

HUSKY OIL OPERATIONS LTD.

LSD:

Q.C. INFORMATION

**16" x 7'6" s/s 600 ANSI SEPARATOR/METER SKID
UNIT, 3 PHASE CONTROLS, SCADA, 3" SENIOR
METER RUN, 15,000 LITRE TANK, 2" 900# INLET
ESDV VALVE**

Manufactured By:

R.J.V. Gas Field Services

4901-47th Street, Vegreville, Alberta, T9C 1C3
Phone (780)632-7774 - Fax (780)632-6820

R.J.V JOB# NO.: 07-4220

UNIT NO.: 14072

R.J.V. GAS FIELD SERVICES LTD.
UNIT IDENTIFICATION SHEET

COMPANY: HUSKY OIL OPERATIONS		JOB # 07-4220		UNIT# 14072	
PO#	AFE#	SO#	DRAWING# 07-4220-1		
REQUESTED BY: SAEED DEVARI		LOCATION:		AREA:	
DESCRIPTION: 16"x7'6" s/s, 600# ANSI, 1440 PSI, 3-PHASE VERTICAL MISTEX, SWEET SERVICE, SCADA, SINGLE SEPARATOR/METERING/15,000L TANK SKID UNIT c/w 3" 600 ANSI SENIOR METER RUN, 3" 600# ANSI INLET AND OUTLET CONNECTIONS					
DESCRIPTION		MAKE	MODEL	SERIAL	
METER RUN		Nu Flo	3" 600# Sch 40 SR, FIG# 3D	11097632105	
MVS		Fisher	Model Flo Boss 103	17958142	
RTD		Aircom	Model TC	116389-75	
PRESSURE TRANSMITTER		Wika	Model E-10, 0-3000 PSI	2601D9D	
SEPARATOR		R.J.V. Gas Field	16" x 7'6"s/s 600# 3 PHASE	11373	A#584719
LEVEL CONTROL		Fisher	2" 2" NPT, Type L2	18184110	18184098
LEVEL CONTROL VALVE		Fisher	2" 1" NPT, Type D2		
SIGHT GLASS		Penburthy	#1TM5 & 1RL5 Reflex c/w #330J GAUGE COCKS		
PRESSURE	VESSEL	Taylor	1" x 1" NPT, Model T-8200-1	37395-306	
SAFETY VALVE	FUEL GAS	Taylor	1" x 1" NPT, Model T-8200-1	37628-70	
PREAMP		Nu Flo		1131	
TURBINE		Turbines Inc	1" Bore x 1" NPT Turbine Meter	2491-83	
ELECTRO-MAGNETIC PICK UP		Turbines Inc	K-Factor	912.85	
METHANOL INJECTION PUMP		Cavern Oil	2" Model CL113	2762	2759
PSV		Tarpon	750-1500 psi	EDV-327	
PSV		Tarpon	3000-4000 psi	EDV-804	
PRESSURE CONTROLLER		Dyna Flo	Model 4000	P126112-01	
PRESSURE REGULATOR VALVE		Kimray	3" 600# ANSI RF Motor Valve	2073470164	
PRESSURE PILOT		CVS	Type 7970	PP9615	
HI LO PRESSURE PILOT		Fisher	Type 4660	P126112-22	
SWITCHING VALVE		Amot	1/4" NPT Model 4057D025H2	T2737	
SOLENOID VALVE		Asco	1/4" NPT EF8314G301	A13440	
HEATER		Catadyne	2" BX24X24 24,000 BTU, 12 VDC	366660	366661
GLOBE VALVE		Panam	1" 800# npt	P181	
GLOBE VALVE		Panam	2" 800# npt	P2266	
GLOBE VALVE		Panam	3" 1500# RF	P4802	

COMPANY: HUSKY OIL OPERATIONS		JOB #07-4220		UNIT# 14072	
PO#	AFE#	SO#	DRAWING# 07-4220-1		
REQUESTED BY: SAEED DEVARI		LOCATION:		AREA:	
ESDV		Dyna Flo	Model DSR-100 c/w 2" 1500# b/v	942114-007	
RADIO CONTROL BOX		R.J.V. Gas Field	36" x 42" x 16" L-Shaped	070307	
FUEL GAS SCRUBBER		R.J.V. Gas Field	8" x 30" S/S, 975 PSI SPRING RANGE		11309
TANK		Hugesteel	15,000L DW Above Ground	52071888	
PRESSURE REGULATOR VALVES	FUEL GAS	Bel Gas	1" NPT, P627, 70-150 PSI, SPRING RANGE		
	INSTRUMENT	Bel Gas	1/4" NPT, Type P50, 0-60 PSI, SPRING RANGE		
	INSTRUMENT	Bel Gas	1/4" NPT, Type P50, 0-120 PSI, SPRING RANGE		
	INSTRUMENT	Bel Gas	5 1/4" NPT, Type P50, 0-60 PSI, SPRING RANGE		
SKID		R.J.V. Gas Field	10'x21'4" c/w 6"@ 8.2 CH, 6"@15 Tank Beams, 3/16" CH PL		
BUILDING		R.J.V. Gas Field	10' x 16' x 10' -9'6" EAVE PANEL TYPE WHITE/WHITE		
HLSD		Wellmark		ST2TP-97	
MANUFACTURE DATE: Jan-30-08		TESTER: MARVIN HOMENIUK		TANK: 500G D/W 65070466	
TESTING DATE: January 30-2008		SHIPPING DATE:		DELIVERY:	



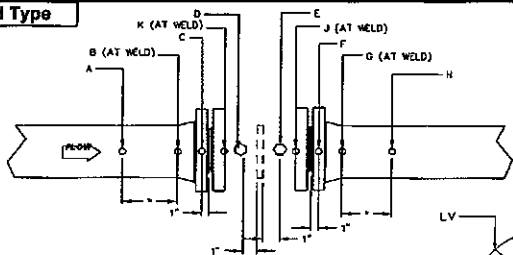
MEASUREMENT SYSTEMS

Meter Tube Calibration Record

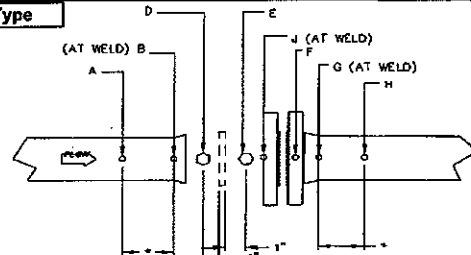
General Specifications

Customer:	RJV GASFIELD SERVICES	Date:	NOVEMBER 21/ 2007
Location:	HUSKY	P.O. Number:	104989
Serial No.	11097632105	Work Order No.	110976321
Assembly Part No.	9A-METERRUN-ED	Part No.	40553-34221
Orifice Fitting:	3" 600# SCH. 80 DUAL CHAMBER	Meter Tube Type No.	2
Flow Conditioner:		Yes	No
			X

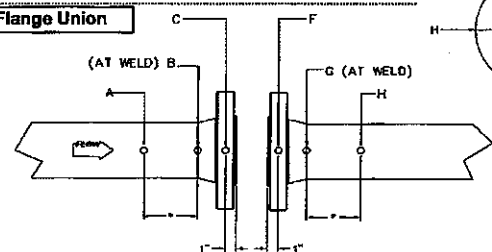
Type 1 Flanged Type



Type 2 Flangeweld Type



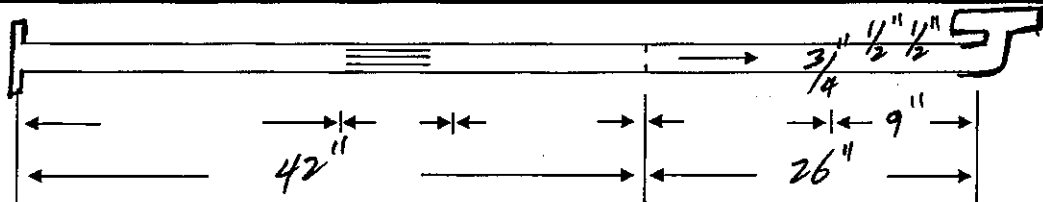
Type 3 Orifice Flange Union



Type 4 weldneck Type Valve or Door
Check Location Point A-B-D on Upstream Tube,
Point E-G-H on Downstream Tube

*Cross section 'A' and 'H' shall be one pipe diameter
except if such Cross Section falls within the lifting or weld
it shall be made 1" inside the pipe

Location	Upstream Meter Tube					Downstream Meter Tube				
	A	B	C	D	K	E	F	G	H	J
V	2.898	2.900		2.898		2.898	2.897	2.891	2.896	2.894
LV	2.897	2.903		2.898		2.898	2.897	2.899	2.897	2.904
RV	2.900	2.896		2.898		2.898	2.897	2.896	2.896	2.899
H	2.899	2.896		2.898		2.898	2.897	2.899	2.898	2.900
Average	2.898	2.899		2.898		2.898	2.897	2.896	2.897	2.899
Upstream Mean Average to Stamp on I.D. Plate			2.898			Downstream Mean Average to Stamp on I.D. Plate			2.898	



AGA/API Figure	3D	BETA	0.70	Meter Tap Location	
Remarks:		Inspector:		Upstream	1"
				Downstream	1"



www.c-a-m.com
Phone: 780.468.2941
5151-67th Ave., Edmonton, AB. T6B 2R8
rev.3 01/02/07

Certificate of Authorization

Quality Control Program

Expiry Date: **December 9, 2007**

Reg. No.: **AQP-5046**

This is to certify that:

**NUFLO MEASUREMENT SYSTEMS
A NUFLO TECHNOLOGIES COMPANY
9207 - 34A AVENUE
EDMONTON, ALBERTA**

having complied with the provisions of the SAFETY CODES ACT, is hereby authorized to:

Manufacture Category 'F' Fittings in accordance with CSA B51
at the above SHOP address.



Dated at Edmonton, this 3rd day of March, 200

Chief Inspector and Administrator

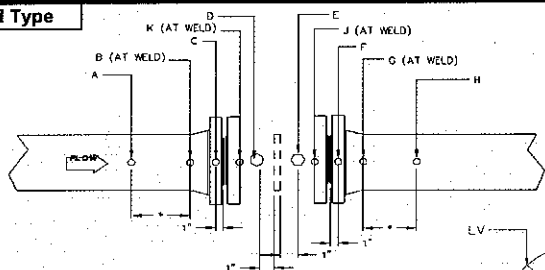
Certificate No.: 4486

Meter Tube Calibration Record

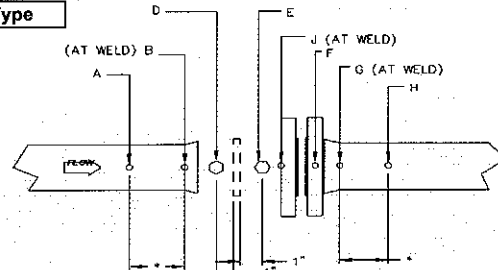
General Specifications

Customer:	RJV GASFIELD SERVICES	Date:	NOVEMBER 21/ 2007
Location:	HUSKY	P.O. Number:	104989
Serial No.	11097632105	Work Order No.	110976321
Assembly Part No.	9A-METERRUN-ED	Part No.	40553-34221
Orifice Fitting:	3" 600# SCH. 80 DUAL CHAMBER	Meter Tube Type No.	2
Flow Conditioner:		Yes	No
			X

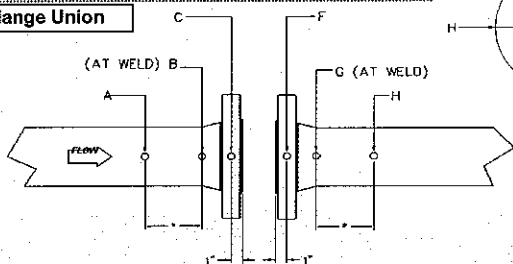
Type 1 Flanged Type



Type 2 Flangeweld Type



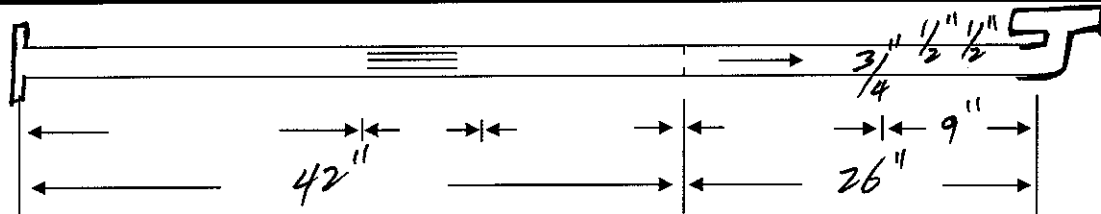
Type 3 Orifice Flange Union



Type 4 weldneck Type Valve or Door
Check Location Point A-B-D on Upstream Tube,
Point E-G-H on Downstream Tube

*Cross section 'A' and 'H' shall be one pipe diameter
except if such Cross Section falls within the lifting or weld
it shall be made 1" inside the pipe

Location	Upstream Meter Tube					Downstream Meter Tube				
	A	B	C	D	K	E	F	G	H	J
V	2.898	2.900		2.898		2.898	2.897	2.891	2.896	2.894
LV	2.897	2.903		2.898		2.898	2.897	2.899	2.897	2.904
RV	2.900	2.896		2.898		2.898	2.897	2.896	2.896	2.899
H	2.899	2.896		2.898		2.898	2.897	2.899	2.898	2.900
Average	2.898	2.899		2.898		2.898	2.897	2.896	2.897	2.899
Upstream Mean Average to Stamp on I.D. Plate				2.898		Downstream Mean Average to Stamp on I.D. Plate				2.898



AGA/API Figure	3D	BETA	0.70	Meter Tap Location	Upstream	1"	Downstream	1"
Remarks:	68°F.				Inspector:	[Signature]		

NuFlo Measurement Systems PRODUCT OF CANADA

P.T. NO. **40553- 34221** SIZE **3.0** BORE **2.900**

W.P. **1440** FLG. **600** SER. NO. **11097632105**

C.R.N. NO. **OF1120.213** TRIM **SWEET**

TO REMOVE PLATE FROM DUAL CHAMBER

(1) CLOSE ORIFICE CHAMBER (INDEX ORIFICE OUT OF OPERATION)
(2) OPEN BLEED VALVE (3) OPEN CHAMBER LID (REMOVE ONLY TWO TOP NUTS) (4) REMOVE ORIFICE PLATE (PRY ON HOLES IN RETAINER HANDLE)

TO PLACE ORIFICE PLATE IN OPERATION

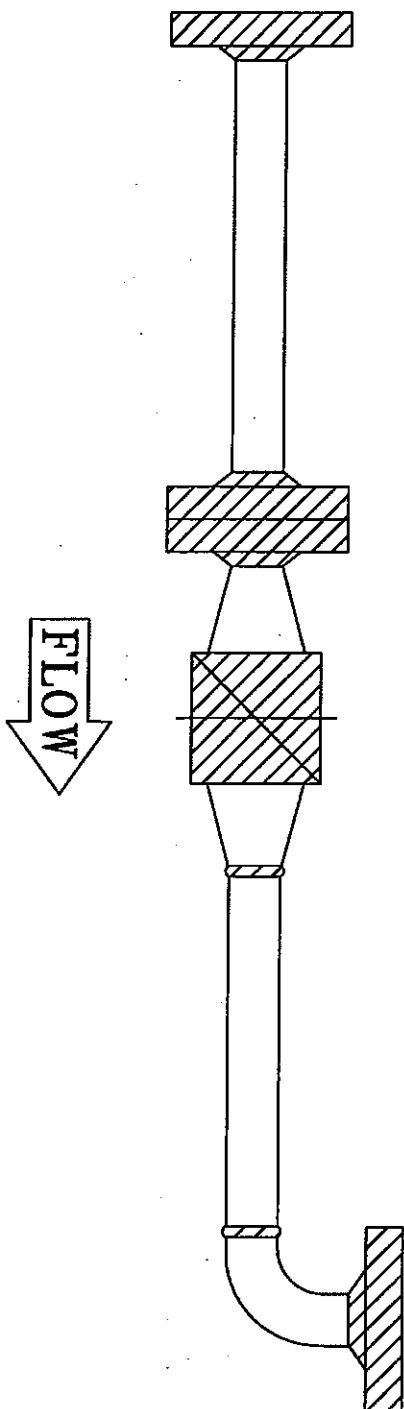
(1) REPLACE ORIFICE WITH 'OUTLET' ON PLATE AND SEAL RETAINER FACING UPWARD (2) CLOSE LID (3) CLOSE BLEED VALVE (4) OPEN EQUALIZING VALVE (MAKES INDEXING EASY) (5) OPEN ORIFICE CHAMBER (INDEX ORIFICE INTO OPERATION) (6) CLOSE EQUALIZING VALVE

NuFlo Measurement Systems

EDMONTON, ALBERTA, CANADA

METER RUN	9A-METERRUN-ED			MAX. BORE	
ASSY. NO.				D.S. (D)	2.898
SER. NO.	11097632105	U.S. (D)	2.898	RATING	600
PIPE SIZE	3.0	SCH.	80	CALIBRATION	CAMERON
AGA / API	3D	d / D	0.70	CERTIFIED BY	
W.O. NO.	110976321	DATE	11/07		

WELD IDENTIFICATION MAP



DESCRIPTION: 9A-METERRUN-ED
SERIAL No.: 11097632105
CUSTOMER: R/V GASFIELD SERVICE
P/O No.: 104989 TAG No.: _____
W/O No.: 110976321 END USER: HUSKY
RADIOGRAPHY UNIT: _____
WELDER: KEN MARTIN FILE No.: W-2398
DATE: NOVEMBER 26/07 CORINNE HAMILTON
SYMBOL: C QUALITY ASSURANCE INSPECTOR



Cameron

Measurement Systems

5151-67th AVENUE
EDMONTON, ALBERTA
T6B 2R8



LABOUR
Boiler and Pressure Vessel Safety

Form No. CB-43 (92/02)

Grade "B" Pressure Welder's
Certificate of Competency

This is to Certify that: Ken Martin

having complied with provisions of the Boilers and Pressure Vessels Act is hereby granted a Grade "B" Pressure Welder's Certificate of Competency, and is authorized to engage in pressure welding in accordance with the prescribed Regulations.



W. 02398
ABB File No.

Dated at Edmonton, this Second
day of June 19 93

[Signature]
Chief Inspector

No 8759



Qualimet

WELDER PERFORMANCE QUALIFICATION CARD

Name Ken Martin

File No. W-1398

This card is issued pursuant to the Alberta Safety Codes Act and the Pressure Welders Regulation. The performance qualification is in accordance with Section IX of the ASME Code and subject to the limitations on the reverse side.

May 2, 2007
Date of Test

[Signature]
Welder or Machine Welding
Operator's Signature

Chris Volyn E.T.T.
Welding Examiner (Print type)

Acc. Org. Card No. 1949

PERFORMANCE
QUALIFICATION

Acc. Org. Card No. 1949

Process(es) GTAW SAW Materials (P.No.) P1 F P1

Filler Metal (F.No.) E-3 E-4 Min. Pipe Diameter 1" O.D.

Max. Deposited Weld Metal 0.188" 0.634" Position(s) Qualified 1G

Backing without with Backing Gas N/A

Progression Flat Flat

May 2, 2007
P.Q. Expiry Date

[Signature]
Welding Examiner Signature

E-00268
Examiner File No.



A.O.Q.P. No. 7106 (c)

LUDWIG & ASSOCIATES LTD.

Materials and Welding Engineering

WELDER PERFORMANCE QUALIFICATION CARD

Name: Ken Martin ABSA File No. W-2398

This card is issued pursuant to the Alberta Safety Codes Act and the Pressure Welders Regulation. The performance qualification is in accordance with Section IX of the ASME Code and subject to the limitations on the reverse side.

October 19, 2006
Date of Test

[Signature]
Signature of Welder or Machine Operator

James Hitchings
Welding Examiner (Print type)

Card No. E 7976

PERFORMANCE QUALIFICATION

E 7976

Process(es) GMAW FCAW Materials (P.No.) P1

Filler Metal Group (F.No.) F6 F6 Min. Outside Diameter 1.0 in. O.D.

Max. Deposited Weld Metal 0.110 in. 0.672 in. Position(s) Qualified GMAW: SPO-45° FCAW: FLAT

Backing WITH OR WITHOUT WITH Backing Gas WITH OR WITHOUT

Progression Vert. Down N/A

October 19, 2006
P.Q. Expiry Date

[Signature]
Welding Examiner Signature

E-00272
Examiner File No.

MST1201
7/24/06

Highland Foundry Ltd
CHEMICAL AND PHYSICAL ANALYSIS

Page 1
14 48 38

Product# 40713-001
Customer Part# 40713-001
Customer NUFLO MEASUREMENT SYSTEMS
ACCOUNTS PAYABLE
7944 10TH STREET N E
CALGARY AB T2E 8W1
CANADA

Order/Item# 28227 / 3
Customer P O # XP60868

3" DUAL CHAMBER BODY

Approved by Shyan Smith
Quality Assurance Technician

Melt#	Quantity	Date	Heat Treat	BATCH #	Specification
4-7823	20	6/29/06		AX2 - -	ASTM A216 GRADE WCB

C H E M I C A L S					
C	1820	MN	8810	SI	4570
S	0120	NI	0700	CR	1460
CU	1390	V	0130	P	0170
				MO	0390

P H Y S I C A L S	
YIELD KSI	51 0
ELONGATION %	34
TENSILE KSI	74 4
RED OF AR %	65

CE: 0.3824



MATERIAL TEST REPORT

9670-187th Street Surrey BC Canada V4N 3N6
Phone 604 888 8444 Fax 604 888 3634

ISO 9001.2000

MST1201
10/27/06

Highland Foundry Ltd.
CHEMICAL AND PHYSICAL ANALYSIS

Page 1
10:11:31

Product# . . . : 40703-005
Customer Part#: 40703-005
Customer . . . : NUFLO MEASUREMENT SYSTEMS
ACCOUNTS PAYABLE
7944 10TH STREET N.E.
CALGARY AB T2E 8W1
CANADA

Order/Item# . . : 28629 / 4
Customer P.O.#: XP61603

3" DUAL CHAMBER LID

Approved by: Shyan Smith
Quality Assurance Technician

Melt#	Quantity	Date	Heat Treat	BATCH #	:	Specification
2-6885	5	10/03/06		DI2	- -	ASTM A216 GRADE WCB

C H E M I C A L S			
C : .1900	MN : .6600	SI : .5100	P : .0190
S : .0140	NI : .1000	CR : .4000	MO : .0300
CU : .1100	V : .0100		

P H Y S I C A L S	
YIELD KSI 48.4	TENSILE KSI 75.1
ELONGATION % 34	RED OF AR. % 58

CE: .4020



MATERIAL TEST REPORT

9670-187th Street, Surrey, BC Canada V4N 3N6
Phone 604-888-8444 Fax 604-888-3634
www.hIGHLANDfoundry.com

ISO 9001:2000

ASCOMETAL



Département Métallurgie Qualité
Usine des Daces Boite postale #1
59941 Dunkerque cedex 2
Téléphone 03 28 29 60 00
Télécopie 03 28 29 60 03

DOCUMENT DE CONTROLE

Inspection Documents / Prüfbescheinigungen

Inspection Certificate 31
NFEN 10204 / DIN EN 10204 / ISO R 404

N° 030000031107
LS mt. 0080089477/000005
V/REF .17510 507624/388
YOUR ORDER / IHRE ZULASSUNG

DATE 07/07/2006 DATE EDITION 07/28/2006
DU 01/25/2006
DATE/DATUM

ORDRE DE FABRICATION F3875AN WORKS ORDER NUMBER / WERKSTELLUNG		COULEE F3875 CAST / SCHMELZEN		DESTINATAIRE DOCUMENT DOCUMENT FOR / EMPFANGER	
AFFAIRE SUIVIE PAR T WILSON YOUR CONTACT IS / BEARBEITER				Company INTEGRIS METALS LTD A DIVISION OF RIO ALGOM LTD 7945, CORONET ROAD EDMONTONALB T6E 4N7 CANADA	
N/REFERENCE 500515406 / 000010 (70016748) ASCOMETAL ORDER / WERKSTELLUNG					
QUANTITE 4195 QUANTITY / MENGE	NUANCE - A105 GRADE / WERKSTOFF				
PRODUIT A105 ROL ROUNDS CLESS TURN 6,250 IN NORMALISED PRODUCT DESCRIPTION / BESCHREIBUNG					
SPECIFICATION CLIENT ASTM A105+A350LF2+A596GRC+API6A4SK SPECIFICATION / SPEZIFIKATION					
IND SANS REV / ENTWURF	DATE 00 00 2001 DATE / DATUM	CCU	D000002429		
SPECIFICATION SUPP : SANS					

ANALYSE CHIMIQUE DE COULEE / LADLE ANALYSIS / SCHMELZANALYSE

Element (%)	Element	Teil	C	Mn	Si	Cr	Ni	Mo	Cu	P	S	Al	V
MINI	SPEC MIN	MINI		600	150								
VALEUR	ACTUAL	WERTE	160	1094	284	237	081	050	150	010	011	024	016
MAXI	SPEC MAX	MAXI	230	1350	300	300	400	120	400	035	035		080

Element (%)	Element	Teil	Cb
MINI	SPEC MIN	MINI	
VALEUR	ACTUAL	WERTE	0000
MAXI	SPEC MAX	MAXI	0200

Contraintes groupées Combined requirements / verbundene anforderungen

Element	MINI VALEUR	MAXI
CEq	418	430
Ni+Cr+Mo+Cu+V	534	1000
Cr+Mo	287	320

Handwritten signature and date: 4/29/06

DURETE / HARDNESS / HARTE

Nappe / Batch number / Los Nummer - B824 / *
mid radius tested

Element	Element	Teil	HB
MINI	SPEC MIN	MINI	
VALEUR	ACTUAL	WERTE	152
MAXI	SPEC MAX	MAXI	187

CARACTERISTIQUES MECANQUES / MECHANICAL PROPERTIES / MECHANISCHE KENNWERTE

Traction / Tensile test / Zugversuch
Nappe / Batch number / Los Nummer : B824 / *
Diameter of test coupon (in) 50
Longitudinal test

mid radius tested
Tensile test temperature (°F) 70

Element	Element	Teil	E% (2in)	RA% Ys.2% PSI	UTS PSI
MINI	SPEC MIN	MINI	22.0	30	45000
VALEUR	ACTUAL	WERTE	35.4	71	47517
MAXI	SPEC MAX	MAXI			95000

Résilience / Impact test / Kerbschlagproben
Nappe / Batch number / Los Nummer B824 / *
notch test 10 x 10
Charpy V notch
Impact test temperature (°F) -50

Mid radius testing
Longitudinal test

Element	Element	Teil	Ft/Lbs	Ft/Lbs	Ft/Lbs	Mils LE	Mils LE	Mils LE
MINI	SPEC MIN	MINI	150	150	150			
VALEUR	ACTUAL	WERTE	79.7	75.2	91.7	43.0	40.0	49.0
MAXI	SPEC MAX	MAXI						



Handwritten signature and date: 4/19/06

Nous certifions que les produits en-dessus sont conformes aux prescriptions de la commande, respectant la directive européenne 2000/33/CE du 18 septembre 2000 et présentant un niveau de radioactivité au plus égal à la radioactivité ambiante.

We hereby certify the above mentioned products are complying with the order requirements, are respectful of the September 18th 2000 2000/33/CE european directive and have a radioactivity level which does not exceed that present in the environment.

Wir bestätigen hiermit dass die obengenannten Erzeugnisse den Bestimmungsvorschriften, der EU Richtlinie 2000/33/CE von 18 September 2000 entsprechen und die gebotenen Produkte keine Radioaktivität, die höher ist als natürliche Strahlung der Umwelt aufweisen.

Ascometal
SA à direction et conseil de surveillance
au capital de 65 285 430 euros
RCS Nanterre B 331 048 132

Siège social Immeuble LE COLISEE, 10 Avenue de l'Arche, Faubourg de l'Arche, 92419 Courbevoix Cedex

0148750 / 93A10439, 40, 42, 43

TIN # 500515406

ASCOMETAL



Département Métallurgie Qualité
Unité des Documents - Boîte postale 41
59501 Dunkerque cedex 2
Téléphone 03 28 29 60 00
Téléfax 03 28 29 60 01

DOCUMENT DE CONTROLE

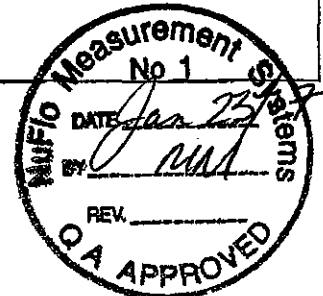
Inspection Documents / Prüfbescheinigungen

Inspection Certificate 3 I
NFEN 10204 / DIN EN 10204 / ISO R 404

N° 030000031107
LS Int. 0080089477/000005
V/REF 17510 507624/38B
YOUR ORDER / IHRE ZEICHEN

DATE 07/07/2006 DATE EDITION 07/28/2006
DU 01/25/2006
DATE / DATUM

ORDRE DE FABRICATION F3875AN WORKS ORDER NUMBER / WERKBESTELLUNG		COULEE F3875 CAST / SCHMELZE		DESTINATAIRE DOCUMENT DOCUMENT FOR / EMPFANGER				
AFFAIRE SUIVIE PAR T WILSON YOUR CONTACT IS / BEARBEITER				Company INTEGRIS METALS LTD A DIVISION OF RIO ALGOM LTD 7945, CORONET ROAD EDMONTONALB T6E 4N7 CANADA				
N/REFERENCE 500515406 / 000010 (70016748) ASCOMETAL ORDER / WERKBESTELLUNG								
QUANTITE 4 195 QUANTITY / MENGE	NUANCE A105 GRADE / WERKSTOFF							
PRODUIT A105 ROL ROUNDS CLESS TURN 6,250 IN NORMALISED PRODUCT DESCRIPTION / BESCHREIBUNG								
SPECIFICATION CLIENT ASTM A105/A350LF2/A696GRC/API6A45K SPECIFICATION / SPEZIFIKATION								
IND SANS REV / ANMERKUNG	DATE 00 00.2001 DATE / DATUM	CCU	D000002429					
SPECIFICATION SUPP SANS								
Nappe / Batch number / Los Nummer B824 / * notch test 10 x 10 Charpy V notch Impact test temperature (°F) -60 Mid radius testing Longitudinal test								
ELEMENT	ELEMENT	TEIL	Fv/Lbs	Fv/Lbs	Fv/Lbs	Mils LE	Mils LE	Mils LE
MINI	SPEC MIN	MINI						
VALEUR	ACTUAL	WERTE	70 8	87.2	85.2	38 0	46 0	45 0
MAXI	SPEC MAX	MAXI						
Nappe / Batch number / Los Nummer B824 / * notch test 10 x 10 Charpy V notch transverse test Mid radius testing Impact test temperature (°F) -60								
ELEMENT	ELEMENT	TEIL	Fv/Lbs	Fv/Lbs	Fv/Lbs	Mils LE	Mils LE	Mils LE
MINI	SPEC MIN	MINI						
VALEUR	ACTUAL	WERTE	38 6	39 3	32 1	50 0	50 0	50 0
MAXI	SPEC MAX	MAXI						
TRAITEMENT THERMIQUE / HEAT TREATMENT / WARMBEHANDLUNG								
Normalized air cooled Norm. temp (°F) Norm. holding time (hrs)			Val 1652 Val 3.25					
DURETE SURFACE / SURFACE HARDNESS / RANDHÄRTE								
ELEMENT	ELEMENT	TEIL	BHN top					
MINI	SPEC MIN	MINI						
VALEUR	ACTUAL	WERTE	163					
MAXI	SPEC MAX	MAXI	187					
AUTRES RESULTATS / OTHER RESULTS / ANDERE PRÜFERGEBNISSE								
Electric furnace - vacuum degassed Ultrasonic testing satisfactory per ASTM A388								
Conforms to NACE MR 01-75 Conforms to ASME SA105/SA350LF2 class 1 Conforms to ASTM A696 gr C - ASME SA696 gr C No welding performed Grain size M-Qual Ebn Reduction ratio								
			Min	5	Val	7	Max	8
					Val	4 19		



Nous certifions que les produits ci-dessus sont conformes aux prescriptions de la commande, respectent la directive européenne 2000/53/CE du 18 septembre 2000 et présentent un niveau de radioactivité au plus égal à la radioactivité ambiante.

We hereby certify the above mentioned products are complying with the order requirements as respectful of the September 18th 2000 2000/53/CE european directive, and have a radioactivity level which does not exceed that present in the environment.

Wir bestätigen hiermit dass die obigenbestellten Fertigungsgegenstände den Bestimmungsvorgaben, der EU-Richtlinie 2000/53/CE vom 18 September 2000 entsprechen und die gelieferten Produkte keine Radioaktivität, die Höher ist als natürliche Strahlung der Umwelt aufweisen.

Ascometal
SA a directeur et conseil de surveillance
au capital de 65 285 430 euros
RCS Nanterre B 331 048 132

Siege social Immeuble LE COLISER, 10 Avenue de l'Arche, Faubourg de l'Arche, 92419 Courbevoie Cedex

ASCOMETAL



Département Métallurgie Qualité
Usine des Dunes - Boite postale 41
59241 Dunkerque cedex 2
Téléphone 03 21 29 60 00
Télécopie 03 28 29 60 03

DOCUMENT DE CONTROLE

Inspection Documents / Prüfbescheinigungen

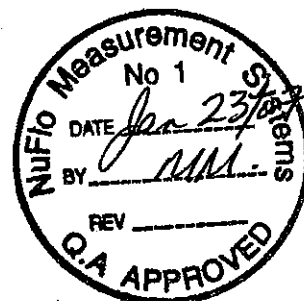
Inspection Certificate 31
NFEN 10204 / DIN EN 10204 / ISO R 404

N° 030000031107
LS int. 0080039477/000005
V/REV 17510 507624/383
YOUR ORDER / IHRE ZEICHEN

DATE 07/07/2006 DATE EDITION 07/28/2006
DU 01/25/2006
DATE / DATUM

ORDRE DE FABRICATION- F3875AN WORKS ORDER NUMBER / WERKBESTELLUNG		COULEE F3875 CAST / SCHMELZE		DESTINATAIRE DOCUMENT DOCUMENT FOR / EMPFÄNGER	
AFFAIRE SUIVIE PAR T WILSON YOUR CONTACT IS / BEARBEITER				Company INTEGRIS METALS LTD A DIVISION OF RIO ALGOM LTD 7945, CORONET ROAD EDMONTON ALB T6E 4N7 CANADA	
N/REFERENCE 500515406 / 000010 (70016748) ASCOMETAL ORDER / WERKBESTELLUNG					
QUANTITE 4.195 QUANTITY / MENGE	NUANCE A105 GRADE / WERKSTOFF				
PRODUIT A105 ROL ROUNDS CLESS TURN 6.250 IN NORMALISED PRODUCT DESCRIPTION / BESCHREIBUNG					
SPECIFICATION CLIENT ASTM A105-A350LF2+A696GRC+API6A45K SPECIFICATION / SPEZIFIKATION					
IND SANS BY / SIGNATURE	DATE 00 00.2001 DATE / DATUM	CCU	D008002429		
SPECIFICATION SUPP . SANS					
Continuous cast					
Conforms to ASTM A105 - A350LF2					
HOT ROLLED CARBON STEEL ROUND BARS ROUGH TURNED CFR DUTY UNPAID VANCOUVER (CAN) LUCCHINI USA, SOC-11601/CPO-507624/383 COLOR CODE BLACK AND GOLD COUNTRY OF ORIGIN FRANCE					

Visa du chef de service
Stamp of inspection supervisor
Der Werkssachverständige
G Giroud



Nous certifions que les produits ci-dessus sont conformes aux prescriptions de la commande, répondant la directive européenne 2000/53/CE du 18 septembre 2000 en présence un niveau de radioactivité au plus égal à la radioactivité ambiante.

We hereby certify the above mentioned products are complying with the order requirements are respectful of the September 18th 2000 2000/53/CE - european directive, and have a radioactivity level which does not exceed that present in the environment.

Wir bestätigen hiermit dass die obengenannten Erzeugnisse den Bestimmungsvorschriften, der EU-Richtlinie 2000/53/CE vom 18 september 2000 entsprechen und die gelieferten Produkte keine Radioaktivität, die Höher ist als natürliche Strahlung der Umwelt, aufweisen.

Ascometal
SA à directeur et conseil de surveillance
au capital de 65 285 430 euros
RCS Nanterre B 331 048 132

Siège social: Immeuble LE COLISEE, 10 Avenue de l'Arche, Faubourg de l'Arche, 92419 Courbevois Cedex

鋼鐵股份有限公司
ENG STEEL FORGING CO., LTD.

MILL TEST CERTIFICATE
=====

CERT NO.: SB-5997BN

DATE : 02/15/2007

2 LANE 50, WAN SING STREET
IN DISTRICT, KAOHSIUNG,
N. R. O. C.
NO. 1970
7-372 4249 07-371 2934
7-371 2923 07-371 2846
http://www.saneng.com.tw
sanengseed.net.tw

ORDER NO.: 5997/45000684
L/C NO. :

PAGE : 2 OF 4

P R O D U C T		S P E C I F I C A T I O N F O R M A T E R I A L		S P E C I F I C A T I O N F O R P I T T I N G S										
FORGED CARBON STEEL FLANGES		ASTM A-105-03/ASME SA-105 (2245.12 CAT 1 GR.248 SOFT SERVICE-01)		ASME B16.5-98a										
D E S C R I P T I O N	Q U A N T I T Y	C H E M I C A L C O M P O S I T I O N (%)												
		C	Si	Mn	P	S	Cr	Gr	Ni	Mo	V	Nb	N	C.E.
4305-105 800 WHEF AS	25 PCF	0.210	0.210	1.090	0.039	0.014	0.060	0.060	0.040	0.006	0.003	0.005	0.010	0.413
4305-105 600 WHEF AS	927 PCF	0.220	0.220	1.060	0.037	0.013	0.060	0.060	0.040	0.005	0.003	0.005	0.010	0.422
4305-105 500 WHEF AS	5 PCF	0.200	0.200	1.090	0.012	0.011	0.190	0.200	0.200	0.030	0.000	0.000	0.010	0.422
4305-105 600 WHEF AS	20 PCF	0.210	0.210	1.090	0.009	0.014	0.060	0.060	0.040	0.003	0.003	0.005	0.010	0.413
4305-105 150 WHEF	15 PCF	0.200	0.140	1.100	0.013	0.019	0.120	0.110	0.030	0.005	0.003	0.005	0.010	0.421
4305-105 150 WHEF	80 PCF	0.210	0.170	1.070	0.007	0.010	0.050	0.040	0.030	0.005	0.003	0.005	0.009	0.404
4305-105 300 WHEF	300 PCF	0.210	0.170	1.060	0.007	0.011	0.060	0.070	0.030	0.005	0.003	0.005	0.010	0.399
23865-105 900/1500 WHEF	9 PCF	0.200	0.160	1.060	0.010	0.011	0.060	0.070	0.030	0.005	0.003	0.005	0.008	0.406
23867-105 1500 BLRT3	10 PCF	0.200	0.180	0.970	0.011	0.008	0.074	0.060	0.050	0.005	0.003	0.005	0.007	0.384
23861-105 600 BLRT3	2	0.200	0.180	0.970	0.011	0.008	0.074	0.060	0.050	0.005	0.003	0.005	0.007	0.384
TENSILE STRENGTH (MPA)	YIELD STRENGTH (MPA)	ELONGATION (%)		HARDNESS (HB)		REDUCTION OF AREA (%)	HEAT TREATMENT	MATERIAL SUPPLIER	R E M A R K S					
		MIN	MAX	MIN	MAX									
HEAT	485 MIN	250 MIN	22.0 MIN	187 MAX	30.0 MIN									
31057	517.80	335.40	33.6	153	87.7	NORMALIZED	DEKX							
31057	515.80	331.50	34.0	135	87.7	NORMALIZED	DEKX							
58036	503.10	307.90	34.8	154	65.9	NORMALIZED	DEKX	RED OCTOBER						
31057	517.80	335.40	33.6	153	67.7	NORMALIZED	DEKX							
48362	517.80	315.80	34.8	154	67.7	NORMALIZED	DEKX							
21079	515.80	333.40	36.4	155	68.6	NORMALIZED	DEKX							
38912	497.20	389.30	32.6	159	85.8	NORMALIZED	DEKX							
21533	515.80	337.40	34.6	153	68.6	NORMALIZED	DEKX							
41367	535.40	348.10	33.8	154	65.9	NORMALIZED	DEKX							
36746	498.90	349.90	37.0	149	88.6	NORMALIZED	DEKX							

NOV 1 1954

HEREBY CERTIFY THAT THE MATERIAL DESCRIBED HEREIN HAS BEEN MADE IN ACCORDANCE WITH THE ABOVE SPECIFICATION AND ALSO WITH THE REQUIREMENTS CALLED FOR BY THE ABOVE ORDER AND IS THAT WHICH HAS BEEN TESTED TO THE SATISFACTION OF THE CERTIFICATE-

25

CLIENTE / Customer / Client
VAN LEEUWEN PIPE AND TUBE -CAN
2876-64TH AVENUE
EDMONTON - ALBERTA T6P 1R1
CANADA

CERTIFICADO DE INSPECCION
Works Certificate - Certificat d'Usine

DIN EN 10204 / 3.1
ISO 10474 / 3.1

FECHA
Date 06/09/2006 N°
108486

HOLA
Page 1



ULMA

ULMA FORUM, S COOP

PRODUCTO
Article - Produit
FLANGES
SU PEDIDO N°
Your Order No 45000593 (19 06 06)

DE
of - de 19/08/2008

Certified acc PED 97/23/EC
by TÜV Rheinland
N° 01 202 EQ 02 7443

NORMAS APPLICABLES
Requirements - Normes Applicables
ASME B16.5-96

MARKA DEL FABRICANTE
Mark of factory
MARQUE du fabricant

B° Zubillaga 3 - Apdo 14
20560 ORMAI (Gipuzkoa) SPAIN
Tel 34 943 780552
Fax 34 - 943 781808
E-mail ulma@ulmapiping.com

MATERIAL CORRESPONDIENTE
Material Correspondent - Qualité
ASTMA105N-05
ASME SA105N-05

DEPARTAMENTO QUALITY ASSURANCE
Section
Department

53921

MODO DE FUSION (*)
Steel Making Elaboration de l'acier
E = Elec Y = Oxígeno básico
NACE MR-01-75/03
CAN/CSA-2246 12
Gr 248 CAT 1

PARTIDA Item Poste	CANTIDAD Quantity Quantité	DESCRIPCION Description Description	OBSERVACIONES Remarks Observations (*)	COLADA N° Heat No N° Coule	PRESISTENCIA T Strength Resist Rupt N/mm2	LIMITE ELAST Y Strength Limite Elac N/mm2	ALARGAM Elongation Allongement Lo 4d %	ESTRICCION Red Area Strichen %	RESILENCIA Impact test Resilience Joules	MECA Average Meaning	DUREZA Hardness Dureté HB
1 4885	280	WN 3 600LB S40 RF A105N	NE	288A6	514	317	32.80	84.00			148
7 4907	1 400	WN 3 600LB S80 RF A105N	NE	273A6	520	317	32.80	83.00			151
19 24051	120	WN 3 900LB S80 RF A105N	NE	278A6	520	321	35.70	66.50			151
36 24120	25	WN 4 600LB SXXS RF A105N	NE	264A6	515	317	32.80	64.00			149
38 24142	15	BLIND 4 1500LB RF A105N	NE	241V6	517	330	34.20	67.00			151
39 24148	28	BLIND 3 900LB RF A105N	NE	278A6	520	321	33.70	66.50			151

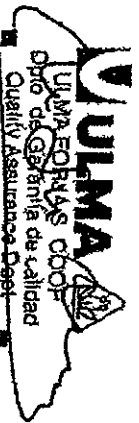
COMPOSICION QUIMICA - STEEL MARKER'S LADLE ANALYSIS - ANALYSE CHIMIQUE

COLADA N° Heat No N° Coule	C %	Si %	Mn %	P %	S %	Cr %	Ni %	Mo %	Nb %	V %	Cu %	CEO %
241V6	0.180	0.220	0.830	0.014	0.001	0.180	0.080	0.040	0.007	0.001	0.220	0.385
264A6	0.180	0.230	0.840	0.012	0.002	0.080	0.080	0.020	0.007	0.001	0.200	0.360
268A6	0.180	0.220	0.810	0.013	0.003	0.070	0.080	0.010	0.008	0.002	0.220	0.351
273A6	0.200	0.240	0.850	0.029	0.004	0.130	0.080	0.030	0.008	0.004	0.200	0.383
278A6	0.200	0.210	0.870	0.008	0.001	0.070	0.080	0.040	0.007	0.001	0.210	0.387

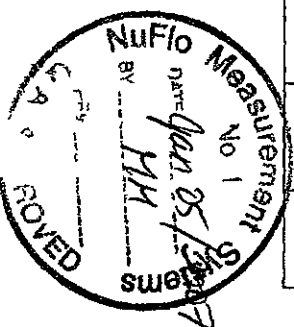
Las dimensiones y la condición superficial se hallaron satisfactorias
Dimension and surface condition were found acceptable
Les dimensions et états de surface sont satisfaisants

- Los materiales citados cumplen las normas aplicables
- Manufacturing requirements are satisfied
- Les normes applicables sont respectées

EL INSPECTOR
Works Inspector L'inspecteur



(*) OBSERVACIONES
Remarks
Observations
N NORMALIZED AT 900 C AND ALLOWED TO COOL IN STILL AIR



HEAT NUMBER 56940
TRANS AM PIPING PRODUCTS - REV'D BY
Shipment/Seq # S 6 - 1649 20

1/2X3/4-36 CL 3000 FS THREADED PIPET
A105N



Manufacturer of Piping & Pressure Vessel Components

4407 Haygood St Houston, TX 77022

Phone 713 695 3633 Fax 713 695 3528

A Division of BONNEY FORGE

Page:

SOLD TO: TRANS AM PIPING (CALGARY)
7025 - 44TH STREET S E
CALGARY, AB, CN T2C 4E8

This product has not come in direct contact with mercury or any of its compounds, nor with any mercury containing device employing a single boundary of containment No welding performed

We certify that the contents of this report are correct and accurate and that all test results and operations performed by WFI or its subcontractors are in compliance with the material specification and requirements of the referenced code or standard and that the material conforms to the dimensional requirements of the order This document is in accordance with EN10204 3.1

MTR #: 119585

PO #: CI-06-744

SALES ORDER #: C613159 DATE: 11/07/2006

CERTIFIED MATERIAL TEST REPORT

MATERIAL: A/SA105N 01

HEAT CODE: 56940

ITEM	Quantity
26	

Description

36 - 3/4 X 1/2 3000 THP
A/SA105N

CHEMICAL COMPOSITION:

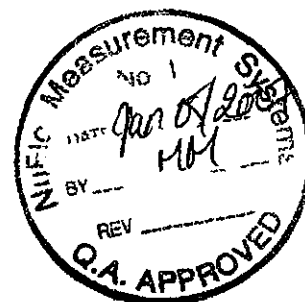
LADLE	C	MN	P	S	SI	CU	NI	CR
	0.200	1.060	0.010	0.019	0.190	0.210	0.040	0.050
	NO	V	NB					
	0.020	0.000	0.016					

CARBON EQUIVALENCY: LADLE 0.407
MECHANICAL PROPERTIES:

	TENSILE PSI	YIELD PSI	ELONG %	RA %	HARDNESS
PRODUCT	74,250	51,125	33.50%	67.90%	135 BHN 137 BHN

Normalized

Pete Ogg
Quality Assurance Representative



HEAT NUMBER 57055
TRANS AM PIPING PRODUCTS - REV'D BY
Shipment/Seq # S 7 - 5474 4

3/4X11/2-36 CL 3000 FS THREADED PIPET
A105N



Manufacturer of Piping & Pressure Vessel Components
4407 Haygood St Houston, TX 77022
Phone 713 695 3633 Fax 713 695 3528
A Division of BONNEY FORGE

Page: 41

SOLD TO: TRANS AM PIPING (EDMON)
233061 ENDEAVOR DRIVE S.E.
CALGARY, ALB, CN T2P2G6

This product has not come in direct contact with mercury or any of its compounds, nor with any mercury containing device employing a single boundary of containment No welding performed

We certify that the contents of this report are correct and accurate and that all test results and operations performed by WFI or its subcontractors are in compliance with the material specification and requirements of the referenced code or standard and that the material conforms to the dimensional requirements of the order This document is in accordance with EN10204 3.1

MTR #: 129111

PO #: PI-07-35469

SALES ORDER #: C705880 DATE: 05/04/2007

CERTIFIED MATERIAL TEST REPORT

HEAT CODE: 57055

MATERIAL: A/SA105N 01

ITEM	Quantity	Description
4	192	36 - 1 1/2 X 3/4 3000 THP A/SA105N
10	1589	36 - 1 1/2 X 3/4 3000 SWP A/SA105N

CHEMICAL COMPOSITION:

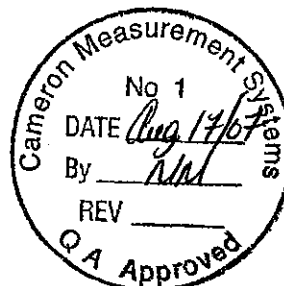
LADLE	C	MN	P	S	SI	CU	NI	CR
	0.200	1.070	0.007	0.019	0.200	0.090	0.020	0.040
	MO	V	NB					
	0.010	0.000	0.013					

CARBON EQUIVALENCY: LADLE 0.396
MECHANICAL PROPERTIES:

	TENSILE PSI	YIELD PSI	ELONG %	RA %	HARDNESS
PRODUCT	75,500	51,000	89.00%	70.00%	144 BHN

Normalized

Marie Dehmer
Quality Assurance Representative



Purchaser: VAN LEEUWEN PIPE AND TUBE (CANADA) INC.

INSPECTION CERTIFICATE

TO EN10204 3.1

E.No. Purchase Order No. Job No.
MA-561 45000462

D M Y Certificate No.
24/10/2007 T-2007040103 Rev.1

Thai Benkan Co., Ltd.
58 Soi Witthanasri, Bangna, Bangkok,
Samutprakan, 10130 Thailand.

No.	MFG. No. (Heat Identification No.) * QSA Z246.11 Gr. 241 CMI 1 POLAR SERVICE NACE MR0175/AB20 18106-2003	Specification for Material Made from Seamless Pipe ASTM A234-BRASS/SAE 304L Gr. WPB										Specification for Inspection ASME B16.3-2003			Visual Examination Good	Dimensional Inspection Good		
		Product & Size (T*1)										Quantity	Heat Treatment (Note 1)	Item No.				
1	08M00022	90 EL W/PB 3 S80										724/1,500	A	3604				
2	08N00034	80 EL W/PB 3 S80										128/1,500	A	3604				
3																		
4																		
5																		
Specification		Chemical Composition %												Tension Test *2			HARDNESS MAX	
		C	Si	Mn	P	S	Ca	Ni	Cr	Mo	V	Nb	C.E.	YS	TS	E		
		X 100	X 100	X 100	X 1000	X 1000	X 100	X 100	X 100	X 100	X 1000	X 1000	X 100		MPa.	%		
		Min.	Max.	10	28													
Material Heat No.		30		106	50	58	40	40	40	15	80	20	43		240	415	30	197 HB : GOOD
1	68M1846	16	25	72	19	8	15	7	8	2	26	2	32	341	509	35		
2	760086	18	24	75	9	5	15	8	8	1	10	1	35	343	500	36		
3																		
4																		
5																		

(Note 1) A: Heat formed with final temperature between 620 °C-900°C, Air Cooling N: Normalizing 910°C±0.5 HR, Air Cooling *N: Normalizing 910°C±0.5 HR, Air Cooling (Specification for material made from plate) β: Stress Relieving 675° C±0.5 HR, Air Cool NACE MR0103 : 2003

C.E. = C+Mn+Si+V+P+S+N+Cu+Ni

MAGNETIC PARTICLE EXAMINATION FOR TEE ONLY:

We hereby certify that the product described herein has been manufactured in accordance with the specifications concerned and also with the purchaser's requirements and that the test results shown herein are correct.

* 1: T* symbolized wall thickness in mm. * 2: YS Yield strength TS = Tensile strength E = Elongation Form TZ-6A/2

Quality Assurance Manager
Thai Benkan Co., Ltd.

 vallourec précision atirage	VPE INDUSTRIE Z.I. MAROLLES 77 51303 VITRY LE FRANCOIS Cedex	Mill Test Report EN 10204 Norm/3.1 Pattern		Date : 04.01.2007 Customer: SCOT INDUSTRIES INC. Packing List # : 20344495 Réf. : 216349 / 000001	Page 1 / 2
---	---	--	--	--	------------

SCOT INDUSTRIES INC.
 1501 F.M. 1489 SOUTH
 77423 BROOKSHIRE (TEXAS)
 Attention to : M. DERBY WILLIAM (BILL) K

Purchase Order / Date : 113-12280 / 10.07.2006

3 1/2" 10050 A106

Product
 Type : Mechanical Tube COLD DRAWN SEAMLESS (T_MECA)
 Your reference :
 Final Status : NORMALIZED
 Grade : GRADE B
 Specification : ASTM A106(+SPEC.COMPLEM.) DANIEL SPEC. MS 00022 REV. H + API 5L X42
 Marking on tubes : SPECIFIED TEXTE SPEC - NUANCE - DIMENSION - HEAT N° - N° COMMANDE CLIENT- COUNTRY OF ORIGIN
 : - FRANCE-

Shipped quantities

Batches Qty	ID	OD	Thickness	Unit	Length	Nb Pieces	Total Length	Weight	Heat	PB1 #	PB2 #
6		2.900 in	3.500 in			104	2 900.262 ft	30 289.335 lb	SVS42655	306837	

Cast Analysis

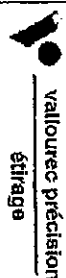
	Heat	C	Mn	Si	P	S	Cr	Mo	Ni	Cu
Min. Spec.		0.280	0.290	0.100	0.030	0.030	0.400	0.150	0.400	0.400
Max. Spec.		1.060								
Unit		%	%	%	%	%	%	%	%	%
Results	SVS42655	0.154	0.815	0.195	0.018	0.005	0.092	0.028	0.069	0.167

Cast Analysis

	Heat	V
Min. Spec.		0.080
Max. Spec.		
Unit		%
Results	SVS42655	0.000

Mechanical Properties

Test	Prod. Batch	Heat	YS	TS	2" elongation	Flattening
Min. Spec.			42061	60191	30.00	52.0
Max. Spec.						
Unit			PSI	PSI	%	mm
Results	306837	SVS42655	48705	69282	42.72	52.0



vallourec précision
étréage

VPE INDUSTRIE
Z.I. MAROLLES
77

51303 VITRY LE FRANCOIS Cedex

Mill Test Report
EN 10204 Norm/3.1 Pattern

Date : 04.01.2007

Customer: SCOT INDUSTRIES INC.

Packing List # : 20344495

Réf. : 216349 / 000001

Page 2/ 2

Non Destructive Tests

Results	Test	Find	Batch	Hebl	Eddy C test	Visual inspec

ROCKWELL C HARDNESS :

THE VALUES : 22 MAXI

2500 PSI HYDRAULIC TEST

Quality department	Inspection date	Name
approved agent	28.12.2006	Muguette BRACONNIER

All tubes were produced in accordance to the norm and requirements of the order regarding grade, quality and heat treatment throughout their whole length

Taylor Valve Technology, Inc

8300 Southwest 8th Street

Oklahoma City, Oklahoma

Serial Number : 37395-306 telephone: 405.787.0145 facsimile: 405.789.8198

Certificate Number: 39419.5752

OG1316.2C email: info@taylorvalve.com

Customer: KINGS ENERGY SERVICES

Date : 03-Dec-07

277, 28042 HWY 11

RED DEER COUNTY, ALBERTA

Sales Order #: 37395

T4S 2L4

Customer P.O. #: 104218-00

Safety Relief Valve Certification

Taylor Valve Technology, Inc. Safety Relief Valves are designed, manufactured and tested in accordance with the provisions of the ASME Boiler and Pressure Vessel Code, Section VIII. This Valve is certified to relieve within plus or minus 2 psi of the set pressure 70 psig or below, and plus or minus 3% of set point for pressures above 70 psig, as allowed for within the provisions of ASME. The published relieving capacities have been certified by the National Board of Boiler and Pressure Vessel Inspectors.

Valve Specifications

Model Number : Taylor Model 8200 Soft Seat	Orifice :	E
Body Size : 1 Inch	Orifice Diameter :	0.520 Inches
Part Number : 82E4351311	Orifice Area :	0.212 In ²
Body Configuration : 1" MNPT X 1" FNPT	Operating Temperature :	70 °F
	Spring Range :	101-225 PSI
	Set Pressure :	150 PSIG

Materials

Body : WCB Carbon Steel	Spring : 17.7 PH Stainless Steel
Seat Frame : Carbon Steel	Guide : 304 Stainless Steel
Seat Housing : 17.4 PH H900 Stainless Steel	Adjustment Screw : Carbon Steel with EN Plating
Trim : Standard	Options : None
Seat : FKM 90d	

Set Pressure Specifications

	Customer Units	ASME Units
Set Pressure :	150 psig	Set Pressure : 150 psig
ASME High Set Limit :	155 psig	ASME High Set Limit : 155 psig
ASME Low Set Limit :	146 psig	ASME Low Set Limit : 146 psig

ASME (90%) rated capacity at set pressure for indicated fluid, specific gravity and temperature.

Certifying Fluid : Air	582 SCFM	Spec Gravity : 1.00	Temp : 60 oF
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API 520 (100%) calculated capacity at set pressure for indicated fluid, specific gravity and temperature.

Test Fluid : Air	640 SCFM	Spec Gravity : 1.00	Temp : 60 oF
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Prepared by : **MELISSA BREWER**

Department : **Customer Service**

Signed *MELISSA BREWER*

Approved by : **MELISSA BREWER**

Department : **Quality**

Signed *MELISSA BREWER*

Taylor Valve Technology, Inc

8300 Southwest 8th Street

Oklahoma City, Oklahoma

Serial Number : 37628-70

telephone: 405.787.0145 facsimile: 405.789.8198

Certificate Number: 39419.5549

OG1316.2C

email: info@taylorvalve.com

Customer : KINGS ENERGY SERVICES

Date : 03-Dec-07

277, 28042 HWY 11

RED DEER COUNTY, ALBERTA

T4S 2L4

Sales Order # : 37628

Customer P.O. # : 104218-00

Safety Relief Valve Certification

Taylor Valve Technology, Inc. Safety Relief Valves are designed, manufactured and tested in accordance with the provisions of the ASME Boiler and Pressure Vessel Code, Section VIII. This Valve is certified to relieve within plus or minus 2 psi of the set pressure 70 psig or below, and plus or minus 3% of set point for pressures above 70 psig, as allowed for within the provisions of ASME. The published relieving capacities have been certified by the National Board of Boiler and Pressure Vessel Inspectors.

Valve Specifications

Model Number : Taylor Model 8200 Soft Seat	Orifice :	E
Body Size : 1 Inch	Orifice Diameter :	0.520 Inches
Part Number : 82E4351311	Orifice Area :	0.212 In ²
Body Configuration : 1" MNPT X 1" FNPT	Operating Temperature :	70 °F
	Spring Range :	101-225 PSI
	Set Pressure :	150 PSIG

Materials

Body : WCB Carbon Steel	Spring : 17.7 PH Stainless Steel
Seat Frame : Carbon Steel	Guide : 304 Stainless Steel
Seat Housing : 17.4 PH H900 Stainless Steel	Adjustment Screw : Carbon Steel with EN Plating
Trim : Standard	Options : None
Seat : FKM 90d	

Set Pressure Specifications

	Customer Units	ASME Units	
Set Pressure :	150 psig	Set Pressure :	150 psig
ASME High Set Limit :	155 psig	ASME High Set Limit :	155 psig
ASME Low Set Limit :	146 psig	ASME Low Set Limit :	146 psig
ASME (90%) rated capacity at set pressure for indicated fluid, specific gravity and temperature.			
Certifying Fluid : Air	582 SCFM	Spec Gravity : 1.00	Temp : 60 oF
API 520 (100%) calculated capacity at set pressure for indicated fluid, specific gravity and temperature.			
Test Fluid : Air	640 SCFM	Spec Gravity : 1.00	Temp : 60 oF

Prepared by : **MELISSA BREWER**

Department : **Customer Service**

Signed *MELISSA BREWER*

Approved by : **MELISSA BREWER**

Department : **Quality**

Signed *MELISSA BREWER*



CALIBRATION REPORT

PREPARED FOR EDMONTON VALVE 4503-93 ST

INSTRUMENT INFORMATION

MANUFACTURER: SWAGELOK	MODEL NUMBER: SS-4R3A5-EP
IDENTIFICATION NUMBER: EDV-327	ACCURACY: N/A
JOB: 408905-1	RANGE: 750-1500 PSI
TARPON NUMBER: TARED-P-EDV-327	TYPE: PSV
CALIBRATION DATE: 23-NOV-07	CALIBRATION DUE: 23-NOV-08

CALIBRATION DATA

CRACK SET POINT	ACTUAL	FOUND	LEFT
0	0	0	0
N/A	N/A	N/A	N/A
1440PSI	1440 PSI	N/A	1440 PSI

TEST EQUIPMENT USED

SERIAL NO.	MAKE	MODEL NO.	CALIBRATION DATE
404643	CRYSTAL	5KPSIXP21	18-OCT-07

COMMENTS: The instrument was calibrated against laboratory standards that are either traceable to the National Institute of Standards and Technology, (NIST), National Research Council, (NRC), or are derived by approved ratio techniques.

CALIBRATION TECHNICIAN: **CHRIS JAMES**



CALIBRATION REPORT

PREPARED FOR EDMONTON VALVE 4503-93 ST			
INSTRUMENT INFORMATION			
MANUFACTURER: SWAGELOK		MODEL NUMBER: SS-4R3A5-EP	
IDENTIFICATION NUMBER: EDV-804		ACCURACY: N/A	
JOB: 407174		RANGE: 3000-4000 PSI	
TARPON NUMBER: TARED-P-EDV804		TYPE: PSV	
CALIBRATION DATE: 01-May-07		CALIBRATION DUE: 01-May-08	
CALIBRATION DATA			
CRACK SET POINT	ACTUAL	FOUND	LEFT
0	0	0	0
N/A	N/A	N/A	N/A
3700 PSI	3700 PSI	N/A	3700 PSI
TEST EQUIPMENT USED			
SERIAL NO.	MAKE	MODEL NO.	CALIBRATION DATE
404643	CRYSTAL	5KPSIXP21	23-Feb-07
COMMENTS: The instrument was calibrated against laboratory standards that are either traceable to the National Institute of Standards and Technology, (NIST), National Research Council, (NRC), or are derived by approved ratio techniques.			
CALIBRATION TECHNICIAN: Andre Brochu			

SHIPPING DETAILS

TOTAL WIDTH- 10'-8" TOTAL LENGTH- 21'-4"
TOTAL HEIGHT- 12'-4" APPROX. WEIGHT- 14800 LBS

REV	DATE	DESCRIPTION	BY

RJV

GAS FIELD SERVICES.

4901- BRUCE RD. VEGREVILLE, ALTA

T9C-1C3

PHONE (780) 632-7774

FAX (780) 632 6820

TITLE: HUSKY OIL OPERATIONS

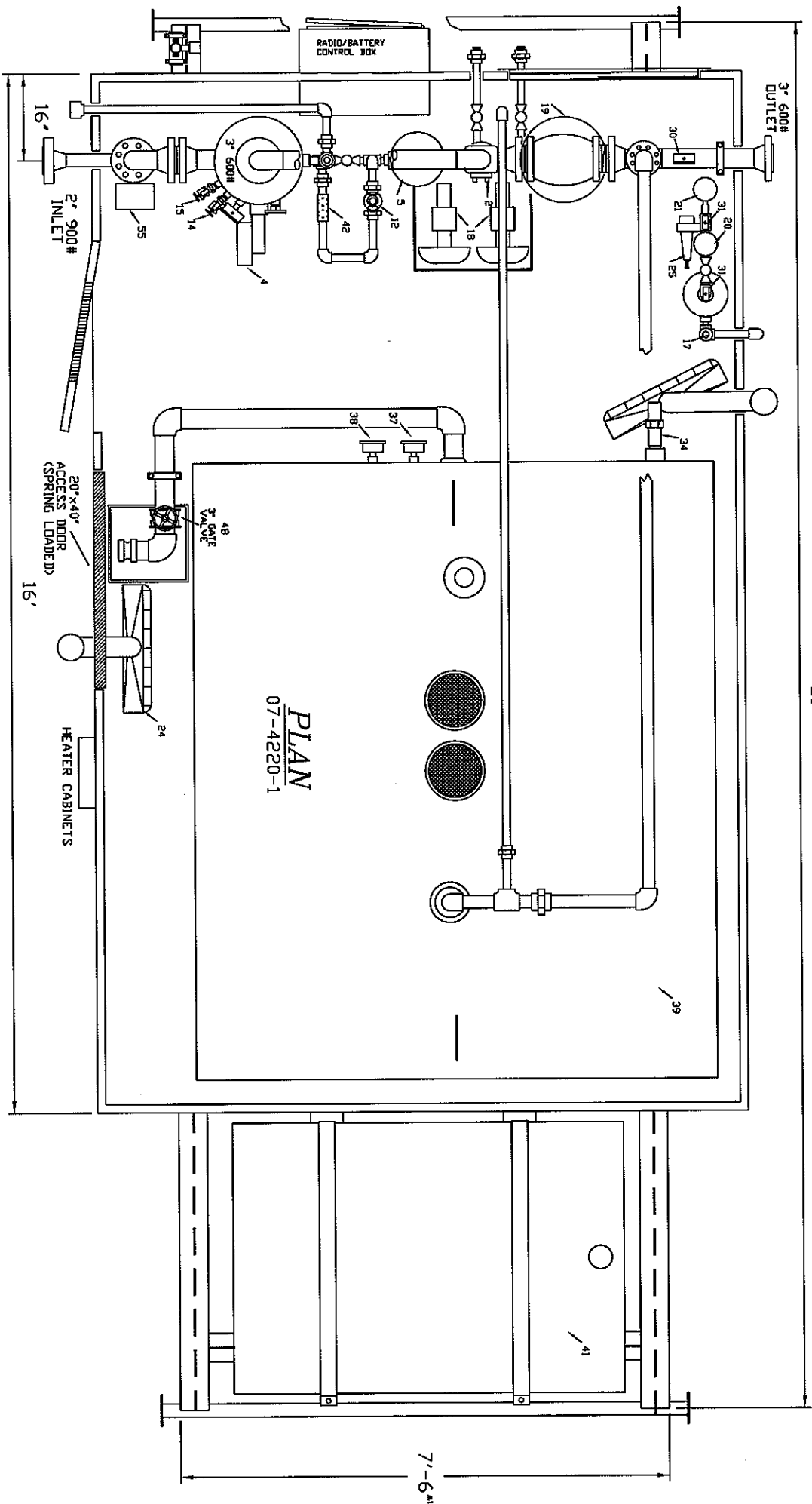
16"x7'6" S/S 600 ANSI SEPARATOR/METER
SKID UNIT, 3 PHASE CONTROLS, SCADA,
3" SENIOR METER RUN, 15,000 LITRE TANK
2" 900# INLET ESDV VALVE.

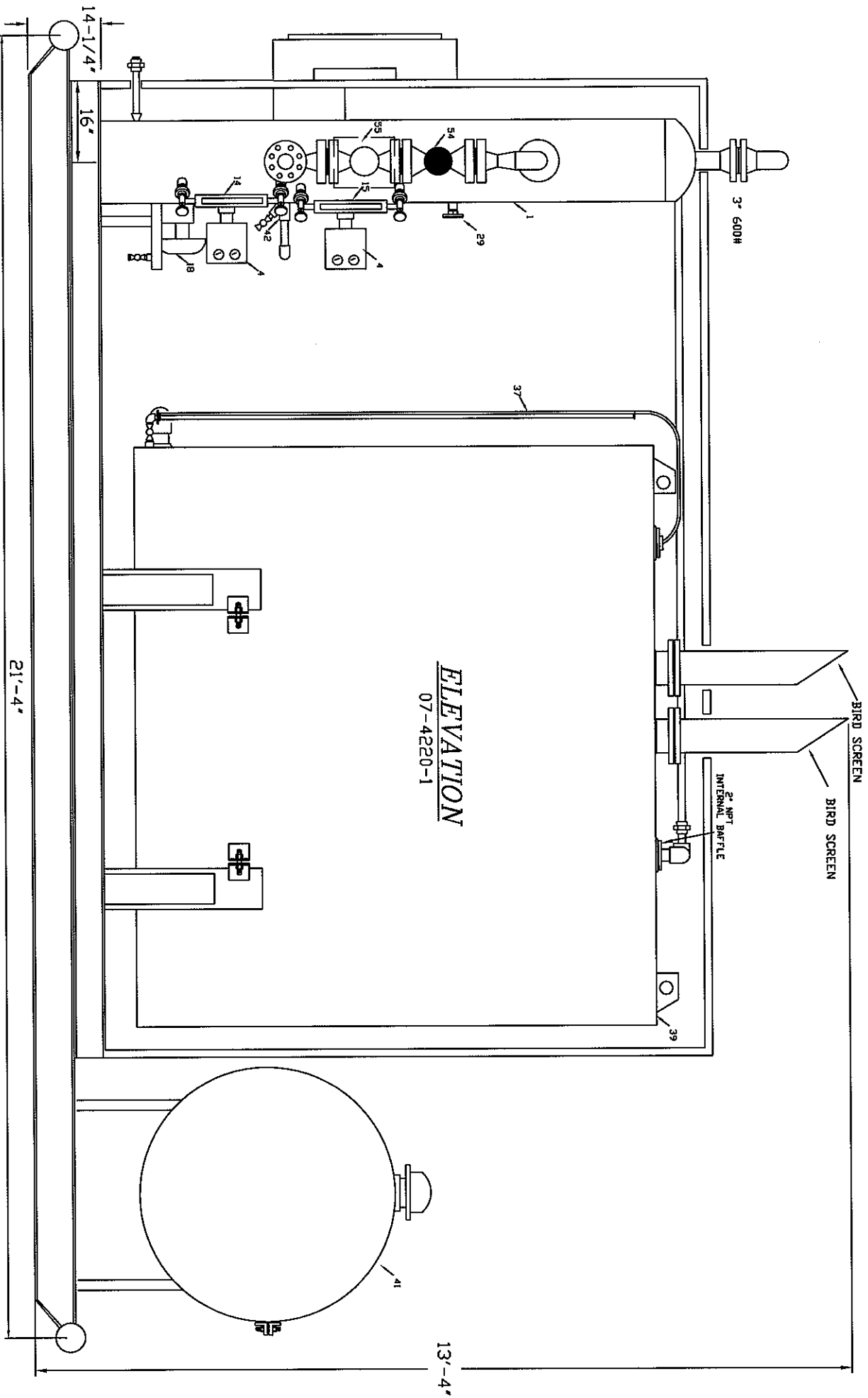
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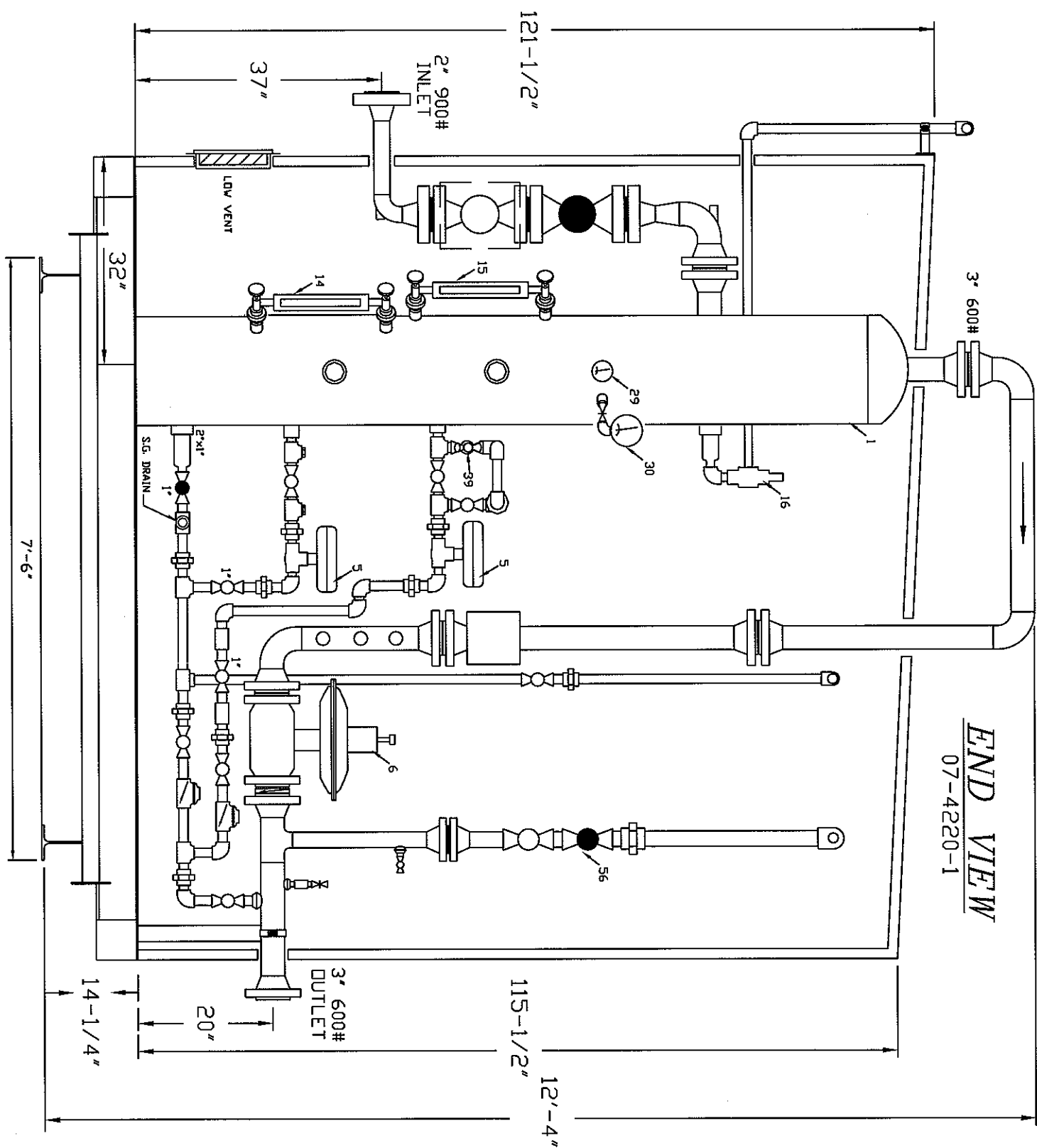
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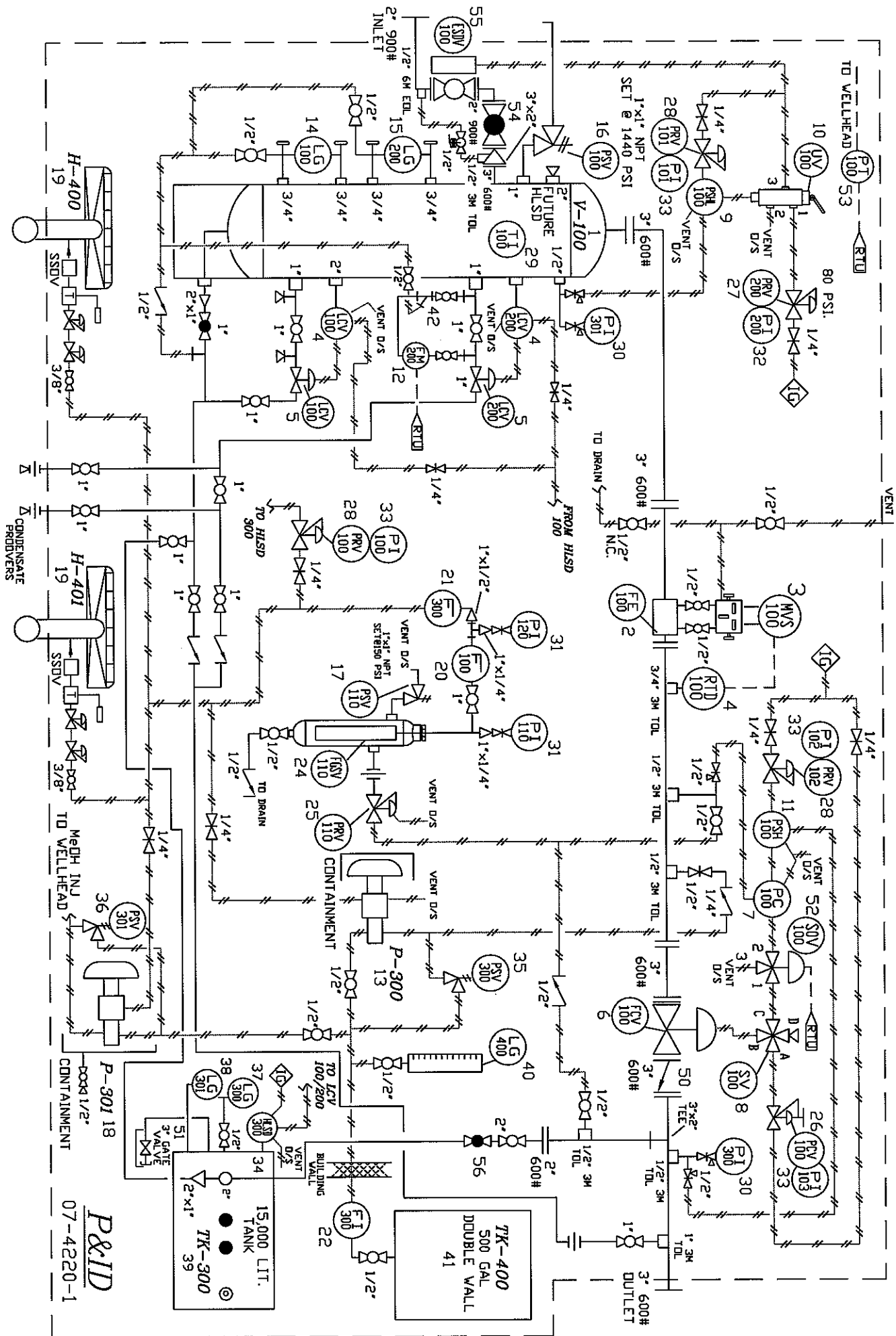
This drawing and the design it covers are confidential and shall shall not be disclosed in any manner, or used for any purpose, except with written consent of, R.J.V. Gas Field Services Ltd.

DWN. BY: SI DATE: NOV. 9/07 SCALE: NTS









EQUIPMENT & MATERIAL

TAG#	ITEM	QTY	DESCRIPTION
V-100	1	1	RJV 16"x7'6" s/s 600 ANSI, 1440 PSI, 3 PHASE VERTICAL MISTEX SEPARATOR c/w 1/16" CORROSION ALLOWANCE.
FE-100	2	1	NORTHSTAR 3" 600 ANSI SCH 40 (SENIOR) ORIFICE FITTING AGA FIG 30, 7 BETA RATIO, 3 TAPS- 1 3/4" & 2 1/2" NPT, c/w 1.304 SST ORIFICE PLATE/RETAINER, A071 668 OJA/
MVS-100	3	1	FISHER RDC 103 TRANSMITTER c/w RTD ASSEMBLY, 0-2000 PSI. STATIC PRESSURE, M-673-SDJ PGI 5-VALVE MANIFOLD, FM/CSA.
LC-100/200	4	2	FISHER 2" NPT TYPE L2 LEVEL CONTROL, LCC LOW TEMP., SNAP ACTING, FAILL CLOSED, c/w 1-7/8" x 12" PVC DISPLACER.
LCV-100/200	5	2	FISHER 1" NPT TYPE D2, LCC LOW TEMP., NACE SPEC., RATED 900# ANSI, 0-35 PSI SIGNAL, ADJUSTABLE 1/4"/3/8"/1/2" TRIM.
FCV-100	6	1	KIMRAY 3" 600# ANSI. RF., MOTOR VALVE, 1,500 PSI. MDP., STD. SERVICE, 2" INNER VALVE, CARBON STEEL BODY.
PC-100	7	1	FISHER TYPE 4150K-R PRESSURE CONTROLLER, DIRECT ACTING, 0/1500 PSI 316 STAINLESS STEEL BOURDON TUBE, RE-CONDITION
SV-100	8	1	CONANT 1/4" NPT MODEL 3861ALT MANUAL SELECTOR VALVE, 3-WAY SELECTOR/316 SST CONSTRUCTION.
PSHL-100	9	1	RE-CONC. FISHER TYPE 4660 HI-LQ PRESSURE PILOT, 0-1500 PSI. BOURDON TUBE, STANDARD, 1380 PSI RISING, 100 PSI FALLING.
UV-100	10	1	AMDT 1/4" NPT SWITCHING VALVE, MODEL #4057D025H2, STD. SERVICE, 125 PSIG. ALL PORTS, STD. SERVICE.
PSH-100	11	1	CVS 7970 PNEUMATIC PRESSURE PILOT, HIGH PRESSURE SET @ 700 RISING SENSOR, TWO POSITION, 3-WAY PILOT, AUTO RESET.
FM-200	12	1	WUFLD 1" x 1" NPT. TURBINE METER 5-50 USGPM FLOW RANGE, CAVEN OIL CL5100 METHANOL INJECTION PUMP, 3/8" PLUNGER.
P-300	13	1	PNEUMATIC MICRO VALVE, 7.9 GPD, HARD PACKING. 6000 PSI MWP. C/V PRESSURE REGULATOR & PRESSURE GAUGE.
LG-100	14	1	PENBURTHY MODEL 1TMS TRANSPARENT GAUGE GLASS, c/w 303J GAUGE COCKS, C/W 1/2" NPT DRAIN BALL VALVE.
LG-200	15	1	PENBURTHY MODEL 1RLS REFLEX GAUGE GLASS, c/w 303J GAUGE COCKS, C/W 1/2" NPT DRAIN BALL VALVE.
PSV-100	16	1	TAYLOR 1" MNPT x 1" FNPT, MODEL T-8200-1 SST BODY, CS BONNET & CAP, .128" ORIFICE, SET @ 1440 PSIG.
PSV-110	17	1	TAYLOR 1" MNPT x 1" FNPT, MODEL T-8200-1 SST BODY, CS BONNET & CAP, .128" ORIFICE, SET @ 150 PSIG.
P-301	18	1	CAVEN OIL CL5100 METHANOL INJECTION PUMP, 3/8" PLUNGER. PNEUMATIC MICRO VALVE, 7.9 GPD, HARD PACKING. 6000 PSI MWP. C/V PRESSURE REGULATOR & PRESSURE GAUGE.
H-400/401	19	2	CATADYNE BX24X24 24,000 BTU, 12 VDC, NATURAL GAS HEATER c/w STANDS, SSDV, REGULATORS, 25 FT CABLES, THERMOSTAT, GRILL, VENT HOOD & ELECTRICAL AS PER CEC REGULATIONS.
F-100	20	1	WATERGUARD 1" NPT MODEL WGF12100 FILTER HEAD ASSEMBLY, MODEL VG40510SP WATER REMOVING FILTER.
F-300	21	1	HEADLINE 1/2" NPT. MODEL #360A c/w P/N 25-64-70C ELEMENTS
FI-300	22	1	1" NPT. FLEET GUARD METHANOL FILTER/SPIN ON CARTRIDGE.
V-110	23	1	RJV 8"x30" s/s FUEL GAS SCRUBBER 975 PSI DESIGN PRESS.
FGSV-110	24	1	RJV 2"x1" FUEL GAS SHUT OFF VALVE c/w DEMISTER WRAP
PRV-110	25	1	BELGAS 1" NPT TYPE P627 REG. CARBON STEEL CONST. 1/8" ORIFICE, 70-150 PSI SPRING RANGE, SET @ 100 PSIG.
PCV-100	26	1	BELGAS 1/4" NPT TYPE P50 REGULATOR, STD SERVICE, 0-60 PSI SPRING RANGE. MANUAL HAND WHEEL.
PRV-200	27	1	BELGAS 1/4" NPT TYPE P50 REGULATOR, STD SERVICE, 0-120 PSI SPRING RANGE. SET 80 PSI. (UV-100 SUPPLY)
PRV-100/101	28	3	BELGAS 1/4" NPT TYPE P50 REGULATOR, STD SERVICE, 0-60 PSI. RANGE (PSHL-100, HUSD-300, PSH-100)
TI-100	29	1	TREND MOD 33, 3" DIAL, DS, -40/120°F, c/w 304 SST TOW, 4" STEM ON SEPARATOR.
PI-300/301	30	2	WIKA #233.54 4" DIAL 1/2" NPT BOT CONN. LIQUID FILLED, DS, 0/1500# PSI c/w AGCO #M91C-44 1/2" NPT ISOLATION/BLEED VALVES, (SEPARATOR & OUTLET PIPING).
PI-110/120	31	2	WIKA #233.53 2 1/2" DIAL 1/4" NPT BOT CONN. LIQUID FILLED, DS, c/w AGCO HSRDC-2 1/4" ISOLATION/BLEED VALVES
PI-200	32	1	WIKA #233.53 2 1/2" DIAL 1/4" NPT BOT CONN. LIQUID FILLED, 0/200 PSI (FUEL GAS SCRUBBER/ON DOWNSTREAM OF FILTER).
PI-100/101	33	4	WIKA #233.53 2 1/2" DIAL 1/4" NPT BOT CONN. LIQUID FILLED, 0/100 PSI (UV-200 IG REGULATOR).
HLSD-103	34	1	WIKA #233.53 2 1/2" DIAL 1/4" NPT BOT CONN. LIQUID FILLED, 0/60 PSI.
HLSD-300	34	1	VELLMARK 2" NPT SNAPTRDOL 7400 SERIES PNEUMATIC LEVEL SWITCH, STANDARD SERVICE, c/w PNEUMATIC MICRO VALVE.
PSV-300	35	1	NUPRO 1/4" #SS-4R3AS-EP/177-R3A-KI-C, SET @ 1,440 PSIG.
PSV-301	36	1	NUPRO 1/4" #SS-4R3AS-EP/177-R3A-KI-C, SET @ 3,700 PSIG.
LG-300	37	1	RJV 5700-84-CVR METH. TANK METERING/LEVEL GAUGE BOARD
LG-301	38	1	RJV 5700-4-CVR METH. TANK METERING/LEVEL GAUGE 4IN.
TK-300	39	1	WESTEEL 15,000 LITRE DOUBLE VALLED ABOVE GROUND TANK c/w 2-6" 150 ANSI VENT STACKS AND 3" NPT PUMP OUT/DRAIN
LG-400	40	1	RJV #5428 METERING/LEVEL GAUGE, 48" VISIBLE LENGTH.
TK-400	41	1	WESTEEL 500 GAL DOUBLE WALL METH. STORAGE TANK.
	42	1	ALBERTA STRAINER 1" NPT. FIG# YS600, 1,480 PSI. WP.
	43	1	FLOMORE 1/4" NPT #A-676 BALL CHECK (METHANOL INJ. POINT).
	44	3	PLAINSMAN 1/2" NPT 3000# CB-50 BALL CHECK.
	45	2	HAYCO 1" FNPT 3,000# MODEL CSPI050AB, SWING TYPE CHECK.
	46	16	HAYCO 1/2" NPT 2000# BHI-F0520-B BALL VALVES.
	47	13	HAYCO 1" NPT 2000# BHI-R10520-B BALL VALVES.
	48	8	AGCO 1/4" NPT 6000# #H5RDC-2 NEEDLE VALVES.
	49	5	AGCO 1/2" NPT 6000# #H7VC-44Q NEEDLE VALVES.
	50	1	WHEATLEY 3" 600# ANSI FIG# 910-035 144101 SWING CHECK
	51	1	3" CLIP GATE VALVE
SDV-100	52	1	ASCO 1/4" NPT RED HAT SOLENOID, P/N EF8314G301, 24V DC
PT-100	53	1	ROSEMOUNT 200# CASING PRESSURE TRANSMITTER, 1500 PSI, RANGE, 1/2" FNPT CONNECTION, CALIBRATION 0-3000 PSI.
PCV-100	54	1	PANAM 2" 900# FIG# 215-FCB2, MANUAL GLOBE VALVE, CS. BODY
ESDV-100	55	1	RADIUS ACTUATOR c/w 2" 900# MERIDIAN BALL VALVE, AN05 BODY
	56	1	RADIUS AS060A ACTUATOR, FAIL CLOSED, SUPPLY 80 PSI.
	57	1	PANAM 2" NPT 800# FIG#F6/B38 GLOBE VALVE, STD. TRIM
	58	1	HAYCO 1" NPT 800# FIG#F6/B38 GLOBE VALVE, STD. TRIM
		1	NAYCO 2" NPT 2000# BHI-F02520-B BALL VALVES.
			TUBING- 3/8" & 1/2" OD .035 WT STAINLESS STEEL.
			TUBE FITTINGS- SWAGelok STAINLESS STEEL.
			FR PRESSURE SENSING LINES & FG TAKE-OFFS SHALL BE 1/2" OD
			SKID- RJV 10"x21'4" c/w 6"QB-2 CHANNEL (IRON/PERIPHERY), 6"R15
			TANK BEAMS) 6"QB-2 CHANNEL (IRON/CHECKER FLOORING SUPPORTS)
			8"R15 WF BEAM FLOOR RUNNERS
			3/16" CHECKERED PLATE(FLOORING), 3" POLYURETHANE
			UNDERSKID INSULATION AND 3 1/2" PULL BARS EACH END
			BUILDING- 10'x16'x10'-9'6" URETHANE INJECTED PANEL TYPE c/w
			SHED ROOF, 30 GAUGE PREPAINTED STEEL EXTERIOR WHITE WALLS
			R12 INSULATION VALUE 30 GAUGE WHITE STEEL INTERIOR
			DOOR- 3'X7' URETHANE INJECTED PANEL TYPE, c/w PANIC LOCK
			WEATHER STRIPPING, IVG WINDOW, DOOR SWEEP, DOG DOOR.
			WINDOW- 1, 36'X36" DG SLIDER c/w SCREENS. IVG WINDOW
			VENTS- 2, 12'X12" INSULATED ALUMINUM LOUVRED c/w SCREENS.
			FLANGES- SA-105N 600 ANSI 2" SCH 80, & 3" SCH 40.
			WELD FITTINGS- SA-234-WPB 2" SCH 80 & 3" SCH 40.
			SCREWED FITTINGS- SA-105N 3000# FS.
			SCREWED UNIONS- SA-105N 3000# FS.
			O-LETS- SA-105N 3000# FS.
			PIPE AND NIPPLES- SA-106 GR B SEAMLESS.
			WELDED 2", SCH 80, & 3" SCH 40.
			THREADED PIPE/NIPPLES/SVAGES- 150#- SCH 80, 600#- SCH 160
			BOLTING- ASTM A193 GR B7 STUDS/ASTM A194 GR 2H NUTS.
			GASKETS- 304 SST FLEXATALLIC GRAPHITE.
			ALL PIPING DESIGNED TO B31-3 CODE
			WELDED PIPING SHALL BE SUBJECTED TO 10% RADIOGRAPHY.
			WELDED PIPING SHALL BE HYDRO-TESTED TO 2160 PSI.
			ALL VENTING CONTROLS AND INSTRUMENTS SHALL BE VENTED TO
			SKID EDGE AND ALL CONTROLS OPERATIONALLY AIR TESTED.
			ALL METAL SURFACES SHALL BE MECHANICALLY CLEANED TO
			SSPC-SP-2, 1 COAT OF ZINC CHROMATE PRIMER AND 1 FINISH
			COAT OF ENAMEL PAINT SHALL BE APPLIED AS FOLLOWS-
			CHECKERED PLATE FLOORING- WARM GREY
			STEEL SKIDS, EQUIPMENT, PIPING & TANKS- WARM GREY
			ANTENNA WINCH TOWER

07-4220-1

DESIGN DATA

DESIGN & FABRICATE TO ASME SECTION VIII, DIV. I, 2001 EDITION

DESIGN PRESSURE: 10,204 KPA (1480 PSI)

HYDROTEST: 15,307 KPA (2220 PSI) LONG'L JOINT EFF: 100%

RADIOGRAPHY-CIRC. SEAMS-SPOT UW11(a)5(b) CORR. ALLOWANCE: .063" (1.6mm)

RADIOGRAPHY-LONG SEAMS- SMLS LIMITED BY: SHELL

P.W.H.T: OPTIONAL-60 MINUTES @ 1150°F (621°C) FLANGES: SA-105

M.A.W.P: 10,204 KPA (1480 PSI) NOZZLES: SA-106-B

HEADS: SA-516-70 MIN: 20.63mm NOM: 22.23mm STUDS: 193-B7

SHELL: SA-106-B NOM: 21.4mm NUTS: 194-2H

MIN. DESIGN METAL TEMP: -29C (-20F) MISC. PLATE: SA-36

EXEMPT FROM IMPACT TEST REQUIREMENTS AS PER UG 20(f)

DESIGN TEMP: 38C (100F)

WELD FITTINGS: SA-234-WPB/SA-105

COUPLINGS (T.O.L): SA-105

INTERNAL: SA-36

PRE-HEAT: 10C (50F)

SHIPPING WT: 685KG (1507lbs)

CAPACITY: .262 CUBIC METER (9.268 CU FT)

PAINT:

CRN:



GAS FIELD SERVICES LTD.

4901- 47 ST VEGREVILLE, ALTA

T9C-1C3

PHONE (780) 632-7774

FAX (780) 632 6820

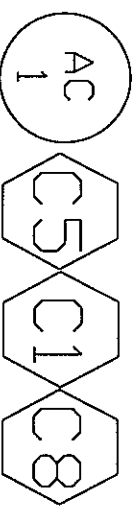
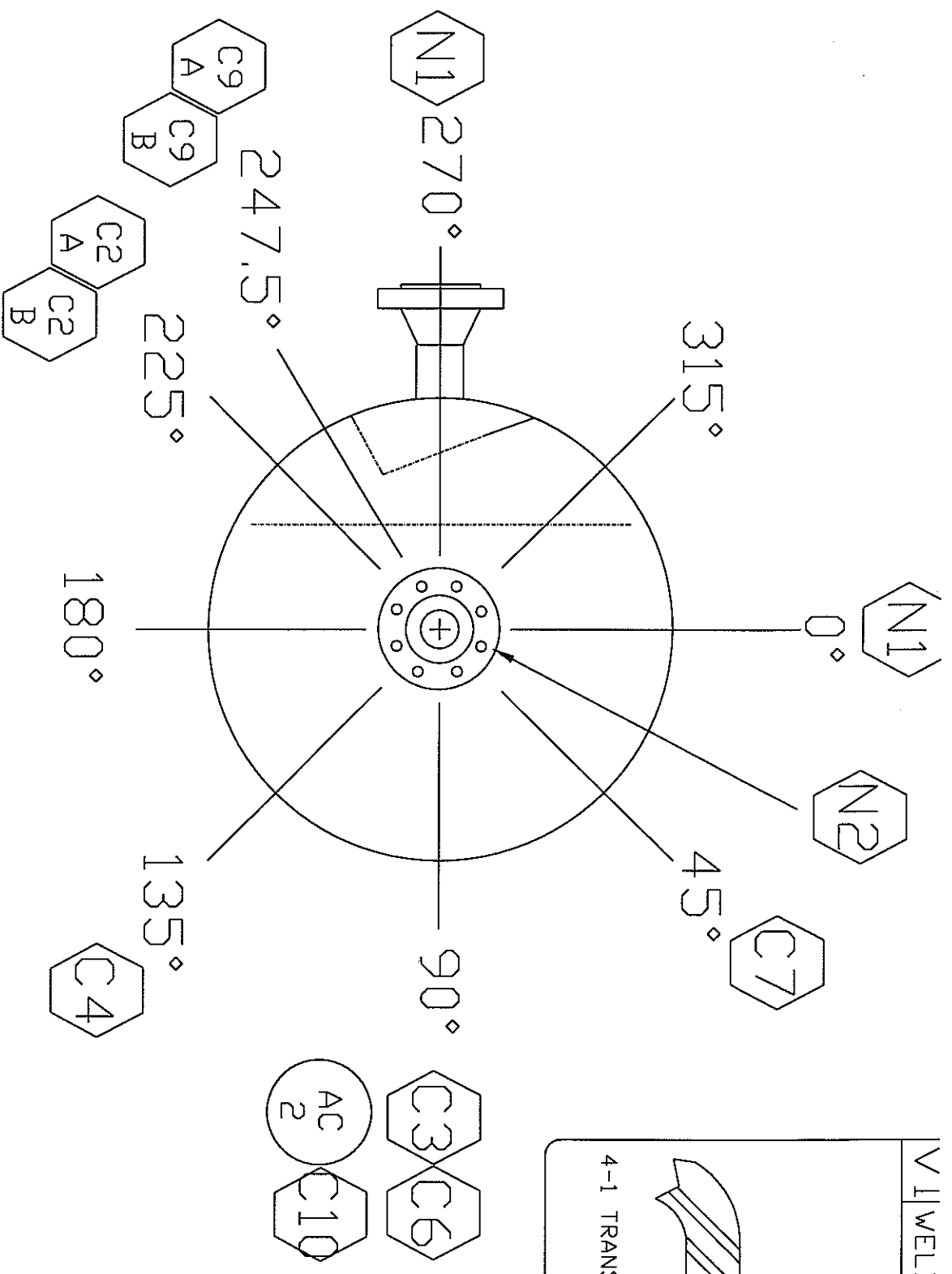
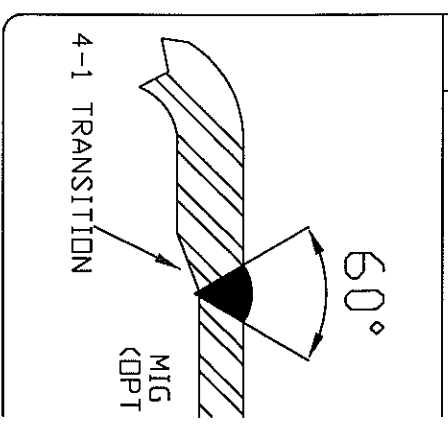
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3 PHASE VERTICAL SEPARATOR

DWG. # V01-381

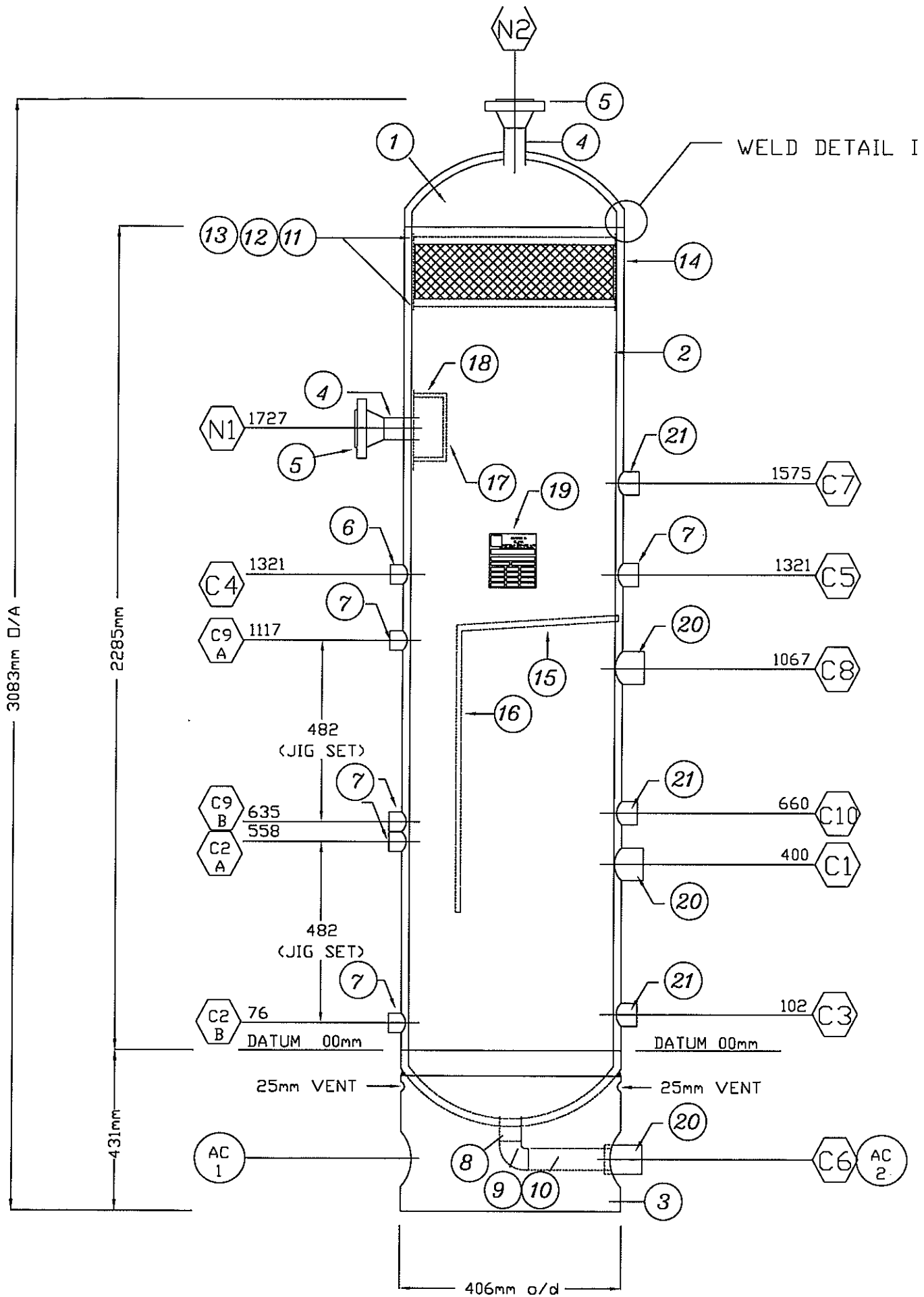
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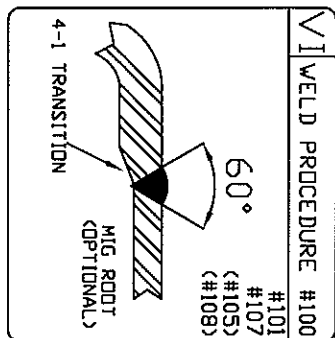
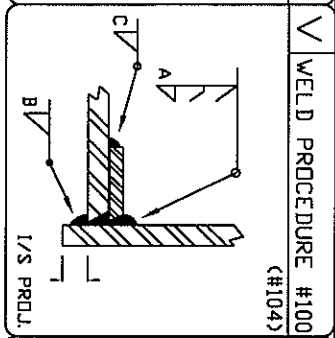
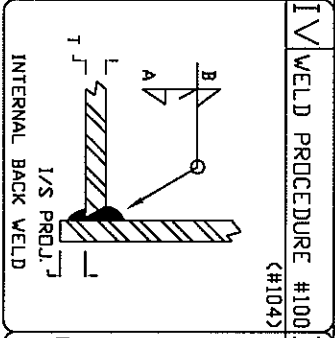
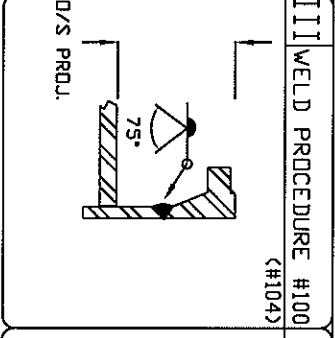
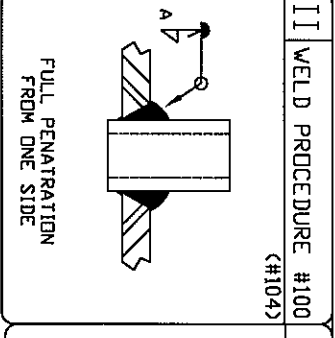
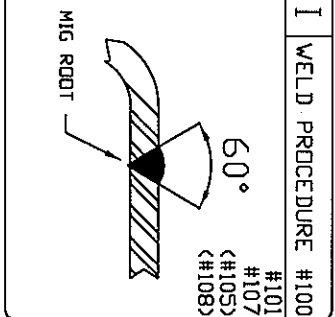
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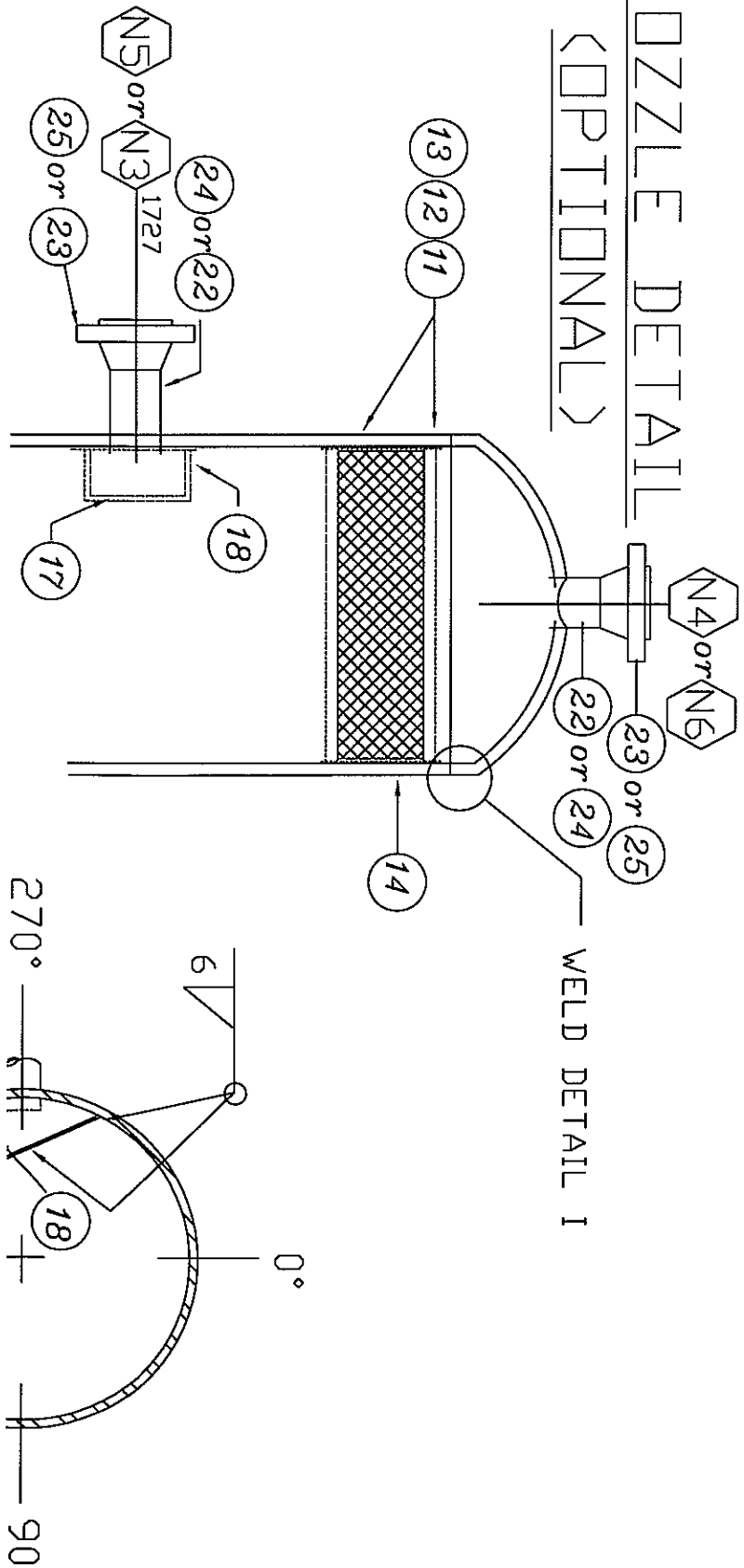
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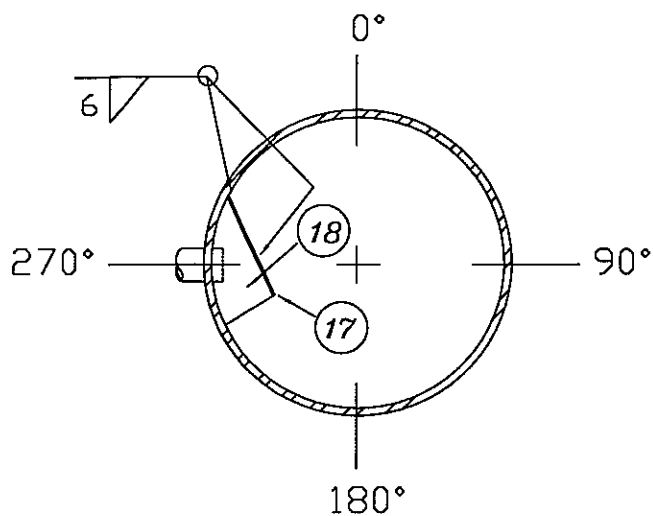


ELEVATION

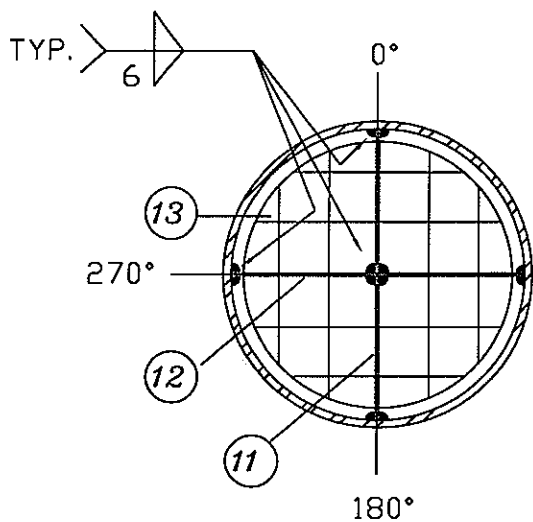
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	#101 #107 (#105) (#108)	(#104)	(#104)	(#104)	(#104)	#101 #107 (#105) (#108)
						
						
						
						
						
						

NOZZLE DETAIL (OPTIONAL)

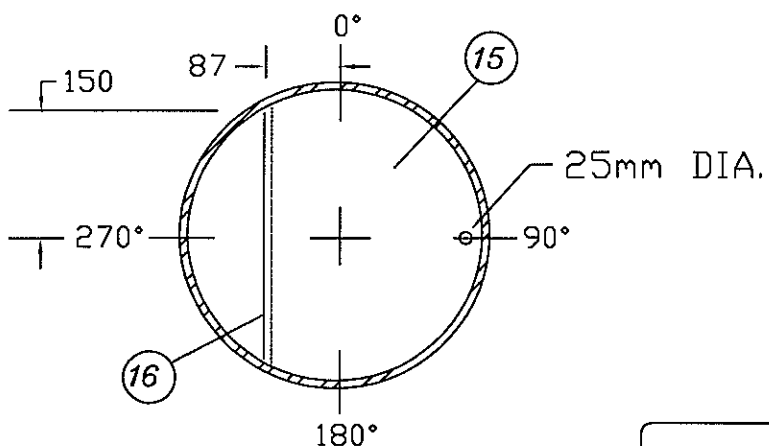




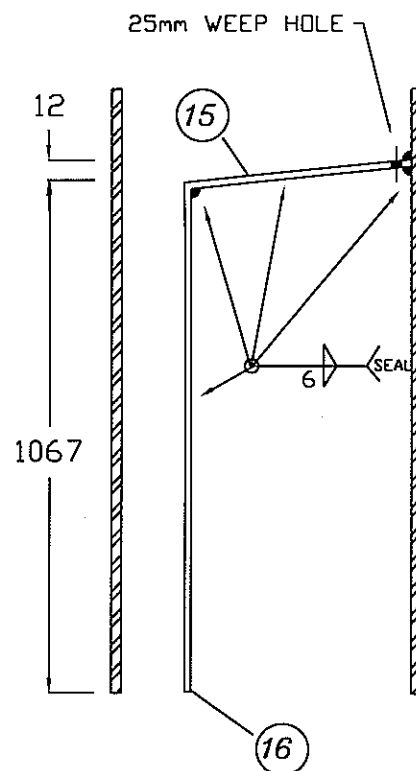
DETAIL-INLET DEFLECTOR



DETAIL-MISTEX SUPPORT



DETAIL-FLOAT BAFFLE



ELEVATION
FLOAT BAFFLE

BOILER BRANCH APPROVAL STAMP

WARNING!

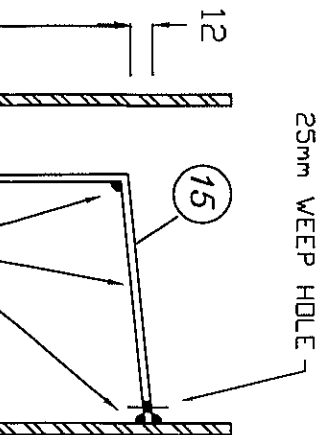
THIS DRAWING AND THE DESIGN IT COVERS ARE CONFIDENTIAL AND SHALL NOT BE DISCLOSED TO OTHERS OR REPRODUCED IN ANY MANNER OR USED FOR ANY PURPOSE WHATSOEVER EXCEPT BY WRITTEN CONSENT OF RJV GASFIELD SERVICE LTD.

NOZZLE SCHEDULE

MARK	SIZE	RATING	TYPE	SERVICE	NOZZLE BORE	ITEM	PROJN I/S	WELD DETAIL	WELD SIZE	REMARKS
N1	60.3mm	600#	RFWN	INLET	SCH160	4,5	16mm 135mm	III, IV	10mm 6mm	
N2	60.3mm	600#	RFWN	OUTLET	SCH160	4,5	16mm 150mm	III, IV	10mm 6mm	
N3	88.9mm	600#	RFWN	INLET(OPTIONAL)	SCHXXS	22,23	13mm 200mm	III, IV	10mm 6mm	
N4	88.9mm	600#	RFWN	OUTLET(OPTIONAL)	SCHXXS	22,23	6mm 200mm	III, IV	10mm 6mm	
N5	114.3mm	600#	RFWN	INLET(OPTIONAL)	SCHXXS	24,25	25mm 200mm	III, IV	10mm 6mm	
N6	114.3mm	600#	RFWN	OUTLET(OPTIONAL)	SCHXXS	24,25	6mm 200mm	III, IV	10mm 6mm	
C1	60.3mm	6000#	CPLG	L.L.G. (WATER)INSPECTION		20	6mm 50mm	IV	10mm 6mm	
C2A,B	26.7mm	6000#	CPLG	L.L.G. (WATER)		7	6mm 25mm	IV	10mm 6mm	
C3	33.4mm	6000#	CPLG	LIQUID OUT(WATER)		21	6mm 25mm	IV	10mm 6mm	
C4	21.4mm	6000#	CPLG	P.PRESSURE INDICATOR		6	6mm 22mm	IV	10mm 6mm	
C5	26.7mm	6000#	CPLG	TEMP. INDICATOR		7	6mm 25mm	IV	10mm 6mm	
C6	60.3mm	6000#	CPLG	DRAIN	SCH160	8,9,10,20	SET 50mm	IV	10mm 6mm	
C7	33.4mm	6000#	CPLG	P.S.V.		21	6mm 25mm	IV	10mm 6mm	
C8	60.3mm	6000#	CPLG	L.L.C. (OIL)INSPECTION		20	6mm 50mm	IV	10mm 6mm	
C9A,B	26.7mm	6000#	CPLG	L.L.G. (OIL)		7	6mm 25mm	IV	10mm 6mm	
C10	33.4mm	6000#	CPLG	LIQUID OUT (OIL)		21	6mm 25mm	IV	10mm 6mm	

BILL OF MATERIALS

ITEM	QTY.	DESCRIPTION	MAT'L
1	2	406mm o/d X 22.23 NOM. SMLS HEAD 21 S.E. 20.63 MIN	SA-516-70
2	1	406mm o/d X 22.85mm SMLS PIPE B.B.E. 21.4 NOM.	SA-106-B
3	1	406mm o/d X 35.6mm LG. 9.5mm WALL ERV BASE	SA-53-B
4	2	60.3mm X 102mm LG. B.D.E. SMLS PIPE SCH 160	SA-106-B
5	2	60.3mm 600 ANSI RFWN FLANGE SCH 160 BORE	SA-105
6	1	21.3mm, 6000# FULL COUPLING	SA-105
7	5	26.7mm, 6000# FULL COUPLING	SA-105
8	1	60.3mm X 76mm LG. B.D.E. SMLS PIPE SCH 160	SA-106-B
9	1	60.3mm 90 BUTT WELD ELBOW SCH 160	SA-234-VPB
10	1	60.3mm X 102mm LG. B.D.E. SMLS PIPE SCH 160	SA-106-B
11	2	360mm LG. X 6mm THK X 25.4mm W. MESH SUPPORT	SA-36
12	4	172mm LG. X 6mm THK X 25.4mm W. MESH SUPPORT	SA-36
13	2	360mm o/d X 25.4mm W. MESH PAD SUPPORT GRIDS	SA-36
14	1	360mm o/d X 152mm THK MISTEX PAD	304SS
15	1	360mm o/d X 270mm LG. X 6mm THK FLOAT BAFFLE	SA-36
16	1	318mm o/d X 106.7mm LG. X 6mm THK FLOAT BAFFLE	SA-36
17	1	178mm LG X 178mm W X 6mm THK INLET DEFLECTOR	SA-36
18	2	178mm LG. X 130mm W X 6mm THK INLET DEFLECTOR	SA-36
19	1	NAME PLATE & 165mm LG. X 152mm WIDE CHANNEL	SA-36
20	3	60.3mm, 6000# FULL COUPLING	SA-105
21	3	33.4mm, 6000# FULL COUPLING	SA-105
22	2	88.9mm X 152mm LG. B.D.E. SMLS PIPE SCH XXS	SA-106-B
23	2	88.9mm 600 ANSI RFWN FLANGE SCH XXS BORE	SA-105
24	2	114.3mm X 152mm LG. B.D.E. SMLS PIPE SCH XXS	SA-106-B
25	2	114.3mm 600 ANSI RFWN FLANGE SCH XXS BORE	SA-105





TO: RJV GASFIELD SERVICE LTD
4901 47TH ST (BRUCE RD) BOX 295
VEGREVILLE AB
T9C 1C3

Registered: 2002/09/16
Journal #: 29589
Account #: 24578

Attn: WES MARKOWSKY

Re: RJV GASFIELD SERVICE LTD

DESIGN REGISTRATION

C.R.N.

P7217.21

Drawings / Documents	Description			
3 PHASE SEPARATOR V01-381 REV 0 REGISTERED	MDMT	MAWT	MAWP	EXT PRESS
	-----	-----	-----	-----
	-20 F	100 F	1480 psi	
Code: ASME Sec VIII Div 1, 01 Ed.				

Remarks: This design has been registered as noted above. An invoice for survey will follow in the amount of \$ 60.00

dc

Yours truly,

R. TUAZON

Design Surveyor

Authorized Inspector to be given travel sheet prior to construction so that he can indicate hold points with an asterik (*)

Hold points established - Sign & Date

DEC 0 4 2007

(Authorized Inspector)

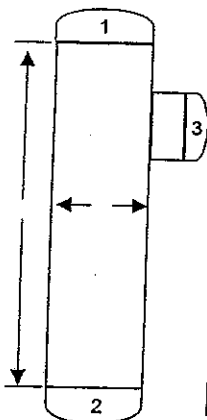
Vessel Serial # 11373

DWG # 101-381

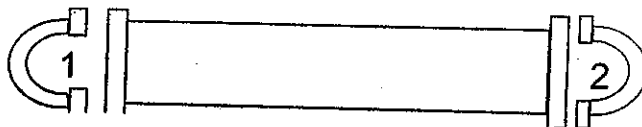
(A) # 584719

Vessel Title 16" 3 Phase Separator CRN # P7217.2

ITEM	COMMENTS	AUTH. INS. HOLD POINTS	DATE FUNCTION COMPLETE & INSPECTORS INITIALS	
			QC INSPECTOR	AUTHORIZED INSPECTOR
APPROVED DRAWING		✓	NOV 06 2007 DC	✓ DEC 0 4 2007
MATERIAL CHECKED AGAINST DRAWING, MATERIAL LIST			NOV 06 2007 DC	
MILL TESTS CHECKED		✓	NOV 06 2007 DC	✓ DEC 0 4 2007
VESSEL LAYOUT			NOV 12 2007 DC	
NOZZLES & FITTING	ORIENTATION		NOV 12 2007 DC	
	RATINGS	✓	NOV 12 2007 DC	✓ DEC 0 4 2007
FIT UP	NOZZLES & FITTINGS		NOV 12 2007 DC	
	SHELL & HEAD		DEC 06 2007 DC	
INTERNALS (tray, baffles, etc.)			DEC 0 4 2007 DC	
INTERNAL INSPECTION		(*)	DEC 0 4 2007 DC	✓ DEC 0 4 2007
WELD SIZES		✓	JAN 11 2008 DC	✓ JAN 2 4 2008
WELDERS I.D.			JAN 11 2008 DC	
EXTERNAL AFTER COMPLETION OF ALL WELDING		✓	JAN 11 2008 DC	✓ JAN 2 4 2008
RADIOGRAPHS		✓	JAN 07 2008 DC	✓ JAN 2 4 2008
OTHER N.D.E.				
IMPACT TESTS				
PWHT CHART CHECKED				
NAMEPLATE		✓	JAN 11 2008 DC	✓ JAN 2 4 2008
HYDROSTATIC TEST		(*)	JAN 2 4 2008 @	✓ JAN 2 4 2008
DATA REPORT		(X)	JAN 2 4 2008 @	✓ JAN 2 4 2008



		SPECIFICATION	HEAT NUMBER	THICKNESS
SHELL	C1	SA-106-B	6304294	21.44 mm
	C2			
	C3			
HEADS	1	SA-516-70	24736	20.63 mm
	2	SA-516-70	24736	20.63 mm
	3			
REPADS	1			
	2			
	3			
		SPECIFICATION	SIZE	SCHEDULE
NOZZLES		SA-106-B	3"	sch. XXS
FITTINGS		SA-105	1/2", 3/4", 1", 2"	#6000 cplg.
TUBES				



CONTRACT No.: 2006BGEL01		包头钢铁 (集团) 有限责任公司 BAOTOU IRON AND STEEL (GROUP) CO., LTD. Hexi Industrial Zone, Kun Distract, Baotou, Inner Mongolia, China		CERTIFICATE NO.: BSC001/2006												
SHIPPER: Baotou Steel International Economic and Trading Co., Ltd.		无 缝 钢 管 质 量 证 明 书 QUALITY AND TEST CERTIFICATE ORIGINAL 16" X 0.844" wall		TOTAL QUANTITY: 482.722MT												
PURCHASER: Eldon Development Ltd. (LAI WU GROUP) 42/F., Office Tower, Convention Plaza, 1 Harbour Road, Wanchai, Hong Kong		SHIPPING MARKS: LW WSC COMMODITY: CARBON SEAMLESS PIPE SPEC.: ASTM A106B/ASME SA 106B SIZE: OD 16" X 0.844" WALL THICKNESS X 7.5FT OD 16" X 0.844" WALL THICKNESS X LESS THAN 7.5FT		PACKING: Binding together three pieces per bundle												
DESCRIPTION OF GOODS: CARBON SEAMLESS PIPE UNDER CONTRACT NO. 2006BGEL01 (1) 16" O.D. X 0.844" W.T. X 7.5FT (2) 16" O.D. X 0.844" W.T. X LESS THAN 7.5FT		HEAT NO.: BUNDLE NO.: BUNDLE WEIGHT: MADE IN CHINA														
		Chemical Compositions(%)		Mechanical Properties												
Heat No.	Specification	Quantity	C	MN	S	P	SI	CR	CU	MO	NI	V	TS (Mpa)	YS (Mpa)	EL (%)	
6204801	16 0.844	225.06	0.200	0.550	0.016	0.011	0.270	0.036	0.008	0.005	0.008	0.005	480	240	33	
6104585	16 0.844	293.31	0.180	0.530	0.015	0.019	0.270	0.019	0.008	0.005	0.008	0.005	515	325	28	
6601454	16 0.844	355.3	0.190	0.540	0.007	0.012	0.260	0.018	0.008	0.005	0.009	0.005	505	300	27.5	
6704635	16 0.844	446.73	0.230	0.500	0.007	0.017	0.240	0.015	0.005	0.005	0.009	0.005	510	340	28	
6304294	16 0.844	296.23	0.230	0.560	0.004	0.016	0.300	0.022	0.010	0.005	0.009	0.005	510	325	27.5	
6704637	16 0.844	377.88	0.210	0.520	0.006	0.019	0.300	0.010	0.005	0.005	0.009	0.005	510	340	28	
6304295	16 0.844	377.24	0.180	0.530	0.009	0.014	0.260	0.024	0.009	0.005	0.016	0.005	480	260	30.5	
		2371.75	482.722													
		Technical Testing		Rolling process		Eddy Current Test										
Dimension Check	Surface Quality	Hydrostatic	Flattening Test	Bending Test	Hot rolling	OK	OK	OK								
OK	OK	5.8 (Mpa)	OK	OK	OK	OK	OK	OK								
Conclusion: The above mentioned material has been made in accordance with B-2004 Inspector: [Signature] Date: Sept. 1, 2006																

NOV 22 2006

FABRICATION & ENGINEERING

RJV Gasfield
4901-47 Street
Vegreville
T9C 1C3

AB

Date: **October 25, 2007**

These items shipped on our sales order:
S22116

Material Certification Cover Sheet

Attention: Quality Control Manager

Subject: Customer P.O.: 2493

Please find the enclosed Documents & Reports covering items supplied, as detailed below, for the above noted purchase order.

[illegible]

1
18
29

We Certify that the conditions stated below have been met as applicable.

The above items were formed to meet the requirements of ASME Section VIII, Division 1, UCS 79 (d)

Tack welds were welded using procedures and welders qualified to ASME Section IX.

Parts are supplied and identified in accordance with ASME Section VIII, Div. 1, Para UG 11 (b).

Shells Cold formed NO

Stress relieved NO

Hot Formed Above 900°F YES

Yours truly,

Chris Adams

Chris Adams
Q.C. Documentation



OCT 26 2007

An Affiliate of Canadian Erectors Limited

FABRICATION & ENGINEERING

SHIP TO

[illegible]

CUSTOMER P.O. NO.	2493
CESSCO W.O. NO.	S22116
DATE CERT. ORIGINATED	25-Oct-07

[illegible]

The chemical and physical properties as indicated on the attached report are the results of the Mill Tests of the raw material used in the manufacture of these products and are certified to meet only the minimum requirements of the ASME and ASTM specifications for this material

- | | | | |
|-------------------------------------|--|-------------------------------------|---|
| ☒ | The items listed above were formed in strict accordance with all applicable requirements of the ASME Boiler and Pressure Vessel Code Section VIII, Div 1. | ☐ | We hereby certify that these heads were heated to 1950°F and water quenched in strict accordance with all applicable specifications |
| ☒ | We hereby certify that these heads were hot formed at the required normalizing temperature and air cooled, in accordance with all applicable specifications. | ☐ | We hereby certify that these heads were heated to 1950°F and rapid air cooled in strict accordance with all applicable specifications |
| ☐ | We hereby certify that these heads were cold formed in compliance with ASME Boiler and Pressure Vessel Code, Section VIII, Div. 1 paragraph UCS - 79 (d). | ☒ | We hereby certify that these heads comply with tolerances of UG - 81 of ASME Section VIII, Div. 1. |

HOT FORMING (NORMALIZING) TEMP. OF 1650° F IS HELD FOR 1 HOUR/INCH OF THICKNESS PRIOR TO FORMING

WE HEREBY CERTIFY THAT THIS REPORT COVERING THE ABOVE AND ATTACHED INFORMATION IS TRUE AND CORRECT AS SHOWN AND CONTAINED IN OUR RECORDS.

Chris Adams

Chris Adams
QUALITY CONTROL

INSPECTION & TEST PLAN

CUSTOMER: RJV Gasfield	JOB NO: S22116
DESCRIPTION : HEADS	TAG NO:
PCS 16" OD x 7/8"nom .812"min 2:1 S.E. 2" S.F.	P.O.NO: 2493
	PAGE NO:

INSP. POINT	INSPECTION, EXAMINATION OR TESTING INSTRUCTIONS AND ACCEPTANCE CRITERIA				CESSCO				
					B.H.N	SIGN	DATE	LOG NO.	MIN THK
1	MATERIAL RECEIVED, INSPECTION COMPLETED						10/22/07	26576	830
2	MILL TEST REPORTS CHECKED AND TRACEABLE						✓	✓	838
3	CHECK HEAD FOR DEFECTS						✓	✓	838
4	VERIFY ALL STAMPING ON HEAD						✓	✓	838
5	CIRCLE STAMPING ON HEAD						✓	✓	839
6	BEVEL: IN:								

* NOTE: MIN THK DETERMINED AFTER HOT FORMING.

REMARKS:

INSPECTION & TEST PLAN

CUSTOMER: RJV Gasfield	JOB NO: S22116
DESCRIPTION : HEADS	TAG NO:
PCS 16" OD x 7/8"nom .812"min 2:1 S.E. 2" S.F.	P.O.NO: 2493
	PAGE NO:

INSP. POINT	INSPECTION, EXAMINATION OR TESTING INSTRUCTIONS AND ACCEPTANCE CRITERIA				CESSCO				
		B.H.N	SIGN	DATE	LOG NO.	MIN THK			
1	MATERIAL RECEIVED, INSPECTION COMPLETED		<i>[Signature]</i>	10/22/07	24736	835			
2	MILL TEST REPORTS CHECKED AND TRACEABLE		<i>[Signature]</i>	✓	✓	832			
3	CHECK HEAD FOR DEFECTS		<i>[Signature]</i>	✓	✓	831			
4	VERIFY ALL STAMPING ON HEAD		<i>[Signature]</i>	✓	✓	839			
5	CIRCLE STAMPING ON HEAD		<i>[Signature]</i>	✓	✓	836			
6	BEVEL: IN: OUT: 30° N.L.		<i>[Signature]</i>	10/23/07	✓	838			
7	STRAIGHT FLANGE LENGTH REQUIREMENT: 2"		<i>[Signature]</i>	✓	✓	836			
8	CUSTOMER REQUIREMENTS:				✓	837			
	HIC: SELECT CHEM:				✓	838			
	U.T. GRID: B.H.N.: MISC:				✓	835			
	TO MATCH: 0.843" SCH: 80 pipe		<i>[Signature]</i>	✓	✓	834			
9	CHECK HEAD FOR DEFECTS AFTER MACHINING		<i>[Signature]</i>	✓	✓	830			
10	CHECK FINISHED BEVEL		<i>[Signature]</i>	✓	✓	832			
11	FINISHED DIAMETER CHECK		<i>[Signature]</i>	✓	✓	830			
12	MACHINING TOLERANCE	O.D.	I.D.	HEIGHT					
		+1/8"	+1/8"	+1"		831			
		-1/8"	-1/8"	-1/4"		831			
	CLEAR TO SHIP				<i>[Signature]</i>	0726576	834		

* NOTE: MIN THK DETERMINED AFTER HOT FORMING.
REMARKS: _____

INSPECTION & TEST PLAN

CUSTOMER: RJV Gasfield

JOB NO: S22116

DESCRIPTION: HEADS

TAG NO:

PCS 16" OD x 7/8"nom .812"min 2:1 S.E. 2" S.F.

P.O.NO: 2493

PAGE NO:

INSP. POINT	INSPECTION, EXAMINATION OR TESTING INSTRUCTIONS AND ACCEPTANCE CRITERIA				CESSCO				
					B.H.N	SIGN	DATE	LOG NO.	MIN THK
1	MATERIAL RECEIVED, INSPECTION COMPLETED					<i>[Signature]</i>	10/2/09	24736	835
2	MILL TEST REPORTS CHECKED AND TRACEABLE					<i>[Signature]</i>	✓	✓	835
3	CHECK HEAD FOR DEFECTS					<i>[Signature]</i>	✓	✓	837
4	VERIFY ALL STAMPING ON HEAD					<i>[Signature]</i>	✓	✓	834
5	CIRCLE STAMPING ON HEAD					<i>[Signature]</i>	✓	✓	830
6	BEVEL: IN: OUT: 30° N.L.					<i>[Signature]</i>	10/23/09	✓	838
7	STRAIGHT FLANGE LENGTH REQUIREMENT: 2"					<i>[Signature]</i>	✓	✓	833
8	CUSTOMER REQUIREMENTS:							✓	838
	HIC: SELECT CHEM:							✓	838
	U.T. GRID: B.H.N.: MISC:							26576	831
	TO MATCH: 0.843" SCH: 80 pipe					<i>[Signature]</i>	✓	✓	834
9	CHECK HEAD FOR DEFECTS AFTER MACHINING					<i>[Signature]</i>	✓	24736	839
10	CHECK FINISHED BEVEL					<i>[Signature]</i>	✓	24736	833
11	FINISHED DIAMETER CHECK					<i>[Signature]</i>	✓	✓	837
12	MACHINING TOLERANCE	O.D.	I.D.	HEIGHT		<i>[Signature]</i>	✓	✓	832
		+1/8"	+1/8"	+1"				✓	834
		-1/8"	-1/8"	-1/4"				✓	839
	CLEAR TO SHIP					<i>[Signature]</i>		✓	836

* NOTE: MIN THK DETERMINED AFTER HOT FORMING.

REMARKS:

INSPECTION & TEST PLAN

CUSTOMER: RJV Gasfield	JOB NO: S22116
DESCRIPTION : HEADS	TAG NO:
PCS 16" OD x 7/8"nom .812"min 2:1 S.E. 2" S.F.	P.O.NO: 2493
	PAGE NO:

INSP. POINT	INSPECTION, EXAMINATION OR TESTING INSTRUCTIONS AND ACCEPTANCE CRITERIA				CESSCO				
					B.H.N	SIGN	DATE	LOG NO.	MIN THK
1	MATERIAL RECEIVED, INSPECTION COMPLETED					<i>[Signature]</i>	10/27/67	26575	832
2	MILL TEST REPORTS CHECKED AND TRACEABLE					<i>[Signature]</i>	✓	24736	834
3	CHECK HEAD FOR DEFECTS					<i>[Signature]</i>	✓	26576	835
4	VERIFY ALL STAMPING ON HEAD					<i>[Signature]</i>	✓	24736	837
5	CIRCLE STAMPING ON HEAD					<i>[Signature]</i>	✓	✓	830
6	BEVEL: IN: OUT: 30° N.L.					<i>[Signature]</i>	10/27/67	26576	834
7	STRAIGHT FLANGE LENGTH REQUIREMENT: 2"					<i>[Signature]</i>	✓	24736	839
8	CUSTOMER REQUIREMENTS:							✓	831
	HIC: SELECT CHEM:							✓	838
	U.T. GRID: B.H.N.: MISC:							✓	836
	TO MATCH: 0.843" SCH: 80 pipe					<i>[Signature]</i>	✓	26576	834
9	CHECK HEAD FOR DEFECTS AFTER MACHINING					<i>[Signature]</i>	✓	✓	835
10	CHECK FINISHED BEVEL					<i>[Signature]</i>	✓	✓	833
11	FINISHED DIAMETER CHECK					<i>[Signature]</i>	✓	✓	831
12	MACHINING TOLERANCE	O.D.	I.D.	HEIGHT		<i>[Signature]</i>	✓	✓	839
		+1/8"	+1/8"	+1"				✓	836
		-1/8"	-1/8"	-1/4"				✓	831
	CLEAR TO SHIP					<i>[Signature]</i>	10/27/67	✓	831

* NOTE: MIN THK DETERMINED AFTER HOT FORMING.

REMARKS: _____

INSPECTION & TEST PLAN

CUSTOMER: RJV Gasfield	JOB NO: 522116
DESCRIPTION : HEADS	TAG NO:
PCS 16" OD x 7/8"nom .812"min 2:1 S.E. 2" S.F.	P.O.NO: 2493
	PAGE NO:

INSP. POINT	INSPECTION, EXAMINATION OR TESTING INSTRUCTIONS AND ACCEPTANCE CRITERIA	CESSCO				
		B.H.N	SIGN	DATE	LOG NO.	MIN THK
1	MATERIAL RECEIVED, INSPECTION COMPLETED		<i>[Signature]</i>	10/22/67	26576	833
2	MILL TEST REPORTS CHECKED AND TRACEABLE		<i>[Signature]</i>	✓	✓	835
3	CHECK HEAD FOR DEFECTS		<i>[Signature]</i>	✓	✓	835
4	VERIFY ALL STAMPING ON HEAD		<i>[Signature]</i>	✓	✓	836
5	CIRCLE STAMPING ON HEAD		<i>[Signature]</i>	✓	✓	830
6	BEVEL: IN: OUT: 30° N.L.		<i>[Signature]</i>	10/23/67	✓	837
7	STRAIGHT FLANGE LENGTH REQUIREMENT: 2"		<i>[Signature]</i>	✓	✓	832
8	CUSTOMER REQUIREMENTS:				✓	830
	HIC: SELECT CHEM:				✓	839
	U.T. GRID: B.H.N.: MISC:				✓	830
	TO MATCH: 0.843" SCH: 80 pipe		<i>[Signature]</i>	✓	✓	830
9	CHECK HEAD FOR DEFECTS AFTER MACHINING		<i>[Signature]</i>	✓	✓	838
10	CHECK FINISHED BEVEL		<i>[Signature]</i>	✓	✓	833
11	FINISHED DIAMETER CHECK		<i>[Signature]</i>	✓	✓	839
12	MACHINING TOLERANCE	O.D.	I.D.	HEIGHT		
		+1/8"	+1/8"	+1"		✓ 838
		-1/8"	-1/8"	-1/4"		✓ 835
	CLEAR TO SHIP		<i>[Signature]</i>	10/24/67	✓	832

* NOTE: MIN THK DETERMINED AFTER HOT FORMING.

REMARKS: _____

INSPECTION & TEST PLAN

CUSTOMER: RJV Gasfield	JOB NO: S22116
DESCRIPTION : HEADS	TAG NO:
PCS 16" OD x 7/8"nom .812"min 2:1 S.E. 2" S.F.	P.O.NO: 2493
	PAGE NO:

INSP. POINT	INSPECTION, EXAMINATION OR TESTING INSTRUCTIONS AND ACCEPTANCE CRITERIA				CESSCO				
					B.H.N	SIGN	DATE	LOG NO.	MIN THK
1	MATERIAL RECEIVED, INSPECTION COMPLETED					<i>[Signature]</i>	10/23/07	24736	.834
2	MILL TEST REPORTS CHECKED AND TRACEABLE					<i>[Signature]</i>	✓	✓	.837
3	CHECK HEAD FOR DEFECTS					<i>[Signature]</i>	✓	26576	.831
4	VERIFY ALL STAMPING ON HEAD					<i>[Signature]</i>	✓	24736	.837
5	CIRCLE STAMPING ON HEAD					<i>[Signature]</i>	✓	26576	.839
6	BEVEL: IN: OUT: 30° N.L.					<i>[Signature]</i>	10/23/07	24736	.831
7	STRAIGHT FLANGE LENGTH REQUIREMENT: 2"					<i>[Signature]</i>	✓		
8	CUSTOMER REQUIREMENTS:								
	HIC: SELECT CHEM:								
	U.T. GRID: B.H.N.: MISC:								
	TO MATCH: 0.843" SCH: 80 pipe					<i>[Signature]</i>	✓		
9	CHECK HEAD FOR DEFECTS AFTER MACHINING					<i>[Signature]</i>	✓		
10	CHECK FINISHED BEVEL					<i>[Signature]</i>	✓		
11	FINISHED DIAMETER CHECK					<i>[Signature]</i>	✓		
12	MACHINING TOLERANCE	O.D.	I.D.	HEIGHT		<i>[Signature]</i>	✓		
		+1/8"	+1/8"	+1"					
		-1/8"	-1/8"	-1/4"					
	CLEAR TO SHIP					<i>[Signature]</i>		<i>[Signature]</i>	

* NOTE: MIN THK DETERMINED AFTER HOT FORMING.
REMARKS: _____

K-04138



DILLINGER HÜTTE

Erläuterungen siehe Rückseite/Explications voir au verso/See reverse for explanations (www.dillinger.biz/certificate)

A02 ABNAHRMEPRUEFZEUGNIS CERTIFICAT DE RECEPTION INSPECTION CERTIFICATE		A08 Advice of dispatch No./ Date of dispatch 5442435-13.04.05		A09 Manufacturer's order/ A03 Certificate No. 292922-001		Sheet 1/....	
A05 Established inspecting body GTS		A06 Purchaser Final receiver ARCELOR CANADA, BURLI CESSCO FAB., EDMONTON		B01 Product HOT ROLLED PLATES			
B02/ Steel grade SA516-70/A516-70		A07.1 No. 50047		A07.2 No. K-04138			
B03 Specifications ASME-2A:04/ASTM-A516:03 ANNEXURE:REV.08-SEPT.2004		A07.3 No. 50047		A07.4 No. 50047			
		A07.5 No. 50047		A07.6 No. 50047			
		A07.7 No. 50047		A07.8 No. 50047			
		A07.9 No. 50047		A07.10 No. 50047			
		A07.11 No. 50047		A07.12 No. 50047			
		A07.13 No. 50047		A07.14 No. 50047			
		A07.15 No. 50047		A07.16 No. 50047			
		A07.17 No. 50047		A07.18 No. 50047			
		A07.19 No. 50047		A07.20 No. 50047			
		A07.21 No. 50047		A07.22 No. 50047			
		A07.23 No. 50047		A07.24 No. 50047			
		A07.25 No. 50047		A07.26 No. 50047			
		A07.27 No. 50047		A07.28 No. 50047			
		A07.29 No. 50047		A07.30 No. 50047			
		A07.31 No. 50047		A07.32 No. 50047			
		A07.33 No. 50047		A07.34 No. 50047			
		A07.35 No. 50047		A07.36 No. 50047			
		A07.37 No. 50047		A07.38 No. 50047			
		A07.39 No. 50047		A07.40 No. 50047			
		A07.41 No. 50047		A07.42 No. 50047			
		A07.43 No. 50047		A07.44 No. 50047			
		A07.45 No. 50047		A07.46 No. 50047			
		A07.47 No. 50047		A07.48 No. 50047			
		A07.49 No. 50047		A07.50 No. 50047			
		A07.51 No. 50047		A07.52 No. 50047			
		A07.53 No. 50047		A07.54 No. 50047			
		A07.55 No. 50047		A07.56 No. 50047			
		A07.57 No. 50047		A07.58 No. 50047			
		A07.59 No. 50047		A07.60 No. 50047			
		A07.61 No. 50047		A07.62 No. 50047			
		A07.63 No. 50047		A07.64 No. 50047			
		A07.65 No. 50047		A07.66 No. 50047			
		A07.67 No. 50047		A07.68 No. 50047			
		A07.69 No. 50047		A07.70 No. 50047			
		A07.71 No. 50047		A07.72 No. 50047			
		A07.73 No. 50047		A07.74 No. 50047			
		A07.75 No. 50047		A07.76 No. 50047			
		A07.77 No. 50047		A07.78 No. 50047			
		A07.79 No. 50047		A07.80 No. 50047			
		A07.81 No. 50047		A07.82 No. 50047			
		A07.83 No. 50047		A07.84 No. 50047			
		A07.85 No. 50047		A07.86 No. 50047			
		A07.87 No. 50047		A07.88 No. 50047			
		A07.89 No. 50047		A07.90 No. 50047			
		A07.91 No. 50047		A07.92 No. 50047			
		A07.93 No. 50047		A07.94 No. 50047			
		A07.95 No. 50047		A07.96 No. 50047			
		A07.97 No. 50047		A07.98 No. 50047			
		A07.99 No. 50047		A07.100 No. 50047			

NO:

B01-B99 Product description

B09 Item No.	B10 Quantity	B11 Thickness	B12 Width	B13 Length	B14 Mass theoretical KG	B04 Delivery condition	B08 Heat No.	B07 Rolled plate No./ Test No.	B16 Customer reference
01	1	0,6250 x	96,00000 x	384,00000 x	2964	N	17797	489231-01	ITEM 1 - 24 671
01	1	0,6250 x	96,00000 x	384,00000 x	2964	N	17797	489231-02	ITEM 1 - 24 673
01	1	0,6250 x	96,00000 x	384,00000 x	2964	N	17797	489231-03	ITEM 1 - 24 674
01	1	0,6250 x	96,00000 x	384,00000 x	2964	N	17797	489232-01	ITEM 1 - 24 670
01	1	0,6250 x	96,00000 x	384,00000 x	2964	N	17797	489232-02	ITEM 1 - 24 672
01	1	0,6250 x	96,00000 x	384,00000 x	2964	N	17797	489232-03	ITEM 1 - 24 676
01	1	0,6250 x	96,00000 x	384,00000 x	2964	N	17799	489230-01	ITEM 1 - 24 677
01	1	0,6250 x	96,00000 x	384,00000 x	2964	N	17799	489230-02	ITEM 1 - 24 675
**	8			23712					
02	1	0,6250 x	72,00000 x	384,00000 x	2223	N	17796	490148-01	ITEM 2 - 24 678
02	1	0,6250 x	72,00000 x	384,00000 x	2223	N	17796	490148-02	ITEM 2 - 24 684
02	1	0,6250 x	72,00000 x	384,00000 x	2223	N	17796	490149-01	ITEM 2 - 24 683
02	1	0,6250 x	72,00000 x	384,00000 x	2223	N	17796	490149-02	ITEM 2 - 24 679
02	1	0,6250 x	72,00000 x	384,00000 x	2223	N	17796	490149-03	ITEM 2 - 24 680
02	1	0,6250 x	72,00000 x	384,00000 x	2223	N	17798	490147-01	ITEM 2 - 24 681
02	1	0,6250 x	72,00000 x	384,00000 x	2223	N	17798	490147-02	ITEM 2 - 24 682
02	1	0,6250 x	72,00000 x	384,00000 x	2223	N	17798	490147-03	ITEM 2 - 24 685
**	8			17784					
03	1	0,6250 x	120,00000 x	480,00000 x	4631	N	17797	489139-01	ITEM 3 - 24 686
03	1	0,6250 x	120,00000 x	480,00000 x	4631	N	17797	489139-02	ITEM 3 - 24 691
03	1	0,6250 x	120,00000 x	480,00000 x	4631	N	17797	489139-03	ITEM 3 - 24 690
03	1	0,6250 x	120,00000 x	480,00000 x	4631	N	17797	489727-01	ITEM 3 - 24 687
03	1	0,6250 x	120,00000 x	480,00000 x	4631	N	17797	489727-02	ITEM 3 - 24 688

201/202 We hereby certify, that the above mentioned materials have been delivered in accordance with the terms of order.

TFK

QM-System: Certification as per ISO 9001

GTS Industries

B.P 6-317 58379 Dunkerque cedex 1

Service Qualité-Essais

HOUSSIN

Test House Manager

Date 17.05.05

AN

1



DILLINGER HÜTTE

Erläuterungen siehe Rückseite/Explications voir au verso/See reverse for explanations (www.dillinger.biz/certificate)

A02 ABNAHMEPRÜFZEUGNIS CERTIFICAT DE RECEPTION INSPECTION CERTIFICATE		3.1.B DIN EN 10204 - EN 10204 - DIN 50049 3.1.B NF EN 10204 3.1.B BS EN 10204 - ISO 10474 MATERIAL TEST REPORT		A09 Advice of dispatch No./ Date of dispatch	5442435-13.04.05	A08/ Manufacturer's order/ A03 Certificate No.	292922-001 B01 Product HOT ROLLED PLATES	Sheet 2/...
A05 Established inspecting body GTS		A08 Purchaser Final receiver		ARCELOR CANADA, BURLI A07.1 No. 50047 A07.2 No. K-04138				
B02/ Steel grade B03 Specifications		SA516-70/A516-70 ASME-2A:04/ASTM-A516:03 ANNEXURE:REV.08-SEPT.2004 SA20						

B01-B99 Product description									
B09 Item No.	B10 Quantity	B11 Thickness	B12 Width	B13 Length	B14 Mass theoretical KG	B04 Delivery condition	B08 Heat No.	B07 Rolled plate No./ Test No.	B16 Customer reference
03	1	0,6250 x	120,00000 x	480,00000 x	4631 N	N	17797	489727-03	ITEM 3 - 24692
03	1	0,6250 x	120,00000 x	480,00000 x	4631 N	N	17797	489728-01	ITEM 3 - 24696
03	1	0,6250 x	120,00000 x	480,00000 x	4631 N	N	17797	489728-02	ITEM 3 - 24697
03	1	0,6250 x	120,00000 x	480,00000 x	4631 N	N	17797	489728-03	ITEM 3 - 24689
03	1	0,6250 x	120,00000 x	480,00000 x	4631 N	N	17797	489735-01	ITEM 3 - 24695
03	1	0,6250 x	120,00000 x	480,00000 x	4631 N	N	17797	489735-02	ITEM 3 - 24694
03	1	0,6250 x	120,00000 x	480,00000 x	4631 N	N	17797	489735-03	ITEM 3 - 24693
**	12				55572				
04	1	0,7500 x	96,00000 x	384,00000 x	3557 N	N	17796	488506-01	ITEM 4 - 24702
04	1	0,7500 x	96,00000 x	384,00000 x	3557 N	N	17796	488506-02	ITEM 4 - 24704
04	1	0,7500 x	96,00000 x	384,00000 x	3557 N	N	17796	488507-01	ITEM 4 - 24701
04	1	0,7500 x	96,00000 x	384,00000 x	3557 N	N	17796	488507-02	ITEM 4 - 24703
04	1	0,7500 x	96,00000 x	384,00000 x	3557 N	N	17798	491141-01	ITEM 4 - 24699
04	1	0,7500 x	96,00000 x	384,00000 x	3557 N	N	17798	491141-02	ITEM 4 - 24705
04	1	0,7500 x	96,00000 x	384,00000 x	3557 N	N	17798	491141-03	ITEM 4 - 24700
04	1	0,7500 x	96,00000 x	384,00000 x	3557 N	N	17798	491142-01	ITEM 4 - 24706
04	1	0,7500 x	96,00000 x	384,00000 x	3557 N	N	17798	491142-02	ITEM 4 - 24698
04	1	0,7500 x	96,00000 x	384,00000 x	3557 N	N	17798	491142-03	ITEM 4 - 24707
**	10				35570				
05	1	0,7500 x	120,00000 x	480,00000 x	5557 N	N	17796	489733-01	ITEM 5 - 24708
05	1	0,7500 x	120,00000 x	480,00000 x	5557 N	N	17796	489733-02	ITEM 5 - 24709
05	1	0,7500 x	120,00000 x	480,00000 x	5557 N	N	17796	489734-01	ITEM 5 - 24717
05	1	0,7500 x	120,00000 x	480,00000 x	5557 N	N	17796	489734-02	ITEM 5 - 24719

A04	Z01/Z02 We hereby certify, that the above mentioned materials have been delivered in accordance with the terms of order.		GTS Industries B.P 6-317 59379 Dunkerque cedex 1 Service Qualité-Essais	
TFK		 HOUSSIN Test House Manager		Date 17.05.05 AN 1
Trademark		QM-System: Certification as per ISO 9001		



DILLINGER HÜTTE

Erläuterungen siehe Rückseite/Explications voir au verso/See reverse for explanations (www.dillinger.biz/certificate)

A02 ABNAHMEPRUEFZEUGNIS CERTIFICAT DE RECEPTION INSPECTION CERTIFICATE	3.1.B DIN EN 10204 - EN 10204 - DIN 50049 3.1.B NF EN 10204 3.1.B BS EN 10204 - ISO 10474 MATERIAL TEST REPORT	A09 Advice of dispatch No./ Date of dispatch 5442435-13.04.05	A08/ Manufacturer's order/ A03 Certificate No. 292922-001 B01 Product HOT ROLLED PLATES	Sheet 3/...
A05 Established inspecting body GTS	A06 Purchaser Final receiver ARCELOR CANADA, BURLI CESSCO FAB., EDMONTON	A07.1 No. 50047 A07.2 No. K-04138		
B02/ Steel grade SA516-70/A516-70	SA516-70/A516-70	SA20		
B03 Specifications	ASME-2A:04/ASTM-A516:03 ANNEXURE:REV.08-SEPT.2004			

B01-B99 Product description

Item No.	B10 Quantity	B11 Thickness	B12 Width	B13 Length	B14 Mass theoretical	B04 Delivery condition	B08 Heat No.	B07 Rolled plate No./ Test No.	B16 Customer reference
05	1	0,7500 x	120,00000 x	480,00000 x	5557	N	17796	491065-01	ITEM 5 - 24710
05	1	0,7500 x	120,00000 x	480,00000 x	5557	N	17796	491065-02	ITEM 5 - 24713
05	1	0,7500 x	120,00000 x	480,00000 x	5557	N	17796	491478-01	ITEM 5 - 24716
05	1	0,7500 x	120,00000 x	480,00000 x	5557	N	17796	491478-02	ITEM 5 - 24714
05	1	0,7500 x	120,00000 x	480,00000 x	5557	N	17798	491066-01	ITEM 5 - 24712
05	1	0,7500 x	120,00000 x	480,00000 x	5557	N	17798	491066-02	ITEM 5 - 24718
05	1	0,7500 x	120,00000 x	480,00000 x	5557	N	17799	489223-01	ITEM 5 - 24711
05	1	0,7500 x	120,00000 x	480,00000 x	5557	N	17799	489223-02	ITEM 5 - 24715
**	12				66684				
06	1	0,8750 x	96,00000 x	384,00000 x	4149	N	17796	488093-01	ITEM 6 - 24721
06	1	0,8750 x	96,00000 x	384,00000 x	4149	N	17796	488093-02	ITEM 6 - 24723
06	1	0,8750 x	96,00000 x	384,00000 x	4149	N	17796	488093-03	ITEM 6 - 24725
06	1	0,8750 x	96,00000 x	384,00000 x	4149	N	17796	489228-01	ITEM 6 - 24720
06	1	0,8750 x	96,00000 x	384,00000 x	4149	N	17796	489228-02	ITEM 6 - 24726
06	1	0,8750 x	96,00000 x	384,00000 x	4149	N	17796	489228-03	ITEM 6 - 24722
06	1	0,8750 x	96,00000 x	384,00000 x	4149	N	17798	489233-01	ITEM 6 - 24729
06	1	0,8750 x	96,00000 x	384,00000 x	4149	N	17798	489233-02	ITEM 6 - 24728
06	1	0,8750 x	96,00000 x	384,00000 x	4149	N	17798	489234-01	ITEM 6 - 24727
06	1	0,8750 x	96,00000 x	384,00000 x	4149	N	17798	489234-02	ITEM 6 - 24726
**	10				41490				
07	1	0,8750 x	120,00000 x	480,00000 x	6483	N	17796	491062-01	ITEM 7 - 24735
07	1	0,8750 x	120,00000 x	480,00000 x	6483	N	17796	491062-02	ITEM 7 - 24734
07	1	0,8750 x	120,00000 x	480,00000 x	6483	N	17796	491063-01	ITEM 7 - 24732

Z01/202 Wir hereby certify, that the above mentioned materials have been delivered in accordance with the terms of order.

TFK

QM-System: Certification as per ISO 9001

GTS Industries

B.P 6-317 59379 Dunkerque cedex 1

Service Qualité-Essais

HOUSIN

Test House Manager

Date 17.05.05

AN 1

Trademark



DILLINGER HÜTTE

Erläuterungen siehe Rückseite/Explications voir au verso/See reverse for explanations (www.dillinger.biz/certificate)

A02 ABNAHMEPRÜFZEUGNIS CERTIFICAT DE RECEPTION INSPECTION CERTIFICATE		3.1.B DIN EN 10204 - EN 10204 - DIN 50049 3.1.B NF EN 10204 3.1.B BS EN 10204 - ISO 10474 MATERIAL TEST REPORT		A09 Advice of dispatch No./ Date of dispatch	5442435-13.04.05	A08/ Manufacturer's order/ A03 Certificate No.	292922-001	Sheet	4/...
A05 Established inspecting body GTS		A06 Purchaser Final receiver		ARCELOR CANADA, BURLI CESSCO FAB., EDMONTON		B01 Product HOT ROLLED PLATES			
B02/ Steel grade SA516-70/A516-70		B03 Specifications ASME-2A:04/ASTM-A516:03 ANNEXURE:REV.08-SEPT.2004		A07.1 No. 50047 A07.2 No. K-04138		SA20			

B01-B99 Product description

B09 Item No.	B10 Quantity	B11 Thickness	B12 Width	B13 Length	B14 Mass theoretical KG	B04 Delivery condition	B08 Heat No.	B07 Rolled plate No./ Test No.	B16 Customer reference
07	1	0,8750 x	120,00000 x	480,00000 x	6483	N	17796	491063-02	ITEM 7 - 24736
07	1	0,8750 x	120,00000 x	480,00000 x	6483	N	17796	491064-01	ITEM 7 - 24739
07	1	0,8750 x	120,00000 x	480,00000 x	6483	N	17796	491064-02	ITEM 7 - 24733
07	1	0,8750 x	120,00000 x	480,00000 x	6483	N	17799	489224-01	ITEM 7 - 24731
07	1	0,8750 x	120,00000 x	480,00000 x	6483	N	17799	489224-02	ITEM 7 - 24730
07	1	0,8750 x	120,00000 x	480,00000 x	6483	N	17799	489225-01	ITEM 7 - 24737
07	1	0,8750 x	120,00000 x	480,00000 x	6483	N	17799	489225-02	ITEM 7 - 24738
**	10				64830				
08	1	1,0000 x	96,00000 x	384,00000 x	4742	N	17797	488094-01	ITEM 8 - 24742
08	1	1,0000 x	96,00000 x	384,00000 x	4742	N	17797	488094-02	ITEM 8 - 24740
08	1	1,0000 x	96,00000 x	384,00000 x	4742	N	17797	488094-03	ITEM 8 - 24743
08	1	1,0000 x	96,00000 x	384,00000 x	4742	N	17797	489754-01	ITEM 8 - 24746
08	1	1,0000 x	96,00000 x	384,00000 x	4742	N	17797	489754-02	ITEM 8 - 24745
08	1	1,0000 x	96,00000 x	384,00000 x	4742	N	17797	489754-03	ITEM 8 - 24747
08	1	1,0000 x	96,00000 x	384,00000 x	4742	N	17798	489227-01	ITEM 8 - 24741
08	1	1,0000 x	96,00000 x	384,00000 x	4742	N	17798	489227-02	ITEM 8 - 24744
**	8				37936				
09	1	1,0000 x	120,00000 x	480,00000 x	7410	N	17798	489752-01	ITEM 9 - 24749
09	1	1,0000 x	120,00000 x	480,00000 x	7410	N	17798	489752-02	ITEM 9 - 24748
09	1	1,0000 x	120,00000 x	480,00000 x	7410	N	17798	489753-01	ITEM 9 - 24755
09	1	1,0000 x	120,00000 x	480,00000 x	7410	N	17798	489753-02	ITEM 9 - 24750
09	1	1,0000 x	120,00000 x	480,00000 x	7410	N	17798	492425-01	ITEM 9 - 24752
09	1	1,0000 x	120,00000 x	480,00000 x	7410	N	17798	492425-02	ITEM 9 - 24751

201/2002 We hereby certify, that the above mentioned materials have been delivered in accordance with the terms of order.

A01

GTS Industries
B.P 6-317 59379 Dunkerque cedex 1
Service Qualité-Essais

Houssin
HOUSSIN

Test House Manager

AN 1

Date 17.05.05

QM-System: Certification as per ISO 9001

TFK

Trademark



DILLINGER HÜTTE

Erläuterungen siehe Rückseite/Explications voir au verso/See reverse for explanations (www.dillinger.biz/certificate)

A02	ABNAHMEPRÜFZEUGNIS CERTIFICAT DE RECEPTION INSPECTION CERTIFICATE	3.1.B 3.1.B 3.1.B	DIN EN 10204 - EN 10204 - DIN 50049 NF EN 10204 BS EN 10204 - ISO 10474	A08 Advice of dispatch No./ Date of dispatch	5442435-13.04.05	A08/ Manufacturer's order/ A09 Certificate No.	292922-001 B01 Product HOT ROLLED PLATES	Sheet	5/...	
A05	Established inspecting body GTS	A06 Purchaser Final receiver	ARCELOR CANADA, BURLI CESSCO FAB., EDMONTON	A07.1 No. 50047 A07.2 No. K-04138						
B02/	Steel grade	SA516-70/A516-70								
B03	Specifications	ASME-2A.04/ASTM-A516:03 ANNEXURE:REV.08-SEPT.2004								

B01-B99 Product description

B09 Item No.	B10 Quantity	B11 Thickness	B12 Width INCH	B13 Length	B14 Mass theoretical KG	B04 Delivery condition	B08 Heat No.	B07 Rolled plate No./ Test No.	B16 Customer reference
09	1	1,0000 x	120,00000 x	480,00000 x	7410	N	17798	492429-01	ITEM 9 - 24753
09	1	1,0000 x	120,00000 x	480,00000 x	7410	N	17798	492429-02	ITEM 9 - 24754
**	8				59280				
10	1	1,1250 x	120,00000 x	384,00000 x	6669	N	17797	489725-01	ITEM 10 - 24762
10	1	1,1250 x	120,00000 x	384,00000 x	6669	N	17797	489725-02	ITEM 10 - 24763
10	1	1,1250 x	120,00000 x	384,00000 x	6669	N	17797	489726-01	ITEM 10 - 24760
10	1	1,1250 x	120,00000 x	384,00000 x	6669	N	17797	489726-02	ITEM 10 - 24761
**	4				26676				
11	1	1,1250 x	120,00000 x	480,00000 x	8336	N	17797	489731-01	ITEM 11 - 24757
11	1	1,1250 x	120,00000 x	480,00000 x	8336	N	17797	489732-01	ITEM 11 - 24758
11	1	1,1250 x	120,00000 x	480,00000 x	8336	N	17798	489729-01	ITEM 11 - 24759
11	1	1,1250 x	120,00000 x	480,00000 x	8336	N	17798	489730-01	ITEM 11 - 24756
**	4				33344				
12	1	1,5000 x	120,00000 x	480,00000 x	11114	N	17797	488097-01	ITEM 12 - 24765
12	1	1,5000 x	120,00000 x	480,00000 x	11114	N	17798	492019-01	ITEM 12 - 24764
**	2				22228				
13	1	1,7500 x	120,00000 x	384,00000 x	10373	N	17165	489831-01	ITEM 13 - 24766
***	97				495479				

B04 Delivery condition / Heat treatment of plates

ITEM NO.: 01-13

N: HT: 1670 GR.F +27 -27 GR.F

SOAKING TIME TO ATTAIN THE TARGET TEMPERATURE OVER THE WHOLE SECTION: 1-1,75 MIN/MM (25-45 MIN/INCH)

COOLING IN STILL AIR

A04 2012/02 We hereby certify, that the above mentioned materials have been delivered in accordance with the terms of order.

TFK

QM-System: Certification as per ISO 9001

Houssin

HOUSSIN

Test House Manager

A01

GTS Industries
B.P 6-317 59379 Dunkerque cedex 1
Service Qualité-Essais

Date 17.05.05 AN 1



DILLINGER HÜTTE

Erläuterungen siehe Rückseite/Explications voir au verso/See reverse for explanations (www.dillinger.biz/certificate)

A02 ABNAHMEPRUEFZEUGNIS CERTIFICAT DE RECEPTION INSPECTION CERTIFICATE		3.1.B DIN EN 10204 - EN 10204 - DIN 50049 3.1.B NF EN 10204 3.1.B BS EN 10204 - ISO 10474 MATERIAL TEST REPORT	A09 Advice of dispatch No./ Date of dispatch 5442435-13.04.05	A08 Manufacturer's order/ Certificate No. 292922-001	Sheet 6/...
A05 Established inspecting body GTS		A06 Purchaser Final receiver ARCELOR CANADA, BURLI CESSCO FAB., EDMONTON	A07.1 No. 50047 A07.2 No. K-04138	B01 Product HOT ROLLED PLATES	
B02/ Steel grade	SA516-70/A516-70				
B03 Specifications	ASME-2A:04/ASTM-A516:03 ANNEXURE:REV.08-SEPT.2004				

B06 Marking

ITEM NO.: 01-13
STEEL GRADE SA516 70 MTLTV
HEAT NO. / TRADEMARK / ROLLED PLATE NO.-TEST NO.

C10-C29 Tensile test

B09 B08 Heat No.	B07 Rol. plate/ Test No.	B05 Reference condition	C01 C02/ C03 C01 Temp. GRF	C10 C11 KSI RP02	C12 RM	C13 A % LO-2RN	C14-C15 A % LO-2RN
01 17797	489231	K1 Q0	RT	53,7	77,1	38,8	
01 17797	489232	K1 Q0	RT	53,2	77,0	28,0	
01 17799	489230	K1 Q0	RT	52,3	76,4	34,0	
02 17796	490148	K1 Q0	RT	51,8	75,5	36,5	
02 17796	490149	K1 Q0	RT	51,8	75,0	36,3	
02 17798	490147	K1 Q0	RT	52,8	76,4	35,7	
03 17797	489139	K1 Q0	RT	52,2	76,4	38,2	
03 17797	489727	K1 Q0	RT	52,6	77,3	36,9	
03 17797	489728	K1 Q0	RT	53,7	77,7	37,2	
03 17797	489735	K1 Q0	RT	52,5	76,9	35,9	
04 17796	488506	K1 Q0	RT	50,9	75,3	27,6	
04 17796	488507	K1 Q0	RT	51,2	75,0	29,7	
04 17798	491141	K1 Q0	RT	52,2	76,3	29,3	
04 17798	491142	K1 Q0	RT	53,1	76,7	27,7	
05 17796	489733	K1 Q0	RT	50,9	75,7	27,3	
05 17796	489734	K1 Q0	RT	52,1	75,5	28,4	
05 17796	491065	K1 Q0	RT	51,3	75,4	29,2	
05 17796	491478	K1 Q0	RT	51,2	75,4	30,5	
05 17798	491066	K1 Q0	RT	52,5	76,1	29,2	

A04 201/202 We hereby certify, that the above mentioned materials have been delivered in accordance with the terms of order.

TFK

QM-System: Certification as per ISO 9001

Trademark

Houssin

HOUSSIN

Test House Manager

GTS Industries
B.P 6-317 59379 Dunkerque cedex 1
Service Qualité-Essais

Date 17.05.05

AN 1



DILLINGER HÜTTE

Erläuterungen siehe Rückseite/Explications voir au verso/See reverse for explanations (www.dillinger.biz/certificate)

A02 ABNAHMEPRÜFZEUGNIS CERTIFICAT DE RECEPTION INSPECTION CERTIFICATE		3.1.B DIN EN 10204 - EN 10204 - DIN 50049 3.1.B NF EN 10204 3.1.B BS EN 10204 - ISO 10474 MATERIAL TEST REPORT	A09 Advice of inspection No./ Date of dispatch 5442435-13.04.05	A08/ Manufacturer's order/ A03 Certificate No. 292922-001 801 Product HOT ROLLED PLATES	Sheet 7/...
A05 Established inspecting body GTS		A06 Purchaser Final receiver ARCELOR CANADA, BURLI CESSCO FAB., EDMONTON	A07.1 No. 50047 A07.2 No. K-04138 SA20		
B02/ Steel grade B03 Specifica- tions		SA516-70/A516-70 ASME-2A:04/ASTM-A516:03 ANNEXURE:REV.08-SEPT.2004			

C10-C29 Tensile test

B05 Item No.	B06 Heat No.	B07 Rol. plate/ Test No.	B05 Reference condition	C01 C02/ C01	C03 Temp. GR.F	C10 KSI RP02	C12 RM	C13 A % LP=2IN	C14-C15 A % LP=8IN
05	17799	489223		K1 QO	RT	51,8	76,0		29,0
06	17796	488093		K1 QO	RT	51,0	76,0		31,3
06	17796	489228		K1 QO	RT	52,3	75,4		33,5
06	17798	489233		K1 QO	RT	51,0	76,3		27,9
06	17798	489234		K1 QO	RT	51,0	76,1		31,7
07	17796	491062		K1 QO	RT	53,4	74,8		32,6
07	17796	491063		K1 QO	RT	51,6	75,4		28,7
07	17796	491064		K1 QO	RT	51,8	75,5		32,6
07	17799	489224		K1 QO	RT	51,6	76,6		27,1
07	17799	489225		K1 QO	RT	51,6	75,5		33,4
07	17799	488094		K1 QO	RT	51,0	76,1		32,1
08	17797	488094		K1 QO	RT	52,3	75,8		30,6
08	17797	489754		K1 QO	RT	51,9	75,4		31,2
08	17798	489227		K1 QO	RT	50,9	76,1		33,7
09	17798	489752		K1 QO	RT	51,6	76,0		31,8
09	17798	489753		K1 QO	RT	52,5	75,3		33,6
09	17798	492425		K1 QO	RT	51,9	75,1		30,1
09	17798	492429		K1 QO	RT	50,9	76,4		29,0
10	17797	489725		K1 QO	RT	50,6	75,8		34,1
10	17797	489726		K1 QO	RT	51,2	76,9		29,0
11	17797	489731		K1 QO	RT	51,2	76,4		29,7
11	17797	489732		K1 QO	RT	51,2	76,4		30,2
11	17798	489729		K1 QO	RT	50,8	76,0		30,1
11	17798	489730		K1 QO	RT	50,6	76,1		30,1

A04 2012/02 We hereby certify, that the above mentioned materials have been delivered in accordance with the terms of order.

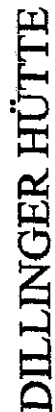
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Trademark

QM-System: Certification as per ISO 9001

HOUSSIN
Test House Manager

A01
GTS Industries
B.P 6-317 59379 Dunkerque cedex 1
Service Qualité-Essais
Date 17.05.05 AN 1



002 ANALYSEPREPAREMENTS 3 1 B DIN EN 10204 - EN 10204 - DIN 50049

CESTETICA DE RECEPION 3 1 B NF EN 10204

TYPESET BY GRIFFITHS 3 1 B BS EN 10204

A05 Established inspecting body	A06 Purchaser	EXPORTER CANADA: BTRT.T	A07.1 No. 50047
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GTS

[illegible]

B02/ Steel grade SA516-70/A516-70 SA20

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C10-C29 Tensile test

B09 Item No.	B08 Heat No.	B07 Rol./plate/ Test No.	B05 Reference condition	C01 C01	C02/ Temp. GR.F	C03 C10	C11 KSI RP02	C12 RM	C13	C14-C15		
									A %	A %	A %	LD=2IN LD=8IN
12	17797	488097		K1	QV	RT	49,7	75,1		40,4		
12	17798	492019		K1	QV	RT	50,5	74,2		36,0		
13	17165	489831		K1	QV	RT	49,3	75,0		34,4		

C30-C39 Hardness test

B09 Mem. No.	B08 Heat No.	B07 Roll-plate/ Test No.	B05 Reference condition	C01	C02/C01	C03 Temp. GRF	C03 Testing method	C35 C31 Individual values	C32 Average value
01	17797	489231		K1	Q0	RT	HBW 5/750	HB 141	
01	17797	489232		K1	Q0	RT	HBW 5/750	HB 143	
01	17799	489230		K1	Q0	RT	HBW 5/750	HB 144	
				K1	Q0	RT	HV10	HV 152	
02	17796	490148		K1	Q0	RT	HBW 5/750	HB 141	
02	17796	490149		K1	Q0	RT	HBW 5/750	HB 142	
02	17798	490147		K1	Q0	RT	HBW 5/750	HB 141	
03	17797	489139		K1	Q0	RT	HBW 5/750	HB 143	
03	17797	489727		K1	Q0	RT	HBW 5/750	HB 151	
03	17797	489728		K1	Q0	RT	HBW 5/750	HB 147	
03	17797	489735		K1	Q0	RT	HBW 5/750	HB 140	
04	17796	488506		K1	Q0	RT	HBW 5/750	HB 140	
04	17796	488507		K1	Q0	RT	HBW 5/750	HB 148	
04	17798	491141		K1	Q0	RT	HBW 5/750	HB 143	
04	17798	491142		K1	Q0	RT	HBW 5/750	HB 139	
05	17796	489733		K1	Q0	RT	HBW 5/750	HB 146	
05	17796	489734		K1	Q0	RT	HBW 5/750	HB 139	

001702 We hereby certify that the above mentioned materials have been delivered in accordance with the terms of order.

QM-System: Certification as per ISO 9001

GTS Industries
B.P. 6-317 593
Service Qualité-Essais

Test House Manager

AN 1

Date 17.05.05



DILLINGER HÜTTE

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A02 ABNAHMEPRÜFZEUGNIS CERTIFICAT DE RECEPTION INSPECTION CERTIFICATE		3.1.B DIN EN 10204 - EN 10204 - DIN 50049 3.1.B NF EN 10204 3.1.B BS EN 10204 - ISO 10474 MATERIAL TEST REPORT		A09 Advice of dispatch No./ Date of dispatch 5442435-13.04.05	A08/ Manufacturer's order/ A03 Certificate No. 292922-001	Sheet 9/...			
A05 Established inspecting body GTS		A06 Purchaser ARCELOR CANADA, BURLI		B01 Product HOT ROLLED PLATES					
Final receiver CESSCO FAB., EDMONTON		A07.1 No. 50047 A07.2 No. K-04138							
B02/ Steel grade SA516-70/A516-70		SA20							
B03 Specifications ASME-2A:04/ASTM-A516:03 ANNEXURE:REV.08-SEPT.2004									
C30-C39 Hardness test									
B09 Item No.	B08 Heat No.	B07 Roll plate/ Test No.	B05 Reference condition	C01	C02/C01	C03 Temp. GR.F	C33 Testing method	C35 C31 Individual values	C32 Average value
05	17796	491065		K1	Q0	RT	HBW 5/750	HB 141	
05	17796	491478		K1	Q0	RT	HBW 5/750	HB 140	
05	17798	491066		K1	Q0	RT	HBW 5/750	HB 172	
05	17799	489223		K1	Q0	RT	HBW 5/750	HB 141	
06	17796	488093		K1	Q0	RT	HBW 5/750	HB 141	
				K1	Q0	RT	HV10	HV 157	
06	17796	489228		K1	Q0	RT	HBW 5/750	HB 140	
06	17798	489233		K1	Q0	RT	HBW 5/750	HB 149	
06	17798	489234		K1	Q0	RT	HBW 5/750	HB 137	
07	17796	491062		K1	Q0	RT	HBW 5/750	HB 139	
07	17796	491063		K1	Q0	RT	HBW 5/750	HB 144	
07	17796	491064		K1	Q0	RT	HBW 5/750	HB 142	
07	17799	489224		K1	Q0	RT	HBW 5/750	HB 146	
07	17799	489225		K1	Q0	RT	HBW 5/750	HB 140	
08	17797	488094		K1	Q0	RT	HBW 5/750	HB 139	
				K1	Q0	RT	HV10	HV 151	
08	17797	489754		K1	Q0	RT	HBW 5/750	HB 144	
08	17798	489227		K1	Q0	RT	HBW 5/750	HB 148	
09	17798	489752		K1	Q0	RT	HBW 5/750	HB 146	
09	17798	489753		K1	Q0	RT	HBW 5/750	HB 146	
09	17798	492425		K1	Q0	RT	HBW 5/750	HB 138	
09	17798	492429		K1	Q0	RT	HBW 5/750	HB 137	
10	17797	489725		K1	Q0	RT	HBW 5/750	HB 141	
10	17797	489726		K1	Q0	RT	HBW 5/750	HB 140	

Z01/Z02 We hereby certify, that the above mentioned materials have been delivered in accordance with the terms of order.

QM-System: Certification as per ISO 9001

TPK

Trademark

A01

GTS Industries
B.P 6-317 59379 Dunkerque cedex 1
Service Qualité-Essais

HOUSSIN
Test House Manager

Date 17.05.05
AN 1



DILLINGER HÜTTE

Erläuterungen siehe Rückseite/Explications voir au verso/See reverse for explanations (www.dillinger.biz/certificate)

A02 ABNAHMEPRÜFZEUGNIS CERTIFICAT DE RECEPTION INSPECTION CERTIFICATE		3.1.B DIN EN 10204 - EN 10204 - DIN 50049 3.1.B NF EN 10204 3.1.B BS EN 10204 - ISO 10474 MATERIAL TEST REPORT	A08 Advice of dispatch No./ Date of dispatch	A08/ Manufacturer's order/ A03 Certificate No.	Sheet
A05 Established inspecting body GTS		A06 Purchaser ARCELOR CANADA, BURLI A07.1 No. 50047 Final receiver CESSCO FAB., EDMONTON A07.2 No. K-04138	5442435-13.04.05	292922-001 B01 Product HOT ROLLED PLATES	10/...
B02/ Steel grade SA516-70/A516-70		SA20			
B03 Specifications ASME-2A:04/ASTM-A516:03 ANNEXURE:REV.08-SEPT.2004					

C30-C39 Hardness test

B09 Item No.	B08 Heat No.	B07 Roll plate/ Test No.	B05 Reference condition	C01	C02/C01	C03 Temp. GRF	C33 Testing method	C35 C31 Individual values	C32 Average value
11	17797	489731		K1	QO	RT	HBW 5/750	HB 151	
11	17797	489732		K1	QO	RT	HBW 5/750	HB 143	
11	17798	489729		K1	QO	RT	HBW 5/750	HB 144	
11	17798	489730		K1	QO	RT	HBW 5/750	HB 140	
				K1	QO	RT	HV10	HV 144	
12	17797	488097		K1	QO	RT	HBW 5/750	HB 135	
12	17798	492019		K1	QO	RT	HBW 5/750	HB 137	
13	17165	489831		K1	QO	RT	HBW 5/750	HB 140	
				K1	QO	RT	HV10	HV 181	

C40-C49 Impact test

B09 Item No.	B08 Heat No.	B07 Roll plate/ Test No.	B05 Reference condition	C01	C02/ C01	C03 Temp. GRF	C41 Specimen width	C40 Type of specimen	C44 Testing method	C46 Energy	C45 Individual values AV=FTLEF	C43 Average value
01	17797	489231		K1	LO	-51	-51	CHP-V	CHP-V	AV 112	117	126
01	17797	489232		K1	LO	-51	-51	CHP-V	CHP-V	AV 119	122	119
01	17799	489230		K1	LO	-51	-51	CHP-V	CHP-V	AV 108	107	109
02	17796	490148		K1	LO	-51	-51	CHP-V	CHP-V	AV 115	111	109
02	17796	490149		K1	LO	-51	-51	CHP-V	CHP-V	AV 83	95	116
02	17798	490147		K1	LO	-51	-51	CHP-V	CHP-V	AV 115	87	106
03	17797	489139		K1	LO	-51	-51	CHP-V	CHP-V	AV 101	107	100
03	17797	489727		K1	LO	-51	-51	CHP-V	CHP-V	AV 105	120	125
03	17797	489728		K1	LO	-51	-51	CHP-V	CHP-V	AV 115	133	116
03	17797	489735		K1	LO	-51	-51	CHP-V	CHP-V	AV 121	118	121
04	17796	488506		K1	LV	-51	-51	CHP-V	CHP-V	AV 119	136	122
04	17796	488507		K1	LV	-51	-51	CHP-V	CHP-V	AV 125	125	121

Z01/Z02 We hereby certify, that the above mentioned materials have been delivered in accordance with the terms of order.

QM-System: Certification as per ISO 9001

TFK

Trademark

GTS Industries

B.P 6-317 59379 Dunkerque cedex 1

Service Qualité-Essais

HOUSSEIN

Test House Manager

Date 17.05.05

AN 1



DILLINGER HÜTTE

Erläuterungen siehe Rückseite/Explications voir au verso/See reverse for explanations (www.dillinger.biz/certificate)		A02 ABNAHMEPRÜFZEUGNIS 3.1.B DIN EN 10204 - EN 10204 - DIN 50049		A09 Advice of dispatch No./ Date of dispatch		A08/ Manufacturer's order/ Certificate No.		Sheet	
CERTIFICAT DE RECEPTION 3.1.B NF EN 10204				5442435-13.04.05		292922-001		11/...	
INSPECTION CERTIFICATE 3.1.B BS EN 10204 - ISO 10474 MATERIAL TEST REPORT						B01 Product			
A05 Established inspecting body		A06 Purchaser		ARCELOR CANADA, BURLI		A07.1 No. 50047			
GTS		Final receiver		CESSCO FAB., EDMONTON		A07.2 No. K-04138			
B02/ Steel grade		SA516-70/A516-70		SA20					
B03 Specifications		ASME-2A:04/ASTM-A516:03							
		ANNEXURE:REV.08-SEPT.2004							

C40-C49 Impact test

B09 Item No.	B08 Heat No.	B07 Roll plate/ Test No.	B05 Reference condition	C01	C02/ C01	C03 Temp. GR.F	C41 Specimen width	C40 Type of specimen	C44 Testing method	C46 Energy	C45 Individual values AV=FTLBF	C43 Average value
04	17798	491141		K1	LV	-51	-51	CHP-V			86	117
04	17798	491142		K1	LV	-51	-51	CHP-V			96	80
05	17796	489733		K1	LV	-51	-51	CHP-V			110	124
05	17796	489734		K1	LV	-51	-51	CHP-V			114	95
05	17796	491065		K1	LV	-51	-51	CHP-V			115	111
05	17796	491478		K1	LV	-51	-51	CHP-V			126	102
05	17798	491066		K1	LV	-51	-51	CHP-V			86	124
05	17799	489223		K1	LV	-51	-51	CHP-V			100	71
06	17796	488093		K1	LV	-51	-51	CHP-V			107	94
06	17796	489228		K1	LV	-51	-51	CHP-V			126	118
06	17798	489233		K1	LV	-51	-51	CHP-V			82	89
06	17798	489234		K1	LV	-51	-51	CHP-V			114	122
07	17796	491062		K1	LV	-51	-51	CHP-V			74	66
07	17796	491063		K1	LV	-51	-51	CHP-V			106	89
07	17799	491064		K1	LV	-51	-51	CHP-V			85	108
07	17799	489224		K1	LV	-51	-51	CHP-V			105	124
07	17799	489225		K1	LV	-51	-51	CHP-V			84	89
08	17797	488094		K1	LV	-51	-51	CHP-V			106	60
08	17797	489754		K1	LV	-51	-51	CHP-V			103	112
08	17798	489227		K1	LV	-51	-51	CHP-V			95	106
09	17798	489752		K1	LV	-51	-51	CHP-V			89	108
09	17798	489753		K1	LV	-51	-51	CHP-V			77	94
09	17798	492425		K1	LV	-51	-51	CHP-V			119	116
09	17798	492429		K1	LV	-51	-51	CHP-V			117	111

A04		Z01/Z02 We hereby certify, that the above mentioned materials have been delivered in accordance with the terms of order.		A01	
TFK		GTS Industries B.P 6-317 59379 Dunkerque cedex 1 Service Qualité-Essais		AN	
Trademark		Date 17.05.05		AN	
		HOUSSIN Test House Manager			



DILLINGER HÜTTE

A02 ABNAHMEPRUEFZEUGNIS		3.1.B DIN EN 10204 - EN 10204 - DIN 50049		A09 Advice of dispatch No./ Date of dispatch		A08/ Manufacturer's order/ A03 Certificate No.		Sheet							
CERTIFICAT DE RECEPTION		3.1.B NF EN 10204		5442435-13.04.05		292922-001		12/...							
INSPECTION CERTIFICATE		3.1.B BS EN 10204 - ISO 10474 MATERIAL TEST REPORT													
A05 Established inspecting body		A06 Purchaser		A07.1 No. 50047		B01 Product									
GTS		ARCELOR CANADA, BURLI		A07.2 No. K-04138		HOT ROLLED PLATES									
Final receiver		CESSCO FAB., EDMONTON													
SA20															
B02/ Steel grade		SA516-70/A516-70													
B03 Specifications		ASME-2A:04/ASTM-A516:03													
ANNEXURE: REV.08-SEPT.2004															
C40-C49 Impact test															
B09 Item No.	B08 Heat No.	B07 Rol.plate/ Test No.	B05 Reference condition	C01	C02/ C01	C03 Temp. GRF	C41 Specimen width	C40 Type of specimen	C44 Testing method	C46 Energy	C45 Individual values AV=FT.LBF	C43 Average value			
10	17797	489725		K1	LV	-51		CHP-V				104			
10	17797	489726		K1	LV	-51		CHP-V				70			
11	17797	489731		K1	LV	-51		CHP-V				110			
11	17797	489732		K1	LV	-51		CHP-V				99			
11	17798	489729		K1	LV	-51		CHP-V				107			
11	17798	489730		K1	LV	-51		CHP-V				97			
12	17797	488097		K1	LV	-51		CHP-V				88			
12	17798	492019		K1	LV	-51		CHP-V				100			
13	17165	489831		K1	LV	-51		CHP-V				78			
C66-C68 Supplementary tests on test samples															
ITEM NO.: 01-13															
FERRITIC GRAIN SIZE : CLASS 7 OR FINER															
C70-C99 Chemical composition % - Heat analysis															
B08 Heat	C70	C	Si	MN	P	S	AL	CU	MO	NI	CR	V	NB	TI	B
17165	Y	0,181	0,379	1,17	0,008	0,0004	0,040	0,034	0,038	0,044	0,069	0,000	0,000	0,002	0,0001
17796	Y	0,179	0,373	1,17	0,008	0,0007	0,035	0,017	0,004	0,023	0,031	0,000	0,000	0,003	0,0001
17797	Y	0,180	0,373	1,19	0,008	0,0006	0,040	0,018	0,009	0,068	0,050	0,000	0,000	0,003	0,0000
17798	Y	0,176	0,373	1,20	0,009	0,0007	0,037	0,029	0,003	0,034	0,041	0,000	0,000	0,004	0,0002
17799	Y	0,175	0,355	1,16	0,009	0,0008	0,035	0,013	0,005	0,023	0,031	0,000	0,000	0,004	0,0001

TFK
Trademark

2017/2022 We hereby certify, that the above mentioned materials have been delivered in accordance with the terms of order.
QM-System: Certification as per ISO 9001

GTS Industries
B.P 6-317 59379 Dunkerque cedex 1
Service Qualité-Essais
Date 17.05.05
AN 1



DILLINGER HÜTTE

Erläuterungen siehe Rückseite/Explications voir au verso/See reverse for explanations (www.dillinger.biz/certificate)

A02 ABNAHMEPRUEFZEUGNIS CERTIFICAT DE RECEPTION INSPECTION CERTIFICATE		3.1.B DIN EN 10204 - EN 10204 - DIN 50049 3.1.B NF EN 10204 3.1.B BS EN 10204 - ISO 10474 MATERIAL TEST REPORT	A09 Advice of dispatch No./ Date of dispatch 5442435-13.04.05	A08/ Manufacturer's order/ A03 Certificate No. 292922-001 B01 Product HOT ROLLED PLATES	Sheet 13/....
A05 Established inspecting body GTS		A06 Purchaser Final receiver ARCELOR CANADA, BURLI CHESCO FAB., EDMONTON			
B02 Steel grade B03 Specifications		SA516-70/A516-70 ASME-2A:04/ASTM-A516:03 ANNEXURE:REV.08-SEPT.2004 SA20			

C70-C99 Chemical composition % - Heat analysis

B08 Heat	C70	CA	O
17165	Y	0,0017	0,0001
17796	Y	0,0019	0,0009
17797	Y	0,0020	0,0008
17798	Y	0,0016	0,0005
17799	Y	0,0017	0,0006

C94 Heat analysis Carbon equivalent / Alloying restrictions

B08 Heat	FO-02=	0,403	FO-51=	0,000	FO-55=	0,19	FO-70=	0,14	FO-78=	0,11
17165	FO-02=	0,384	FO-51=	0,000	FO-55=	0,08	FO-70=	0,06	FO-78=	0,04
17796	FO-02=	0,396	FO-51=	0,000	FO-55=	0,15	FO-70=	0,08	FO-78=	0,06
17797	FO-02=	0,389	FO-51=	0,000	FO-55=	0,11	FO-70=	0,08	FO-78=	0,04
17798	FO-02=	0,378	FO-51=	0,000	FO-55=	0,07	FO-70=	0,05	FO-78=	0,04
17799										

C95 Ladle treatment

ITEM NO.: 01-13
HEAT OF THE INDICATED ITEM: VACUUM DEGASSED / SULPHIDE SHAPE CONTROL

C95 Further information about ladle treatment

ITEM NO.: 01-13
FULLY KILLED AND FINE GRAIN TREATED.

A04	TFK	201/202 We hereby certify, that the above mentioned materials have been delivered in accordance with the terms of order.		A01
Trademark		QM-System: Certification as per ISO 9001	GTS Industries B.P 6-317 59379 Dunkerque cedex 1 Service Qualité-Essais	
		HOUSSIN Test House Manager	Date 17.05.05	AN 1



DILLINGER HÜTTE

Erklärungen siehe Rückseite/Explications voir au verso/See reverse for explanations (www.dillinger.biz/certificate)

A02 ABNAHMEPRÜFZEUGNIS CERTIFICAT DE RECEPTION INSPECTION CERTIFICATE		3.1.B DIN EN 10204 - EN 10204 - DIN 50049 3.1.B NF EN 10204 3.1.B BS EN 10204 - ISO 10474 MATERIAL TEST REPORT		A08/ Manufacturer's order/ A03 Certificate No. 292922-001 B01 Product HOT ROLLED PLATES		Sheet 14/...
A05 Established inspecting body GTS		A06 Purchaser ARCELOR CANADA, BURLI Final receiver CESSCO FAB., EDMONTON		A09 Advice of dispatch No./ Date of dispatch 5442435-13.04.05		
B02/ Steel grade SA516-70/A516-70						
B03 Specifications ASME-2A:04/ASTM-A516:03 ANNEXURE:REV.08-SEPT.2004						

C70-C99 Chemical composition % - Product analysis

B08 Heat	B07 Test No.	C01	C	SI	MN	P	S	AL	CU	MO	NI	CR	V	NB	TI	B
17165	489831	K1	0,184	0,371	1,15	0,008	0,0006	0,041	0,032	0,039	0,042	0,066	0,002	0,001	0,002	0,0001
17796	488093	K1	0,187	0,361	1,17	0,008	0,0005	0,037	0,019	0,008	0,044	0,039	0,001	0,001	0,003	0,0001
17797	488094	K1	0,188	0,359	1,15	0,007	0,0007	0,041	0,020	0,011	0,071	0,048	0,001	0,001	0,003	0,0001
17798	489730	K1	0,179	0,364	1,16	0,008	0,0007	0,039	0,029	0,006	0,037	0,040	0,001	0,001	0,004	0,0000
17799	489230	K1	0,185	0,348	1,15	0,009	0,0010	0,035	0,014	0,006	0,022	0,030	0,001	0,001	0,004	0,0001

B08 Heat	B07 Test No.	C01	CA	O
17165	489831	K1	0,0015	0,0001
17796	488093	K1	0,0013	0,0009
17797	488094	K1	0,0016	0,0008
17798	489730	K1	0,0013	0,0010
17799	489230	K1	0,0013	0,0006

C94 Product analysis Carbon equivalent / Alloying restrictions

B08 Heat	B07 Test No.	C01	K1 FO-70=
17165	489831	K1	0,14
17796	488093	K1	0,07
17797	488094	K1	0,08
17798	489730	K1	0,08
17799	489230	K1	0,06

A04	TFK Trademark	Z01/Z02 We hereby certify, that the above mentioned materials have been delivered in accordance with the terms of order. QM-System: Certification as per ISO 9001	GTS Industries B.P 6-317 59379 Dunkerque cedex 1 Service Qualité-Essais Date 17.05.05 AN 1	A01
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DILLINGER HÜTTE

Erläuterungen siehe Rückseite/Explications voir au verso/See reverse for explanations (www.dillinger.biz/certificate)		A08 Advice of dispatch No./ Date of dispatch		A09/ Manufacturer's order/ A03 Certificate No.		Sheet	
A02 ABNAHMEPRUEFZEUGNIS CERTIFICAT DE RECEPTION INSPECTION CERTIFICATE		3.1.B DIN EN 10204 - EN 10204 - DIN 50049 3.1.B NF EN 10204 3.1.B BS EN 10204 - ISO 10474 MATERIAL TEST REPORT		292922-001 B01 Product		15	
A05 Established inspecting body GTS		A06 Purchaser Final receiver		ARCELOR CANADA, BURLI CESSCO FAB., EDMONTON		HOT ROLLED PLATES	
B02/ Steel grade B03 Specifications		SA516-70/A516-70 ASME-2A:04/ASTM-A516:03 ANNEXURE:REV.08-SEPT.2004					
C94 Carbon equivalent formula / Alloying restrictions							
FO-02 = C+(MN/6)+(CR+MO+V)/5+(NI+CU)/15							
FO-51 = V +NB							
FO-55 = CU+MO+NI+CR							
FO-70 = CU+MO+CR+NB+V +TI							
FO-78 = CR+MO							
D01 Checking of marking, surface, shape and dimensions							
ITEM NO.: 01-13							
RESULT OF MARKING, SURFACE, SHAPE AND DIMENSIONS: NO REMARKS							
SURFACE AS PER ASME-SA20							
THICKNESS AS PER ASME-SA20							
LENGTH AND WIDTH AS PER ASME-SA20							
FLATNESS AS PER ASME-SA20							
A04							
TTFK Trademark		Z01/Z02 We hereby certify, that the above mentioned materials have been delivered in accordance with the terms of order. QM-System: Certification as per ISO 9001				A07	
		GTS Industries B.P 6-317 59379 Dunkerque cedex 1 Service Qualité-Essais				AN 1	
		Date 17.05.05				AN 1	
		HOUSSIN Test House Manager					



Ph:(780) 632-7774

205

3400

05500

Year

16" Stock Heads

DATE REQUIRED

JOB NUMBERS

1. The above items are to be formed to meet the requirements of ASME Section VIII, Div.1 USC 79(d).

2. Tack welds that are welded must use procedures and welders qualified to ASME Section IX

~~Authorized~~

Signature



Ph:(780) 632-7774

279

VENDOR V.F.G. Oilfield Services

CONTACT ALL ITJ

DATE REQUIRED 6th 3 P.M. Separators

JOB NUMBERS
Ser. # 11366 - 11383

[illegible]

1. The above items are to be formed to meet the requirements

of ASME Section VIII, Div.1 USC 79(d).

2. Tack welds that are welded must use procedures and welders qualified to ASME Section IX

Authorized Signature

1

W
BT-2

CERTIFIED BY

RJV

**GAS FIELD
SERVICES LTD**

VEGREVILLE, ALBERTA
PHONE (780) 632-7774

A584719

UNIT NAME

Vert. 3 Phase Separator

C. R. NO.

P7217.2

SERIAL NO.

11373

M.A.W.P.

1480 p.s.i.

10204 Kpa

CORR. ALLOW.

1.6 mm

SHELL MAT'L

SA-106-B

SHELL THICK.

21.44 mm

HEAD THICK.

20.63 mm

HYDRO TEST

2220 p.s.i.

15307 Kpa

HEAT TREATMENT

Nil

HEAD MAT'L

SA-516-70

DATE MFG.

2008-01

DESIGN TEMP.

100 °F

38 °C

SIZE

406×2285mm

WEIGHT

685 Kg

M. D. M. T.

-20 °F

-29 °C

ABSA, the pressure equipment safety authority
9410 - 20th Avenue
Edmonton, AB T6N 0A4
Partial/ Partiel ☐MANUFACTURER'S DATA REPORT
FOR PRESSURE VESSEL
DÉCLARATION DE CONFORMITÉ DU CONSTRUCTEUR
D'APPAREILS SOUS PRESSION

A 584719

Upon shipment of a pressure vessel, this form fully and correctly filled in must be mailed to the office of the Chief Inspector in the province of installation in accordance with the regulations under the Act, governing the construction and installation of pressure vessels.

Au moment de l'expédition d'un appareil sous pression, ce formulaire complété correctement, doit être envoyé au bureau de l'inspecteur en chef de la province d'installation tel que prévu dans les règlements de la loi sur les appareils sous pression.

Manufactured by Construit par	Name and address of Manufacturer/ Nom et adresse du constructeur RJV Gas Field Services 4901-47th St. Bruce Rd. Vegreville, Alberta T9C 1C3
Manufactured for Construit pour	Name and address of Purchaser or Consignee/ Nom et adresse du client ou de son représentant RJV Gas Field Services 4901-47th St. Bruce Rd. Vegreville, Alberta T9C 1C3
Ultimate owner Utilisateur	Name and address/ Nom et adresse Stock
Location of installation Lieu d'installation	Address/ Adresse Stock

Pressure vessel/ Appareil

Type/ Genre Vertical 2 Phase Separator	Overall Length/Longueur totale 2285 mm sm/sm	Serial No./ N° de série 11373	Year built/Année de fabrication 2008
Provincial Registration No. - C.R.N./N° d'enregistrement provincial - N.E.C. P7217.2	National Board No./ N° National Board N/A	Drawing No./ N° de dessin V01-381	

The chemical and physical properties of all parts meet the requirements of material specifications of the A.S.M.E. Code.
Les propriétés chimiques et physiques de toutes les composantes respectent les exigences des spécifications de matériaux de code ASME.

The design, construction and workmanship conform to CSA B51. La conception, la construction et la façon sont conformes à ACNOR B51.	ASME Section VIII 2007 Edition	Division 1	Addenda/Supplément N/A	Code case No. N° de cas N/A
--	--------------------------------------	---------------	---------------------------	-----------------------------------

Manufacturer's partial data reports properly identified and signed by authorized inspectors have been furnished for the following items of the report, and attached to this report:
Les rapports partiels du constructeur adéquatement identifiés et signés par les inspecteurs autorisés ont été produits pour les items suivants du rapport, et attachés à ce rapport:

Names of parts/ Nom de la composante	Item No./ N° d'item	Manufacturer's Name/ Nom du constructeur	Identifying Stamp/ Estampe d'identification

Shell/ Virole

Description	Material Matériau	Thickness Épaisseur	Corr. Allow. Surépais. de corr.	Diameter Diamètre	Longitudinal Joints Joints longitudinaux			P.W.H.T. Traitement therm		Girth Joints Joints de circonférence		Number of courses Nombre de sections
					Type	R.T. Radiog.	Efficiency Efficacité	Temp.	Time Durée	Type	R.T. Radiog.	
Shell	SA-106-B	21.44 mm	1.6 mm	406 mm	Sml's	N/A	100 %	N/A	N/A	1	Spot	1
											70 %	

Heads/ Têtes

Description	Material Matériau	Min. Thickn. Épais min.	Corr. Allow Surép. Corr.	Crown Radius Rayon couron.	Knuckle Radius Petit rayon	Ellipse Ratio Rapp. ellipse	Conical Apex Angle Angle conique	Hemisph. Radius Ray. Hémisph	Flat Diameter Diam. plat	Side to pressure Côte sous pression
Top	SA-516-70	20.63 mm	1.6 mm	-----	-----	2:1	-----	-----	-----	Concave
Bottom	SA-516-70	20.63 mm	1.6 mm	-----	-----	2:1	-----	-----	-----	Concave
Removable bolts used (describe other fastenings) Boulons amovibles utilisés (décrire tout autre attache)					Mat'l Spec./ Spéc. du mat.			Grade		Size/ Dimension

Pressure - Temperature/ Pression - température

Pressure Vessel Part Partie de l'appareil	Constructed for max. allowable working pressure Construit pour une pression maximale de marche permise	At max. temp. A une temp. max.	Min. Temp. (when less than -29°C) Temp. min. (inférieure à -29°C)	Test pressure (hydro-pneumatic or combination) Pression d'épreuve (hydro-pneumatique ou combinaison)
Vessel	10,205 Kpa	38° C	-29° C	15,307 Kpa

Tube Section/ Faisceau tubulaire

Tubesheet/ Plaque tubulaire	Material/ Matériau	Diameter/ Diamètre	Nominal Thickness Épaisseur nominale	Corr. Allow. Surépais. corrosion	Attachment Mode d'attachement
Tube material/ Matériau des tubes	Diameter/ Diamètre	Nominal Thickness (gauge) Épaisseur nominale (calibre)	Number/ Nbre	Type (Straight or U) Type (Droit ou U)	Heating Surface Surface de chauffe

Jacket/ Chemise

Type of jacket/ Genre de chemise	Jacket closure Fermeture de chemise	Proof Test Pression d'épreuve	Heating Surface Surface de chauffe	Sketch/ Schéma
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Safety Valve Outlets/ Soupapes de sûreté

Number/ Nombre 1	Dimension 33.4 mm	Location/ Endroit Shell
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Nozzles and Openings/ Tubulures et ouvertures

Purpose/ But	Number Nombre	Dimension	Type	Material Matériau	Nominal Thickness Épaisseur nominale	Reinforcement material Matériau de renfort	How attached Genre d'attaches	Location/ Endroit
Inlet/Outlet	2	88.9 mm	CL600	SA-105/SA-106-B	15.24 mm	N/A	UW16.1 {c}	Shell/Top Head
(2)L.L.C./H.L.S.D./Drain	4	60.3 mm	Coupling	SA-105	CL6000	N/A	UW16.1 {c}	Shell/Bottom Head
(2) Liquid Out/ P.S.V.	3	33.4 mm	Coupling	SA-105	CL6000	N/A	UW16.1 {c}	Shell
(2)Sight Glass /Temp.Indicator	5	26.7 mm	Coupling	SA-105	CL6000	N/A	UW16.1 {c}	Shell
Pressure Indicator	1	21.4 mm	Coupling	SA-105	CL6000	N/A	UW16.1 {c}	Shell

Supports/ Supports

Skirt/ Jupe Yes/ Oui No/ Non ☒ ☐	Lugs/ Oreilles No./ Nbre No	Legs/ Pieds No./ Nbre No	Other/ Autres (Description) N/A	Attached/ Attaches (Where and How/ Méthode et endroit) Welded to bottom head
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Remarks/ Observations (Cubical capacity/ Volume)

Volume- (.262 cubic meters)
Except from impact test requirements as per UG 20(f) 1 to 5
Hydrostatically tested in the Vertical Position

Certificate of Compliance/ Certificat de conformité

We certify that the statements made in this data report are correct and that the said vessel has been constructed in accordance with the Provincial Registered design below and the requirements of standard CSA B51.

Nous certifions que les données de la déclaration de conformité sont correctes et que l'appareil a été construit en accord avec l'enregistrement provincial ci-dessous et les exigences de la norme ACNOR B51.

Provincial Registered Design
Enregistrement provincial **P7217.2**

Manufacturer
Constructeur **RJV Gas Field Services**

Signature *Daniel Hauca* Date **JAN 24 2008**

**Certificate of Compliance - Field Work/
Certificat de conformité - Installation au chantier**

We certify that the field installation of all parts of the vessel conforms with the requirements of Provincial Regulations.

Nous certifions que l'installation au chantier de toutes les composantes de l'appareil est conforme aux règlements provinciaux.

Installer's Name
Nom de l'installateur

Signature

Date

Certificate of Shop Inspection/ Certificat d'inspection en usine

I, the undersigned, a duly authorized Boiler and Pressure Vessel Inspector
Je, soussigné, inspecteur autorisé de chaudières et appareil sous pression
employed by **ABSA**

of/ de **Alberta**
have inspected the above vessel and state that to the best of my knowledge and belief, the manufacturer has constructed the vessel in accordance with the Provincial registration CRN **P7217.2**
and the requirements of standard CSA B51.

ai inspecté l'appareil précité et autant que je sache, crois que le constructeur a construit l'appareil en accord avec l'enregistrement provincial NEC

et les exigences de la norme ACNOR B51.

Inspector's Name
Nom de l'inspecteur

Signature *D. Maltais* Date **JAN 24 2008**

Certificate of Field Inspection/ Certificat d'inspection - Installation au chantier

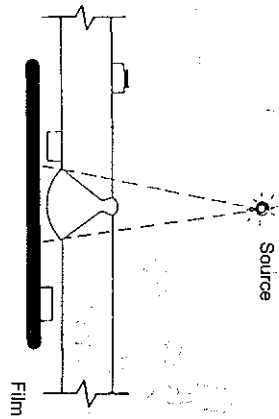
I, the undersigned, a duly authorized Boiler and Pressure Vessel Inspector
Je, soussigné, inspecteur autorisé de chaudières et appareil sous pression
employed by

have inspected the items not covered by the Shop Inspection Certificate and the installation of the items and state that to the best of my knowledge and belief the construction and assembly of the items are in accordance with the Provincial Regulations.

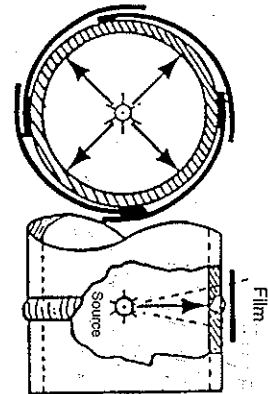
ai inspecté les composantes non couvertes par le certificat d'inspection en usine et l'installation de l'appareil et, autant que je sache, la construction et l'assemblage de l'appareil sont en accord avec les règlements provinciaux.

Inspector's Name
Nom de l'inspecteur

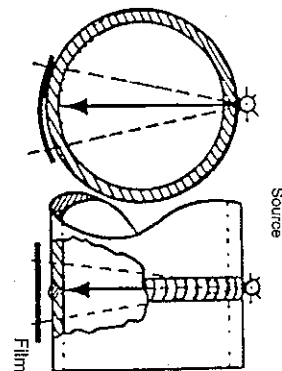
Signature Date



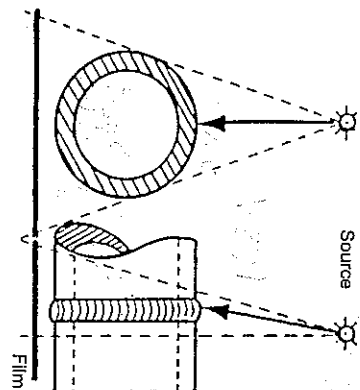
Technique "1"
SWE-SWV



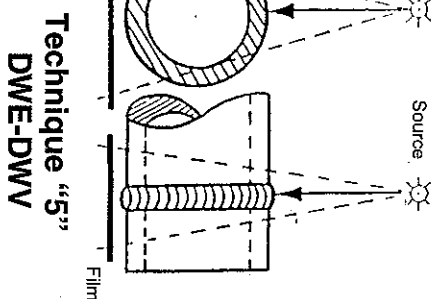
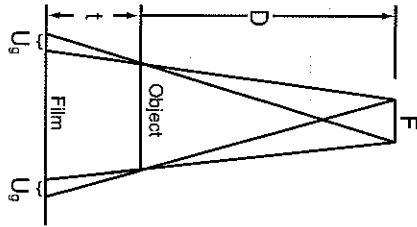
Technique "2"
SWE-SWV



Technique "3"
DWE-SWV



Technique "4"
DWE-DWV



U_g = Geometric Unsharpness
 D = source to object distance
 t = object to film distance
 F = Focal Spot Size

$$U_g = \frac{Ft}{D}$$

*Note: if t is omitted from this report, the
Pipe Schedule shall apply as t .

DEFECT LEGEND		OTHER LEGENDS	
CRK	Crack	SWE	Single Wall Exposure
LF	Lack of Fusion	DWE	Double Wall Exposure
IP	Incomplete Penetration	SWV	Single Wall Viewing
P	Porosity	DWV	Double Wall Viewing
S	Slag	EXP	Exposures
UC	Undercut	REIN	Reinforcement
CR	Concave Root	DIA	Diameter
EP	Excessive Penetration	SOD	Source Object Distance
BT	Burn Through	OFD	Object to Film Distance
HB	Hollow Bead		
PH	Pinhole		

SCOPE OF SERVICES:

The agreement of Acuren Group Inc. to perform services extends only to those services provided for in writing. Under no circumstances shall such services extend beyond the performance of the requested inspection of specific equipment provided for in writing and the preparation of reports or similar documents reflecting the inspection data obtained or the opinion formulated on the basis of such inspection. It is expressly understood that all descriptions, comments and expressions of opinion reflect the opinion or observations of the examiner and are not intended nor can they be construed as representations or warranties as to the actual circumstances. Acuren is not assuming any responsibilities of the owner/operator, and the owner/operator retains complete responsibility for the engineering, repair and use decisions as a result of the inspection data or other information provided by Acuren. In no event shall Acuren's liability in respect of the services referred to herein exceed the amount paid for such services.

STANDARD OF CARE:

In performing the services provided, Acuren Group Inc. uses the degree, care and skill ordinarily exercised under similar circumstances by others performing such services in the same or similar locality. No other warranty, expressed or implied, is made or intended by Acuren.

DESIGN DATA

DESIGN & FABRICATE TO ASME SECTION VIII, DIV. I, 1992 EDITION 1992 ADDENDA

DESIGN PRESSURE: 1035 KPA (150 PSI)
HYDROTEST: 1555 KPA (225 PSI) LONG'L JOINT EFF:
RADIOGRAPHY-CIRC. SEAMS-NONE CORR. ALLOWANCE: 3.17MM(.125")
RADIOGRAPHY-LONG SEAMS-SMLS LIMITED BY: SHELL
P.W.H.T: NONE FLANGES: SA-105
M.A.W.P: 1035 KPA (150 PSI) NOZZLES: SA-106-B
HEADS: SA-234-WP MIN: 7.16mm NDM: 8.1mm STUDS: 193-B7
SHELL: SA-516-70 NDM: 15.6mm NDM: 19.05mm NUTS: 194-2H
MIN. DESIGN METAL TEMP: -29C (-20F) MISC. PLATE: SA-36
EXEMPT FROM IMPACT TEST REQUIREMENTS AS PER UG 20(F)

DESIGN TEMP: 38C (100F)
WELD FITTINGS: SA-234-WPB
COUPLINGS(T.O.L): SA-105
INTERNAL: SA-36
PRE-HEAT: 93C (200F)
SHIPPING WT: 50KG (110lbs)
CAPACITY: .22 CUBIC METER (7.78CU FT)
PAINT: ONE COAT PRIMER
CRN: F6388.23

RJV

GASFIELD SERVICE LTD.

4901 BRUCE RD VEGREVILLE, ALTA

T9C-1C3

PHONE (403) 632-7774

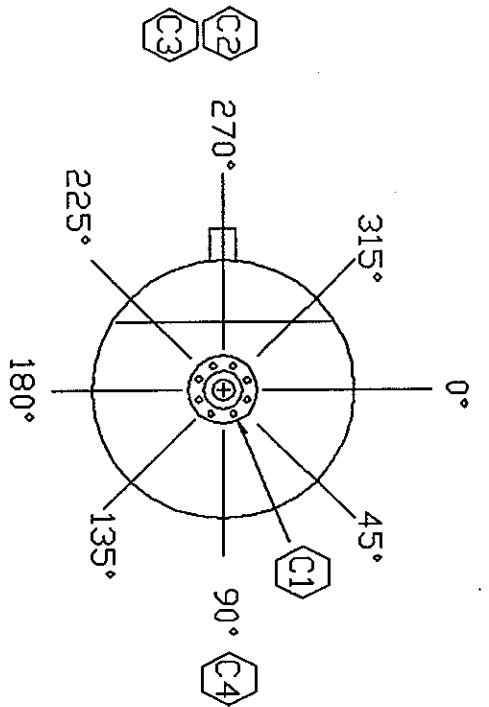
FAX (403) 632 6820

TITLE: 219 OD X 762 sm/sm 1035 KPA
FUEL GAS SCRUBBER

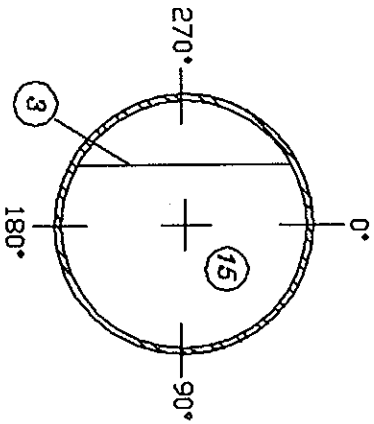
DWG. # V8505

REV. # 2

SHEET OF



ORIENTATION



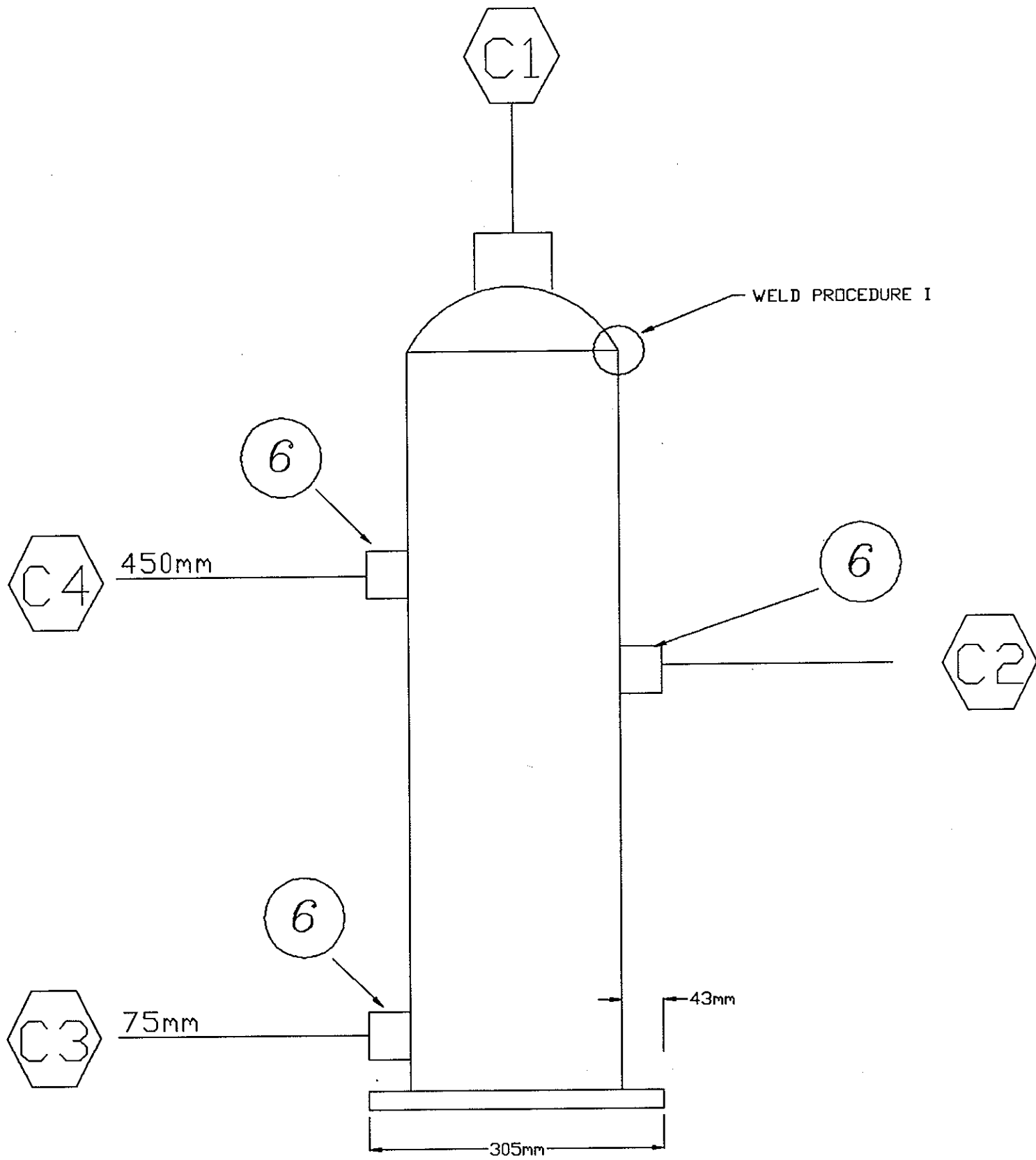
DETAIL-INLET DEFLECTOR

BOILER BRANCH APPROVAL STAMP

WARNING

THIS DRAWING AND THE DESIGN IT COVERS ARE CONFIDENTIAL AND SHALL NOT BE DISCLOSED TO OTHERS OR REPRODUCED IN ANY MANNER OR USED FOR ANY PURPOSE WHATSOEVER EXCEPT BY WRITTEN CONSENT OF RJV GASFIELD SERVICE LTD.

REFERENCE DWG.		REVISIONS		ENGINEERING	
DWG. #	DESCRIPTION	#	DESCRIPTION	DATE	BY
				AUG. 01/94	GARY ZUK
				SCALE	
				CHECKED BY	
				APPROVED BY	



[illegible]

BILL OF MATERIALS			
ITEM	QTY.	DESCRIPTION	MAT'L
1	1	219mm O.D. SCH 40 WELD CAP	SA-231-WPB
2	1	219mm O.D. SCH 40 ERW PIPE X 610mm LG(BBE)	SA-53B-ENK
3	1	1100mm X 100mm X 6.4mm THK X 165mm LG(CUT TO FIT)	SA-36
4	1	305mm O.D. X 19.05mm NOM.(MIN)15.6mm) THK PLATE	SA-516-70
5	1	NPS 2 3000# FULL COUPLING	SA-105
6	3	NPS 1 3000# FULL COUPLING	SA-105

[illegible]

GENERAL NOTES:



TO: RJV GASFIELD SERVICE LTD
 4901 47TH ST (BRUCE RD) BOX 295
 VEGREVILLE AB
 T9C 1C3

Registered: 2004/02/09
 Journal #: 32931
 Account #: 24578

Attn: WES MARKOWSKY

Re: RJV GASFIELD SERVICE LTD

DESIGN REGISTRATION

C.R.N.

F6388.21

Drawings / Documents	Description			
FUEL GAS SCRUBBER 8"OD V8505 REV.2	MDMT	MAWT	MAWP	EXT PRESS
	-20 F	100 F	150 psi	
REGISTERED				

Remarks: This design has been registered as noted above. An invoice for survey will follow in the amount of \$ 60.00

Yours truly,

E. HURD

Design Surveyor

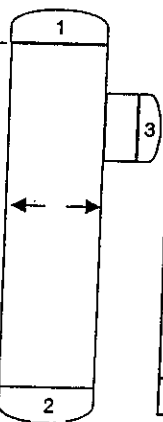
Authorized Inspector to be given travel sheet prior to construction so that he can indicate hold points with an asterik (*)

Hold points established - Sign & Date _____

(Authorized Inspector)

Vessel Serial # 11309		DWG # V8505 Rev.2		(A) #	
Vessel Title 8" Fuel Gas Scrubber		CRN # F6388.2			
ITEM	COMMENTS	AUTH. INS. HOLD POINTS	DATE FUNCTION COMPLETE & INSPECTORS INITIALS		
			QC INSPECTOR	AUTHORIZED INSPECTOR	
APPROVED DRAWING			SEP 07 2007	DC	
MATERIAL CHECKED AGAINST					
DRAWING, MATERIAL LIST			SEP 07 2007	DC	
MILL TESTS CHECKED			SEP 07 2007	DC	
VESSEL LAYOUT			SEP 10 2007	DC	
NOZZLES	ORIENTATION		SEP 10 2007	DC	
& FITTING	RATINGS		SEP 10 2007	DC	
IT	NOZZLES & FITTINGS		SEP 10 2007	DC	
IP	SHELL & HEAD		SEP 12 2007	DC	
INTERNALS (tray, baffles, etc.)			SEP 12 2007	DC	
INTERNAL INSPECTION		(*)	SEP 12 2007	DC	
WELD SIZES			SEP 17 2007	DC	
WELDERS I.D.			SEP 17 2007	DC	
EXTERNAL AFTER COMPLETION					
FINAL WELDING			SEP 17 2007	DC	
RADIOGRAPHS					
THER N.D.E.					
PACT TESTS					
VHT CHART CHECKED					
MEPLATE			SEP 17 2007	DC	
DROSTATIC TEST		(*)	SEP 20 2007	DC	
TA REPORT			SEP 20 2007	DC	

		SPECIFICATION	HEAT NUMBER	THICKNESS
SHELL	C1	SA-106-B	P521860	8.1 mm
	C2			
	C3			
HEADS	1	SA-234-WPB	6A4499	7.16 mm
	2	SA-516-70	288712-98024	19.05 mm
	3			
REPADS	1			
	2			
	3			
		SPECIFICATION	SIZE	SCHEDULE
NOZZLES				
FITTINGS		SA-105	3/4", 1", 2"	*3000 cpg.
TUBES				



JAN 04 2006

Contract No: 05MPM07203-1

L/C NO. 5FAHDS-00607

Name of Customer: CE FRANKLIN

P.O.NO.: PO.134645-OR-2100

DESCRIPTION: SEAMLESS CARBON STEEL PIPE FOR OIL AND GAS USE

TOTAL: 620PIECES, 105BUNDLES, 226.999MT, 14540FT

Page: 1/1

HUNAN HENGYANG STEEL TUBE (GROUP) CO., LTD

MILL TEST REPORT

Date: SEP. 27. 2005

Cable: 6993

P.C. 421001

8" Std. WT# P521860

Add: 10 Dalixincun, Hengyang City, Hunan, China

Tel and Fax: +86 734 8873739 8872942

SPEC: ASTM A53B-2002/A106B-2002a, ASME SA53B-2004/SA106B-2004, API 5LB, PSL1-2004, NACE MR-0175-1999													CERTIFICATE NO: 0509033			
N	BATCH NO.	HEAT NO.	STEEL GRADE	SIZE	BUNDLES	PIECES	FEET	QUANTITY (MT)	ACTUAL WEIGHT(MT)							
1	259200210	P522239	B	6"*.432"*.20FT 112754	20	138	2760	35.805								
2	258203001	P512308	B	8"*.0.322"*.20FT 1132144	27	189	3780	49.003								
3	258102910	P521860	B	8"*.0.322"*.40FT 1132144	11	53	2120	27.483								
4	259200213	P522281	B	8"*.0.500"*.20FT 113220	13	90	1800	35.459								
5	259200304	P521073	B	10"*.0.365"*.20FT 113259	11	75	1500	27.568								
6	259200303	P521053	B	10"*.0.365"*.40FT 113259	16	48	1920	35.28								
7	259100204	P522303	B	10"*.0.500"*.20FT 1126743	7	33	660	16.401								
CHEMICAL COMPOSITION %																
N	DELIVERY	NONDESTRUCTIVE TEST														
O.	CONDITION	EDDY CURRENT TEST	ULTRASONIC TEST	C	Si	Mn	P	S	Cu	Ni	Cr	Mo	V	CE		
1	HOT-ROLLED	OK		0.20	0.24	0.55	0.013	0.021	0.02	0.02	0.03	0.01	0.001	0.30		
2	HOT-ROLLED	OK		0.20	0.23	0.50	0.012	0.026	0.03	0.03	0.02	0.01	0.001	0.29		
3	HOT-ROLLED	OK		0.19	0.21	0.56	0.022	0.028	0.02	0.02	0.02	0.01	0.001	0.29		
4	HOT-ROLLED	OK		0.19	0.24	0.56	0.014	0.024	0.02	0.02	0.01	0.01	0.001	0.29		
5	HOT-ROLLED	OK		0.19	0.21	0.49	0.013	0.029	0.02	0.02	0.02	0.01	0.001	0.28		
6	HOT-ROLLED	OK		0.19	0.19	0.46	0.017	0.033	0.03	0.02	0.02	0.01	0.001	0.28		
7	HOT-ROLLED	OK		0.21	0.24	0.51	0.014	0.029	0.03	0.03	0.03	0.01	0.001	0.31		
TENSILE STRENGTH		σ s (PSI)		δ (%)		ELONGATION		AK (J)		HARDNESS		HYDROSTATIC TEST		FLATTEN TEST		BEND TEST
1	70325	46400		30						HRC 6.0		2800 PSI		OK		
2	68875	44950		35						HRC 6		2800 PSI		OK		
3	73225	47125		35.5						HRC 5.0		2800 PSI		OK		
4	69600	44950		29						HRC 5.5		2800 PSI		OK		
5	69600	44950		43						HRC 7.5		2800 PSI		OK		
6	70325	45675		42						HRC 7		2800 PSI		OK		
7	70325	45675		30						HRC 5.5		2800 PSI		OK		

REMARKS: 1. We hereby certify that the material has been manufactured, sampled, tested and inspected in accordance with the required standards.

2. Properties compliance to DIN 50049 3.1.B.

3. BRINELL /Rockwell hardness certified to NACE MR-0175-99.

4. SPECIMEN SIZE: (Pipe end, Longitudinal, Gauge Length=2")

A. For pipes ≤ 1" full length specimen were used;

B. For pipes > 1" longitudinal strip specimen were used; the width of the gauge length portion is 3/4".

5. METRIALS CONFIRM TO ANSI B36.10,A-530/A530M

6. Origin: Made in China.

QUALITY MANAGER

SEP 05 2006

8" STD BW CAPS A234-WPB

HEAT NUMBER : 6A4499
TRANS AM PIPING PRODUCTS - REV'D BY: 15
Shipment/Seq #: S 6 - 1207

JUL 05 2006

OC

Ou E Lan

MANAGER OF Q.A. DEPT.

PURCHASER : SEYBOLD
STANDARD : ASTM A234 WPB-02
ASME SA234 WPB-01

MATERIALS : ASTM A106 Gr.B / JIS G3103 SB410
INSP. SPEC. : ASME B16.9 - 01

8. MEI-CHUNG RD. NIAO-SONG,
KAOHSIUNG HSIEN 83301 TAIWAN
TEL: 886-77310527-8
FAX: 886-77315887

INDUSTRIES CO., LTD.



INSPECTION CERTIFICATE

DATE: 2006 - 04 - 06
ORDER NO: 5211/CDS690
P.I. NO: 5J06-3
CERTIFI. NO: 143

ACCORDING TO EN10204/DIN50049/3.1B

ITEM NO.	PRODUCT & SIZE	QUANTITY PCS	MFG NO.	VISUAL & DIMENSIONAL INSPECTION	HARDNESS MAX 197 HB	HEAT TREATMENT (NOTE)	MAGNETIC PARTICLE EXAMINATION	IMPACT TEST (J)								
1	CAP 8"	STD	6A4499	GOOD	128 - 135	N	GOOD									
2	RED-TEE 6X3"	STD	54521	GOOD	152 - 157	N										
ITEM NO.	MATERIAL CHARGE NO.	CHEMICAL COMPOSITION %										PHYSICAL TEST				
		C	Si	Mn	P	S	Cu	Ni	Cr	Mo	V	Nb	Y S	T S	E	C.E.
STANDARD	MIN.	MAX.	x100	x100	x1000	x1000	x100	x100	x100	x100	x100	x1000	KSI	KSI	%	X100
1	1K599	30	18	76	50	58	40	40	40	15	8	20	35.0	85.0		50
2	J5X3121	10	23	128	19	6	0	1	0	2	0	0	46.6	68.2	28.6	31
			25		10	5	2	3	11	1	0	0	46.3	67.7	43.5	34

(NOTE): A: HOT FORMED WITH FINAL TEMPERATURE BETWEEN 620°C-980°C, AIR COOLING.
N: NORMALIZING AT TEMPERATURE 980°CX0.5HR, AIR COOLING.

NACE MR-01-75 & NACE MR 0103 : SATISFACTORY
WE HEREBY CERTIFY THAT THE PRODUCT DESCRIBED HEREIN HAS BEEN MANUFACTURED IN ACCORDANCE WITH THE SPECIFICATIONS CONCERNED AND ALSO WITH THE PURCHASER'S REQUIREMENTS AND THAT THE TEST RESULTS SHOWN HEREIN ARE CORRECT.

HT #

8" STD CAP

6A4499

Edmonton Exchanger & Manufacturing Ltd.

5545-89 Street, Edmonton, Alberta T6E 5W9

Telephone (780) 468-6722 Fax (780) 466-5155

QCC-004

Rev.4

Date: April 1, 2005

Approved By: S.Z.

Certificate of Compliance

Customer RJV GASFIELD LTD.	Purchase Order 2455	Work Order C68196	Date 2007/03/15	Page 1 of 1
----------------------------	---------------------	-------------------	-----------------	-------------

Item#	Description	Qty	Heat#	Brinell Hardn.	Brinell Hardn. After Form.
P68196-1	DISC(S) - 0.7500" NOM X 12" OD (Material Spec: SA 516-70 Normalized)	50	288712-98024	?	?

Brinell Equipment: Newage Calibrated Pin
Brinell Hardness Tester

Supplementary Requirements

Normalized Material Identification Marking:

'MT' indicates normalized by the mill per ASME Code Section II, part A, SA 20, para. 13.1.1.

'GMT' indicates normalized by Edmonton Exchanger per ASME Code Section II, part A, SA 20, para. 13.1.2.

'GT' indicates normalized by Edmonton Exchanger per ASME Code Section VIII Div. 1, UG-85 or ASME Code Section I, PG-77.4.

The items listed above (if applicable) comply with the requirements of ASME Code Section I, PG-80 and Section VIII, Div. 1, UCS-79(d), UG-79 & UG-80. All welders and procedures are qualified to ASME Code Section IX. For tacking carbon steel items, roundbar used is 1018 Cold Rolled. Material being supplied conforms to the latest ASME Code Section II, Part A, 2004 Edition, Addenda July 1, 2006.

Steve Zubryckyj (QAM)

Supplementary Examination - Items



MAR 20 2007



DILLINGER HÜTTE

Erläuterungen siehe Rückseite/Explications voir au verso/See reverse for explanations (www.dillinger.de/certificate)

A02	INSPECTION CERTIFICATE 3.1 AS PER EN 10204:2004		A10	Advice of dispatch No./ Date of dispatch	A08/ Manufacturer's order/ A03 Certificate No.	Sheet
	INSPECTION CERTIFICATE 3.1.B AS PER EN 10204:1991+A1:1995 + AS PER ISO 10474:1991			235808-24.11.06	315782-001	1/...
	MATERIAL TEST REPORT (MTR)				B01 Product	
A05	Established inspecting body	A06 Purchaser	ARCELOR CANADA, BURLI	A07.1 No. 61057	HOT ROLLED PLATES	
DH		Final receiver	EDMONTON STEEL, EDMON	A07.2 No. E10409-J1010-LG		
B02/	Steel design.	SA516-70				
B03	Any suppl.	ASME-2A: 04+A05				
	requirements	DIL-HUE-2:R21-2006-04-27				



12892

B01-B99 Description of the product

B14 Item No.	B08 Number of pieces	B09 Thickness	B10 Width	B11 Length	B12 Theoretical mass KG	B04 Product delivery condition	B07.2 Heat No.	B07.1 Rolled plate No./ Test No.	A09 Purchaser article number
01	1	0,7500 x	120,50000 x	480,00000	5580	N	288712	98024-01	ITEM 1
01	1	0,7500 x	120,50000 x	480,00000	5580	N	288712	98024-02	ITEM 1
01	1	0,7500 x	120,50000 x	480,00000	5580	N	288712	98024-03	ITEM 1
01	1	0,7500 x	120,50000 x	480,00000	5580	N	288712	98025-01	ITEM 1
01	1	0,7500 x	120,50000 x	480,00000	5580	N	288712	98025-02	ITEM 1
01	1	0,7500 x	120,50000 x	480,00000	5580	N	288712	98025-03	ITEM 1
01	1	0,7500 x	120,50000 x	480,00000	5580	N	288712	98026-01	ITEM 1
01	1	0,7500 x	120,50000 x	480,00000	5580	N	288712	98026-02	ITEM 1
**	8				44640				
**	8				44640				

B04 Product delivery condition

ITEM NO.: 01

N: HT: 1670 GR.F +36 -27 GR.F

SOAKING TIME TO ATTAIN THE TARGET TEMPERATURE OVER THE WHOLE SECTION: 1-1,75 MIN/MM (25-45 MIN/INCH)

COOLING IN STILL AIR

B06 Marking of the product

ITEM NO.: 01

STEEL DESIGNATION SA516 70 MTLTV SA516 60 MTLTV

HEAT NO. / TRADEMARK / ROLLED PLATE NO.-TEST NO. / INSPECTOR'S STAMP

A04		Z01/Z02/Z03 We hereby certify, that the above mentioned materials have been delivered in accordance with the terms of order.	AG der Dillinger Hüttenwerke	A01
	Manufacturer's mark	QM-System: Certification as per ISO 9001	Postfach 1580, D-66748 Dillingen/Saar	
			Inspection department	
			Inspector's stamp	Date 24.11.06
			Test House Manager	KW 1



DILLINGER HÜTTE

Erläuterungen siehe Rückseite/Explications voir au verso/See reverse for explanations (www.dillinger.de/certificate)

A02 INSPECTION CERTIFICATE 3.1 AS PER EN 10204:2004		A10 Advice of dispatch No./ Date of dispatch		Sheet	
INSPECTION CERTIFICATE 3.1.B AS PER EN 10204:1991+A1:1995 + AS PER ISO 10474:1991		235808-24.11.06		A08/ Manufacturer's order/ A09 Certificate No.	
MATERIAL TEST REPORT (MTR)				315782-001	
A05 Established inspecting body		A06 Purchaser		B01 Product	
DH		ARCELOR CANADA, BURLI		HOT ROLLED PLATES	
		EDMONTON STEEL, EDMON			
B02 Steel design.		A07.1 No.		2/...	
SA516-70		61057			
B03 Any suppl.		A07.2 No.			
ASME-2A: 04+A05		E10409-J1010-LG			
requirements		DIL-HUE-2: R21-2006-04-27			

C10-C29 Tensile test

B14 Item No.	B07.2 Heat No.	B05 Rol. plate/ Test No.	B05 Reference (heat) treatment	C01 C02/ C01 Temp. GR.F	C10 C11 KSI	C12 C13 RM	A %	C14-C15
01	288712	98024		K1 Q	RT	50,5	74,7	LO=BIN
01	288712	98025		K1 Q	RT	51,0	75,4	28,4
01	288712	98026		K1 Q	RT	51,5	76,0	29,4
								27,0

C30-C39 Hardness test

B14 Item No.	B07.2 Heat No.	B05 Rol. plate/ Test No.	B05 Reference (heat) treatment	C01 C02/ C01 Temp. GR.F	C33 C35 C31	C32 Average value
01	288712	98024		K1 O	RT HBW 10/3000	148
01	288712	98025		K1 O	RT HBW 10/3000	148
01	288712	98026		K1 O	RT HBW 10/3000	149
						155

C40-C49 Impact test

B14 Item No.	B07.2 Heat No.	B07.1 Rol.plate/ Test No.	B05 Reference (heat) treatment	C01	C02/ C01	C03 Temp. GR.F	C41 Width of test piece	C40 Type of test piece	C44 Testing method	C46 Energy	C45 Individual values AV=FT.LBF	C43 Average value
01	288712	98024		K1	LV	-51		CHP-V			108	109
01	288712	98025		K1	LV	-51		CHP-V			81	124
01	288712	98026		K1	LV	-51		CHP-V			119	173
											153	148

C70-C99 Chemical composition % - Heat analysis

B07.2 Heat No.	C70	C	SI	MN	P	S	N	AL	CU	MO	NI	CR	V	NB	SN
288712	Y	0,175	0,383	1,17	0,007	0,0009	0,0065	0,047	0,012	0,003	0,030	0,042	0,001	0,000	0,001
B07.2 Heat No.	C70	Ti	B												
288712	Y	0,002	0,0001												

A04		Z01Z02Z03 We hereby certify, that the above mentioned materials have been delivered in accordance with the terms of order.		AG der Dillinger Hüttenwerke	
D/H		QM-System: Certification as per ISO 9001		Postfach 1580, D-66748 Dillingen/Saar	
Manufacturer's mark		B. MUELLER		Inspection department	
		Inspector's stamp		Date 24.11.06	
		Test House Manager		KW 1	



DILLINGER HÜTTE

Erläuterungen siehe Rückseite/Explications voir au verso/See reverse for explanations (www.dillinger.de/certificate)

A02	INSPECTION CERTIFICATE 3.1 AS PER EN 10204:2004		A10	Advice of dispatch No./ Date of dispatch	A08/ Manufacturer's order/ A03 Certificate No.	Sheet												
INSPECTION CERTIFICATE 3.1.B AS PER EN 10204:1991+A1:1995 + AS PER ISO 10474:1991		235808-24.11.06		315782-001	3/...													
MATERIAL TEST REPORT (MTR)																		
A05	Established inspecting body	A06 Purchaser	A07.1 No.	61057														
DH		Final receiver	A07.2 No.	E10409-J1010-LG	B01 Product HOT ROLLED PLATES													
B02/	Steel design.	SA516-70																
B03	Any suppl. requirements	ASME-2A:04+A05 DIL-HUE-2:R21-2006-04-27																
C94 Heat analysis Carbon equivalent / Alloying restrictions																		
B07.2	Heat	288712	FO-02=	0,38	FO-55=	0,09	FO-78=	0,05	FO-91=	6,7								
C95 Ladle treatment																		
ITEM NO.: 01																		
HEAT OF THE INDICATED ITEM: VACUUM DEGASSED / SULPHIDE SHAPE CONTROL																		
C70-C99 Chemical composition % - Product analysis																		
B07.2	Heat	288712	Test No.	98025	C	SI	MN	P	S	N	AL	CU	MO	NI	CR	V	NB	SN
				K1	0,170	0,382	1,18	0,006	0,0006	0,0062	0,042	0,014	0,003	0,027	0,137	0,000	0,000	0,000
B07.2	Heat	288712	Test No.	98025	Ti	B												
				K1	0,002	0,0001												
C94 Product analysis Carbon equivalent / Alloying restrictions																		
B07.2	Heat	288712	Test No.	98025	K1	FO-02=	0,40	FO-55=	0,18									
C94 Carbon equivalent formula / Alloying restrictions																		
FO-02 = C + (MN/6) + (CR+MO+V) / 5 + (NI+CU) / 15																		
FO-55 = CU+MO+NI+CR																		
FO-78 = CR+MO																		
FO-91 = MN/C																		
A04	201202203 We hereby certify, that the above mentioned materials have been delivered in accordance with the terms of order.		AG der Dillinger Hüttenwerke Postfach 1580, D-66748 Dillingen/Saar Inspection department		A01													
D/H Manufacturer's mark		B. MOELLER Test House Manager		AHB		Date 24.11.06		KW 1										



DILLINGER HÜTTE

Erläuterungen siehe Rückseite/Explications voir au verso/See reverse for explanations (www.dillinger.de/certificate)

A02 INSPECTION CERTIFICATE 3.1 AS PER EN 10204:2004 INSPECTION CERTIFICATE 3.1.B AS PER EN 10204:1991+A1:1995 + AS PER ISO 10474:1991 MATERIAL TEST REPORT (MTR)		A10 Advice of dispatch No./ Date of dispatch 235808-24.11.06	A08/ Manufacturer's order/ A03 Certificate No. 315782-001	Sheet 4
A05 Established inspecting body DH		A06 Purchaser Final receiver ARCELOR CANADA, BURLI A07.1 No. 61057 EDMONTON STEEL, EDMON A07.2 No. E10409-J1010-LG		
B02/ Steel design. SA516-70				
B03 Any suppl. requirements ASME-2A:04+A05 DIL-HUE-2:R21-2006-04-27				
D01 Marking and identification, surface appearance, shape and dimensional properties				
ITEM NO.: 01				
RESULT OF MARKING, SURFACE, SHAPE AND DIMENSIONS: NO REMARKS				
SURFACE AS PER ASME-SA20				
THICKNESS AS PER ASME-SA20				
LENGTH AND WIDTH AS PER ASME-SA20				
FLATNESS AS PER 1/2-ASME-SA20				
A04	201Z02Z03 We hereby certify, that the above mentioned materials have been delivered in accordance with the terms of order. QM-System: Certification as per ISO 9001		AG der Dillinger Hüttenwerke Postfach 1580, D-66748 Dillingen/Saar inspection department	
		AHB B. MUELLER Test House Manager		Inspector's stamp Date 24.11.06 KW 1

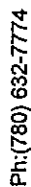
Ph:(780) 632-7774

DATE REQUIRED 8th Stock Scrubbers

JOB NUMBERS

1. The above items are to be formed to meet the requirements of ASME Section VIII, Div.1 USC 79(d).
2. Tack welds that are welded must use procedures and welders qualified to ASME Section IX

Authorized
Signature



③

[illegible]

Authorized Signature

W

CERTIFIED BY

RJV

**GAS FIELD
SERVICES LTD**

VEGREVILLE, ALBERTA
PHONE (780) 632-7774

UNIT NAME

Fuel Gas Scrubber

C. R. NO.

F6388.2

SERIAL NO.

11309

M.A.W.P.

150 p.s.i.

1035 Kpa

HYDRO TEST

225 p.s.i.

1555 Kpa

DESIGN TEMP.

100 °F

38 °C

CORR. ALLOW.

3.17 mm

HEAT TREATMENT

SIZE

219 x 760 mm

SHELL MAT'L

SA-106-B

HEAD MAT'L

**Top-SA-234-WPB
Bottom-SA-516-70**

WEIGHT

50 Kg

SHELL THICK.

8.1 mm

M. D. M. T.

-20 °F

HEAD THICK.

**Top - 7.16
Bottom - 19.05 mm**

DATE MFG.

2007-09

-29 °C

8" Typical Scrubber ALBERTA MUNICIPAL AFFAIRS

ABSA, the pressure equipment safety authority

9410 - 20th Avenue

Edmonton, AB T6N 0A4

Partial/ Partiel ☐

A _____

AB-25 (Side 1) 2006/04

MANUFACTURER'S DATA REPORT FOR PRESSURE VESSEL

DÉCLARATION DE CONFORMITÉ DU CONSTRUCTEUR D'APPAREILS SOUS PRESSION

Upon shipment of a pressure vessel, this form fully and correctly filled in must be mailed to the office of the Chief Inspector in the province of installation in accordance with the regulations under the Act, governing the construction and installation of pressure vessels.

Au moment de l'expédition d'un appareil sous pression, ce formulaire complété correctement, doit être envoyé au bureau de l'inspecteur en chef de la province d'installation tel que prévu dans les règlements de la loi sur les appareils sous pression.

Manufactured by Construit par	Name and address of Manufacturer/ Nom et adresse du constructeur RJV Gas Field Services 4901-47th St. Bruce Rd. Vegreville, Alberta T9C 1C3
Manufactured for Construit pour	Name and address of Purchaser or Consignee/ Nom et adresse du client ou de son représentant RJV Gas Field Services 4901-47th St. Bruce Rd. Vegreville, Alberta T9C 1C3
Ultimate owner Utilisateur	Name and address/ Nom et adresse Stock
Location of installation Lieu d'installation	Address/ Adresse Stock

Pressure vessel/ Appareil

Type/ Genre Vertical Fuel Gas Scrubber	Overall Length/Longueur totale 762 mm sm/sm	Serial No./ N° de série 11309	Year built/Année de fabrication 2007
Provincial Registration No. - C.R.N./N° d'enregistrement provincial - N.E.C. F6388.2	National Board No./ N° National Board N/A	Drawing No./ N° de dessin V8505 Rev.2	

The chemical and physical properties of all parts meet the requirements of material specifications of the A.S.M.E. Code.
Les propriétés chimiques et physiques de toutes les composantes respectent les exigences des spécifications de matériaux de code ASME.

The design, construction and workmanship conform to CSA B51. La conception, la construction et la façon sont conformes à ACNOR B51.	ASME Section VIII 2004 Edition	Division 1	Addenda/Supplément 2006	Code case No. N° de cas N/A
--	--------------------------------------	----------------------	-----------------------------------	--

Manufacturer's partial data reports properly identified and signed by authorized inspectors have been furnished for the following items of the report, and attached to this report:
Les rapports partiels du constructeur adéquatement identifiés et signés par les inspecteurs autorisés ont été produits pour les items suivants du rapport, et attachés à ce rapport:

Names of parts/ Nom de la composante	Item No./ N° d'item	Manufacturer's Name/ Nom du constructeur	Identifying Stamp/ Estampe d'identification

Shell/ Virole

Description	Material Matériau	Thickness Épaisseur	Corr. Allow. Surépais. de corr.	Diameter Diamètre	Longitudinal Joints Joints longitudinaux			P.W.H.T. Traitement therm		Girth Joints Joints de circonférence		Number of courses Nombre de sections
					Type	R.T. Radiog.	Efficiency Efficacité	Temp.	Time Durée	Type	R.T. Radiog.	
Shell	SA-106-B	8.1 mm	3.17 mm	219 mm	1	sm's	100 %	-----	-----	None	None	1
											70 %	

Heads/ Tetes

Description	Material Matériau	Min. Thickn. Épais minm.	Corr. Allow Surép. Corr.	Crown. Radius Rayon couron.	Knuckle Radius Petit rayon	Ellipse Ratio Rapp. ellipse	Conical Apex Angle Angle conique	Hemisph. Radius Ray. Hémisph	Flat Diameter Diam.plat	Side to pressure Côte sous pression
Top	SA-234-WPB	7.16 mm	3.17 mm	-----	-----	Weld Cap	-----	-----	-----	Concave
Bottom	SA-516-70	19.05 mm	3.17 mm	-----	-----	-----	-----	-----	305 mm	Flat
Removable bolts used (describe other fastenings) Boulons amovible utilisés (décrire tout autre attache)					Mat'l Spec./ Spéc. du mat.			Grade		Size/ Dimension

Pressure - Temperature/ Pression - température

Pressure Vessel Part Partie de l'appareil	Constructed for max. allowable working pressure Construit pour une pression maximale de marche permise	At max. temp. A une temp. max.	Min. Temp. (when less than -29°C) Temp. min. (inférieure à -29°C)	Test pressure (hydro-pneumatic or combination) Pression d'épreuve (hydro-pneumatique ou combinaison)
Vessel	1035 Kpa	38° C	-29° C	1555 Kpa

Tube Section/ Faisceau tubulaire

Tubesheet/ Plaque tubulaire	Material/ Matériau	Diameter/ Diamètre	Nominal Thickness Épaisseur nominale	Corr. Allow. Surépais. corrosion	Attachment Mode d'attachement
Tube material/ Matériau des tubes	Diameter/ Diamètre	Nominal Thickness (gauge) Épaisseur nominale (calibre)	Number/ Nbre	Type (Straight or U) Type (Droit ou U)	Heating Surface Surface de chauffe

Jacket/ Chemise

Type of jacket/ Genre de chemise	Jacket closure Fermeture de chemise	Proof Test Pression d'épreuve	Heating Surface Surface de chauffe	Sketch/ Schéma
----------------------------------	--	----------------------------------	---------------------------------------	----------------

Safety Valve Outlets/ Soupapes de sûreté

Number/ Nombre 1	Dimension 33.4 mm	Location/ Endroit Shell
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Nozzles and Openings/ Tubulures et ouvertures

Purpose/ But	Number Nombre	Dimension	Type	Material Matériau	Nominal Thickness Épaisseur nominale	Reinforcement material Matériau de renfort	How attached Genre d'attaches	Location/ Endroit
Outlet	1	60.3 mm	Coupling	SA-105	CL3000	N/A	UW16.1 (c)	Top Head
Inlet/Drain/P.S.V.	3	33.4 mm	Coupling	SA-105	CL3000	N/A	UW16.1 (c)	Bottom Head / Shell

Supports/ Supports

Skirt/ Jupe Yes/ Oui No/ Non ☐ ☒	Lugs/ Oreilles No./ Nbre No	Legs/ Pieds No./ Nbre No	Other/ Autres (Description) N/A	Attached/ Attaches (Where and How/ Méthode et endroit) Flat bottom head welded to shell
---	-----------------------------------	--------------------------------	------------------------------------	---

Remarks/ Observations (Cubical capacity/ Volume)

Volume- (.022 cubic meters) Exempt from impact test requirements as per UG 20(f) 1 to 5 Hydrostatically tested in the Vertical Position
--

Certificate of Compliance/ Certificat de conformité

We certify that the statements made in this data report are correct and that the said vessel has been constructed in accordance with the Provincial Registered design below and the requirements of standard CSA B51.

Nous certifions que les données de la déclaration de conformité sont correctes et que l'appareil a été construit en accord avec l'enregistrement provincial ci-dessous et les exigences de la norme ACNOR B51.

Provincial Registered Design
Enregistrement provincial F6388.2

Manufacturer
Constructeur RJV Gas Field Services

Signature _____ Date _____

Certificate of Shop Inspection/ Certificat d'inspection en usine

I, the undersigned, a duly authorized Boiler and Pressure Vessel Inspector
Je, soussigné, inspecteur autorisé de chaudières et appareil sous pression
employed by
employé par ABSA

of/ de Alberta
have inspected the above vessel and state that to the best of my knowledge and belief, the manufacturer has constructed the vessel in accordance with the Provincial registration CRN F6388.2
and the requirements of standard CSA B51.

ai inspecté l'appareil précité et autant que je sache, crois que le constructeur a construit l'appareil en accord avec l'enregistrement provincial NEC _____
et les exigences de la norme ACNOR B51.

Inspector's Name
Nom de l'inspecteur _____

Signature _____ Date _____

Certificate of Compliance - Field Work/**Certificat de conformité - Installation au chantier**

We certify that the field installation of all parts of the vessel conforms with the requirements of Provincial Regulations.

Nous certifions que l'installation au chantier de toutes les composantes de l'appareil est conforme aux règlements provinciaux.

Installer's Name
Nom de l'installateur _____

Signature _____

Date _____

Certificate of Field Inspection/ Certificat d'inspection - Installation au chantier

I, the undersigned, a duly authorized Boiler and Pressure Vessel Inspector
Je, soussigné, inspecteur autorisé de chaudières et appareil sous pression
employed by
employé par _____

have inspected the items not covered by the Shop Inspection Certificate and the installation of the items and state that to the best of my knowledge and belief the construction and assembly of the items are in accordance with the Provincial Regulations.

ai inspecté les composantes non couvertes par le certificat d'inspection en usine et l'installation de l'appareil et, autant que je sache, la construction et l'assemblage de l'appareil sont en accord avec les règlements provinciaux.

Inspector's Name
Nom de l'inspecteur _____

Signature _____ Date _____

RJV GASFIELD SERVICES LTD.

4901-47st VEGERVILLE, ALBERTA T9C-1C3
PHONE (780) 632-7774 FAX (780) 632-6820

HYDRO TEST REPORT

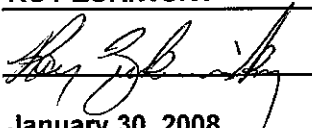
SKID IDENTIFICATION NO.: 14072

RJV JOB NO.:	<u>07-4220</u>	TEST PRESSURE:	<u>2160 Psi</u>
CUSTOMER:	<u>Husky Oil Operations</u>	TEMPERATURE:	<u>AMBIENT</u>
DATE OF TEST:	<u>January 30, 2008</u>	DURATION OF TEST:	<u>1 HOUR</u>
TEST FLUID:	<u>WATER</u>	CHARTED / <u>WITNESSED</u>	
DESIGN PRESSURE:	<u>1440 Psi</u>	PIPING ONLY/ <u>ASSEMBLED UNIT</u>	
PRESSURE GAUGE NO.:	<u># 23</u>	DATE LAST CALIBRATED:	<u>June 14/05</u>

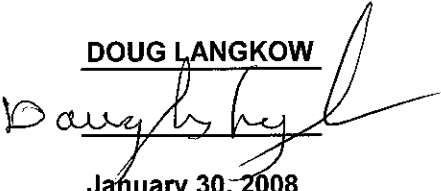
STATEMENT OF COMPLIANCE

I/ We the undersigned, declare that the described pressure piping system has been subjected to a Hyrotesting Procedure in accordance with the ASME Code, and find that it complies in all respects with the regulations for construction, installation, testing and inspection, and in this to be acceptable as to the specification of the said codes.

HYDROTEST PERFORMED BY:

NAME: ROY ZUKIWSKY
SIGNATURE: 
DATE: January 30, 2008

HYDROTEST INSPECTION PERFORMED BY:

NAME: DOUG LANGKOW
SIGNATURE: 
DATE: January 30, 2008

Page 1 of 2.

Partial Data Reports certified by sub-contractors are listed below and attached to this Data Report ☐

No.	Line No.	Spool No.	Dr. No. (with Rev. No.)	Sub-contractor (Name)	AQP No. (if from Alberta)	Expiry (if from Alberta)

Remarks: For partial data report provide information about the code work that was not completed by the subcontractor (e.g., hydrotest, PWHT etc.). For final data report provide information about the code work that was not completed by subcontractors and subsequently completed by the primary contractor (e.g., hydrotest of entire assembly, PWHT etc.)

Endorse certificate 'A' or 'B'

A. CERTIFICATE OF COMPLIANCE

Signed by the subcontractor when supplying this certificate as a
Partial Data Report

We certify that the statements in this Data Report are correct and that materials, construction and workmanship of the piping fabrication conform to the registered quality system and the applicable Piping code(s).

Date: _____
Subcontractor

Print Authorized Representative's Name

Signature

**This certificate is not valid unless it forms part of a
Final Data Report signed by Primary Contractor**

B. CERTIFICATE OF COMPLIANCE

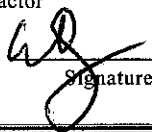
Signed by the primary contractor when supplying this certificate as a
Final Data Report

We certify that the statements in this Data Report are correct and that piping job no. 07-4220
described in this Data Report was constructed in accordance with the Province of Alberta Safety Codes Act and Regulations, and applicable ASME Piping Code(s).

Date: Jan.30/08 RJV Gas Field Services
Primary Contractor

Wes Markowsky

Print Authorized Representative's Name


Signature

CERTIFICATE OF INSPECTION

I, the undersigned, employed by _____ have inspected the piping
job no. 07-4220 described in this Pressure Piping Construction and Test Data Report and state that, to the best of my knowledge and belief, the Contractor has constructed this piping in accordance with the applicable Sections of the ASME Piping Codes and the Province of Alberta Safety Codes Act and Regulations.

Date: _____

Date: _____

Print Owner's Inspector's Name Owner's Inspector's Signature

Name: _____ Sign.: _____

ABSA Safety Codes Officer
(BOILER EXTERNAL PIPING ONLY)

V#

SCBR#

MR#

SHED#

2" SCH. 160

1 PCS.-11" LONG

1 PCS.-5" LONG TOE/ROE TO SCH 80

2" SCH. 80

1 PCS.-20" LONG

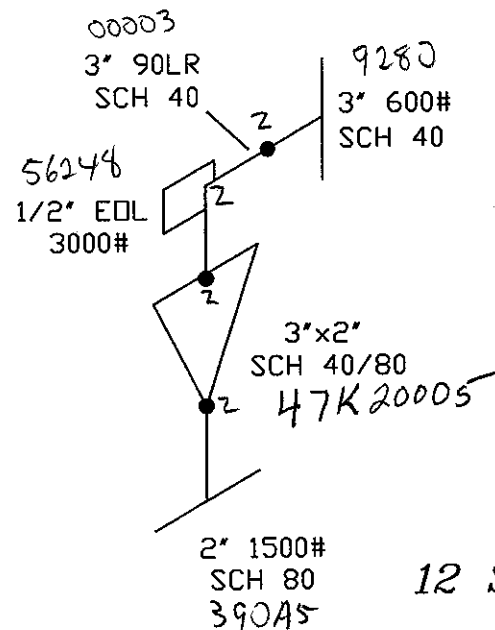
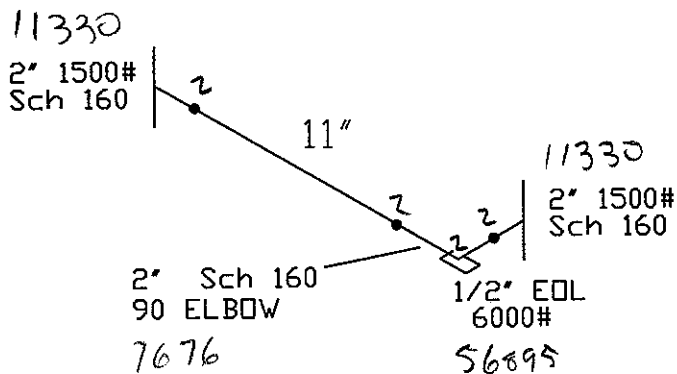
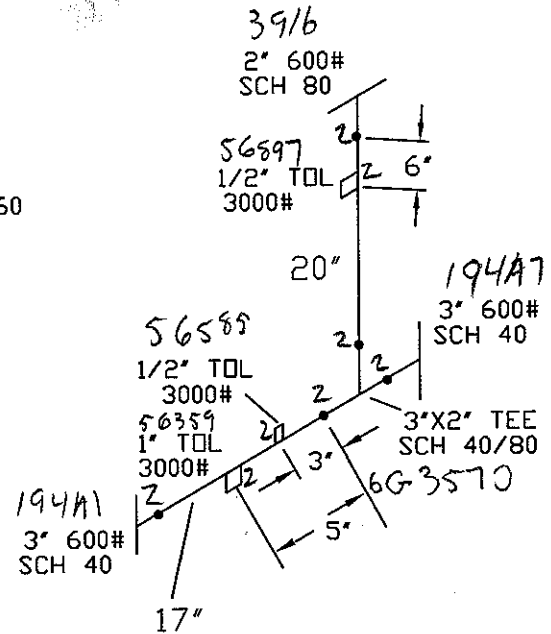
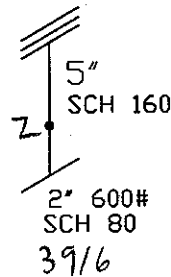
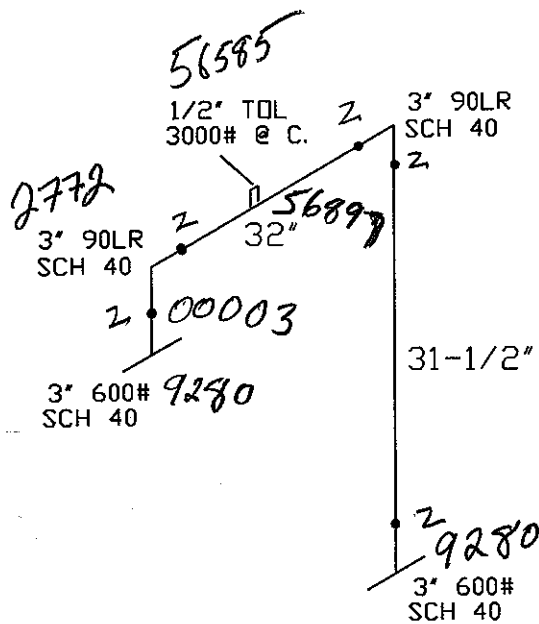
3" SCH. 40

1 PCS.-32" LONG

1 PCS.-17" LONG

1 PCS.-31-1/2" LONG

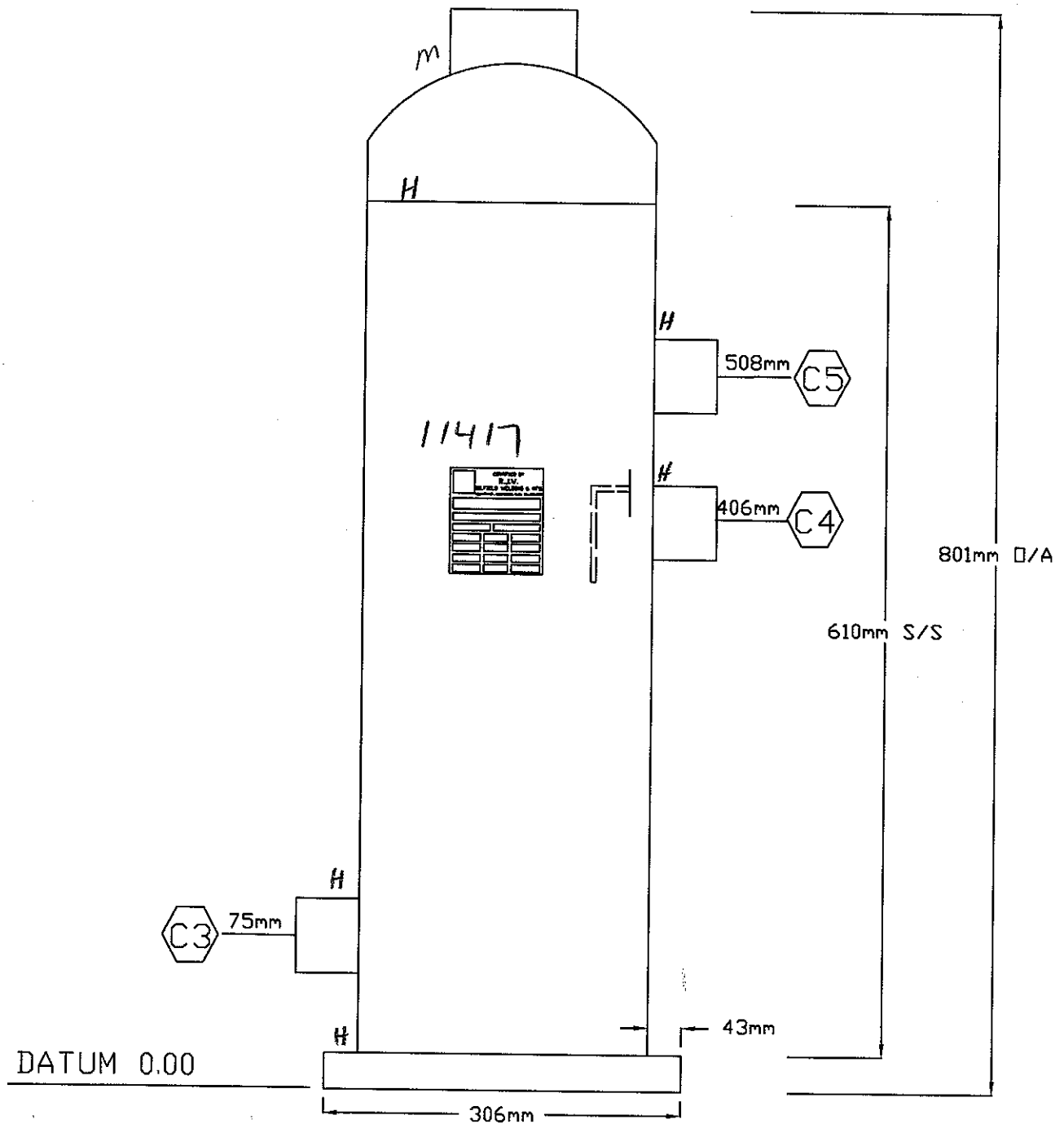
HUSKY
JOB# 07-4220



12 SETS

8" X 24"
V85-05

C1



1" CL 3000 PS SCRD TEE A105N

TRANS AM PIPING PRODUCTS - REV'D BY: 10

HEAT NUMBER : HG1
 Shipment/Seg #: S 7 - 1536



INDUSTRIA MECCANICA LIGURE SPA

10030 CASARZA LIGURE - Genova - Italy - P.zza Marco Cappelli, 4 - Tel. 0185.467661 - Fax 0185.466510

INSPECTION CERTIFICATE EN 10204:2004 / 3.1

COMPANY WITH QUALITY SYSTEM ISO 9001:2000
 CERTIFIED BY RINA

TRANS AM PIPING PRODUCTS LTD.

CA

Certificate Nr 18140
 Invoice Nr 1190
 Dated 09 11 2007
 Del. Note Nr 1830
 Dated 09 11 2007

HEAT CODE	HEAT	ITEM	YOUR P.O.	OUR REFERENCE	Q.TY	DESCRIPTION	ITEM	HEAT	HEAT CODE
HG1	78457	023	CI-07 - 598	2007-2E201-0000963-023		FITTING TEE THRD NPT 3M 1" A105N	023	78457	HG1
A46	78483	091	CI-07 - 598	2007-2E201-0000963-091		FITTING 90 ELB SW 3M 1" A105N	091	78483	A46
56A	73413	115	CI-07 - 598	2007-2E201-0000963-115		FITTING 90 ELB THRD NPT 3M 1" A105N	115	73413	56A
HG1	78457	023	CI-07 - 598	2007-2E201-0000963-023		FITTING TEE THRD NPT 3M 1" A105N	023	78457	HG1
H86	77553	023	CI-07 - 598	2007-2E201-0000963-023		FITTING TEE THRD NPT 3M 1" A105N	023	77553	H86
GBI	78154	092	CI-07 - 598	2007-2E201-0000963-092		FITTING 90 ELB SW 3M 2" A105N	092	78154	GBI
TP5	72966	004	CI-07 - 598	2007-2E201-0000963-004		FITTING TEE THRD NPT 2M 1" A105N	004	72966	TP5
FRS	73265	019	CI-07 - 598	2007-2E201-0000963-019		FITTING 90 ELB THRD NPT 3M 2" A105N	019	73265	FRS

HEAT CODE	HEAT	ITEM	MATERIAL	C%	SI%	Mn%	S%	P%	Cr%	Ni%	Mo%	Ti%	Cu%	V%	Nb%	N%	AP%	C.E.%	OTHER ELEMENTS
HG1	78457	023	ASTM A105	0.205	0.230	0.900	0.026	0.018	0.100	0.050	0.010	0.005	0.170	0.002	0.002	0.000	0.008	0.392	
A46	78483	091	ASTM A105	0.190	0.190	0.990	0.020	0.017	0.090	0.050	0.010	0.005	0.190	0.003	0.001	0.000	0.012	0.392	
56A	73413	115	ASTM A105	0.195	0.170	1.010	0.018	0.014	0.080	0.040	0.010	0.005	0.150	0.001	0.000	0.000	0.022	0.394	
HG1	78457	023	ASTM A105	0.205	0.230	0.900	0.026	0.018	0.100	0.050	0.010	0.005	0.170	0.002	0.002	0.000	0.008	0.392	
H86	77553	023	ASTM A105	0.205	0.220	1.130	0.017	0.022	0.140	0.006	0.010	0.005	0.160	0.012	0.001	0.000	0.018	0.437	
GBI	78154	092	ASTM A105	0.180	0.210	0.880	0.021	0.012	0.090	0.040	0.010	0.005	0.170	0.001	0.001	0.000	0.023	0.361	
TP5	72966	004	ASTM A105	0.185	0.200	0.950	0.017	0.019	0.110	0.060	0.010	0.006	0.190	0.003	0.001	0.000	0.021	0.385	
FRS	73265	019	ASTM A105	0.195	0.200	0.980	0.019	0.017	0.110	0.060	0.020	0.005	0.220	0.002	0.001	0.000	0.022	0.403	

HEAT CODE	HEAT	ITEM	TEST SPECIMEN	SECT. mm2	LENGTH mm	YIELD POINT N/mm2 >= 0.2%	TENSILE STRENGTH N/mm2 >= 0.2%	ELONGATION % >= 5mm	REDUCTION OF AREA % >= 5mm	HARDNESS HB	BEND TEST	FLATTENING TEST	TYPE 10x10mm	IMPACT TEST °C	1	2	3	SHAPE 1" O.D. x 1/2" x 1/2"	YIELD POINT N/mm2 >= 0.2%
HG1	78457	023	ASME SA ASTM A105-05	122.65	50.00	309.0	564.0	31.0	54.0	160 - 162	0.0	0.0	KV	20	98	99	104	1	0.0
A46	78483	091	ASME SA ASTM A105-05	122.65	50.00	306.0	564.0	31.0	54.0	162 - 168	0.0	0.0	KV	20	104	105	108	1	0.0
56A	73413	115	ASME SA ASTM A105-05	122.65	50.00	308.0	551.0	32.5	58.0	163 - 165	0.0	0.0	KV	20	101	105	100	1	0.0
HG1	78457	023	ASME SA ASTM A105-05	122.65	50.00	309.0	564.0	31.0	54.0	160 - 162	0.0	0.0	KV	20	98	99	104	1	0.0
H86	77553	023	ASME SA ASTM A105-05	122.65	50.00	306.0	564.0	34.0	57.0	160 - 162	0.0	0.0	KV	20	106	100	109	1	0.0
GBI	78154	092	ASME SA ASTM A105-05	122.65	50.00	318.0	510.0	32.0	59.0	153 - 156	0.0	0.0	KV	20	100	99	101	1	0.0
TP5	72966	004	ASME SA ASTM A105-05	122.65	50.00	308.0	549.0	32.0	57.0	158 - 166	0.0	0.0	KV	20	96	98	104	1	0.0
FRS	73265	019	ASME SA ASTM A105-05	122.65	50.00	333.0	539.0	33.0	58.0	163 - 165	0.0	0.0	KV	20	99	101	102	1	0.0

HEAT CODE	HEAT	ITEM	NOTES	INSPECTION AUTHORITY	QUALITY CONTROL DEPARTMENT	MANUFACTURER'S SYMBOL	IML	FITTINGS	BORIS FIZZOTTI	STUDBOLTS
HG1	78457	023	ASME B16.11/05 - ANSI B31.1/B31.3 - IML STD - ANSI B1.1-B18.2.2 - NACE MR0175 ISO 15156/1 - MSS SP 83 - SUPPLIED MATERIAL MEETS SPECIFICATIONS AND P.O. REQUIREMENTS - BEND TEST ON PIPE NIPPLES: SATISFACTORY							
A46	78483	091								
56A	73413	115								
HG1	78457	023								
H86	77553	023								
GBI	78154	092								
TP5	72966	004								
FRS	73265	019								



STUDBOLTS

IML

FITTINGS

BORIS FIZZOTTI

INSPECTION AUTHORITY

QUALITY CONTROL DEPARTMENT

MANUFACTURER'S SYMBOL

Flange 3" 600# Sch 40 9280

DINGXIANG NEW CENTURY MACHINERY CO., LTD

Approved according to ISO9001: 2000 by NORDTUV

CERTIFICATE OF ANALYSIS 3.1 B EN 10204

Certificate No. 01 202 CH/CA-04 0131

DESCRIPTION: FLANGES HS NUMBER: 73079100

Order No. FE-CLNC086 Date: 2006-12-27

Works No. NC272

Article: Hot Forged Flange

Specification: ASTM-A105

Material: SA/A105N

State of delivery:

Melting process:

Y

Marking: DYNAFLO 3"600 B16 40SA/A105N

Stamp of Manufacturer:

Inspector's stamp:

Content of the Delivery

Description	Pieces	Heat No.	Description	Pieces	Heat No.
600# WN RF SCH40	250	9280			

Chemical analysis & Mechanical tests

Chemical analysis												Mechanical tests Position of specimen: Tangential				
Heat No.	% C	% Si	% Mn	% P	% S	% Cr	% Ni	% Cu	% Mo	% V	% Nb	T S (Mpa)	Y S (Mpa)	δ (%)	Red (%)	HB
	≤0.35	0.10-0.35	0.60-1.05	≤0.035	≤0.040	≤0.30	≤0.40	≤0.40	≤0.12	≤0.08	≤0.02	≥485	≥250	≥22	≥30	≥187
9280	0.21✓	0.23✓	0.84✓	0.017/	0.011/	0.02/	0.01/	0.01/	0.002/	0.01/	0.01/	485✓	294✓	36.5✓	63.3✓	148✓

Place
Dingxiang

Date
2006-12-27

Works Inspector

Approved
Feb 23/07

DINGXIANG NEW CENTURY MACHINERY CO., LTD
 Approved Inspection & Certification Service
 Certificate No. 01 202 CHW-04 6731
 Flange 2" 600# S80 3916

DESCRIPTION: FLANGES
 Order No. FE-CLINCHD
 Date: 2008.08.24
 MS NUMBER: 78070000
 Works No. NCT142

Article: Hot Forged Flange
 State of delivery:
 Specification: ASME A105
 Material: SA53105N
 Working process: Y

Marking: DYNARLO 2" 600 B16 40 SAA105 SPOS
 Stamp of Manufacturer



Inspector's Stamp

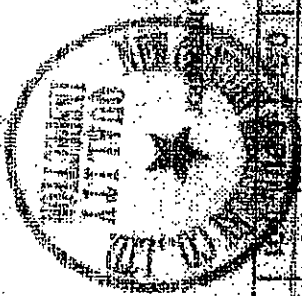


Description	Process	Heat No.	Designation	Process	Heat No.
ROLL B RF WNF SCH40 2"	100	3916			
ROLL B RF WNF SCH40 2"	100	11330			
ROLL B RF WNF SCH40 2"	100	10426			
ROLL B RF WNF SCH40 3"	100	10426			
ROLL B RF WNF SCH40 3"	100	10426			

Chemical analysis & Mechanical tests

Heat No.	Chemical analysis										Mechanical tests					
	% C	% Si	% Mn	% P	% S	% Cu	% Ni	% Mo	% V	% Nb	T.S. (Mpa)	Y.S. (Mpa)	δ (%)	Red (%)	HB	
	≤0.35	0.15-0.35	0.41-1.05	≤0.035	≤0.040	≤0.030	≤0.40	≤0.40	≤0.12	≤0.03	≤0.03	≥485	≥230	≥22	≥30	≤187
38234	0.24	0.21	0.93	0.011	0.012	0.32	0.01	0.01	0.01	0.01	0.01	487	285	30.4	58.6	131
3916	0.23	0.21	0.87	0.012	0.013	0.32	0.01	0.01	0.01	0.01	0.01	502	283	31.6	50.7	134
11330	0.18	0.25	0.84	0.020	0.024	0.31	0.01	0.01	0.01	0.01	0.01	485	281	33.2	56.1	125
10426	0.22	0.29	0.82	0.021	0.014	0.32	0.01	0.01	0.01	0.01	0.01	486	286	33.7	60.8	140

Place: Dingxiang
 Date: 2008.8.24



DF P0 15670

3" 600# S40 Flange 194A7

DIN EN 10204 / 3.1
ISO 10474 / 3.1

HOJA: 116430
Page: 1

FECHA: 21/08/2007
Date:

SU PEDIDO N.º
Your Order No. 9112378-00 (04.05.07)
Votre Cde. N.º

FLANGES
ASME B16.5-98

NORMAS APLICABLES
Requirements - Normes Applicables

MATERIAL CORRESPONDIENTE
ASTMA105N-05
ASME SA105N-05

MODO DE FUSION (*)
Steel Melting - Elaboration de l'acier
E = Elec. Y = Oxígeno básico

CLIENTE / Customer / Client
WESTLUND A DIVISION OF EMCO
CORPORATION
4103 - 84 AVENUE
EDMONTON, ALBERTA
T6B 2Z3 - CANADA

CERTIFICADO DE INSPECCION
Works Certificate - Certificat d'Usine

ULMA FORJA S.COOP.
Bº Zubillaga, 3 - Apdo. 14
20560 ONATI (Gipuzkoa) SPAIN
Tel.: 34 - 943 780552
Fax: 34 - 943 781808
E-mail: ulma@ulmaplping.com

61965

CERTIFIED acc. PED 97/23/EC
by TÜV Rheinland
Nº 01 202 EQ 02 7443

MARCA DEL FABRICANTE
Mark of factory
Marque du fabricant

DEPARTAMENTO QUALITY ASSURANCE
Section
Department

ULMA FORJA S.COOP.

61965

CERTIFIED acc. PED 97/23/EC
by TÜV Rheinland
Nº 01 202 EQ 02 7443

MARCA DEL FABRICANTE
Mark of factory
Marque du fabricant

DEPARTAMENTO QUALITY ASSURANCE
Section
Department

PARTIDA Item Poste	CANTIDAD Quantity Quantité	DESCRIPCION Description Description	OBSERVACIONES Remarks Observations	COLADA N.º Heat No N.º Coudée	RESISTENCIA T. Strength Resist Rupt	LIMITE ELAST. Y. Strength Limite Elast.	ALARGAM. Elongation Allongement	ESTRICCION Red. Area Striction	RESILIENCIA Impact test Resilience	TEMPERATURA TEMPERATURE	
										MEDIA Average Moyenne	°C
1 7534060	72	WN 8 150LB S40 RF A105N	NE	251A7	516	315	31.40	56.00			148
2 7534158	20	WN 24 150LB STD20 RF A105N	NE	307A7	515	319	31.80	57.30			147
3 7534477	10	WN 24 150LB S40 RF A105N	NE	308A7	514	317	31.40	58.00			147
6 7530080	700	WN 3 600LB S40 RF A105N	NE	194A7	516	319	32.00	59.40			150
7 7530250	140	WN 3 600LB S80 RF A105N	NE	188A7	520	296	31.00	60.30			152
9 7532199	10	BLIND 3 1500LB RF A105N	NE	208A7	520	315	32.70	64.00			151
10 7532202	10	BLIND 4 1500LB RF A105N	NE	255A7	521	299	32.70	60.00			151

COMPOSICION QUIMICA - STEEL MARKER'S LADLE ANALYSIS - ANALYSE CHIMIQUE										
COLADA N.º Heat No N.º Coudée	C %	SI %	Mn %	P %	S %	Cr %	Ni %	Mo %	Nb %	CEQ %
188A7	0.210	0.220	0.870	0.014	0.004	0.080	0.120	0.020	0.000	0.180
194A7	0.180	0.230	0.840	0.014	0.001	0.150	0.070	0.040	0.007	0.200
208A7	0.210	0.200	0.890	0.015	0.004	0.080	0.120	0.010	0.000	0.230
251A7	0.190	0.250	0.860	0.013	0.003	0.060	0.080	0.020	0.007	0.210
255A7	0.210	0.210	0.860	0.015	0.006	0.080	0.110	0.010	0.000	0.250
306A7	0.180	0.260	0.840	0.010	0.006	0.070	0.060	0.020	0.007	0.170
307A7	0.180	0.260	0.830	0.011	0.004	0.060	0.060	0.020	0.007	0.180

VERIFIED BY
WESTLUND

EL INSPECTOR
Works Inspector - L'inspecteur

ULMA FORJA S.COOP.
Dpto. de Garantía de calidad
Quality Assurance Dept.

Doc 168723

(*) OBSERVACIONES:
Remarks
Observations

Flange - 2" S160 1500# 11330

09/01/2006 PM 03 232 CH3-060734

THE UNIVERSITY OF CHICAGO

2025-08-21

THE UNIVERSITY OF CHICAGO

REF ID: A61058

1991

अध्यापक श्री कृष्णराजराव विजय



陈永发 周世明

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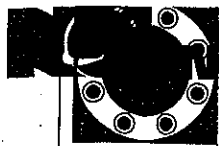
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DF 15670

6336/25 - 211



Sede Legale e Amministrativa: 23824 DERVIO (LC) - Via Enrico Fermi, 46
C.C.I.A.A. Lecco n.00205990138 - R.E.A. n. 78815 C.F. e P.IVA IT00205990138
Sede Operativa: 11010 Anichini (VC) - Via S. Giovanni, 10
Tel. 011/4777240 - Fax 011/4777241 - E-Mail: info@natoil.com

NATIONAL OILWELL CANADA LTD

SUITE 1100, 540 - 5TH AVENUE S.W.
CALGARY, ALBERTA, CANADA T2P 0M2 (CDN)

CERTIFICATO DI COLLAUDO
TEST/CERTIFICATEEN 10204
EN 10204

INS. ORDINE/INTERNAL JOB

040959

CERTIFICATO N.T. CERTIFICATE N.

DATA/DATE

VS. ORDINE/OUR P.O.

DATA/DATE

005597/B

09/06/2005

STOCK 10626208

25/08/2004

POS/ITEM	DESCRIZIONE/DESCRIPTION	QUANTITA' QUANTITY	S/A	MATERIALE/MATERIAL	N° COLATA/PROVA HEAT N°/TEST N°	ACCIAIERIA/ STEEL MILL	#
002/020	2" 600 WN RF STD A105N B1 F	907	S	ASTM A 105/02 N	5975/21	OLIFER/ACP SPA	A
003/030	3" 600 WN RF STD A105N B1 F	1.710	S	ASTM A 105/02 N	6336/33	OLIFER/ACP SPA	B
006/060	2" 1500 WN RJ STD A105N B1 F	64	S	ASTM A 105/02 N	6336/25	OLIFER/ACP SPA	C
032/320	10" 600 BL RF A105N B1 F	17	S	ASTM A 105/02 N	440074/45	VOEST ALPINE	D
045/450	4" 600 WN RJ XS A105N B1 F	20	S	ASTM A 105/02 N	7744/22	OLIFER/ACP SPA	E

#	C %	MIN %	SI %	P %	S %	CR %	NI %	MO %	CU %	V %	SN %	AL %	NB %	TI %	N %	03%	FC%	FL%
A	0.160	1.180	0.160	0.008	0.004	0.170	0.200	0.040	0.200	0.016	0.013	0.025			0.008	0.210	0.356	0.428
A C	0.159	1.174	0.167	0.011	0.004	0.174	0.222	0.049	0.194	0.012	0.013	0.028	0.002		0.008	0.223	0.354	0.429
B	0.150	1.200	0.200	0.010	0.008	0.130	0.160	0.040	0.200	0.016	0.013	0.027			0.007	0.170	0.350	0.411
B C	0.142	1.198	0.204	0.011	0.004	0.114	0.180	0.041	0.188	0.014	0.013	0.028	0.001		0.007	0.155	0.341	0.400
D	0.168	1.200	0.224	0.011	0.004	0.150	0.030	0.012	0.080	0.020	0.005	0.036	0.005	0.002	0.006	0.162	0.368	0.411
D C	0.165	1.190	0.220	0.010	0.004	0.130	0.060	0.020	0.110	0.015	0.005	0.048	0.005	0.002	0.006	0.150	0.363	0.407
E	0.160	1.160	0.200	0.008	0.009	0.077	0.180	0.050	0.200	0.0005	0.010	0.020	0.005		0.004	0.127	0.353	0.404
E C	0.150	1.159	0.192	0.004	0.008	0.096	0.197	0.052	0.188	0.0005	0.010	0.022	0.005		0.004	0.148	0.343	0.398

NOTE/NOTES

03=Chromium + Molybdenum

FC=Carbon Equivalent Short Formula

FL=Carbon Equivalent Long Formula

C = ANALISI DI PRODOTTO/CHECK ANALYSIS

#	TIPO/TYPE	Ø PROVETTA DIAMETER	SEZIONE AREA	LUNGHEZZA LENGTH	TEMP. TEMPERATURE	ROTTURA TENSILE	SNERVAMENTO YIELD	ALL. ELONG %	CONTR. REDUCT. %	TIPO/TYPE	TEMP. TEMPERATURE	VALORI/VALUES	DUREZZA HB HARDNESS (AVERAGE)
A	S	12,50	122,70	50,00	20	485	250	22,0	30,0				187
A	O	12,50	122,70	50,00	20	526	330	27,0	69,2				157
B	S	12,50	122,70	50,00	20	485	250	22,0	30,0				187
B	O	12,50	122,70	50,00	20	541	341	30,8	70,0				157
C	S	12,50	122,70	50,00	20	485	250	22,0	30,0				187
C	O	12,50	122,70	50,00	20	527	326	26,8	68,0				163
D	S	12,50	122,70	50,00	20	485	250	22,0	30,0				187
D	O	12,50	122,70	50,00	20	529	344	29,0	68,7				162
E	S	12,50	122,70	50,00	20	485	250	22,0	30,0				187
E	O	12,50	122,70	50,00	20	539	338	30,9	67,5				160

NOTE/NOTES

O = OTTENUTE/OBTAINED
S = STANDARD

#	TRATTAMENTI TERMICI/HEAT TREATMENTS	NOTE GENERALI/GENERAL NOTES
A	Normalized at 900 dgr.C for 1 h.-Cooling from 900 dgr.C in still air	FINITURE/ROUGHNESS
A		F = STOCK FINISH 125-250 microinch
B	Normalized at 900 dgr.C for 1.1/2 h.-Cooling from 900 dgr.C in still air	F = FINISH 63 MICROINCH MAX
B		
C	Normalized at 900 dgr.C for 1.1/2 h.-Cooling from 900 dgr.C in still air	
C		STANDARD/STANDARD
D	Normalized at 900 dgr.C for 3 h.-Cooling from 900 dgr.C in still air	B1 = ANSI B16.5
D		
E	Normalized at 900 dgr.C for 1.1/2 h.-Cooling from 900 dgr.C in still air	
E		

NOTE/NOTES

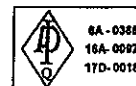
87852

MARCHIO DI FABBRICA
TRADE MARKDATA COLLAUDO INT.
INT. INSPECT DATE

09/06/2005

COLLAUDATORE INT.
INT. INSPECTOR

M. MANZINI

ENTE UFFICIALE DI COLLAUDO
INSPECTION AUTHORITY

CLIENTE / Customer / Client
WESTLUND A DIVISION OF EMCOLT
5105 - 75 STREET
EDMONTON, AB T6E 5S5
CANADA

CERTIFICADO DE INSPECCION
Works Certificate - Certificat d'Usine

DIN 50049 / 3.1.B
 EN 10204 / 3.1.B
 ISO 10474 / 3.1.B

FECHA: 07/12/2005 N.º 103858

HOJA: 1 Page: 1



PRODUCTO **FLANGES**
 Article - Produit
 SU PEDIDO N.º 9103841-00
 Your Order No. Votre Cde. N.º

DE - de 30/08/2005

Certified acc. PED 97/23/EC
 by TÜV Rheinland
 N.º 01 202 EQ 02 7443

Bº Zubiñaga, 3 - Apdo. 14
 20560 ONATI (Gipuzkoa) SP.
 Tel.: 34 - 943 780552
 Tel.: 34 - 943 781808
 E-mail: forja@forjajulma.es

NORMAS APLICABLES **ASME B16.5-96**
 Requirements - Normes Applicables

MATERIAL CORRESPONDIENTE **ASTMA105N-03**
 Material Correspondant - Qualité **ASME SA105N**
 MODO DE FUSION (*) **NACE MR-01-75/03**
 Steel Making - Elaboration de l'acier
 E = Elec. Y = Oxígeno básico

MARCA DEL FABRICANTE
 Mark of factory
 Marque du fabricant
ULMA
 DEPARTAMENTO **QUALITY ASSURANCE**
 Department
 49240

PARTIDA Item Poste	CANTIDAD Quantity Quantité	DESCRIPCION Description Description	OBSERVACIONES Remarks Observations	COLADA N.º Heat No N.º Couée	RESISTENCIA T. Strength Tensile Rupt N/mm2	LIMITE ELAST. Yield Point Elastic Limit N/mm2	ALARGAM. Elongation Elongation %	ESTRICCION Reduction A Section %	RESILIENCIA Impact test Resilience Joules	MEQA Average Average	°C	DU Ha Du HE
2 7530560 3 7531486 17 7533309 18 7535694	300 105 20 560	WN 2 600LB S160 RF A105N WN 2 1500LB S80 RF A105N SO 18 1500LB RF A105N BLIND 2 1500LB RF A105N	NE NE NE NE	401A5 390A5 54433 362A5	517 518 530 503	322 311 311 305	33.40 30.80 31.70 32.60	67.00 63.00 56.00 65.00				
COMPOSICION QUIMICA - STEEL MARKERS - ANALYSE CHIMIQUE												
COLADA N.º Heat No N.º Couée	C %	SI %	Mn %	P %	S %	Cr %	Ni %	Mo %	Nb %	V %	Cu %	CEQ %
362A5 390A5 401A5 54433	0.200 0.180 0.190 0.200	0.210 0.260 0.220 0.250	0.880 0.850 0.850 0.820	0.013 0.015 0.021 0.014	0.007 0.001 0.003 0.005	0.010 0.120 0.130 0.210	0.010 0.090 0.080 0.090	0.002 0.020 0.020 0.020	0.002 0.007 0.007 0.001	0.003 0.002 0.002 0.004	0.130 0.260 0.250 0.300	0.359 0.373 0.384 0.409

- Las dimensiones y la condición superficial se hallaron satisfactorias
- Dimension and surface condition were found acceptable
- Les dimensions et états de surface sont satisfaisants
- Los materiales citados cumplen las normas aplicables
- Manufacturing requirements are satisfied
- Les normes applicables sont respectées

(*) OBSERVACIONES: N.º NORMALIZED AT 900 C AND ALLOWED TO COOL IN STILL AIR
 Remains
 Observations



EL INSPECTOR
 Works Inspector - L'inspecteur



COMPANY
WITH QUALITY MANAGEMENT
SYSTEM CERTIFIED BY DNV
■ ISO 9001 : 2000 ■

MEM HARNET BERTON GB

CERTIFICATO DI COLLAUDO

INVOICE / FATTURA:

S.
DEL. NOTE / BILL

PM5.3

Flange

74305

2 = 1500 #

HEAT CODE COD. COLATA	HEAT COLATA	ITEM POS.	YOUR P.O. VS. ORDER	OUR REFERENCE VS. ORDER	QUANTITY QUANTITÀ	DESCRIPTION DESCRIZIONE	DIM. ACCORDANCE TO DIM. IN ACCORDO A	VISUAL & DIMENSIONAL VISIVO E DIMENSIONALE													
73305		0044			5	THRD 1500 RE 2"	A105	SATISFACTORY													
						7536504	ASME/ANSI B16.5														
HEAT CODE COD. COLATA	HEAT COLATA	ITEM POS.	MATERIAL MATERIALE	C %	Si %	Mn %	S %	P %	Cr %	Ni %	Mo %	Ti %	Cu %	V %	Nb %	N %	As %	C.E. %	ORIGIN ORIGINE		
73305		0044	ASTM A 105	0.180	0.210	1.050	0.012	0.015	0.100	0.050	0.010	0.020	0.190	0.025	0.001	0.000	0.025	0.396	EUROPE		
																			CON. REF.		
HEAT CODE COD. COLATA	HEAT COLATA	ITEM POS.	TEST SPECIFICATION SPEC. / PROVA SECONDO NORMA	YIELD POINT Sicurezza Amp. 431	TENSILE STRENGTH Robore Nella	ELONGATION Allungamento 5 e	REDUCTION OF AREA Riduzione % V	HARDNESS Durezza HRC	POW TEST Paga	FLUTTER IN Schiocchia	U.M. M.P.	IMPACT TEST - (100°C) - 100°C			SHAPE Forma 10 2-17			S	W	X	YIELD POINT Sicurezza Amp. 431
73305		0044	126-60	50-90	336.0	543	33.0	58.0	264-166	0.0	0.0	KV	20	87	84	84	1			0.0	
			MATERIAL IN ACCORDANCE TO MATERIALE IN ACCORDO A																		
			HEAT TREATMENT TRATTAMENTO TERMICO																		
73305		0044	ASTM/ASME A 105/SA 105 K - 05																		
			NORMALIZED AT 920 C - COOLED IN STILL AIR																		
			ELECTRIC FURNACE																		

MATERIAL IN ACCORDANCE WITH NACE MR-0175/2003

QUALITY CONTROL DEPARTMENT

OFFICIALS: CON: HUELGO CUYAU?A

BRACCHI F/AVITO

INSPECTION AUTHORITY
DATE: 08/04/2001 11:00

EUTECH PROCALF CONSULTING

MANUFACTURER'S SYMBOL

1. JARCHIS PRODUCTIONS

(MFF)

FORMALIZED AT 920 C - COOLED IN STILL AIR
ELECTRIC FURNACE

ELECTRIC FORNACE

CERTIFIED MILL TEST REPORT



**The Best Value
Price, Quality, Service
All The Time.**

LOG NO. 301B34 PAGE 2

BONNEY FORGE
P.O. BOX 330 • 14496 CROGHAN PIKE • MOUNT UNION, PA 17066-0330
(814) 542-2545 • (800) 345-7546 • FAX (814) 542-4906
www.bonneyforge.com

CUSTOMER: CCTF CORPORATION

Date 08/02/06

CUSTOMER'S Order No.: 4021376-00

Bonney Order No. 3039169

SHIPPED TO: CCTF CORPORATION

075178

1387 CORNWALL RD.

OAKVILLE, ONTARIO, L6J7T5 CANA

ITEM	QUANTITY	LOT NO.	GRADE OR SPECIFICATION NO. CHEMICAL ANALYSIS, PHYSICAL PROPERTIES, REMARKS:
------	----------	---------	--

SA/A105N

004	10	38296	7550987	5 - 4 X 1 XS A105N WELD B
				C .210 MN 1.020 P .010 S .023 SI .250
				NI .030 CU .160 CR .060 MO .006 V .025
				AL .001 NB .001
				CE(LONG FORMULA) = 0.41
				T/S 77504 Y/S 50327 EL 30.80 RA 64.27
				BRINELL HARDNESS: 148

005	10	56245	7551177	10 X3 XS A105N WELD B
				C .200 MN 1.060 P .010 S .026 SI .260
				NI .000 CU .010 CO .001 CR .060 MO .005
				V .005 AL .001 NB .000
				CE(LONG FORMULA) = 0.39
				T/S 77375 Y/S 52750 EL 31.25 RA 67.00
				BRINELL HARDNESS1: 147 HARDNESS2: 147

006	500	56660	7550001	B -3 X 1/2 3000 A105N THRD T
				C .210 MN 1.150 P .011 S .019 SI .210
				NI .020 CU .060 CO .003 CR .040 MO .000
				V .002 AL .018 NB .015
				CE(LONG FORMULA) = 0.42
				T/S 79000 Y/S 52500 EL 35.00 RA 70.00
				BRINELL HARDNESS1: 153 HARDNESS2: 153

		56822	7550001	B -3 X 1/2 3000 A105N THRD T
				C .190 MN 1.040 P .014 S .019 SI .210
				NI .040 CU .110 CO .003 CR .050 MO .020
				V .000 AL .019 NB .015
				CE(LONG FORMULA) = 0.39
				T/S 74000 Y/S 49800 EL 35.00 RA 65.00
				BRINELL HARDNESS1: 147 HARDNESS2: 147

***** CONTINUED ON NEXT PAGE *****

We certify that the data on this sheet is a true copy taken from our records of material furnished us by the production mill, or as obtained by additional laboratory checks.

by Kylee Fleck

Kylee Fleck

CMTR: REV 1

QUALITY PROCESS MANAGER

OLET 56660
1/2" 3M

CERTIFIED MILL TEST REPORT



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LOG NO. 301834 PAGE 4

BONNEY FORGE
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www.bonneyforge.com

CUSTOMER: CCTF CORPORATION

Date 08/02/06

CUSTOMER'S Order No.: 4021376-00

Bonney Order No. 1039169

SHIPPED TO: CCTF CORPORATION

375178

1387 CORNWALL RD.

OAKVILLE, ONTARIO, L6J7T5 CANA

ITEM	QUANTITY	LOT NO.
------	----------	---------

GRADE OR SPECIFICATION NO. CHEMICAL ANALYSIS, PHYSICAL PROPERTIES, REMARKS:
--

1. THE FITTINGS SUPPLIED ARE IN ACCORDANCE WITH PURCHASE ORDER SPECIFICATIONS.
2. THE MATERIAL SUPPLIED IDENTIFIED AS A105N WAS NORMALIZED IN ACCORDANCE WITH ASTM A105 HEAT TREATING REQUIREMENTS.
3. THE MATERIAL SUPPLIED MEETS THE REQUIREMENTS OF BOTH NACE MR0103-2003 AND NACE MR0175-2003.
4. CERTIFYING ASTM A105-05 / ASME SA105-04 EDITION.
5. THE MATERIAL SUPPLIED WAS INSPECTED AND MANUFACTURED IN ACCORDANCE WITH EN DIN 10204 3.1.B.
6. ELONGATION TEST RESULTS ARE OBTAINED USING STANDARD ROUND SPECIMEN, 2 INCH OR 50 MM GAGE LENGTH.

***** END OF CERTIFICATION *****

We certify that the data on this sheet is a true copy taken from our records of material furnished us by the production mill, or as obtained by additional laboratory checks.

by

Kylee Fleck

Kylee Fleck

CERTIFIED MILL TEST REPORT



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LOG NO. 225221 PAGE 2
BONNEY FORGE
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(814) 542-2545 • (800) 345-7546 • FAX (814) 542-4906
www.bonneyforge.com

CUSTOMER: WESTLUND INDUSTRIAL SUPPLY

Date 12/30/05

CUSTOMER'S Order No.: 9105834-00

Bonney Order No. 024886

SHIPPED TO: WESTLUND INDUSTRIAL SUPPLY
5105 75TH STREET

337212

EDMONTON ALBERTA
EDMONTON ALBERTA, T6E5S5 CANAD

ITEM QUANTITY LOT NO.

GRADE OR SPECIFICATION NO.
CHEMICAL ANALYSIS, PHYSICAL PROPERTIES, REMARKS:

SA/A105N

026	50	3322	7524552	1/4X1/8 3M/6M A105N HXBU T
				C .200 MN 1.050 P .007 S .021 SI .220
				NI .020 CU .070 CD .004 CR .030 MO .010
				V .000 AL .021 NB .014
				CE(LONG FORMULA) = 0.39
				T/S 77750 Y/S 54125 EL 33.25 RA 70.75
				BRINELL HARDNESS1: 139 HARDNESS2: 137
035	6	56627	7525354	4 2000 A105N TEE T
				C .170 MN 1.070 P .010 S .018 SI .250
				NI .090 CU .210 CD .008 CR .110 MO .030
				V .047 AL .028 NB .003
				CE(LONG FORMULA) = 0.41
				T/S 79125 Y/S 56625 EL 31.00 RA 63.95
				BRINELL HARDNESS1: 137 HARDNESS2: 135
051	600	56585	7550001	8 -3 X 1/2 3000 A105N THRD T
				C .190 MN 1.030 P .009 S .021 SI .210
				NI .030 CU .130 CD .004 CR .070 MO .020
				V .000 AL .020 NB .016
				CE(LONG FORMULA) = 0.39
				T/S 74000 Y/S 50500 EL 33.00 RA 63.00
				BRINELL HARDNESS1: 144 HARDNESS2: 144
072	8	55862	7525737	3/4 3000 A105N TEE S
				C .210 MN .810 P .008 S .040 SI .250
				NI .030 CU .030 CR .060 MO .010 V .001
				CB .001 AL .027
				CE(LONG FORMULA) = 0.36
				T/S 72000 Y/S 45300 EL 37.00 RA 64.00
				BRINELL HARDNESS1: 137 HARDNESS2: 139

***** CONTINUED ON NEXT PAGE *****

We certify that the data on this sheet is a true copy taken from our records of material furnished us by the production mill, or as obtained by additional laboratory checks.

by

Cris Childers

CMTR: REV 1

QUALITY PROCESS MANAGER

CERTIFIED MILL TEST REPORT



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LOG NO. 302442 PAGE 25

BONNEY FORGE
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(814) 542-2545 • (800) 345-7548 • FAX (814) 542-4906
www.bonneyforge.com

CUSTOMER: WESTLUND INDUSTRIAL SUPPLY

Date 08/23/06

CUSTOMER'S Order No.: 9109088-00

Bonney Order No. 40455

SHIPPED TO: WESTLUND INDUSTRIAL SUPPLY
5105 75TH STREET

378307

EDMONTON ALBERTA
EDMONTON ALBERTA, T6E5S5 CANAD

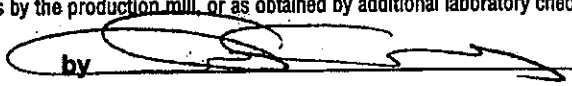
ITEM	QUANTITY	LOT NO.	GRADE OR SPECIFICATION NO.	
			CHEMICAL ANALYSIS, PHYSICAL PROPERTIES, REMARKS:	

SA/A105N

080	625	56822	7550001	B -3 X 1/2 3000 A105N THRD T					
				C .190 MN 1.040 P .014 S .019 SI .210					
				NI .040 CU .110 CO .003 CR .050 MO .020					
				V .000 AL .019 NB .015					
				CE(LONG FORMULA) = 0.39					
				T/S 74000 Y/S 49800 EL 35.00 RA 65.00					
				BRINELL HARDNESS1: 147 HARDNESS2: 147					
081	3	56712	7550642	BX3 STD A105N WELD B					
				C .190 MN .950 P .010 S .019 SI .220					
				NI .074 CU .210 CR .109 MO .019 V .002					
				NB .008					
				CE(LONG FORMULA) = 0.39					
				T/S 76000 Y/S 52250 EL 32.50 RA 65.15					
				BRINELL HARDNESS1: 141 HARDNESS2: 144					
082	7	56538	7551096	4 -31/2X 2 XS A105N WELD B					
				C .200 MN 1.110 P .008 S .018 SI .190					
				NI .040 CU .120 CO .004 CR .060 MO .010					
				V .000 AL .018 NB .012					
				CE(LONG FORMULA) = 0.41					
				T/S 77500 Y/S 53500 EL 32.60 RA 69.00					
				BRINELL HARDNESS1: 141 HARDNESS2: 139					
083	4	56555	7551398	B-6 X2 S160 A105N WELD B					
				C .190 MN 1.040 P .008 S .022 SI .180					
				NI .030 CU .130 CO .003 CR .050 MO .020					
				V .000 AL .024 NB .012					
				CE(LONG FORMULA) = 0.39					
				T/S 76875 Y/S 52750 EL 32.10 RA 67.45					
				BRINELL HARDNESS1: 135 HARDNESS2: 132					

***** CONTINUED ON NEXT PAGE *****

We certify that the data on this sheet is a true copy taken from our records of material furnished us by the production mill, or as obtained by additional laboratory checks.

by 

Chris Childers

CMTR: REV 1

QUALITY PROCESS MANAGER

1/2" 3000 Thread Qlt

56822

CERTIFIED MILL TEST REPORT



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LOG NO. 302442 PAGE 31
BONNEY FORGE
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(814) 542-2545 • (800) 345-7546 • FAX (814) 542-4906
www.bonneyforge.com

CUSTOMER: WESTLUND INDUSTRIAL SUPPLY

Date 08/23/06

CUSTOMER'S Order No.: 9109088-00

Bonney Order No 040455

SHIPPED TO: WESTLUND INDUSTRIAL SUPPLY
5105 75TH STREET

378307

EDMONTON ALBERTA
EDMONTON ALBERTA, T6E5S5 CANAD

ITEM QUANTITY LOT NO.

GRADE OR SPECIFICATION NO.
CHEMICAL ANALYSIS, PHYSICAL PROPERTIES, REMARKS:

1. THE FITTINGS SUPPLIED ARE IN ACCORDANCE WITH PURCHASE ORDER SPECIFICATIONS.
2. THE MATERIAL SUPPLIED IDENTIFIED AS A105N WAS NORMALIZED IN ACCORDANCE WITH ASTM A105 HEAT TREATING REQUIREMENTS.
3. CERTIFYING ASTM A105-05 / ASME SA105-04 EDITION.
4. THE MATERIAL OF THE FITTINGS SUPPLIED IS ASTM A350-LF2 BUT MEETS THE REQUIREMENTS OF ASME SA350-LF2.
5. THE CHARPY V-NOTCH IMPACT TEST WAS PERFORMED AT -50 DEGREES FAHRENHEIT IN ACCORDANCE WITH A350-LF2.
6. CERTIFYING TO ASTM A350 LF2 04A REVISION.
7. THE MATERIAL SUPPLIED WAS NORMALIZED IN ACCORDANCE WITH ASTM A350 HEAT TREATING REQUIREMENTS.
8. ELONGATION TEST RESULTS ARE OBTAINED USING STANDARD ROUND SPECIMEN, 2 INCH OR 50 MM GAGE LENGTH.
9. THE MATERIAL SUPPLIED WAS INSPECTED AND MANUFACTURED IN ACCORDANCE WITH EN DIN 10204 3.1. B.
10. THE MATERIAL SUPPLIED MEETS THE REQUIREMENTS OF BOTH NACE MR0103-2003 AND NACE MR0175-2003.

***** END OF CERTIFICATION *****

We certify that the data on this sheet is a true copy taken from our records of material furnished us by the production mill, or as obtained by additional laboratory checks.

by 

Cris Childers

CMTR: REV 1

QUALITY PROCESS MANAGER

Tee 05C10214
3x2 S80

Purchaser : CCTF

INSPECTION CERTIFICATE

EN 10204 3.1B

E.No. Purchase Order No. Job No.
M-989 4870929-00

D M Y Certificate No.
26/05/2005 T-2005200389



No.	MFG. No. (Heat Identification No.)	Specification for Material Made from Seamless Pipe ASTM A234-03/ASME SA234 WPB CSA Z245.11 GR241 CAT 1 NACE MR0175-2000										Specification for Inspection		Visual Examination	Dimensional Inspection	
		Product & Size										Quantity	Heat Treatment (Note 1)	Symbol No.	Good	Good
		(T+1)														
1	05C10214	T WPB 3 X 2 S80										73/700	S	7513453		
2	05D10112	T WPB 3 X 2 S80										100/700	S	7513453		
3																
4																
5																
Chemical Composition %																
Specification		C	Si	Mn	P	S	Cu	Ni	Cr	Mo	V	Nb	C.E.	YS	TS	E
Min.		X 100	X 100	X 100	X 1000	X 1000	X 100	X 100	X 100	X 100	X 1000	X 1000	X 100		MPa	%
Max.			10	29										240	415	30
Material Heat No.		23		108	50	58	40	40	40	15	80	20			585	
1	J4LB282	19	20	57	19	5	2	2	5	1	0	1	30	303	465	40
2	J5K1215	19	20	78	14	7	1	2	5	1	0	0	33	279	484	39
3																
4																
5																
Tensile Test #2																
Material Heat No.		23		108	50	58	40	40	40	15	80	20			585	
1	J4LB282	19	20	57	19	5	2	2	5	1	0	1	30	303	465	40
2	J5K1215	19	20	78	14	7	1	2	5	1	0	0	33	279	484	39
3																
4																
5																
HARDNESS MAX																
Material Heat No.		23		108	50	58	40	40	40	15	80	20			585	
1	J4LB282	19	20	57	19	5	2	2	5	1	0	1	30	303	465	40
2	J5K1215	19	20	78	14	7	1	2	5	1	0	0	33	279	484	39
3																
4																
5																

(Note 1) A : Hot formed with final temperature between 620°C-390°C, Air Cooling N : Normalizing 910°C, X0.5 HR, Air Cooling S : Stress Relieving 675°C, X0.5 HR, Air Cooling

* Hot Finished condition

C.E. - C+Mn+Cr+Mo+V/5+Ni+Cu/15
We hereby certify that the product described herein has been manufactured in accordance with the specifications concerned and also with the purchaser's requirements and that the test results shown herein are correct.

Quality Assurance Manager
Tiba Beton Co., Ltd.
58 Soi Watruat, Bangkui, Prapadaeng.

1" CL 3000 PS SCRD TEE A105N

TRANS AM PIPING PRODUCTS - REV'D BY: 10

HEAT NUMBER : HG1
 Shipment/Seg #: S 7 - 1536



INDUSTRIA MECCANICA LIGURE SPA

16030 CASARZA LIGURE - Genova - Italy - P.zza Marco Cappelletti, 4 - Tel. 0185.467661 - Fax 0185.466510

INSPECTION CERTIFICATE EN 10204:2004 / 3.1

COMPANY WITH QUALITY SYSTEM ISO 9001:2000
 CERTIFIED BY RINA

TRANS AM PIPING PRODUCTS LTD.

CA

Certificate Nr 18140
 Invoice Nr 1190
 Dated 12.11.2007
 Del. Note Nr 1830
 Dated 09.11.2007
 Dated 09.11.2007

HEAT CODE	HEAT	ITEM	YOUR P.O.	OUR REFERENCE	Q.TY	DESCRIPTION	ITEM	HEAT	HEAT CODE
HG1	78457	023	CI-07 - 598	2007-2E201-0000963-023		FITTING TEE THRD NPT 3M 1" A105N			
A46	78483	091	CI-07 - 598	2007-2E201-0000963-091		FITTING 90 ELB SW 3M 1" A105N			
56A	73413	115	CI-07 - 598	2007-2E201-0000963-115		FITTING 90 ELB THRD NPT 3M 1" A105N			
HG1	78457	023	CI-07 - 598	2007-2E201-0000963-023		FITTING TEE THRD NPT 3M 1" A105N			
H86	77553	023	CI-07 - 598	2007-2E201-0000963-023		FITTING TEE THRD NPT 3M 1" A105N			
GBI	78154	092	CI-07 - 598	2007-2E201-0000963-092		FITTING 90 ELB SW 3M 2" A105N			
TP5	72966	004	CI-07 - 598	2007-2E201-0000963-004		FITTING TEE THRD NPT 2M 1" A105N			
FRS	73265	019	CI-07 - 598	2007-2E201-0000963-019		FITTING 90 ELB THRD NPT 3M 2" A105N			

HEAT CODE	HEAT	ITEM	MATERIAL	C%	SI%	MIN%	S%	P%	CR%	NI%	MO%	TI%	CU%	V%	NB%	N%	AP%	C.E.%	OTHER ELEMENTS
HG1	78457	023	ASTM A105	0.205	0.230	0.900	0.026	0.018	0.100	0.050	0.010	0.005	0.170	0.002	0.002	0.000	0.008	0.392	
A46	78483	091	ASTM A105	0.190	0.190	0.990	0.020	0.017	0.090	0.050	0.010	0.005	0.190	0.003	0.001	0.000	0.012	0.392	
56A	73413	115	ASTM A105	0.195	0.170	1.010	0.018	0.014	0.080	0.040	0.010	0.005	0.150	0.001	0.000	0.000	0.022	0.394	
HG1	78457	023	ASTM A105	0.205	0.230	0.900	0.026	0.018	0.100	0.050	0.010	0.005	0.170	0.002	0.002	0.000	0.008	0.392	
H86	77553	023	ASTM A105	0.205	0.220	1.130	0.017	0.022	0.140	0.006	0.010	0.005	0.160	0.012	0.001	0.000	0.018	0.437	
GBI	78154	092	ASTM A105	0.180	0.210	0.880	0.021	0.012	0.090	0.040	0.010	0.005	0.170	0.001	0.001	0.000	0.023	0.361	
TP5	72966	004	ASTM A105	0.185	0.200	0.950	0.017	0.019	0.110	0.060	0.010	0.006	0.190	0.003	0.001	0.000	0.021	0.385	
FRS	73265	019	ASTM A105	0.195	0.200	0.980	0.019	0.017	0.110	0.060	0.020	0.005	0.220	0.002	0.001	0.000	0.022	0.403	

HEAT CODE	HEAT	ITEM	TEST SPECIMEN	SECT. mm2	LENGTH mm	YIELD POINT N/mm2 >= 0.2%	TENSILE STRENGTH N/mm2 >= 0.2%	ELONGATION % >= 5mm	REDUCTION OF AREA % >= 5mm	HARDNESS HB	BEND TEST	FLATTENING TEST	TYPE 1x10mm	IMPACT TEST °C	1	2	3	SHAPE	YIELD POINT N/mm2 >= 0.2%
HG1	78457	023	ASME SA ASTM A105-05	122.65	50.00	309.0	564.0	31.0	54.0	160 - 162	0.0	0.0	KV	20	98	99	104	1	0.0
A46	78483	091	ASME SA ASTM A105-05	122.65	50.00	306.0	564.0	31.0	54.0	162 - 168	0.0	0.0	KV	20	104	105	108	1	0.0
56A	73413	115	ASME SA ASTM A105-05	122.65	50.00	308.0	551.0	32.5	58.0	163 - 165	0.0	0.0	KV	20	101	105	100	1	0.0
HG1	78457	023	ASME SA ASTM A105-05	122.65	50.00	309.0	564.0	31.0	54.0	160 - 162	0.0	0.0	KV	20	98	99	104	1	0.0
H86	77553	023	ASME SA ASTM A105-05	122.65	50.00	306.0	564.0	34.0	57.0	160 - 162	0.0	0.0	KV	20	106	100	109	1	0.0
GBI	78154	092	ASME SA ASTM A105-05	122.65	50.00	318.0	510.0	32.0	59.0	153 - 156	0.0	0.0	KV	20	100	99	101	1	0.0
TP5	72966	004	ASME SA ASTM A105-05	122.65	50.00	308.0	549.0	32.0	57.0	158 - 166	0.0	0.0	KV	20	96	98	104	1	0.0
FRS	73265	019	ASME SA ASTM A105-05	122.65	50.00	333.0	539.0	33.0	58.0	163 - 165	0.0	0.0	KV	20	99	101	102	1	0.0

HEAT CODE	HEAT	ITEM	NOTES	INSPECTION AUTHORITY	QUALITY CONTROL DEPARTMENT	MANUFACTURER'S SYMBOL	IML	FITTINGS	BORIS FIZZOTTI	STUDBOLTS
HG1	78457	023	ASME B16.11/05 - ANSI B31.1/B31.3 - IML STD - ANSI B1.1-B18.2.2 - NACE MR0175 ISO 15156/1 - MSS SP 83 - SUPPLIED MATERIAL MEETS SPECIFICATIONS AND P.O. REQUIREMENTS - BEND TEST ON PIPE NIPPLES: SATISFACTORY							
A46	78483	091								
56A	73413	115								
HG1	78457	023								
H86	77553	023								
GBI	78154	092								
TP5	72966	004								
FRS	73265	019								





I.M.L.

INDUSTRIA MECCANICA LIGURE SPA

INSPECTION CERTIFICATE EN 10204:2004 / 3.1

COMPANY WITH QUALITY SYSTEM ISO 9001:2000
CERTIFIED BY RINA

SEYBOLD INTERNATIONAL CORP.

20 Holly Street, Unit 205
TORONTO M4S 3B1 CANADA

CA

Certificate Nr 15509
Invoice Nr 718
Del. Note Nr 1085

Dated 20.06.2005
Dated 13.06.2005
Dated 13.06.2005

16030 CASARZA LIGURE - Genova - Italy - P.zza Marco Capelli,4 - Tel.0185.467661 - Fax 0185.466510 / MATERIAL TEST DEPARTMENT This certificate has been generated by computer and need not to be signed for validity according to DIN EN 10204 Page 8 - 8

HEAT CODE	HEAT	ITEM	YOUR P.O.	OUR REFERENCE	Q. TV	DESCRIPTION	DIM. ACC. TO	VISUAL & DIMENS.
ACF	76295	012	4661	2004-2E209-0003036-012	375	THREADOLET NPT 3M 1"x3"-3 1/2" A105N CODE: 5120	SEE NOTE	SATISFACTORY
ACF	76295	014	4661	2004-2E209-0003036-014	125	THREADOLET NPT 3M 1"x6"-10" A105N CODE: 5914	SEE NOTE	SATISFACTORY
ABZ	37678	018	4661	2004-2E209-0003036-018	40	WEIDOLET BW STD 2"x6" A105N CODE: 5913	SEE NOTE	SATISFACTORY
ACK	76663	020	4661	2004-2E209-0003036-020	50	SOCKOLET SW 3/4"x6"-12" A105N CODE: 45637	SEE NOTE	SATISFACTORY
T54	76786	053	4661	2004-2E209-0003036-053	28	FITTING TEE THRD NPT 2/3M 1/4" A350/LF2 CODE: 9043	SEE NOTE	SATISFACTORY
TH5	73215	053	4661	2004-2E209-0003036-053	22	FITTING TEE THRD NPT 2/3M 1/4" A350/LF2 CODE: 9043	SEE NOTE	SATISFACTORY
L320	X21947	055	4661	2004-2E209-0003036-055	270	FITTING UNION F/F SW 3M 1" A105N CODE: 77960/270 PCS. NOT SHIPPED AGAINST P.O. ...	SEE NOTE	SATISFACTORY
H45	73854	056	4661	2004-2E209-0003036-056	500	FITTING RED. TEE THRD NPT 3M 1"x1/2" A105N CODE: 45668	SEE NOTE	SATISFACTORY

HEAT CODE	HEAT	ITEM	MATERIAL	C%	SI%	Mn%	S%	P%	Cr%	Ni%	Mo%	Ti%	Cu%	V%	Nb%	N%	Al%	C.E.%	OTHER ELEMENTS
ACF	76295	012	ASTM A105	0.195	0.220	0.920	0.009	0.008	0.100	0.060	0.020	0.018	0.200	0.021	0.001	0.000	0.025	0.394	
ACF	76295	014	ASTM A105	0.195	0.220	0.920	0.009	0.008	0.100	0.060	0.020	0.018	0.200	0.021	0.001	0.000	0.025	0.394	
ABZ	37678	018	ASTM A105	0.180	0.240	0.980	0.023	0.012	0.080	0.070	0.010	0.000	0.180	0.001	0.001	0.000	0.000	0.378	
ACK	76663	020	ASTM A105	0.195	0.220	0.900	0.010	0.011	0.140	0.070	0.010	0.000	0.190	0.017	0.001	0.000	0.000	0.396	
T54	76786	053	ASTM A350 LF2 cl.1	0.220	0.210	0.880	0.010	0.018	0.100	0.050	0.010	0.014	0.200	0.016	0.000	0.000	0.018	0.408	
TH5	73215	053	ASTM A350 LF2 cl.1	0.190	0.180	0.960	0.010	0.012	0.110	0.050	0.010	0.018	0.170	0.016	0.001	0.000	0.020	0.392	
L320	X21947	055	ASTM A105	0.200	0.270	0.850	0.028	0.011	0.110	0.100	0.030	0.003	0.110	0.003	0.001	0.000	0.028	0.384	
H45	73854	056	ASTM A105	0.185	0.210	0.940	0.027	0.015	0.110	0.060	0.020	0.012	0.200	0.002	0.001	0.000	0.005	0.385	

HEAT CODE	HEAT	ITEM	SECT. mm2	LENGTH mm	YIELD POINT N/mm2 >=0.2%	TENSILE STRENGTH N/mm2 >=	ELONGATION %>=	REDUCTION OF AREA %>=	HARDNESS HB	BEND TEST	FLATTENING TEST	IMPACT TEST - JOULE/cm2			SHAPE 1=O 2=□	YIELD POINT N/mm2 >=1.0%		
												TYPE 10x10mm	℃	1	2	3		
ACF	76295	012	50.00	318.0	615.0	31.5	56.0	158 - 164	0.0	0.0	0.0	KV	20	99	103	102	1	0.0
ACF	76295	014	50.00	318.0	615.0	31.5	56.0	158 - 164	0.0	0.0	0.0	KV	20	99	103	102	1	0.0
ABZ	37678	018	50.00	311.0	520.0	32.0	65.0	159 - 163	0.0	0.0	0.0	KV	20	87	95	101	1	0.0
ACK	76663	020	50.00	312.0	502.0	33.2	58.0	159 - 165	0.0	0.0	0.0	KV	20	79	85	88	1	0.0
T54	76786	053	50.00	342.0	565.0	35.0	61.0	164 - 168	0.0	0.0	0.0	KV	-46	51	50	52	1	0.0
TH5	73215	053	50.00	315.0	525.0	31.0	58.0	154 - 160	0.0	0.0	0.0	KV	-46	56	60	52	1	0.0
L320	X21947	055	50.00	361.0	525.0	30.0	57.0	152 - 156	0.0	0.0	0.0	KV	20	106	100	105	1	0.0
H45	73854	056	50.00	320.0	525.0	34.0	55.0	160 - 165	0.0	0.0	0.0	KV	20	109	102	104	1	0.0

HEAT CODE	HEAT	ITEM	MATERIAL IN ACCORDANCE TO	HEAT TREATMENT	FURNACE	STEEL MILL	Our Ref.
ACF	76295	012	ASME SA ASTM A105-03	Normalized at 880 °920 °C / Air Cool	ELECTRIC FURNACE	RIVA ACCIAI	
ACF	76295	014	ASME SA ASTM A105-03	Normalized at 880 °920 °C / Air Cool	ELECTRIC FURNACE	RIVA ACCIAI	
ABZ	37678	018	ASME SA ASTM A105-03	Normalized at 880 °920 °C / Air Cool	ELECTRIC FURNACE		N30007
ACK	76663	020	ASME SA ASTM A105-03	Normalized at 880 °920 °C / Air Cool	ELECTRIC FURNACE		N30003
T54	76786	053	ASME SA ASTM A350-04a Gr. LF2 cl.1	Normalized at 900 °C / Air Cool	ELECTRIC FURNACE		
TH5	73215	053	ASME SA ASTM A350-04a Gr. LF2 cl.1	Normalized at 900 °C / Air Cool	ELECTRIC FURNACE		
L320	X21947	055	ASME SA ASTM A105-03	Normalized at 880 °920 °C / Air Cool	ELECTRIC FURNACE		
H45	73854	056	ASME SA ASTM A105-03	Normalized at 880 °920 °C / Air Cool	ELECTRIC FURNACE		

NOTES	ASME B16.11/01 - BS.3799 - ANSI B31.1/B31.3 - IML STD - ANSI B1.1-B18.2.2 - NACE MR0175 ISO 15156/1 - MSS SP83 - SUPPLIED MATERIAL MEETS SPECIFICATIONS AND P.O. REQUIREMENTS	INSPECTION AUTHORITY	QUALITY CONTROL DEPARTMENT	MANUFACTURERS SYMBOL	MANUFACTURERS SYMBOL
		88037	BORIS FIZZOTTI	FITTINGS IML	STUBBOLTS



I.M.L.

INDUSTRIA MECCANICA LIGURE SPA

INSPECTION CERTIFICATE EN 10204:2004/3.1

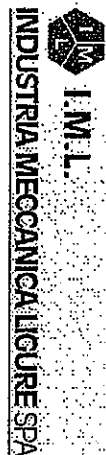
COMPANY WITH QUALITY SYSTEM ISO 9001-2000
CERTIFIED BY RINA

IRACO LIMITED- CASTLE HOUSE
STATION ROAD - NEW BARNET
HERTFORDSHIRE EN5 1PE - UNITED KINGDOM

Certificate N° 16154
Invoice N° 129
Del. Note N° 203
Dated 06.02.200
Dated 06.02.200
Dated 06.02.200

16030 CASARZA LIGURE - Genova - Italy - P.zza Marco Cappelli 4 - Tel.010.55.467661 - Fax 010.55.468510 / MATERIAL TEST DEPARTMENT This certificate has been generated by computer and need not to be signed for validity according to DIN EN 10204 Page 3 -

HEAT CODE		HEAT	ITEM	YOUR P.O.	OUR REFERENCE	Q.TY	DESCRIPTION														DIM. ACC. TO	VISUAL & DIMEN
N76	76607	050	16946	2005-2E201-0001180-050	900	FITTING HEX.H.PLUG THRD NPT 2" A105N	7526014												SEE NOTE	SATISFACTOR		
UP0	74379	039	16946	2005-2E201-0001180-039	210	FITTING UNION F/F THRD NPT 3M 2" A105N	7526014												SEE NOTE	SATISFACTOR		
UP0	74379	039	16946	2005-2E201-0001180-039	505	FITTING UNION F/F THRD NPT 3M 2" A105N	7526014												SEE NOTE	SATISFACTOR		
UP0	74379	039	16946	2005-2E201-0001180-039	505	FITTING UNION F/F THRD NPT 3M 2" A105N	7526014												SEE NOTE	SATISFACTOR		
UP0	74379	039	16946	2005-2E201-0001180-039	650	FITTING UNION F/F THRD NPT 3M 2" A105N	7526014												SEE NOTE	SATISFACTOR		
UP0	74379	039	16946	2005-2E201-0001180-039	60	FITTING UNION F/F THRD NPT 3M 2" A105N	7526014												SEE NOTE	SATISFACTOR		
UP0	74379	039	16946	2005-2E201-0001180-039	150	FITTING TEE THRD NPT 3M 1/2" A350LF2	7526014												SEE NOTE	SATISFACTOR		
TM0	78196	055	16946	2005-2E201-0001180-055	1700	FITTING COUPLING THRD NPT 3M 1" A105N	7526014												SEE NOTE	SATISFACTOR		
72978	025	16946	2005-2E201-0001180-025																			
HEAT CODE		HEAT	ITEM	MATERIAL		C%	S%	M%	P%	C-%	N%	Mo%	TV%	Cu%	V%	Nb%	N%	Al%	C.E.%	OTHER ELEMENT		
N76	76607	050	ASTM A105	0,190	0,190	0,870	0,021	0,017	0,080	0,060	0,010	0,020	0,160	0,015	0,000	0,000	0,000	0,021	0,371			
UP0	74379	039	ASTM A105	0,190	0,220	0,920	0,019	0,013	0,120	0,060	0,010	0,014	0,230	0,002	0,000	0,000	0,005	0,389				
UP0	74379	039	ASTM A105	0,190	0,220	0,920	0,019	0,013	0,120	0,060	0,010	0,014	0,230	0,002	0,000	0,000	0,005	0,389				
UP0	74379	039	ASTM A105	0,190	0,220	0,920	0,019	0,013	0,120	0,060	0,010	0,014	0,230	0,002	0,000	0,000	0,005	0,389				
UP0	74379	039	ASTM A105	0,190	0,220	0,920	0,019	0,013	0,120	0,060	0,010	0,014	0,230	0,002	0,000	0,000	0,005	0,389				
UP0	74379	039	ASTM A105	0,190	0,220	0,920	0,019	0,013	0,120	0,060	0,010	0,014	0,230	0,002	0,000	0,000	0,005	0,389				
UP0	74379	039	ASTM A105	0,190	0,220	0,920	0,019	0,013	0,120	0,060	0,010	0,014	0,230	0,002	0,000	0,000	0,005	0,389				
UP0	74379	039	ASTM A105	0,190	0,220	0,920	0,019	0,013	0,120	0,060	0,010	0,014	0,230	0,002	0,000	0,000	0,005	0,389				
UP0	74379	039	ASTM A105	0,190	0,220	0,920	0,019	0,013	0,120	0,060	0,010	0,014	0,230	0,002	0,000	0,000	0,005	0,389				
UP0	74379	039	ASTM A105	0,190	0,220	0,920	0,019	0,013	0,120	0,060	0,010	0,014	0,230	0,002	0,000	0,000	0,005	0,389				
UP0	74379	039	ASTM A105	0,190	0,220	0,920	0,019	0,013	0,120	0,060	0,010	0,014	0,230	0,002	0,000	0,000	0,005	0,389				
UP0	74379	039	ASTM A105	0,190	0,220	0,920	0,019	0,013	0,120	0,060	0,010	0,014	0,230	0,002	0,000	0,000	0,005	0,389				
UP0	74379	039	ASTM A105	0,190	0,220	0,920	0,019	0,013	0,120	0,060	0,010	0,014	0,230	0,002	0,000	0,000	0,005	0,389				
UP0	74379	039	ASTM A105	0,190	0,220	0,920	0,019	0,013	0,120	0,060	0,010	0,014	0,230	0,002	0,000	0,000	0,005	0,389				
UP0	74379	039	ASTM A105	0,190	0,220	0,920	0,019	0,013	0,120	0,060	0,010	0,014	0,230	0,002	0,000	0,000	0,005	0,389				
UP0	74379	039	ASTM A105	0,190	0,220	0,920	0,019	0,013	0,120	0,060	0,010	0,014	0,230	0,002	0,000	0,000	0,005	0,389				
UP0	74379	039	ASTM A105	0,190	0,220	0,920	0,019	0,013	0,120	0,060	0,010	0,014	0,230	0,002	0,000	0,000	0,005	0,389				
UP0	74379	039	ASTM A105	0,190	0,220	0,920	0,019	0,013	0,120	0,060	0,010	0,014	0,230	0,002	0,000	0,000	0,005	0,389				
UP0	74379	039	ASTM A105	0,190	0,220	0,920	0,019	0,013	0,120	0,060	0,010	0,014	0,230	0,002	0,000	0,000	0,005	0,389				
UP0	74379	039	ASTM A105	0,190	0,220	0,920	0,019	0,013	0,120	0,060	0,010	0,014	0,230	0,002	0,000	0,000	0,005	0,389				
UP0	74379	039	ASTM A105	0,190	0,220	0,920	0,019	0,013	0,120	0,060	0,010	0,014	0,230	0,002	0,000	0,000	0,005	0,389				
UP0	74379	039	ASTM A105	0,190	0,220	0,920	0,019	0,013	0,120	0,060	0,010	0,014	0,230	0,002	0,000	0,000	0,005	0,389				
UP0	74379	039	ASTM A105	0,190	0,220	0,920	0,019	0,013	0,120	0,060	0,010	0,014	0,230	0,002	0,000	0,000	0,005	0,389				
UP0	74379	039	ASTM A105	0,190	0,220	0,920	0,019	0,013	0,120	0,060	0,010	0,014	0,230	0,002	0,000	0,000	0,005	0,389				
UP0	74379	039	ASTM A105	0,190	0,220	0,920	0,019	0,013	0,120	0,060	0,010	0,014	0,230	0,002	0,000	0,000	0,005	0,389				
UP0	74379	039	ASTM A105	0,190	0,220	0,920	0,019	0,013	0,120	0,060	0,010	0,014	0,230	0,002	0,000	0,000	0,005	0,389				
UP0	74379	039	ASTM A105	0,190	0,220	0,920	0,019	0,013	0,120	0,060	0,010	0,014	0,230	0,002	0,000	0,000	0,005	0,389				
UP0	74379	039	ASTM A105	0,190	0,220	0,920	0,019	0,013	0,120	0,060	0,010	0,014	0,230	0,002	0,000	0,000	0,005	0,389				
UP0	74379	039	ASTM A105	0,190	0,220	0,920	0,019	0,013	0,120	0,060	0,010	0,014	0,230	0,002	0,000	0,000	0,005	0,389				
UP0	74379	039	ASTM A105	0,190	0,220	0,920	0,019	0,013	0,120	0,060	0,010	0,014	0,230	0,002	0,000	0,000	0,005	0,389				
UP0	74379	039	ASTM A105	0,190	0,220	0,920	0,019	0,013	0,120	0,060	0,010	0,014	0,230	0,002	0,000	0,000	0,005	0,389				
UP0	74379	039	ASTM A105	0,190	0,220	0,920	0,019	0,013	0,120	0,060	0,010	0,014	0,230	0,002	0,000	0,000	0,005	0,389				
UP0	74379	039	ASTM A105	0,190	0,220	0,920	0,019	0,013	0,120	0,060	0,010	0,014	0,230	0,002	0,000	0,000	0,005	0,389				
UP0	74379	039	ASTM A105	0,190	0,220	0,920	0,019	0,013	0,120	0,060	0,010	0,014	0,230	0,002	0,000	0,000	0,005	0,389				
UP0	74379	039	ASTM A105	0,190	0,220	0,920	0,019	0,013	0,120	0,060	0,010	0,014	0,230	0,002	0,000	0,000	0,005	0,389				
UP0	74379	039	ASTM A105	0,190	0,220	0,920	0,019	0,013	0,120	0,060	0,010	0,014	0,230	0,002	0,000	0,000	0,005	0,389				
UP0	74379	039	ASTM A105	0,190	0,220	0,920	0,019	0,013	0,120	0,060	0,010	0,014	0,230	0,002	0,000	0,000	0,005	0,389				
UP0	74379	039	ASTM A105	0,190	0,220	0,920	0,019	0,013	0,120	0,060	0,010	0,014	0,230	0,002	0,000	0,000	0,005	0,389				
UP0	74379	039	ASTM A105	0,190	0,220	0,920	0,019	0,013	0,120	0,060	0,010	0,014	0,230	0,002	0,000	0,000	0,005	0,389				
UP0	74379	039	ASTM A105	0,190	0,220	0,920	0,019	0,013	0,120	0,060	0,010	0,014	0,230	0,002	0,000	0,000	0,005	0,389				
UP0	74379	039	ASTM A105	0,190	0,220	0,920	0,019	0,013	0,120	0,060	0,010	0,014	0,230	0,002	0,000	0,000	0,005	0,389				
UP0	74379	039	ASTM A105	0,190	0,220	0,920	0,019	0,013	0,120	0,060	0,010	0,014	0,230	0,002	0,000	0,000	0,005	0,389				
UP0	74379	039	ASTM A105	0,190	0,220	0,920	0,019	0,013	0,120	0,060	0,010	0,014	0,230	0,002	0,000	0,000	0,005	0,389				
UP0	74379	039	ASTM A105	0,190	0,220	0,920	0,019	0,013	0,120	0,060	0,010	0,014	0,230	0,002	0,000	0,000	0,005	0,389				
UP0	74379	039	ASTM A105	0,190	0,220	0,920	0,019	0,013	0,120	0,060	0,010	0,014	0,230	0,002	0,000	0,000	0,005	0,389				
UP0	74379	039	ASTM A105	0,190	0,220	0,920	0,019	0,013	0,120	0,060	0,010	0,014	0,230	0,002	0,000	0,000	0,005	0,389				
UP0	74379	039	ASTM A105	0,190	0,220	0,920	0,019	0,013	0,12													



INDUSTRIA MECCANICA LIGURES SPA
16030 CASARCA LIGURE - Genova - Italy - P.zza Marco Capella 4 - Tel: 010.54.67.981 - Fax 010.54.68.610 / MATERIAL TEST DEPARTMENT
COMPANY WITH QUALITY SYSTEM ISO 9001:2000
CERTIFIED BY RINA

SEYBOLD INTERNATIONAL CORP.
20 Hwy Steek, Unit 205
TORONTO M8S 3B1 CANADA
CA

Certificate Nr 16878
Invoice Nr 878
Dil. Note Nr 1592
Date 20.09.2005
Date 14.09.2005
Date 14.09.2005

16030 CASARCA LIGURE - Genova - Italy - P.zza Marco Capella 4 - Tel: 010.54.67.981 - Fax 010.54.68.610 / MATERIAL TEST DEPARTMENT This certificate has been generated by computer and need not to be signed for validity according to DIN EN 10204 Page 6 - 14

HEAT CODE	HEAT	ITEM	YOUR P.O.	OUR REFERENCE	QTY	DESCRIPTION	DIN ACC. TO	VISUAL & DIMENS.											
UU	16836	027	5246	2005-2E209-0003063-027	1515	FITTING UNION F/F THRD NPT 3M 1" A105N CODE: 5488	SEE NOTE	SATISFACTORY											
UP0	74379	029	5246	2005-2E209-0003063-029	645	FITTING UNION F/F THRD NPT 3M 2" A105N CODE: 5609D06.23.2006 : ADDED 200 PCS. N...	SEE NOTE	SATISFACTORY											
A391	78041	016	5246	2005-2E209-0003063-016	1125	FITTING 90 ELB. THRD NPT 3M 1" A105N CODE: 3989	SEE NOTE	SATISFACTORY											
HG7	79023	016	5246	2005-2E209-0003063-016	390	FITTING 90 ELB. THRD NPT 3M 1" A105N CODE: 3989	SEE NOTE	SATISFACTORY											
UP4	73847	028	5246	2005-2E209-0003063-028	30	FITTING UNION F/F THRD NPT 3M 1 1/4" A105N CODE: 5602	SEE NOTE	SATISFACTORY											
L12	77951	029	5246	2005-2E209-0003063-029	112	FITTING UNION F/F THRD NPT 3M 2" A105N CODE: 5609U06.23.2006 : ADDED 200 PCS. N...	SEE NOTE	SATISFACTORY											
EEA	77178	042	5246	2005-2E209-0003063-042	156	FITTING RED. TEE THRD NPT 3M 2"x1" A105N CODE: 11017	SEE NOTE	SATISFACTORY											
EEA	73847	046	5246	2005-2E209-0003063-046	50	FITTING M/F ELB. THRD NPT 3M 3/4" A105N CODE: 3984	SEE NOTE	SATISFACTORY											
HEAT CODE	HEAT	ITEM	MATERIAL	CK	SK	Mn%	Si%	P%	CK%	NI%	Mo%	TT%	CU%	V%	NI%	N%	Al%	C.E.%	OTHER ELEMENTS
UU	16836	027	ASTM A105	0.202	0.260	0.980	0.002	0.007	0.130	0.130	0.020	0.002	0.140	0.003	0.001	0.000	0.027	0.414	
UP0	74379	029	ASTM A105	0.190	0.220	0.920	0.019	0.013	0.120	0.060	0.010	0.014	0.230	0.002	0.000	0.000	0.005	0.389	
A391	78041	016	ASTM A105	0.190	0.170	0.930	0.019	0.013	0.100	0.050	0.020	0.005	0.160	0.002	0.001	0.000	0.007	0.383	
HG7	79023	016	ASTM A105	0.180	0.280	1.090	0.020	0.010	0.090	0.050	0.010	0.005	0.150	0.002	0.001	0.000	0.023	0.405	
UP4	73847	028	ASTM A105	0.185	0.210	1.010	0.023	0.020	0.160	0.060	0.010	0.013	0.280	0.002	0.001	0.000	0.005	0.408	
L12	77951	029	ASTM A105	0.180	0.210	0.860	0.018	0.013	0.090	0.050	0.010	0.005	0.170	0.001	0.000	0.000	0.011	0.358	
EEA	77178	042	ASTM A105	0.185	0.160	0.890	0.021	0.012	0.080	0.050	0.010	0.005	0.160	0.001	0.000	0.000	0.011	0.366	
EEA	73847	046	ASTM A105	0.185	0.210	1.010	0.023	0.020	0.150	0.060	0.010	0.013	0.280	0.002	0.001	0.000	0.006	0.408	
HEAT CODE	HEAT	ITEM	TEST SPECIFICATION	YIELD POINT	TENSILE STRENGTH	ELONGATION	REDUCTION OF AREA	HARDNESS HB	BEND TEST	FLATNESS TEST	TYPE TOLERANCE	IMPACT TEST - JOULES	SHAKE	YIELD POINT					
UU	16836	027	122.65	50.00	306.0	584.0	31.0	54.0	0.0	0.0	KV	20	115	108	109	0.0			
UP0	74379	029	122.65	50.00	325.0	520.0	34.0	59.0	0.0	0.0	KV	20	96	103	100	0.0			
A391	78041	016	122.65	50.00	306.0	563.0	31.0	56.0	0.0	0.0	KV	20	105	100	107	0.0			
HG7	79023	016	122.65	50.00	331.0	563.0	34.0	57.0	0.0	0.0	KV	20	104	109	105	0.0			
UP4	73847	028	122.65	50.00	364.0	548.0	32.0	56.0	0.0	0.0	KV	20	104	100	108	0.0			
L12	77951	029	122.65	50.00	308.0	496.0	33.0	58.0	0.0	0.0	KV	20	100	108	104	0.0			
EEA	77178	042	122.65	50.00	321.0	459.0	32.0	58.0	0.0	0.0	KV	20	89	90	94	0.0			
EEA	73847	046	122.65	50.00	328.0	528.0	33.5	57.0	0.0	0.0	KV	20	103	109	88	0.0			
HEAT CODE	HEAT	ITEM	MATERIAL IN ACCORDANCE TO	HEAT TREATMENT	INSPECTION AUTHORITY	QUALITY CONTROL DEPARTMENT	MANUFACTURER'S SYMBOL	MANUFACTURER'S SYMBOL											
UU	16836	027	ASME SA ASTM A105-05	Normalized at 880-920°C / Air Cool	95826	BORIS FIZZOTTI	IML	STUDBOLTS											
UP0	74379	029	ASME SA ASTM A105-05	Normalized at 880-920°C / Air Cool															
A391	78041	016	ASME SA ASTM A105-05	Normalized at 880-920°C / Air Cool															
HG7	79023	016	ASME SA ASTM A105-05	Normalized at 880-920°C / Air Cool															
UP4	73847	028	ASME SA ASTM A105-05	Normalized at 880-920°C / Air Cool															
L12	77951	029	ASME SA ASTM A105-05	Normalized at 880-920°C / Air Cool															
EEA	77178	042	ASME SA ASTM A105-05	Normalized at 880-920°C / Air Cool															
EEA	73847	046	ASME SA ASTM A105-05	Normalized at 880-920°C / Air Cool															
NOTES	ASME B16.11/05 - ANSI B31.1/B31.3 - IMI STD - ANSI B1.1-B18.2.2 - NACE MR0175 ISO 15166/1 - MSS SP 43 - SUPPLIED MATERIAL MEETS SPECIFICATIONS AND P.O. REQUIREMENTS																		

EEA
2x134 RT

Purchaser: VAN LEEUWEN PIPE AND TUBE (CANADA) INC.

INSPECTION CERTIFICATE

06K30018



Thai Benkan Co., Ltd.
58 Soi Watkrusi, Bangkru, Prapadaeng,
Samutprakarn, 10130 Thailand.

E-No. MA-651

Purchase Order No. 45000577

Job No.

TO EN10204 3.1 8" S40 Cap

D M Y Certificate No.

11/10/2006 T 2006040390

No.	MFG. No. (Heat Identification No.)	Specification for Material Made from Seamless Pipe		Specification for Inspection		Visual Examination	Dimensional Inspection									
		AS IM A2.34-USA/ASME SA234 WPB NACE MR0175/ISO 15156-2003 "CSA Z45.11 Gr. 241 Cat 1 SOUK SERVICE"		ASME B16.9-2003												
		Product & Size		Quantity	Heat Treatment (Note 1)											
		(T=1)			Item No.											
1	06H30020	C WPB 8 S40		114/400	*N	2344										
2	06K30018	C WPB 8 S40		286/400	*N	2344										
3	06K30016	C WPB 10 S40		8/60	*N	2346										
4	06K30006	C WPB 10 S40		52/60	*N	2346										
5	06K30017	C WPB 12 STD		50	*N	2348										
Specification		Chemical Composition %										Tension Test #2				
		C	Si	Mn	P	S	Cu	Ni	Cr	Mo	V	Nb	C.E.	YS	TS	E
Min.		X 100	X 100	X 100	X 1000	X 1000	X 100	X 100	X 100	X 100	X 1000	X 1000	X 100	MPa.		%
Max.			10	29										240	415	30
Material Heat No.		30		106	50	58	40	40	40	15	80	20	45		655	
1	182	21	10	43	7	7	0.7	0.6	1.3	0.3	1	<1	28	262	417	48
2	182	21	10	43	7	7	0.7	0.6	1.3	0.3	1	<1	28	262	417	48
3	182	21	10	43	7	7	0.7	0.6	1.3	0.3	1	<1	28	262	417	48
4	182	21	10	43	7	7	0.7	0.6	1.3	0.3	1	<1	28	262	417	48
5	182	21	10	43	7	7	0.7	0.6	1.3	0.3	1	<1	28	262	417	48

(Note 1) A : Hot formed with final temperature between 620°C-980°C, Air Cooling N : Normalizing 910°Cx0.5 HR. Air Cooling *N : Normalizing 910°Cx0.5 HR. Air Cooling (Specification for material made from plate) S : Stress Relieving 675°Cx0.5 HR. Air Cooling

C.E. = C+Mn/6+(Cr+Mo+V)/5+(Ni+Cu)/15

MAGNETIC PARTICLE EXAMINATION FOR TEE ONLY :

We hereby certify that the product described herein has been manufactured in accordance with the specifications concerned and also with the purchaser's requirements and that the test results shown herein are correct.

* 1 : "T" symbolized wall thickness in mm. * 2 : YS Yield strength TS = Tensile strength E = Elongation

Quality Assurance Manager
Thai Benkan Co., Ltd.



INSPECTION CERTIFICATE

PURCHASER: SEYBOLD
ASTM A234 WPB-07
ASME SA234 WPB-04

CSA Z245.11 Gr.241 Cat I Sour Service
ASTM A106 Gr.B (SEAMLESS PIPE)
ASME B16.9 - 03

8 MEI-CHUNG RD. NIAO-SONG,
KAOHSIUNG HSIEN 83301 TAIWAN
TEL: 886-77310527-8
FAX: 886-77315887

INDUSTRIES CO., LTD.

DATE: 2007 - 08 - 06

ORDER NO: 6747/45000869

P.I. NO: 7E07-2

CERTIFI. NO: 423

ACCORDING TO EN10204/DIN50049/3.1

INSP SPEC. ASME B16.3 - 03

ACCORDING TO EN12068-2

ITEM NO.	PRODUCT & SIZE	QUANTITY PCS	MFG NO.	VISUAL & DIMENSIONAL INSPECTION	HARDNESS MAX. 197 HB	HEAT TREATMENT (NOTE)	MAGNETIC PARTICLE EXAMINATION	IMPACT TEST (J)
1	ELL 90 LR 3" STD	185	6C20553513	GOOD	133 - 134	A		
2	ELL 90 LR 3" STD	535	6J5463	GOOD	118 - 122	A		
3	ELL 180 LR 4" STD	15	6H48093816	GOOD	137 - 138	A		

ITEM NO.	MATERIAL CHARGE NO.	CHEMICAL COMPOSITION %										PHYSICAL TEST					
		C x100	Si x100	Mn x100	P x1000	S x1000	Cu x100	Ni x100	Cr x100	Mo x100	V x100	Nb x1000	Y S	T S	E	C.E.	
													KSI	KSI	%	X100	
	STANDARD	MIN	10	29									35.0	60.0			
	MAX	30		135	50	58	40	40	40	15	8	20		95.0			50
1	0521855	20	29	43	14	8	14	4	3	1	<1	1	46.4	71.1	36.0		29
2	34963	19	25	44	18	29	2	2	5	<1	<1	<1	53.7	63.8	29.0		27
3	308409	12	17	79	9	3	7	3	3	1	<1	1	40.2	62.4	40.0		26

(NOTE): A: HOT FORMED WITH FINAL TEMPERATURE BETWEEN 620°C-880°C, AIR COOLING.
N: NORMALIZING AT TEMPERATURE 880°C X 0.5HR, AIR COOLING.

NACE MR-01-75 & NACE MR 0103 : SATISFACTORY
WE HEREBY CERTIFY THAT THE PRODUCT DESCRIBED HEREIN HAS BEEN MANUFACTURED IN ACCORDANCE WITH THE SPECIFICATIONS CONCERNED AND ALSO WITH THE PURCHASER'S REQUIREMENTS AND THAT THE TEST RESULTS SHOWN HEREIN ARE CORRECT.

Ou E Lan

MANAGER OF Q.A. DEPT.

HEAT NUMBER : **FRS**
 TRANS AM PIPING PRODUCTS - REV'D BY:
 Shipment/Seq #: **S 7 - 1536** **8**

2" CL 3000 FS SCR'D 90 ELL
 A105N



INDUSTRIA MECCANICA LIGURE SPA

16030 CASARZA LIGURE - Genova - Italy - P.zza Marco Capelli 4 - Tel. 0185.467861 - Fax 0185.466510 / MATERIAL TEST DEPARTMENT
 INSPECTION CERTIFICATE EN 10204:2004 / 3.1
 COMPANY WITH QUALITY SYSTEM ISO 9001:2000
 CERTIFIED BY RINA

TRANS AM PIPING PRODUCTS LTD.
 230051 Edgemoor Drive S.E.
 Calgary, Alberta T2P 2G6
 CA

Certificate Nr. 18140
 Invoice Nr. 1130
 Del. Note Nr. 1830

Dated 12.11.2007
 Dated 09.11.2007
 Dated 09.11.2007

2" 3M 90° Elbow
 A105N

FRS

HEAT CODE	HEAT	ITEM	YOUR P.O.	OUR REFERENCE	Q.TY	DESCRIPTION	DIM. ACC. TO	VISUAL & DIMENS.											
75791	038	038	CI-07 - 598 2007-2E201-0000963-038			FITTING COUPLING THRD NPT 3M 1" A105N	SEE NOTE	SATISFACTORY											
72435	056	056	CI-07 - 598 2007-2E201-0000963-056			FITTING CAP THRD NPT 3M 2" A105N	SEE NOTE	SATISFACTORY											
78154	092	092	CI-07 - 598 2007-2E201-0000963-092			FITTING 90 ELB. SW 3M 2" A105N	SEE NOTE	SATISFACTORY											
73265	019	019	CI-07 - 598 2007-2E201-0000963-019			FITTING 90 ELB. THRD NPT 3M 2" A105N	SEE NOTE	SATISFACTORY											
77912	080	080	CI-07 - 598 2007-2E201-0000963-080			FITTING HEX.H.PLUG THRD NPT 1" A105N	SEE NOTE	SATISFACTORY											
78154	092	092	CI-07 - 598 2007-2E201-0000963-092			FITTING 90 ELB. SW 3M 2" A105N	SEE NOTE	SATISFACTORY											
73405	006	006	CI-07 - 598 2007-2E201-0000963-006			FITTING TEE THRD NPT 2M 2" A105N	SEE NOTE	SATISFACTORY											
AK4583	078	078	CI-07 - 598 2007-2E201-0000963-078			FITTING HEX.H.PLUG THRD NPT 1/2" A105N	SEE NOTE	SATISFACTORY											
HEAT CODE	HEAT	ITEM	MATERIAL	%	Si%	Mn%	S%	P%	C%	N%	Mo%	Ti%	Cu%	V%	Nb%	N%	Al%	C.E.%	OTHER ELEMENTS
75791	038	038	ASTM A105	0.180	0.190	0.920	0.024	0.015	0.100	0.080	0.010	0.005	0.200	0.002	0.001	0.000	0.020	0.373	
72435	056	056	ASTM A105	0.205	0.230	0.940	0.021	0.013	0.080	0.050	0.010	0.005	0.160	0.001	0.000	0.000	0.012	0.396	
78154	092	092	ASTM A105	0.180	0.210	0.880	0.021	0.012	0.090	0.050	0.010	0.005	0.170	0.001	0.001	0.000	0.023	0.361	
73265	019	019	ASTM A105	0.195	0.200	0.980	0.019	0.017	0.110	0.060	0.020	0.005	0.220	0.002	0.001	0.000	0.022	0.403	
77912	080	080	ASTM A105	0.190	0.160	0.910	0.023	0.009	0.070	0.050	0.010	0.010	0.170	0.002	0.001	0.000	0.005	0.373	
78154	092	092	ASTM A105	0.180	0.210	0.880	0.021	0.012	0.090	0.040	0.010	0.005	0.170	0.001	0.001	0.000	0.023	0.361	
73405	006	006	ASTM A105	0.200	0.290	0.970	0.020	0.013	0.110	0.050	0.010	0.006	0.190	0.002	0.001	0.000	0.030	0.402	
AK4583	078	078	ASTM A105	0.195	0.240	0.990	0.006	0.010	0.090	0.110	0.030	0.000	0.190	0.000	0.001	0.000	0.005	0.403	
HEAT CODE	HEAT	ITEM	TEST SPECIMEN	SECT. mm	LENGTH mm	YIELD POINT	TENSILE STRENGTH	ELONGATION	REDUCTION OF AREA	HARDNESS HB	BEND TEST	FLATTENING TEST	IMPACT TEST	TEMP. °C	1	2	3	SHAPE	YIELD POINT
75791	038	038	122.65	50.00	360.0	538.0	32.0	32.0	52.0	162 - 164	0.0	0.0	20	99	100	101	1	0.0	
72435	056	056	122.65	50.00	309.0	546.0	31.0	32.0	56.0	160 - 162	0.0	0.0	20	104	105	98	1	0.0	
78154	092	092	122.65	50.00	318.0	510.0	32.0	32.0	59.0	153 - 156	0.0	0.0	20	100	99	101	1	0.0	
73265	019	019	122.65	50.00	333.0	539.0	33.0	32.0	58.0	163 - 165	0.0	0.0	20	99	101	102	1	0.0	
77912	080	080	122.65	50.00	361.0	552.0	32.0	32.0	56.0	160 - 168	0.0	0.0	20	105	100	108	1	0.0	
78154	092	092	122.65	50.00	318.0	510.0	32.0	32.0	59.0	153 - 156	0.0	0.0	20	100	99	101	1	0.0	
73405	006	006	122.65	50.00	340.0	542.0	32.0	32.0	59.0	164 - 166	0.0	0.0	20	100	99	104	1	0.0	
AK4583	078	078	122.65	50.00	366.0	549.0	32.0	32.0	49.0	160 - 164	0.0	0.0	20	104	100	96	1	0.0	
HEAT CODE	HEAT	ITEM	MATERIAL	IN ACCORDANCE TO	HEAT TREATMENT	FURNACE	OUR Ref.												
75791	038	038	ASME SA ASTM A105-05		Normalized at 880°-920°C / Air Cool	ELECTRIC FURNACE	071125												
72435	056	056	ASME SA ASTM A105-05		Normalized at 880°-920°C / Air Cool	ELECTRIC FURNACE	061480												
78154	092	092	ASME SA ASTM A105-05		Normalized at 880°-920°C / Air Cool	ELECTRIC FURNACE	072063												
73265	019	019	ASME SA ASTM A105-05		Normalized at 880°-920°C / Air Cool	ELECTRIC FURNACE	072039												
77912	080	080	ASME SA ASTM A105-05		Normalized at 880°-920°C / Air Cool	ELECTRIC FURNACE	041204												
78154	092	092	ASME SA ASTM A105-05		Normalized at 880°-920°C / Air Cool	ELECTRIC FURNACE	072063												
73405	006	006	ASME SA ASTM A105-05		Normalized at 880°-920°C / Air Cool	ELECTRIC FURNACE	072106												
AK4583	078	078	ASME SA ASTM A105-05		Normalized at 880°-920°C / Air Cool	ELECTRIC FURNACE	011206												
NOTES																			
ASME B16.11/05 - ANSI B31.1/3.3 - IML STD - ANSI B1.1-B18.2.2 -																			
NACE MR0175 ISO 15156/1 - MSS SP 83 - SUPPLIED MATERIAL MEETS																			
SPECIFICATIONS AND P.O. REQUIREMENTS - BEND TEST ON PIPE																			
NIPPLES: SATISFACTORY																			
INSPECTION AUTHORITY																			
QUALITY CONTROL DEPARTMENT																			
MANUFACTURER'S SYMBOL																			
MANUFACTURER'S SYMBOL																			

BORIS FIZZOTTI

FITTINGS

IML

STUB BOLTS



Elbow
1" 3M 90°

MTR View



INSPECTION CERTIFICATE EN 10204:2004 / 3.1
COMPANY WITH QUALITY SYSTEM ISO 9001:2000
CERTIFIED BY RINA

SETGOLD INTERNATIONAL CORP.
20 Hwy. S. Unit 205
TORONTO, ONT. M4S 3B1 CANADA

Certificate No: 16878
Invoice No: 979
Del. Note No: 1502
CA

Date: 20/03/2005
Date: 14/03/2005
Date: 14/03/2005

16000 CASARZUA LIGURE - Genova - Italy - P.zza Marco Cappella, 4 - Tel.010.85.467081 - Fax 010.85.468510 / MATERIAL TEST DEPARTMENT This certificate has been generated by computer and need not to be signed for validity according to DIN EN 10204 Page 0 - 14

HEAT CODE	HEAT	ITEM	YOUR P.O.	OUR REFERENCE	Q.TY	DESCRIPTION	DIM. ACC. TO	VISUAL & DIMENS.											
UU	16836	027	5246	2005-2E209-0003083-027	1515	FITTING UNION F/F THRD NPT 3M 1" A105N CODE: 5468	SEE NOTE	SATISFACTORY											
UP0	74379	029	5246	2005-2E209-0003083-029	645	FITTING UNION F/F THRD NPT 3M 2" A105N CODE: 5609UD6.23.2006 : ADDED 200 PCS. N...	SEE NOTE	SATISFACTORY											
A391	78041	016	5246	2005-2E209-0003083-016	1125	FITTING 90 ELB. THRD NPT 3M 1" A105N CODE: 3989	SEE NOTE	SATISFACTORY											
HG7	79023	016	5246	2005-2E209-0003083-016	390	FITTING 90 ELB. THRD NPT 3M 1" A105N CODE: 3989	SEE NOTE	SATISFACTORY											
UP4	73847	028	5246	2005-2E209-0003083-028	30	FITTING UNION F/F THRD NPT 3M 1 1/4" A105N CODE: 5802	SEE NOTE	SATISFACTORY											
L12	77951	029	5246	2005-2E209-0003083-029	112	FITTING UNION F/F THRD NPT 3M 2" A105N CODE: 5609UD6.23.2006 : ADDED 200 PCS. N...	SEE NOTE	SATISFACTORY											
EEA	77178	042	5246	2005-2E209-0003083-042	156	FITTING RED TEE THRD NPT 3M 2" A105N CODE: 11017	SEE NOTE	SATISFACTORY											
EEA	73847	045	5246	2005-2E209-0003083-045	50	FITTING W/F ELB. THRD NPT 3M 3/4" A105N CODE: 3984	SEE NOTE	SATISFACTORY											
HEAT CODE	HEAT	ITEM	MATERIAL	C%	Si%	Mn%	S%	P%	C%	Ni%	Mo%	TT%	Cu%	V%	Nb%	N%	Al%	C.E.%	OTHER ELEMENTS
UU	16836	027	ASTM A105	0.202	0.260	0.980	0.002	0.007	0.130	0.130	0.020	0.002	0.140	0.003	0.001	0.000	0.027	0.414	
UP0	74379	029	ASTM A105	0.190	0.220	0.920	0.019	0.013	0.120	0.080	0.010	0.014	0.230	0.002	0.000	0.000	0.005	0.389	
A391	78041	016	ASTM A105	0.190	0.170	0.930	0.019	0.013	0.100	0.050	0.020	0.005	0.160	0.002	0.001	0.000	0.007	0.383	
HG7	79023	016	ASTM A105	0.190	0.290	0.020	0.020	0.010	0.090	0.050	0.010	0.005	0.150	0.002	0.001	0.000	0.023	0.405	
UP4	73847	028	ASTM A105	0.185	0.210	1.010	0.023	0.020	0.150	0.080	0.010	0.013	0.280	0.002	0.001	0.000	0.006	0.408	
L12	77951	029	ASTM A105	0.180	0.210	0.860	0.018	0.013	0.090	0.050	0.010	0.005	0.170	0.001	0.000	0.000	0.011	0.358	
EEA	77178	042	ASTM A105	0.185	0.160	0.890	0.021	0.012	0.080	0.050	0.010	0.005	0.160	0.001	0.000	0.000	0.011	0.366	
EEA	73847	045	ASTM A105	0.185	0.210	1.010	0.023	0.020	0.150	0.080	0.010	0.013	0.280	0.002	0.001	0.000	0.006	0.408	
HEAT CODE	HEAT	ITEM	TEST SPECIMEN	YIELD POINT	TENSILE STRENGTH	ELONGATION	REDUCTION OF AREA	HARDNESS HB	BEND TEST	FLATTENING TEST	TYPE	IMPACT TEST - JOULES	SHAPE	YIELD POINT					
UU	16836	027	122.65	50.00	564.0	31.0	54.0	160 - 168	0.0	0.0	KV	20	115	108	1	1	0.0		
UP0	74379	029	122.65	50.00	520.0	34.0	59.0	160 - 165	0.0	0.0	KV	20	96	103	1	1	0.0		
A391	78041	016	122.65	50.00	563.0	31.0	56.0	160 - 166	0.0	0.0	KV	20	105	107	1	1	0.0		
HG7	79023	016	122.65	50.00	553.0	34.0	57.0	162 - 170	0.0	0.0	KV	20	104	109	1	1	0.0		
UP4	73847	028	122.65	50.00	549.0	32.0	56.0	160 - 168	0.0	0.0	KV	20	104	100	1	1	0.0		
L12	77951	029	122.65	50.00	496.0	33.0	58.0	158 - 166	0.0	0.0	KV	20	100	108	1	1	0.0		
EEA	77178	042	122.65	50.00	519.0	32.0	58.0	159 - 163	0.0	0.0	KV	20	89	90	1	1	0.0		
EEA	73847	045	122.65	50.00	529.0	33.5	57.0	159 - 164	0.0	0.0	KV	20	103	109	1	1	0.0		
HEAT CODE	HEAT	ITEM	MATERIAL	IN ACCORDANCE TO	HEAT TREATMENT	FURNACE	STEEL MILL	Our Ref.											
UU	16836	027	ASME SA ASTM A105-05		Normalized at 880-920°C / Air Cool	ELECTRIC FURNACE	ABS												
UP0	74379	029	ASME SA ASTM A105-05		Normalized at 880-920°C / Air Cool	ELECTRIC FURNACE	RIVA ACCIAI	051107											
A391	78041	016	ASME SA ASTM A105-05		Normalized at 880-920°C / Air Cool	ELECTRIC FURNACE	RIVA ACCIAI	051411											
HG7	79023	016	ASME SA ASTM A105-05		Normalized at 880-920°C / Air Cool	ELECTRIC FURNACE	RIVA ACCIAI	051073											
UP4	73847	028	ASME SA ASTM A105-05		Normalized at 880-920°C / Air Cool	ELECTRIC FURNACE	RIVA ACCIAI	051045											
L12	77951	029	ASME SA ASTM A105-05		Normalized at 880-920°C / Air Cool	ELECTRIC FURNACE	RIVA ACCIAI	062024											
EEA	77178	042	ASME SA ASTM A105-05		Normalized at 880-920°C / Air Cool	ELECTRIC FURNACE	RIVA ACCIAI	062067											
EEA	73847	045	ASME SA ASTM A105-05		Normalized at 880-920°C / Air Cool	ELECTRIC FURNACE	RIVA ACCIAI	051045											
NOTES				ASME B16.11/05 - ANSI B31.1/BS1.3 - IML STD - ANSI B1.1-B16.2.2 - NACE MR0175 ISO 15156/1 - MSS SP 63 - SUPPLIED MATERIAL MEETS SPECIFICATIONS AND P.O. REQUIREMENTS															
				INSPECTION AUTHORITY															
				QUALITY CONTROL DEPARTMENT															
				MANUFACTURER'S SYMBOL															
				MANUFACTURER'S SYMBOL															
				FITTINGS															
				IML															
				STUDBOLTS															
				95826															
				BORIS FIZZOTTI															
				IML															
				STUDBOLTS															

CERTIFIED MILL TEST REPORT



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LOG NO. 120774 PAGE 1
 BONNEY FORGE
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 www.bonneyforge.com

CUSTOMER: CCTF CORPORATION

Date 07/14/05

CUSTOMER'S Order No.: 4018957-00

Bonney Order No. 1014198

SHIPPED TO: CCTF CORPORATION

311419

1387 CORNWALL RD

OAKVILLE, ONTARIO, L6J7T5 CANA

ITEM	QUANTITY	LOT NO.	GRADE OR SPECIFICATION (MATERIAL ANALYSIS, PHYSICAL PROPERTIES, DIMENSIONS)
SA/A105N			
010	25	56418	7522991 1 3M A105N 45 EL T
			C .180 MN 1.000 P .009 S .018 SI .240
			NI .020 CU .140 CO .003 CR .040 MO .011
			V .023 AL .001 NB .001
			CE(LONG FORMULA) = 0.37
			T/S 76256 Y/S 52513 EL 33.35 RA 67.29
			BRINELL HARDNESS1: 137 HARDNESS2: 144
		56462	7522991 1 3M A105N 45 EL T
			C .190 MN .990 P .008 S .025 SI .250
			NI .040 CU .190 CO .003 CR .070 MO .011
			V .023 AL .001 NB .001
			CE(LONG FORMULA) = 0.39
			T/S 76875 Y/S 52250 EL 32.65 RA 65.60
			BRINELL HARDNESS1: 147 HARDNESS2: 144
017	150	3137	7520131 3/4X1/2 3M A105N REDU T
			C .180 MN 1.040 P .010 S .017 SI .240
			NI .030 CU .100 CO .004 CR .060 MO .010
			V .022 AL .001 NB .002
			CE(LONG FORMULA) = 0.38
			T/S 76375 Y/S 54125 EL 31.80 RA 68.15
			BRINELL HARDNESS1: 144 HARDNESS2: 153
033	25	56342	7520850 1 1/4 X 1 1/4 X 1 3000 A105N TEE S
			C .200 MN 1.020 P .008 S .023 SI .260
			NI .020 CU .110 CO .002 CR .030 MO .006
			V .025 AL .001 NB .000
			CE(LONG FORMULA) = 0.39
			T/S 75425 Y/S 51750 EL 32.50 RA 64.70
			BRINELL HARDNESS1: 144 HARDNESS2: 144

***** CONTINUED ON NEXT PAGE *****

We certify that the data on this sheet is a true copy taken from our records of material furnished us by the production mill, or as obtained by additional laboratory checks.

by 
 Chris Childers

CMTR: REV 1

QUALITY PROCESS MANAGER

Elbow 1" 3M 45° 56462

CERTIFIED MILL TEST REPORT



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Date 07/14/05

CUSTOMER'S Order No.: 4018957-00

Bonney Order No. 1014198

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OAKVILLE, ONTARIO, L6J7T5 CANA

ITEM	QUANTITY	LOT NO	GRADE OR SPEC. CONTROL NO.						
			CHEMICAL ANALYSIS THROUGHOUT THE ENTIRE PL. (TABLE)						
			SA/A105N						
045	25	1186	7520793	1/8 3M/4M A105N RDPL T					
				C .190 MN .950 P .008 S .023 SI .260					
				NI .054 CU .110 CR .067 MO .013 V .020					
				CB .013					
				CE(LONG FORMULA) = 0.38					
				T/S 78500 Y/S 55375 EL 34.70 RA 63.25					
				BRINELL HARDNESS: 144					
053	20	56172	7520014	3/4 3M A105N/GALV 45EL T					
				C .200 MN 1.070 P .006 S .026 SI .250					
				NI .010 CU .060 CO .002 CR .040 MO .005					
				V .024 AL .001 NB .000					
				CE(LONG FORMULA) = 0.40					
				T/S 77425 Y/S 51875 EL 31.90 RA 65.60					
				BRINELL HARDNESS1: 144 HARDNESS2: 141					
055	25	2991	7520024	1/2 3000 A105N/GALV COUP T					
				C .180 MN .980 P .009 S .030 SI .240					
				NI .040 CU .200 CO .003 CR .050 MO .011					
				V .025 AL .001 NB .000					
				CE(LONG FORMULA) = 0.38					
				T/S 77375 Y/S 54250 EL 29.85 RA 64.50					
				BRINELL HARDNESS1: 144 HARDNESS2: 141					

***** CONTINUED ON NEXT PAGE *****

We certify that the data on this sheet is a true copy taken from our records of material furnished us by the production mill, or as obtained by additional laboratory checks.

by 
 Cris Childers

CMTR: REV 1

QUALITY PROCESS MANAGER

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CUSTOMER: CCTF CORPORATION

Date 07/14/05

CUSTOMER'S Order No.: 4018957-00

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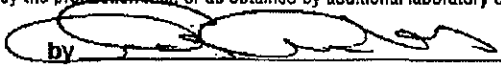
DAKVILLE, ONTARIO, L6J7T5 CANA

ITEM	QUANTITY	LOT NO.	GRADE OR SPECIFICATION CHEMICAL ANALYSIS, TENSILE, YIELD, ETC., AS FURNISHED
------	----------	---------	---

1. THE FITTINGS SUPPLIED ARE IN ACCORDANCE WITH PURCHASE ORDER SPECIFICATIONS.
2. THE MATERIAL SUPPLIED IDENTIFIED AS A105N WAS NORMALIZED IN ACCORDANCE WITH ASTM A105 HEAT TREATING REQUIREMENTS.
3. CERTIFYING ASTM A105-03 / ASME SA105-04 EDITION.
4. ELONGATION TEST RESULTS ARE OBTAINED USING STANDARD ROUND SPECIMEN, 2 INCH OR 50 MM GAGE LENGTH.
5. THE MATERIAL SUPPLIED WAS INSPECTED AND MANUFACTURED IN ACCORDANCE WITH EN DIN 10204 3.1. B.

***** END OF CERTIFICATION *****

We certify that the data on this sheet is a true copy taken from our records of material furnished us by the production mill, or as obtained by additional laboratory checks.

by 

Cris Childers

CMTR: REV 1

QUALITY PROCESS MANAGER

EEK.
2" 3/6m HEX PLUG
A105N

16030 CASARZA LIGURE - Genova - Italy - P.zza Marco Cappelli 4 - Tel.0185.467661 - Fax 0185.466510 / MATERIAL TEST DEPARTMENT
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INSPECTION CERTIFICATE EN 10204:2004 / 3.1
COMPANY WITH QUALITY SYSTEM ISO 9001:2000
CERTIFIED BY RINA

I.M.L.
INDUSTRIA MECCANICA LIGURE SPA

SEYBOLD INTERNATIONAL CORP.
20 Holly Street, Unit 205
TORONTO M4S 3B1 CANADA
CA

Certificate Nr 17373
Invoice Nr 322
Del. Note Nr 508
Dated 23.03.2007
Dated 16.03.2007
Dated 16.03.2007

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HEAT CODE		HEAT	ITEM	YOUR P.O.	OUR REFERENCE	Q.TY	DESCRIPTION										DIM. ACC. TO	VISUAL & DIMENS.				
EEK	72505	034	5950	2006-2E209-0003074-034	1005	FITTING HEX.H.PLUG THRD NPT 3/6M 2" A105N CODE: 4009	SEE NOTE										SEE NOTE	SATISFACTORY				
FIE	74406	023	5950	2006-2E209-0003074-023	396	FITTING 90 ELB. THRD NPT 2M 2" A105N CODE: 3960	SEE NOTE										SEE NOTE	SATISFACTORY				
FGB	74413	056	5950	2006-2E209-0003074-056	140	FITTING RED TEE THRD NPT 3M 2"x1" A105N CODE: 11017	SEE NOTE										SEE NOTE	SATISFACTORY				
C21	AR2240	003	5950	2006-2E209-0003074-003	100	FITTING HEX.BUSHING M/F THRD NPT 3/6M 1/2"x1/8" A105N CODE: 3957	SEE NOTE										SEE NOTE	SATISFACTORY				
C7	AR2240	004	5950	2006-2E209-0003074-004	650	FITTING HEX.BUSHING M/F THRD NPT 3/6M 1/2"x1/4" A105N CODE: 3858	SEE NOTE										SEE NOTE	SATISFACTORY				
C15	AR5064	009	5950	2006-2E209-0003074-009	300	FITTING HEX.BUSHING M/F THRD NPT 3/6M 1"x1/4" A105N CODE: 3865	SEE NOTE										SEE NOTE	SATISFACTORY				
A7	727145	009	5950	2006-2E209-0003074-009	100	FITTING HEX.BUSHING M/F THRD NPT 3/6M 1"x1/4" A105N CODE: 3865	SEE NOTE										SEE NOTE	SATISFACTORY				
ECI	75745	013	5950	2006-2E209-0003074-013	150	FITTING HEX.BUSHING M/F THRD NPT 3/6M 1.3/4"x1" A105N CODE: 3871	SEE NOTE										SEE NOTE	SATISFACTORY				
HEAT CODE		HEAT	ITEM	MATERIAL	C%	Si%	Mn%	S%	P%	C%	Ni%	Mo%	Ti%	Cu%	V%	Nb%	N%	Al%	G.E.%	OTHER ELEMENTS		
EEK	72505	034	ASTM A105	0.195	0.180	1.090	0.013	0.011	0.070	0.040	0.010	0.021	0.140	0.029	0.000	0.000	0.000	0.025	0.410			
FIE	74406	023	ASTM A105	0.185	0.230	0.940	0.017	0.010	0.080	0.040	0.010	0.005	0.120	0.002	0.001	0.000	0.000	0.017	0.371			
FGB	74413	056	ASTM A105	0.185	0.180	0.970	0.019	0.018	0.130	0.050	0.010	0.005	0.190	0.001	0.001	0.000	0.000	0.023	0.391			
C21	AR2240	003	ASTM A105	0.185	0.250	0.950	0.024	0.008	0.160	0.140	0.040	0.000	0.180	0.001	0.000	0.000	0.000	0.000	0.406			
C7	AR2240	004	ASTM A105	0.185	0.250	0.950	0.024	0.008	0.160	0.140	0.040	0.000	0.180	0.001	0.000	0.000	0.000	0.000	0.406			
C15	AR5064	009	ASTM A105	0.190	0.260	0.960	0.020	0.007	0.100	0.110	0.030	0.000	0.140	0.002	0.000	0.000	0.000	0.025	0.393			
A7	727145	009	ASTM A105	0.186	0.239	1.300	0.029	0.012	0.140	0.020	0.005	0.000	0.030	0.002	0.001	0.000	0.000	0.000	0.417			
ECI	75745	013	ASTM A105	0.190	0.190	0.960	0.013	0.010	0.080	0.050	0.010	0.005	0.180	0.001	0.000	0.000	0.000	0.017	0.384			
HEAT CODE		HEAT	ITEM	TEST SPECIMEN SECT. mm2	LENGTH mm	YIELD POINT N/mm2	TENSILE STRENGTH N/mm2	ELONGATION %	REDUCTION OF AREA %	HARDNESS HB	BEND TEST	FLATNESS TEST	TYPE TEST	IMPACT TEST - JOULES	SHAPE 1=O 2=U 3=V	YIELD POINT N/mm2						
EEK	72505	034	122.65	50.00	306.0	529.0	32.0	54.0	160 - 166	0,0	0,0	0,0	KV	20	98	110	1	0,0				
FIE	74406	023	122.65	50.00	308.0	563.0	31.0	54.0	160 - 166	0,0	0,0	0,0	KV	20	105	104	1	0,0				
FGB	74413	056	122.65	50.00	318.0	549.0	32.0	54.0	162 - 168	0,0	0,0	0,0	KV	20	95	94	1	0,0				
C21	AR2240	003	122.65	50.00	308.0	564.0	31.0	54.0	160 - 162	0,0	0,0	0,0	KV	20	104	100	99	1	0,0			
C7	AR2240	004	122.65	50.00	387.0	649.0	34.0	58.0	160 - 165	0,0	0,0	0,0	KV	20	96	90	84	1	0,0			
C15	AR5064	009	122.65	50.00	396.0	621.0	32.0	58.0	162 - 170	0,0	0,0	0,0	KV	20	105	100	94	1	0,0			
A7	727145	009	122.65	50.00	338.0	541.0	30.0	56.0	165 - 168	0,0	0,0	0,0	KV	20	96	95	96	1	0,0			
ECI	75745	013	122.65	50.00	308.0	549.0	31.0	58.0	160 - 166	0,0	0,0	0,0	KV	20	88	95	96	1	0,0			
HEAT CODE		HEAT	ITEM	MATERIAL IN ACCORDANCE TO										HEAT TREATMENT						STEEL MILL		Our Ref.
EEK	72505	034	ASME SA ASTM A105-05											Normalized at 880°±20°C / Air Cool						RIVA ACCIAI		
FIE	74406	023	ASME SA ASTM A105-05											Normalized at 880°±20°C / Air Cool						RIVA ACCIAI		
FGB	74413	056	ASME SA ASTM A105-05											Normalized at 880°±20°C / Air Cool						RIVA ACCIAI		N10228
C21	AR2240	003	ASME SA ASTM A105-05											Normalized at 880°±20°C / Air Cool						RODACCIAI		N10228
C7	AR2240	004	ASME SA ASTM A105-05											Normalized at 880°±20°C / Air Cool						RODACCIAI		N10228
C15	AR5064	009	ASME SA ASTM A105-05											Normalized at 880°±20°C / Air Cool						RODACCIAI		205029
A7	727145	009	ASME SA ASTM A105-05											Normalized at 880°±20°C / Air Cool						RIVA ACCIAI		082028
ECI	75745	013	ASME SA ASTM A105-05											Normalized at 880°±20°C / Air Cool						RIVA ACCIAI		082028
NOTES			ASME B16.11/05 - ANSI B31.1/B31.3 - IML STD - ANSI B1.1-B18.2.2 - NACE MR0175 ISO 15156/1 - MSS SP 83 - MSS SP 97 - SUPPLIED MATERIAL MEETS SPECIFICATIONS AND P.O. REQUIREMENTS										QUALITY CONTROL DEPARTMENT						MANUFACTURER'S SYMBOL			
													INSPECTION AUTHORITY <td colspan="2">MANUFACTURER'S SYMBOL</td>						MANUFACTURER'S SYMBOL			
			98373										BORIS FIZZOTTI						IML			
													FITTINGS						STUDBOLTS			



I.M.L.

INDUSTRIA MECCANICA LIGURE SPA

INSPECTION CERTIFICATE EN 10204:2004 / 3.1

COMPANY WITH QUALITY SYSTEM ISO 9001:2000
CERTIFIED BY RINA

SEYBOLD INTERNATIONAL CORP.

20 Holly Street, Unit 205
TORONTO, M4S 3B1 CANADA

CA

Certificate No. 200500438

Date 13.10.2005

Invoice No.

Date

Date

16930 CASARZA LIGURE - Genova - Italy - P.zza Marco Capelli 4 - Tel. 0185.457651 - Fax 0185.465910 / MATERIAL TEST DEPARTMENT This certificate has been generated by computer and need not to be signed for validity according to DIN EN 10204 Page 1 - 1

HEAT CODE	HEAT	ITEM	YOUR P.O.	OUR REFERENCE	Q.TY	DESCRIPTION	DIM. ACC. TO	VISUAL & DIMENS.											
C23	AA3490 76556 76556				1 1 1	FITTING HEX.H.PLUG THRD NPT 1" A105N FITTING TEE THRD NPT 3/4" A105N FITTING HEX.H.PLUG THRD NPT 1" A105N	SEE NOTE SEE NOTE SEE NOTE	SATISFACTORY SATISFACTORY SATISFACTORY											
HEAT CODE	HEAT	ITEM	MATERIAL	C%	SI%	MI%	S%	P%	Ct%	NI%	MO%	TI%	CU%	V%	Nb%	NI%	AI%	C.E.%	OTHER ELEMENTS
C23	AA3490 76556 76556		ASTM A105 ASTM A105 ASTM A105	0.200 0.175 0.175	0.250 0.220 0.220	0.330 1.010 1.010	0.027 0.022 0.022	0.011 0.018 0.018	0.030 0.030 0.030	0.110 0.050 0.050	0.030 0.010 0.010	0.000 0.009 0.009	0.160 0.160 0.160	0.002 0.002 0.002	0.001 0.000 0.000	0.000 0.000 0.000	0.023 0.005 0.005	0.397 0.377 0.377	
HEAT CODE	HEAT	ITEM	TEST SPECIMEN	YIELD POINT	TENSILE STRENGTH	ELONGATION	REDUCTION OF AREA	HARDNESS HB	BEND TEST	FLATTENING TEST	TYPE	IMPACT TEST - JOULES			SHAPE	YIELD POINT			
C23	AA3490 76556 76556		SECT. max. LENGTH min. 50.00 122.65 50.00 122.65 50.00	306.0 314.0 314.0	588.0 582.0 582.0	34.0 33.0 33.0	56.0 58.0 58.0	160 - 166 168 - 170 168 - 170	0.0 0.0 0.0	0.0 0.0 0.0	KV KV KV	20 20 20	1 1 1	106 100 96	107 96 96	1 1 1	0.0 0.0 0.0		
HEAT CODE	HEAT	ITEM	MATERIAL IN ACCORDANCE TO				HEAT TREATMENT				FURNACE				STEEL MILL				
C23	AA3490 76556 76556		ASME SA ASTM A105-05 ASME SA ASTM A105-05 ASME SA ASTM A105-05				Normalized at 880°±20°C / Air Cool Normalized at 880°±20°C / Air Cool Normalized at 880°±20°C / Air Cool				ELECTRIC FURNACE ELECTRIC FURNACE ELECTRIC FURNACE				RODACCIAI ACC. TANARO ACC. TANARO				
NOTES		ASME B16.11/05 - ANSI B31.1/B31.3 - IML STD - ANSI B1.1-B16.2.2 - NACE MR0175 ISO 15156/1 - MSS SP 83 - SUPPLIED MATERIAL MEETS SPECIFICATIONS AND P.O. REQUIREMENTS		INSPECTION AUTHORITY		QUALITY CONTROL DEPARTMENT		MANUFACTURER'S SYMBOL		MANUFACTURER'S SYMBOL		FURNACE		STEEL MILL		Our Ref.			
		BORIS FIZZOTTI		FITTINGS		IML		STUDBOLTS											

96269



INSPECTION CERTIFICATE EN 10204:2004 / 3.1
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SEYBOLD INTERNATIONAL CORP.
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TORONTO, ONT. M4S 3B1 CANADA

CA

Certificate Nr. 15506
Invoice Nr. 890
Det. Note Nr. 1350
Date
23.07.2005
Date
23.07.2005

16500 CASARZA LIGURE - Genova - Italy - P.zza Marco Cappelli, 4 - Tel. 010.55.457651 - Fax 010.55.465510 / MATERIAL TEST DEPARTMENT This certificate has been generated by computer and need not to be signed for validity according to DIN EN 10204 Page 3 - 7

HEAT CODE	HEAT	ITEM	YOUR P.O.	OUR REFERENCE	Q.TY	DESCRIPTION	DIM. ACC. TO	VISUAL & DIMENS.											
BSC	79326	005	4665	2004-2E209-0003040-005	12	FITTING TEE THRD NPT 2M 2" A105N CODE: 4030	SEE NOTE	SATISFACTORY											
N59	77912	008	4665	2004-2E209-0003040-008	2000	FITTING HEX.H.PLUG THRD NPT 1" A105N 3/8M CODE: 4006	SEE NOTE	SATISFACTORY											
N55	73094	010	4665	2004-2E209-0003040-010	435	FITTING HEX.H.PLUG THRD NPT 2" A105N 3/8M CODE: 4009	SEE NOTE	SATISFACTORY											
TG6	79905	019	4665	2004-2E209-0003040-019	16	FITTING RED.TEE THRD NPT 3M 2"x1" A105N CODE: 11017	SEE NOTE	SATISFACTORY											
N24	76569	035	4665	2004-2E209-0003040-035	45	FITTING HEX.H.PLUG THRD NPT 2" A350LFP2 3/8M CODE: 8424	SEE NOTE	SATISFACTORY											
N55	73094	010	4665	2004-2E209-0003040-010	915	FITTING HEX.H.PLUG THRD NPT 2" A105N 3/8M CODE: 4009	SEE NOTE	SATISFACTORY											
TG5	70278	012	4665	2004-2E209-0003040-012	400	FITTING TEE THRD NPT 3M 1" A105N CODE: 4037	SEE NOTE	SATISFACTORY											
N58	AK4583	007	4665	2004-2E209-0003040-007	6500	FITTING HEX.H.PLUG THRD NPT 1/2" A105N 3/8M CODE: 4004	SEE NOTE	SATISFACTORY											
HEAT CODE	HEAT	ITEM	MATERIAL	C%	SI%	MN%	S%	P%	C-%	NI%	MO%	TI%	CU%	V%	Nb%	N%	AI%	C.E.%	OTHER ELEMENTS
BSC	79326	005	ASTM A105	0.190	0.220	0.940	0.019	0.012	0.120	0.060	0.010	0.014	0.240	0.003	0.001	0.000	0.014	0.393	
N59	77912	008	ASTM A105	0.190	0.160	0.910	0.023	0.009	0.070	0.050	0.010	0.170	0.002	0.001	0.000	0.000	0.005	0.373	
N55	73094	010	ASTM A105	0.195	0.220	1.020	0.014	0.020	0.120	0.060	0.010	0.017	0.200	0.025	0.000	0.000	0.025	0.413	
TG6	79905	019	ASTM A105	0.210	0.210	0.960	0.019	0.020	0.130	0.080	0.010	0.013	0.250	0.003	0.001	0.000	0.006	0.421	
N24	76569	035	ASTM A350 LF2 cl.1	0.185	0.220	1.100	0.012	0.009	0.090	0.070	0.010	0.023	0.130	0.023	0.000	0.000	0.025	0.406	
N55	73094	010	ASTM A105	0.195	0.220	1.020	0.014	0.020	0.120	0.060	0.010	0.017	0.200	0.025	0.000	0.000	0.025	0.413	
TG5	70278	012	ASTM A105	0.180	0.210	0.980	0.026	0.014	0.080	0.050	0.010	0.013	0.230	0.003	0.000	0.000	0.006	0.391	
N58	AK4583	007	ASTM A105	0.195	0.240	0.990	0.006	0.010	0.110	0.010	0.030	0.000	0.190	0.000	0.000	0.000	0.005	0.403	
HEAT CODE	HEAT	ITEM	TEST SPECIMEN	YIELD POINT	TENSILE STRENGTH	ELONGATION	REDUCTION OF AREA	HARDNESS HB	BEND TEST	FLATTENING TEST	TYPE Tensile	IMPACT TEST - JOULES	TEMPERATURE	SHAPE	YIELD POINT				
BSC	79326	005	122.65	50.00	334.0	539.0	34.0	58.0	163 - 165	0.0	0.0	KV	20	105	101	104	1	0.0	
N59	77912	008	122.65	50.00	361.0	552.0	32.0	56.0	160 - 168	0.0	0.0	KV	20	105	100	109	1	0.0	
N55	73094	010	122.65	50.00	378.0	566.0	32.0	56.0	162 - 168	0.0	0.0	KV	20	114	106	109	1	0.0	
TG6	79905	019	122.65	50.00	332.0	540.0	33.5	56.5	162 - 169	0.0	0.0	KV	20	103	102	108	1	0.0	
N24	76569	035	122.65	50.00	367.0	552.0	32.0	54.0	169 - 174	0.0	0.0	KV	-46	60	64	62	1	0.0	
N55	73094	010	122.65	50.00	378.0	566.0	32.0	56.0	162 - 168	0.0	0.0	KV	20	114	106	109	1	0.0	
TG5	70278	012	122.65	50.00	332.0	529.0	33.5	58.0	164 - 162	0.0	0.0	KV	20	109	106	104	1	0.0	
N58	AK4583	007	122.65	50.00	365.0	549.0	32.0	49.0	160 - 164	0.0	0.0	KV	20	104	100	96	1	0.0	
HEAT CODE	HEAT	ITEM	MATERIAL IN ACCORDANCE TO	HEAT TREATMENT	STEEL MILL	Our Ref.													
BSC	79326	005	ASME SA ASTM A105-03	Normalized at 880 °920 °C / Air Cool	ELECTRIC FURNACE	042120													
N59	77912	008	ASME SA ASTM A105-03	Normalized at 880 °920 °C / Air Cool	ELECTRIC FURNACE	041204													
N55	73094	010	ASME SA ASTM A105-03	Normalized at 880 °920 °C / Air Cool	ELECTRIC FURNACE	051027													
TG6	79905	019	ASME SA ASTM A105-03	Normalized at 880 °920 °C / Air Cool	ELECTRIC FURNACE	051022													
N24	76569	035	ASME SA ASTM A350-04a Gr. LF2 cl.1	Normalized at 900 °C / Air Cool	ELECTRIC FURNACE	051022													
N55	73094	010	ASME SA ASTM A105-03	Normalized at 880 °920 °C / Air Cool	ELECTRIC FURNACE	051027													
TG5	70278	012	ASME SA ASTM A105-03	Normalized at 880 °920 °C / Air Cool	ELECTRIC FURNACE	041328													
N58	AK4583	007	ASME SA ASTM A105-03	Normalized at 880 °920 °C / Air Cool	ELECTRIC FURNACE	011206													
NOTES ASME B16.11/01 - BS 3799 - ANSI B31.1/B31.3 - IML STD - ANSI B1.1-B18.2.2 - NACE MR0175 ISO 15156/1 - SUPPLIED MATERIAL MEETS SPECIFICATIONS AND P.O. REQUIREMENTS - MSS SP88																			
INSPECTION AUTHORITY																			
QUALITY CONTROL DEPARTMENT																			
MANUFACTURER'S SYMBOL																			
STEEL MILL																			
OUR REF.																			

87742

BORIS RIZZOTTI

IML



STUDBOLTS

N58



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Material Test Report

Report Number: 15446

Description: 2" SWAGES & BULL PLUGS

Specification: A234-WPB/SA234-WPB

Comment:

Date: Tue, Nov 30th 1999, 00:00

Heat Treatment: H.R.

Material: C1022

CRN: OA7470.5C

Chemical Analysis

Heat Code: **K1235**

Heat Number: 5F2469

C	0.190	Cu	0.180	Al	
Mn	0.910	Ni	0.070	Ti	0.000
P	0.008	Cr	0.090		0.000
S	0.017	Mo	0.030		0.000
Si	0.290	V	0.001		0.000
N	0.000	Nb	0.003		

Carbon Equivalency Formula Used:
 $C + (Mn/6) + (Cr + Mo + V)/5 + (Ni + Cu)/15$
 CE= 0.383

Mechanical Tests

Yield PSI: 45400

% Elongation @ 31 2

Size: 2.375" RND

Tensile PSI: 73000

Reduction of Area % 60

Brinell Hardness: 134

Charpy Impact Test

Individual Values: N/A

(V1) 0 (V2) 0 (V3) 0

This Material Test Report meets DIN50049/en10201 3.1B Standard 1991

We hereby Certify that the material described has been tested in accordance with the specifications, and the results are correct as contained in the records of the Company.

Q.A. Manager and Customer Service

Sarnia

Toll Free: 1-866-511-1381
 By regular telephone at:
 519-336-2960
 By fax at 519-344-3181

Mailing Address:
 PO Box 999,
 645 Kedddco St.
 Sarnia, ON
 N7T 7K6

Edmonton

Toll Free: 1-800-661-3809
 By regular telephone at:
 780-438-4944
 By fax at 780-435-3917

Mailing Address:
 4120 - 78 Av.
 Edmonton, AB
 T6B 3M8

Swage 2" 3M K1235

KEDDCO MFG. LTD.
PO Box 999
645 KeddcO St.
Samia, Ontario N7T 7K6
Tel: (519) 336-2960
Fax: (519) 344-3181
Toll Free: 1-866-511-1381



KEDDCO MFG. LTD.
4120 - 78 Av.
Edmonton, AB T6B 3M8
Tel: (780) 438-4944
Fax: (780) 435-3917
Toll Free: 1-800-661-3809

Material Test Report

Report Number: 14158
Description: 1" SWAGES & BULL PLUGS
Specification: A234-WPB/SA234-WPB

Date: 3-Nov-05
Heat Treatment: H.R.
Material: C1018
CRN: OA7470.5C

Chemical Analysis

Heat Code:

K1045

Heat Number:

350887

C	0.180	Cu	0.230	Al	0.008
Mn	0.750	Ni	0.080	Sn	0.012
P	0.012	Cr	0.100		
S	0.035	Mo	0.019	Ti	0.004
Si	0.220	V	0.004		
N	0.004	Nb	0.010		

Mechanical Tests

Yield PSI: 39700
Elongation @ 2" %: 33
Size: 1.315" RND
Brinell Hardness: 131
Tensile PSI: 66000
Reduction of Area %: 6
CE= 0.350

Charpy Impact Test

Individual Values (ft/lbs.)

(1) (2) (3) @ N/A

We hereby Certify that the material described has been tested in accordance with the specifications, and the results are correct as contained in the records of the Company.



This Material Test Report
meets DIN50049/en10204
3.1B Standard 1991

Ian Shields
Quality Assurance Manager

KEDDCO MFG LTD

SWAGE K 1045

7542488

**Material Test Report**

Report Number: 15973

Date: Tue, Nov 30th 1999, 00:00

Description: 1" SWAGES & BULL PLUGS ←

Heat Treatment: H.R.

Specification: A234-WPB/SA234-WPB

Material: C1022 MOD

Comment:

CRN: OA7470.5C

Chemical AnalysisHeat Code: **K1291**

Heat Number: Z155688

C	0.210	Cu	0.070	Al	
Mn	1.020	Ni	0.030	Ti	0.003
P	0.008	Cr	0.050	Al	0.033
S	0.022	Mo	0.002	Sn	0.003
Si	0.253	V	0.001		0.000
N	0.000	Nb	0.018		

Carbon Equivalency Formula Used:
 $C + (Mn/6) + (Cr + Mo + V)/5 + (Ni + Cu)/15$
 CE = 0.397

Mechanical Tests

Yield PSI: 49800

Tensile PSI: 79000

% Elongation @ 29 2

Reduction of Area % 66

Size: 1.315" RND

Brinell Hardness: 159

Charpy Impact Test

Individual Values: N/A

(V1) 0 (V2) 0 (V3) 0

This Material Test Report meets DIN60049/en10201 3.1B Standard 1991

We hereby Certify that the material described has been tested in accordance with the specifications, and the results are correct as contained in the records of the Company.

G.A. Manager and Customer Service

Sarnia

Toll Free: 1-866-511-1381
 By regular telephone at:
 519-336-2960
 By fax at 519-344-3181

Mailing Address:
 PO Box 999,
 645 Kedco St.
 Sarnia, ON
 N7T 7K6

Edmonton

Toll Free: 1-800-661-3809
 By regular telephone at:
 780-438-4944
 By fax at 780-435-3917

Mailing Address:
 4120 - 78 Av.
 Edmonton, AB
 T6B 3M8

1" Swages + Bull Plugs K1291

KEDDCO MFG. LTD.
PO Box 999
845 KeddcO St.
Sarnia, Ontario N7T 7K6
Tel: (519) 336-2980
Fax: (519) 344-3181
Toll Free: 1-866-511-1381



KEDDCO MFG. LTD.
4120 - 78 Av
Edmonton, AB T6B 3M8
Tel: (780) 438-4944
Fax: (780) 435-3917
Toll Free: 1-800-661-3809

Material Test Report

Report Number:
Description:
Specification:

13120
1/2" SWAGES & BULL PLUGS
A234-WPB/SA234-WPB

Date: 23-Mar-05
Heat Treatment: H.R.
Material: C1018
CRN: OA7470.5C

Chemical Analysis

Heat Code:

Heat Number:

K900

91995

C	0.230	Cu	0.002	Al	0.004
Mn	0.780	Ni	0.110		
P	0.008	Cr	0.120		
S	0.027	Mo	0.030	Ti	0.000
Si	0.230	V	0.002		
N	0.000	Nb	0.002		

Mechanical Tests

Yield PSI:
Elongation @ 2"%
Size:

51000
30
.840" RND

Brinell Hardness:

Tensile PSI: 82500
Reduction of Area % 63
CE= 0.406

Individual Values (ft/lbs.)

Charpy Impact Test

(1) (2) (3) @ N/A

We hereby Certify that the material described has been tested in accordance with the specifications, and the results are correct as contained in the records of the Company.

[Signature]
Ian Shields
Quality Assurance Manager

KEDDCO MFG LTD



This Material Test Report
meets DIN50049/en10204
3.1B Standard 1991

K900

KEMPER VALVE & FITTINGS CORPORATION

December 19, 2006

Midfield Supply
9610 - 39 Ave
Edmonton, AB T6E 5T9
PH: (780) 446-8122
FX: (780) 446-9624

Attention: Jim

PO#: 500363

Qty	Item	Description	Union Material	O-Ring Material
187	916800	1" 3000# HS Octagon O-ring Union	Low Carbon Steel in full compliance with ASTM A105	N.B.R. Nitrile Butadiene Rubber 70-90 Durometer

CERTIFICATE OF CONFORMANCE

This is to certify that the above named Kemper unions have been manufactured in the UNITED STATES OF AMERICA using materials and processes in compliance with applicable Kemper Engineering Specifications, Quality Assurance Procedures and the requirements of accepted industry standards.

Material: Forged and Normalized Low Carbon Steel in compliance with the latest revision of ASTM Specification A-105 "Forgings, Carbon Steel, for Piping Components".

Percent Chemical Composition	C	Mn	P	S	Si	Fe
	.35	.60	.04	.05	.35	
	max.	1.05	max.	max.	max.	bal.

Typical Mechanical Properties	Tensile Strength	Yield Strength	Elongation in 2"	Reduction of Area	Hardness (HB)
	70,000 psi	36,000 psi	22%	30%	187 max.

In addition this product also complies with dimensional specification MSS SP-83 "Carbon Steel Pipe Unions, Socket Welding and Threaded" (excepting Seal and Hi-Speed Nut configuration), and MSS SP-25 "Standard Marking System for Valves, Fittings, Flanges and Unions".

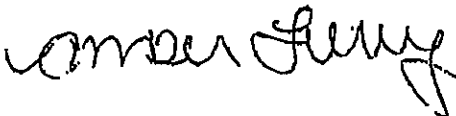
These unions are also supplied with a "NBR" Nitrile Butadiene Rubber O-Ring as the primary sealing component in accordance with your purchase order requirements.

Thank you for your interest in our products.

KEMPER VALVE & FITTINGS CORPORATION

Quality Assurance Department

Prepared by: Amber Levy



PO Box 400 Wauconda, Illinois 60084

phone 847-526-2166 / 800-323-1659
e-mail salesdesk@kempervalve.com

fax 847-526-2241

Union 1" FF 3M

ML-106-04

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LOG NO. 303052 PAGE 7

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(814) 542-2545 • (800) 345-7546 • FAX (814) 542-4906
www.bonneyforge.com

CUSTOMER: WESTLUND INDUSTRIAL SUPPLY

Date 09/13/06

CUSTOMER'S Order No.: 9109317-00

Bonney Order No. 41734

SHIPPED TO: WESTLUND INDUSTRIAL SUPPLY
5105 75TH STREET

38123B

EDMONTON ALBERTA
EDMONTON ALBERTA, T6E5S5 CANAD

ITEM QUANTITY LOT NO.

GRADE OR SPECIFICATION NO.
CHEMICAL ANALYSIS, PHYSICAL PROPERTIES, REMARKS:

SA/A105N

023 25 56912 7526547 1/2 6000 A105N TEE T
C .190 MN .980 P .012 S .023 SI .22C
NI .073 CU .190 CR .096 MO .018 V .027
CB .008 AL .006
CE(LONG FORMULA) = 0.40
T/S 81500 Y/S 54500 EL 30.00 RA 62.00
BRINELL HARDNESS1: 156 HARDNESS2: 156

024 875 56822 7550001 B -3 X 1/2 3000 A105N THRD T
C .190 MN 1.040 P .014 S .019 SI .21C
NI .040 CU .110 CO .003 CR .050 MO .02C
V .000 AL .019 NB .015
CE(LONG FORMULA) = 0.39
T/S 74000 Y/S 49800 EL 35.00 RA 65.00
BRINELL HARDNESS1: 147 HARDNESS2: 147

56897

7550001 B -3 X 1/2 3000 A105N THRD T
C .190 MN 1.020 P .010 S .020 SI .22C
NI .030 CU .110 CO .003 CR .050 MO .02C
V .000 AL .024 NB .014
CE(LONG FORMULA) = 0.38
T/S 75000 Y/S 48700 EL 35.00 RA 69.00
BRINELL HARDNESS1: 141 HARDNESS2: 141

025 2 56293 7550055 36-20X 2 XS A105N WELD B
C .190 MN 1.020 P .011 S .020 SI .24C
NI .020 CU .100 CO .002 CR .040 MO .007
V .025 AL .001 NB .000
CE(LONG FORMULA) = 0.38
T/S 77375 Y/S 51125 EL 31.10 RA 67.70
BRINELL HARDNESS1: 141 HARDNESS2: 139

***** CONTINUED ON NEXT PAGE *****

We certify that the data on this sheet is a true copy taken from our records of material furnished us by the production mill, or as obtained by additional laboratory checks.

by

Cris Childers

CMTR: REV 1

QUALITY PROCESS MANAGER

Diet 1/2" 3M 56897

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LOG NO. 303052 PAGE 14

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www.bonneyforge.com

CUSTOMER: WESTLUND INDUSTRIAL SUPPLY

Date 09/13/06

CUSTOMER'S Order No.: 9109317-00

Bonney Order Nb041734

SHIPPED TO: WESTLUND INDUSTRIAL SUPPLY
5105 75TH STREET

381238

EDMONTON ALBERTA
EDMONTON ALBERTA, T6E5S5 CANAD

ITEM QUANTITY LOT NO.

GRADE OR SPECIFICATION NO.
CHEMICAL ANALYSIS, PHYSICAL PROPERTIES, REMARKS:

1. THE FITTINGS SUPPLIED ARE IN ACCORDANCE WITH PURCHASE ORDER SPECIFICATIONS.
2. THE MATERIAL SUPPLIED IDENTIFIED AS A105N WAS NORMALIZED IN ACCORDANCE WITH ASTM A105 HEAT TREATING REQUIREMENTS.
3. CERTIFYING ASTM A105-05 / ASME SA105-04 EDITION.
4. THE MATERIAL OF THE FITTINGS SUPPLIED IS ASTM A350-LF2 BUT MEETS THE REQUIREMENTS OF ASME SA350-LF2.
5. THE CHARPY V-NOTCH IMPACT TEST WAS PERFORMED AT -50 DEGREES FAHRENHEIT IN ACCORDANCE WITH A350-LF2.
6. CERTIFYING TO ASTM A350 LF2 04A REVISION.
7. THE MATERIAL SUPPLIED WAS NORMALIZED IN ACCORDANCE WITH ASTM A350 HEAT TREATING REQUIREMENTS.
8. ELONGATION TEST RESULTS ARE OBTAINED USING STANDARD ROUND SPECIMEN, 2 INCH OR 50 MM GAGE LENGTH.
9. THE MATERIAL SUPPLIED WAS INSPECTED AND MANUFACTURED IN ACCORDANCE WITH EN DIN 10204 3.1 B.
10. THE MATERIAL SUPPLIED MEETS THE REQUIREMENTS OF BOTH NACE MR0103-2003 AND NACE MR0175-2003.

***** END OF CERTIFICATION *****

We certify that the data on this sheet is a true copy taken from our records of material furnished us by the production mill, or as obtained by additional laboratory checks.

by

Cris Childers

56359

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www.bonneyforge.com

CUSTOMER: WESTLUND INDUSTRIAL SUPPLY

Date 05/17/05

CUSTOMER'S Order No.: 9101983-00

Bonney Order No. 012317

SHIPPED TO: WESTLUND INDUSTRIAL SUPPLY
5105 75TH STREET

305464

EDMONTON ALBERTA
EDMONTON ALBERTA, T6E5S5 CANAD

ITEM QUANTITY LOT NO.

GRADE OR SPECIFICATION NO.
CHEMICAL ANALYSIS, PHYSICAL PROPERTIES, REMARKS:

SA/A105N

066	575	56359	7551657	31/2-3 X 1 3000 A105N THRD T					
				C .190 MN 1.000 P .010 S .020 SI .240					
				NI .020 CU .110 CO .002 CR .050 MO .009					
				V .024 AL .001 NB .001					
				CE(LONG FORMULA) = 0.38					
				T/S 78000 Y/S 51250 EL 30.55 RA 65.60					
				BRINELL HARDNESS1: 147 HARDNESS2: 147					
067	75	56091	7551894	6 X 2 3M A105N THRD T					
				C .180 MN .790 P .015 S .027 SI .240					
				NI .130 CU .290 CR .170 MO .030 V .002					
				AL .002 NB .000					
				CE(LONG FORMULA) = 0.38					
				T/S 78000 Y/S 54250 EL 30.95 RA 63.20					
				BRINELL HARDNESS1: 144 HARDNESS2: 144					
068	75	55981	7551908	10 -8 X 2 3000 A105N THRD T					
				C .200 MN 1.050 P .010 S .026 SI .250					
				NI .030 CU .120 CR .050 MO .008 V .023					
				AL .001 NB .001					
				CE(LONG FORMULA) = 0.40					
				T/S 77000 Y/S 49300 EL 35.00 RA 64.00					
				BRINELL HARDNESS1: 147 HARDNESS2: 153					
069	75	55209	7552157	36-12 X1 6000 A105N THRD T					
				C .200 MN 1.030 P .009 S .024 SI .300					
				NI .061 CU .160 CR .101 MO .016 V .012					
				CB .012					
				CE(LONG FORMULA) = 0.41					
				T/S 80500 Y/S 56500 EL 30.65 RA 64.70					
				BRINELL HARDNESS: 143					

***** CONTINUED ON NEXT PAGE *****

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by

Cris Childers

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www.bonneyforge.com

CUSTOMER: WESTLUND INDUSTRIAL SUPPLY

Date 02/27/04

CUSTOMER'S Order No.: 9192380-00

Bonney Order No 989236

SHIPPED TO: WESTLUND INDUSTRIAL SUPPLY
5105 75TH STREET

Mat 39039

EDMONTON ALBERTA
EDMONTON ALBERTA, T6E5S5 CANAD

ITEM	QUANTITY	LOT NO.	GRADE OR SPECIFICATION NO. CHEMICAL ANALYSIS. PHYSICAL PROPERTIES. REMARKS:							
			SA/A105N-02 -----							
050	175	55932	7551665	5-4X1 3M A105N THRD T						
				C	.180 MN	.970 P	.010 S	.024 SI	.240	
				NI	.040 CU	.180 CR	.040 MD	.008 V	.023	
				AL	.001 NB	.000				
				CE(LONG FORMULA) = 0.37						
				T/S 77000 Y/S 51250 EL 33.15 RA 65.60						
				BRINELL HARDNESS1: 150 HARDNESS2: 147						
051	50	55658	7552076	6-21/2X1/2 6M A105N THRD T						
				C	.200 MN	1.060 P	.010 S	.022 SI	.270	
				NI	.030 CU	.080 CR	.050 MD	.019 V	.024	
				NB	.001					
				CE(LONG FORMULA) = 0.40						
				T/S 77910 Y/S 52940 EL 32.00 RA 67.10						
				BRINELL HARDNESS1: 153 HARDNESS2: 153						
052	50	55788	7552106	10 -3 X 3/4 6000 A105N THRD T						
				C	.190 MN	.990 P	.009 S	.022 SI	.240	
				NI	.020 CU	.100 CR	.040 MD	.010 V	.025	
				NB	.001					
				CE(LONG FORMULA) = 0.38						
				T/S 76900 Y/S 51200 EL 30.90 RA 65.00						
				BRINELL HARDNESS1: 154 HARDNESS2: 152						
		55975	7552106	10 -3 X 3/4 6000 A105N THRD T						
				C	.190 MN	1.020 P	.007 S	.026 SI	.240	
				NI	.120 CU	.310 CR	.060 MD	.028 V	.035	
				CB	.000					
				CE(LONG FORMULA) = 0.41						
				T/S 83500 Y/S 58000 EL 32.00 RA 63.00						
				BRINELL HARDNESS1: 165 HARDNESS2: 165						

***** CONTINUED ON NEXT PAGE *****

We certify that the data on this sheet is a true copy taken from our records of material furnished us by the production mill, or as obtained by additional laboratory checks.



by

Cris Childers

QUALITY CONTROL MANAGER

CERTIFIED MILL TEST REPORT



BONNEY FORGE

U.S. ROUTE 522 SOUTH
P.O. BOX 330
MOUNT UNION, PA 17066
(814) 542-2545 (800) 345-7546
FAX (814) 542-9977 TELEX 910-240-9091

LOG NO. 45597 PAGE 46

CUSTOMER: CCTF - DIV. OF EMCO LTD.

Date 10/15/02

CUSTOMER'S Order No.: 4863893-00

Bonney Order No. 966681

SHIPPED TO: WESTLUND INDUSTRIAL SUPPLY
5105 - 75 STREET

Mark

EDMONTON, AB, T6E 2A0

ITEM	QUANTITY	LOT NO.	GRADE OR SPECIFICATION NO. CHEMICAL ANALYSIS, PHYSICAL PROPERTIES, REMARKS:
SA/A105N-01			
191	200	55558 7551673	10-6X1 3M A105N THRD T C .200 MN 1.090 P .011 S .023 SI .260 NI .020 CU .040 CR .040 MD .006 V .026 CB .000 AL .001 CE(LONG FORMULA) = 0.40 T/S 78270 Y/S 52030 EL 32.90 RA 62.90 BRINELL HARDNESS1: 144 HARDNESS2: 144
182	50	55323 7552203	36-3/4 X 1/2 3M A105N LRED T C .190 MN .960 P .008 S .023 SI .250 NI .020 CU .050 CR .060 MD .008 V .023 NB .001 CE(LONG FORMULA) = 0.37 T/S 74125 Y/S 50000 EL 33.05 RA 66.30 BRINELL HARDNESS: 144
183	50	55674 7552220	36-2 X 1 3000 A105N LRED T C .200 MN 1.050 P .009 S .024 SI .250 NI .020 CU .060 CR .040 MD .007 V .024 NB .001 CE(LONG FORMULA) = 0.39 T/S 76875 Y/S 51250 EL 34.15 RA 67.90 BRINELL HARDNESS1: 147 HARDNESS2: 150
184	25	55242 7552299	36-1 X 3/4 3M A105N LRED S/W C .200 MN .990 P .007 S .027 SI .240 NI .040 CU .100 CR .090 MD .011 V .024 AL .001 NB .000 CE(LONG FORMULA) = 0.40 T/S 78000 Y/S 53875 EL 31.70 RA 65.15 BRINELL HARDNESS: 144

***** CONTINUED ON NEXT PAGE *****

we certify that the data on this sheet is a true copy taken from our records of material furnished us by the production mill, or as obtained by additional laboratory checks.



by Lisa Stewart
Lisa Stewart

QUALITY CONTROL MANAGER

56248

CERTIFIED MILL TEST REPORT



BONNEY FORGE

U.S. ROUTE 522 SOUTH
P.O. BOX 330
MOUNT UNION, PA 17066
(814) 542-2545 (800) 345-7546
FAX (814) 542-9977 TELEX 910-240-9091

LOG NO. 220912 PAGE 22

CUSTOMER: WESTLUND INDUSTRIAL SUPPLY

Date 07/19/05

CUSTOMER'S Order No.: 9102808-00

Bonney Order No. 015202

SHIPPED TO: WESTLUND INDUSTRIAL SUPPLY
5105 75TH STREET

Mark 2345

EDMONTON ALBERTA
EDMONTON ALBERTA, T6E5S5 CANAD

ITEM QUANTITY LOT NO.

GRADE OR SPECIFICATION NO.
CHEMICAL ANALYSIS, PHYSICAL PROPERTIES, REMARKS:

SA/A105N

059	25	55994	7552114	36-12X3/4 6M A105N THRD T					
				C .190 MN 1.020 P .013 S .022 SI .240					
				NI .030 CU .140 CR .050 MD .010 V .024					
				AL .001 NB .001					
				CE(LONG FORMULA) = 0.39					
				T/S 76000 Y/S 48900 EL 35.00 RA 63.00					
				BRINELL HARDNESS1: 153 HARDNESS2: 153					
060	50	56248	7552203	36-3/4 X 1/2 3M A105N LRED T					
				C .190 MN 1.070 P .010 S .023 SI .280					
				NI .020 CU .070 CD .002 CR .040 MD .006					
				V .025 AL .001 NB .000					
				CE(LONG FORMULA) = 0.39					
				T/S 76000 Y/S 51250 EL 30.95 RA 67.25					
				BRINELL HARDNESS1: 147 HARDNESS2: 144					
		56424	7552203	36-3/4 X 1/2 3M A105N LRED T					
				C .210 MN 1.000 P .009 S .026 SI .240					
				NI .040 CU .120 CD .003 CR .070 MD .011					
				V .024 AL .001 NB .001					
				CE(LONG FORMULA) = 0.41					
				T/S 79000 Y/S 53125 EL 33.15 RA 65.60					
				BRINELL HARDNESS1: 141 HARDNESS2: 144					
061	25	55981	7552220	36-2 X 1 3000 A105N LRED T					
				C .200 MN 1.050 P .010 S .026 SI .250					
				NI .030 CU .120 CR .050 MD .008 V .023					
				AL .001 NB .001					
				CE(LONG FORMULA) = 0.40					
				T/S 77000 Y/S 49300 EL 35.00 RA 64.00					
				BRINELL HARDNESS1: 147 HARDNESS2: 153					

***** CONTINUED ON NEXT PAGE *****

We certify that the data on this sheet is a true copy taken from our records of material furnished us by the production mill, or as obtained by additional laboratory checks.



by

Cris Childers

QUALITY CONTROL MANAGER

CERTIFIED MILL TEST REPORT

(2)



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LOG NO. 308776 PAGE 4
 BONNEY FORGE
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 www.bonneyforge.com

CUSTOMER: CCTF CORPORATION

Date 03/19/07

CUSTOMER'S Order No.: 4879711-00

Bonney Order No. 000005602

SHIPPED TO: CCTF CORPORATION
 5407 - 53 AVENUE

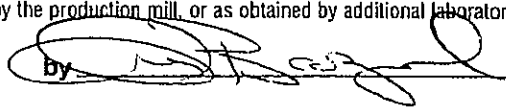
51480

EDMONTON, ABT6B 3G2 Canada

ITEM	QUANTITY	LOT NO.	GRADE OR SPECIFICATION NO. CHEMICAL ANALYSIS, PHYSICAL PROPERTIES, REMARKS:
SA/A105N			
012	50	56680 7552491	10 -6 X 1 3000 A105N SOCK S C .200 MN 1.040 P .006 S .019 SI .220 NI .040 CU .170 CR .040 MD .020 V .000 AL .022 NB .013 CE(LONG FORMULA) = 0.40 T/S 75000 Y/S 53375 EL 31.30 RA 66.10 BRINELL HARDNESS1: 132 HARDNESS2: 135
013	25	56435 7552530	2 X 11/2 3000 A105N SOCK S C .210 MN 1.000 P .009 S .026 SI .240 NI .040 CU .120 CD .003 CR .070 MD .011 V .024 AL .001 NB .001 CE(LONG FORMULA) = 0.41 T/S 79000 Y/S 53125 EL 33.15 RA 65.60 BRINELL HARDNESS1: 141 HARDNESS2: 144
014	25	56765 7550025	6X2 3M A105N SOCK S C .200 MN 1.030 P .007 S .020 SI .220 NI .050 CU .130 CD .004 CR .040 MD .020 V .000 AL .027 NB .016 CE(LONG FORMULA) = 0.40 T/S 73375 Y/S 50375 EL 32.80 RA 67.25 BRINELL HARDNESS1: 150 HARDNESS2: 153
015	50	56895 7552360	36-3/4X1/2 6M A105N LREQ T C .190 MN 1.050 P .011 S .020 SI .260 NI .040 CU .130 CD .003 CR .050 MD .010 V .000 AL .022 NB .012 CE(LONG FORMULA) = 0.39 T/S 74750 Y/S 51375 EL 31.40 RA 63.00 BRINELL HARDNESS1: 130 HARDNESS2: 135

***** CONTINUED ON NEXT PAGE *****

We certify that the data on this sheet is a true copy taken from our records of material furnished us by the production mill, or as obtained by additional laboratory checks.

by 
 Cris Boozel
 56895

CMTR: REV 1

QUALITY PROCESS MANAGER

Diet 3/4 X 1/2" 6M

CERTIFIED MILL TEST REPORT



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LOG NO. 308776 PAGE 5
BONNEY FORGE
P.O. BOX 330 • 14496 CROGHAN PIKE • MOUNT UNION, PA 17066-0330
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www.bonneyforge.com

CUSTOMER: CCTF CORPORATION

Date 03/19/07

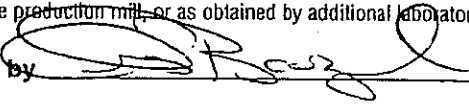
CUSTOMER'S Order No.: 4879711-00

Bonney Order No. 000005602

SHIPPED TO: CCTF CORPORATION
5407 - 53 AVENUE

51480

EDMONTON, ABT6B 3G2 Canada

ITEM	QUANTITY	LOT NO.	GRADE OR SPECIFICATION NO. CHEMICAL ANALYSIS, PHYSICAL PROPERTIES, REMARKS:
1. THE FITTINGS SUPPLIED ARE IN ACCORDANCE WITH PURCHASE ORDER SPECIFICATIONS. 2. THE MATERIAL SUPPLIED IDENTIFIED AS A105N WAS NORMALIZED IN ACCORDANCE WITH ASTM A105 HEAT TREATING REQUIREMENTS. 3. CERTIFYING ASTM A105-05 / ASME SA105-04 EDITION. 4. ELONGATION TEST RESULTS ARE OBTAINED USING STANDARD ROUND SPECIMEN, 2 INCH OR 50 MM GAGE LENGTH. 5. THE MATERIAL SUPPLIED WAS INSPECTED AND MANUFACTURED IN ACCORDANCE WITH EN DIN 10204 3.1. B. (EUROPEAN STANDARD). 2005 EDITION. 6. THE MATERIAL SUPPLIED MEETS THE REQUIREMENTS OF BOTH NACE MR0103-2003 AND NACE MR0175-2003.			
***** END OF CERTIFICATION *****			
We certify that the data on this sheet is a true copy taken from our records of material furnished us by the production mill, or as obtained by additional laboratory checks.			
by 			
Cris Booze			
CMTR: REV 1			
QUALITY PROCESS MANAGER			

JUN 21 2006

Purchaser: F.E. Frankhly Ltd

INSPECTION CERTIFICATE



Thai Benkan Co., Ltd.

58 Soi Watkrumai, Bangkok, Prapadong.

Samprakan, 10130 Thailand.

TO EN10204 3.1

E.No. Purchase Order No. Job No.

D M Y Certificate No.

MA-602 153963 CR-2100

07/06/2006 153963

No.	MFG. No. (Heat Identification No.)	Specification for Material Made from Seamless Pipe										Specification for Inspection		Visual Examination	Dimensional Inspection	
		ASTM A234-05a/ASME SA234 WPB CSA Z245-11 GR241 CMI 1 HANCE MP3345-1003										ASME B16.9-2003		Good	Good	
		Product & Size										Quantity	Heat Treatment (Note 1)			
		(T+1)														
1	17A080	45 EL WPB 8 S40										301	A	7513245		
2	17A080	90 EL WPB 3 S40										815000	A	7513245		
3	17A080	45 EL WPB 10 S40										15	A	7513245		
4	17A080	90 EL WPB 3 S40										3/500	A	7513245		
5	17A080	90 EL WPB 3 S40										489/500	A	7513245		
Specification		Chemical Composition %										Tension Test *2				
Min.	Max.	C	Si	Mn	P	S	Cu	Ni	Cr	Mo	V	Nb	C.E.	YS	TS	E
		X	X	X	X	X	X	X	X	X	X	X	X			
		100	100	100	1000	1000	100	100	100	100	100	1000	1000	100	MPa	
Material Heat No.		30	10	29								20	43	240	415	20
	JSKB110	19	23	69	22	7	2	2	7	1	1	1	3.2	292	472	10
2	75999	17	25	71	12	3	29	15	6	1	1	1	3.4	353	515	30
3	JSK121	21	20	68	10	7	2	2	4	1	1	1	3.4	319	401	42
4	JSK121	18	17	69	15	5	3	2	6	1	1	1	3.1	298	491	53
5	Q21618	18	27	71	7	6	6	4	6	1	1	1	3.4	339	492	36

(Note 1) A: Hot formed with final temperature between 620°C-980°C. Air Cooling N: Normalizing 910°Cx0.5 HR. Air Cooling *N: Normalizing 910°Cx0.5 HR. Air Cooling (Specification for material made from plate) S: Stress Relieving 675°Cx0.5 HR. Air Cooling

C.E. = C+Mn/6+(Cr+Mo+V)/5+(Ni+Cu)/15

We hereby certify that the product described herein has been manufactured in accordance with the specifications concerned and also with the purchaser's requirements and that the test results shown herein are correct.

* 1: "T" symbolized with thickness in mm. * 2: YS Yield strength TS = Tensile strength E = Elongation

Quality Assurance Manager
Thai Benkan Co., Ltd.

HEAT NUMBER : 2772
 TRANS AM PIPING PRODUCTS - REV'D BY:
 Shipment/Seq #: S 6 - 1353 31

3" STD LR 90 BW ELBOW
 A234-WPB

Customer: TRANS AM PIPING PRODUCTS LTD.
 Product: SEAMLESS STEEL PIPE FITTING
 Spec: ASTM/A5M/A234 WPB-00
 DIN 2463 (REN 1024 3 LB)

CHUP HSIN ENTERPRISE CO., LTD.
 17, TUNG LI ROAD HSIAO KANG
 KAOHSIUNG, TAIWAN R.O.C.
 TEL: (07) 831-9157-9
 FAX: (07) 831-2942, 821-7500

Certificate No: 09500018-0301
 Order No: CL-06-150
 Date: 2006/6/9

3" STD 90° Elbow
 (MILL TEST)
 A234-WPB

2772

Specification for Raw Material			Specification for Inspection			Visual Examination			Dimensional Inspection										
ASTM A106 GRB			ASME B16.9-2001			GOOD			GOOD										
Item	Description	Quantity	Heat ID.	Heat No.	Raw Material Mfg	Raw Certificate NO.													
1	90 ELR STD	2	1022	6K1022	SUMITOMO	BYYLA011													
2	90 ELR STD	3	2772	SK2772	SUMITOMO	BYYL3066													
3	90 ELR STD	5	2771	SK2771	SUMITOMO	BYYL3068													
4	90 ELR XS	2	1089	6K1089	SUMITOMO	BYYLA019													
Chemical Composition %			Tension Test																
Specification	C	Si	Mn	P	S	Cu	Ni	Cr	Mo	V	Nb	C.E.	Y.S	T.S	E	HARDNESS TEST	Heat Treatment	Magnetic Particle Exam.	Remark
	×100	×100	×100	×1000	×1000	×100	×100	×100	×100	×1000	×1000	×100	PSI	PSI	%	H B			
MIN	10	29	106	50	58	40	40	40	15	80	20	50	35000	60000	30	197			
MAX	30																		
19	20	49	22	9	15	4	4	1	0	0	0	29	44300	68200	40	135	620°C TO 980°C		
14	18	78	9	3	6	3	2	0	0	0	0	28	43200	65300	40	135			
13	17	83	9	5	7	3	2	1	0	0	0	28	42600	60900	42	135			
19	27	44	20	9	5	1	2	1	0	0	0	27	46400	69600	40	138			
C= C+Mn/6+(Cr+Mo+V/5+(Ni+Cu)/5																			

C.E.=C+Mn/6+(Cr+Mo+V)/5+(Ni+Cu)/15
 We hereby certify that the product described herein has manufactured in accordance with the specifications concerned and also with the purchaser's requirements and that the test results shown herein are correct.

Chief of Quality Assurance Section
L.S. Tsai



INSPECTION CERTIFICATE

PURCHASER: SEYBOLD
ASTM A234 WPB-07
ASME SA234 WPB-04

CSA Z245.11 Gr.241 Cat I Sour Service
ASTM A106 Gr.B (SEAMLESS PIPE)
INSPECTION SPEC. ASME B16.9 - 03

8 MEI-CHUNG RD. NIAO-SONG,
KAOHSIUNG HSIEN 83301 TAIWAN
TEL: 886-77310527-8
FAX: 886-77315887

DATE: 2007 - 08 - 06

ORDER NO: 6747/45000869

P.I. NO: 7E07-2

CERTIFI. NO: 423

ACCORDING TO EN10204/DIN50049/3.1

INSPECTION SPEC. ASME B16.3 - 03										ACCORDING TO EN12242-2004									
ITEM NO	PRODUCT & SIZE		QUANTITY PCS	MFG NO.	VISUAL & DIMENSIONAL INSPECTION	HARDNESS MAX. 197 HB	HEAT TREATMENT (NOTE)	MAGNETIC PARTICLE EXAMINATION	IMPACT TEST (J)										
1	ELL 90 LR 3"	STD	185	6C20553513	GOOD	133 - 134	A												
2	ELL 90 LR 3"	STD	535	6J5463	GOOD	118 - 122	A												
3	ELL 180 LR 4"	STD	15	6H48093816	GOOD	137 - 138	A												
ITEM NO.	MATERIAL CHARGE NO.		CHEMICAL COMPOSITION %										PHYSICAL TEST						
			C x100	Si x100	Mn x100	P x1000	S x1000	Cu x100	Ni x100	Cr x100	Mo x100	V x100	Nb x1000	Y S KSI	T S KSI	E %	C.E. x100		
	STANDARD	MIN	MAX		10	29								35.0	60.0				
1	0521855		30		135	50	58	40	40	15	8	20		95.0			50		
2	34963		20	29	43	14	8	14	4	3	1	1	46.4	71.1	36.0	29			
3	308409		19	25	44	18	29	2	2	5	<1	<1	53.7	63.8	29.0	27			
			12	17	79	9	3	7	3	3	1	1	40.2	62.4	40.0	26			
										SECTION 2.2									

(NOTE): A: HOT FORMED WITH FINAL TEMPERATURE BETWEEN 620°C-880°C, AIR COOLING.
N: NORMALIZING AT TEMPERATURE 880°C X 0.5HR, AIR COOLING.

NACE MR-01-75 & NACE MR 0103 : SATISFACTORY
WE HEREBY CERTIFY THAT THE PRODUCT DESCRIBED HEREIN HAS BEEN MANUFACTURED IN ACCORDANCE WITH THE SPECIFICATIONS CONCERNED AND ALSO WITH THE PURCHASER'S REQUIREMENTS AND THAT THE TEST RESULTS SHOWN HEREIN ARE CORRECT.

Ou E Lan

MANAGER OF Q.A. DEPT.

656463
3" 90° Elbow
STD

697529

2" 90° 160 Elbow

PURCHASER: SEYBOLD
ASTM A234 WPB-06
STANDARD: ASME SA234 WPB-01

INSPECTION CERTIFICATE
RIGID INDUSTRIES CO., LTD.
8, MEI-CHUNG RD. NIAO-SONG,
KAOHSIUNG HSIEN, 83301 TAIWAN
TEL: 886-77310527-8
FAX: 886-77315887

DATE: 2006-09-18
ORDER NO: 5423
P.I. NO: 6A03-5
CERTIFI. NO: 486

MATERIALS: ASTM A106 Gr.B / JIS G3103 SB410
INSP. SPEC.: ASME B16.9 - 03

ACCORDING TO EN10204/DIN50049/3.1

ITEM NO.	PRODUCT & SIZE	QUANTITY PCS	MFG NO.	VISUAL & DIMENSIONAL INSPECTION	HARDNESS MAX 197 HB	HEAT TREATMENT (NOTE)	MAGNETIC PARTICLE EXAMINATION	IMPACT TEST (J)
1	CAP 6" STD	1000	6G4194	GOOD	122 - 135	N		
2	ELL 45 LR 6" XH	10	6F9889	GOOD	132 - 133	A		
3	ELL 90 LR 2" 160	360	6G7529	GOOD	131 - 139	A		
4	ELL 90 LR 3" XH	860	6D4796	GOOD	137 - 138	A		
5	TEE 3" XH	478	6F6195	GOOD	144 - 165	N	GOOD	
6	TEE 3" XH	122	6C1842	GOOD	151 - 161	N	GOOD	
7	TEE 6" XH	56	6B2727	GOOD	170 - 172	N	GOOD	
8	RED-TEE 4X3" STD	500	6F9862	GOOD	147 - 164	N	GOOD	
9	RED-TEE 6X4" STD	23	6F2375	GOOD	135 - 170	N	GOOD	

CHEMICAL COMPOSITION %

ITEM NO.	MATERIAL CHARGE NO.	C x100	Si x100	Mn x100	P x1000	S x1000	Cu x100	Ni x100	Cr x100	Mo x100	V x100	Nb x1000	PHYSICAL TEST			
													Y S KSI	T S KSI	E %	C.E. X100
	STANDARD	MIN.	MAX.	MIN.	MAX.	MIN.	MAX.	MIN.	MAX.	MIN.	MAX.	MIN.	35.0	60.0		
1	25694	18	20	72	17	5	0	1	0	0	0	0	46.7	66.9	28.1	30
2	313889	19	25	58	8	7	5	2	2	0	0	0	42.8	64.9	43.5	29
3	J6L4229	12	25	130	13	3	2	2	11	2	0	0	47.0	68.6	62.0	36
4	309096	18	26	56	9	1	6	3	2	1	0	9	47.3	70.4	38.5	28
5	J6K1495	10	27	127	13	3	1	2	12	0	0	0	46.6	70.6	41.3	33
6	310542	20	25	57	8	2	10	4	3	1	0	2	43.8	67.9	32.0	31
7	311127	18	26	53	7	4	7	3	2	1	0	0	39.6	65.6	40.5	28
8	J5L2562	11	23	132	11	3	5	2	11	1	0	0	49.9	68.7	41.7	35
9	313275	19	25	56	7	1	8	3	2	0	0	1	43.4	69.1	35.0	29

(NOTE): A: HOT FORMED WITH FINAL TEMPERATURE BETWEEN 620°C-980°C, AIR COOLING.

N: NORMALIZING AT TEMPERATURE 880°C X 0.5HR, AIR COOLING.

NACE MR-01-75 & NACE MR 0103 : SATISFACTORY

WE HEREBY CERTIFY THAT THE PRODUCT DESCRIBED HEREIN HAS BEEN MANUFACTURED IN ACCORDANCE WITH THE SPECIFICATIONS CONCERNED AND ALSO WITH THE PURCHASER'S REQUIREMENTS AND THAT THE TEST RESULTS SHOWN HEREIN ARE CORRECT.

Ou E Lan

MANAGER OF Q.A. DEPT.

96176

2" 90° 160 Elbow

6G 7676

INSPECTION CERTIFICATE
RIGID INDUSTRIES CO., LTD.
 8, MEI-CHUNG RD. NIAO-SONG,
 KAOHSIUNG HSIEN, 83301 TAIWAN
 TEL: 886-77310527-8
 FAX: 886-77315887

PURCHASER: SEYBOLD
 ASTM A234 WPB-06
 STANDARD: ASME SA234 WPB-01

MATERIALS: ASTM A106 Gr.B / JIS G3103 SB410
 INSP. SPEC.: ASME B16.9 - 03

DATE: 2006 - 12 - 11
 ORDER NO: 5570
 P.I. NO: 6005-4
 CERTIFI. NO: 667

ACCORDING TO EN10204/DIN50049/3.1

ITEM NO.	PRODUCT & SIZE	QUANTITY PCS	MFG NO.	VISUAL & DIMENSIONAL INSPECTION	HARDNESS MAX 197 HB	HEAT TREATMENT (NOTE)	MAGNETIC PARTICLE EXAMINATION	IMPACT TEST (J)
1	CAP 3"	25	5F4693	GOOD	129 - 171	N		
2	ELL 45 LR 4"	10	6F6527	GOOD	145 - 161	A		
3	ELL 90 LR 2"	387	6G7676	GOOD	135 - 143	A		
4	ELL 90 LR 2" XH	700	6H6402	GOOD	136 - 136	A		
5	ELL 90 LR 3"	75	6H2981	GOOD	140 - 151	A		
6	CON-RED 3X2"	34	6C5619	GOOD	142 - 149	N		
7	CON-RED 8X4	3	6H7532	GOOD	127 - 136	N		
8	CON-RED 8X3"	6	6G2008	GOOD	122 - 155	N		
9	ECC-RED 4X2"	10	5L2248	GOOD	143 - 149	N		
10	ECC-RED 6X3"	12	6F7475	GOOD	123 - 138	N		

ITEM NO.	MATERIAL CHARGE NO.	CHEMICAL COMPOSITION %										PHYSICAL TEST				C.E.
		C x100	Si x100	Mn x100	P x1000	S x1000	Cu x100	Ni x100	Cr x100	Mo x100	V x100	Y S KSI	T S KSI	E %	X100	
1	3R493	20	25	84	16	8	1	0	0	0	0	48.5	71.5	26.3	50	34
2	314027	19	25	56	9	5	5	4	2	0	0	41.9	66.6	43.5	29	29
3	314576	18	23	57	8	2	6	3	2	1	0	44.4	69.4	34.5	28	28
4	0623002	14	30	73	13	9	12	4	2	3	0	43.5	66.7	33.5	28	28
5	J6L4981	11	25	128	13	3	2	2	10	0	0	45.4	68.2	45.9	34	34
6	312019	20	24	54	10	2	7	2	2	0	0	43.5	68.9	35.5	30	30
7	J6K5132	11	25	125	10	4	2	2	12	0	0	42.4	66.0	63.7	34	34
8	65D3908	20	24	48	14	10	1	1	1	1	1	49.3	70.3	42.5	28	28
9	J6K4248	11	26	124	12	4	3	3	6	1	0	47.4	65.8	41.3	33	33
10	313275	19	25	56	7	1	8	3	2	0	0	43.4	69.1	35.0	29	29

(NOTE): A: HOT FORMED WITH FINAL TEMPERATURE BETWEEN 820°C-980°C, AIR COOLING.

N: NORMALIZING AT TEMPERATURE 880°C X 0.5HR, AIR COOLING.

NACE MR-01-75 & NACE MR 0103 : SATISFACTORY

WE HEREBY CERTIFY THAT THE PRODUCT DESCRIBED HEREIN HAS BEEN MANUFACTURED IN ACCORDANCE WITH THE SPECIFICATIONS CONCERNED AND ALSO WITH THE PURCHASER'S REQUIREMENTS AND THAT THE TEST RESULTS SHOWN HEREIN ARE CORRECT.

97286

Ou E Lan

MANAGER OF Q.A. DEPT.

2" 90° 160 Elbow

5K3762

INSPECTION CERTIFICATE



PURCHASER: SEVBOLD
ASTM A234 WPB-06
STANDARD: ASME SA234 WPB-01

DATE: 2006 - 09 - 18
ORDER NO: 5268
P.I. NO: 5K08-5
CERTIFI. NO: 487

8, MELCHUNG RD, NIAO-SONG,
KAOHSIUNG HSIEN, 83301 TAIWAN
TEL: 886-77310527-8
FAX: 886-77315887

MATERIALS: ASTM A106 Gr.B (SEAMLESS PIPE)
INSP. SPEC.: ASME B16.9 - 03

ACCORDING TO EN10204/DIN50049/3.1

ITEM NO.	PRODUCT & SIZE	QUANTITY PCS	MFG NO.	VISUAL & DIMENSIONAL INSPECTION	HARDNESS MAX. 197 HB	HEAT TREATMENT (NOTE)	MAGNETIC PARTICLE EXAMINATION	IMPACT TEST (J)													
									CHEMICAL COMPOSITION %										PHYSICAL TEST		
									C x100	Si x100	Mn x100	P x1000	S x1000	Cu x100	Ni x100	Cr x100	Mo x100	V x100	Nb x1000	Y S KSI	T S KSI
1 2	ELL 90 LR 2"	160	6G7529	GOOD	131 - 139	A															
	ELL 90 LR 2"	160	5K3762	GOOD	128 - 131	A															
1 2	J6L4229 J5L2562	MIN.	10	29									35.0	60.0							
		MAX.	30	135	50	58	40	40	40	15	8	20		95.0		50					
1 2	J6L4229 J5L2562	12	25	130	13	3	2	2	11	2	0	0	47.0	68.6	62.0	36					
		11	23	132	11	3	5	2	11	1	0	0	46.1	66.6	64.0	35					

(NOTE): A: HOT FORMED WITH FINAL TEMPERATURE BETWEEN 620°C-980°C, AIR COOLING.
N: NORMALIZING AT TEMPERATURE 980°CX0.5HR., AIR COOLING.
NACE MR-01-75 & NACE MR 0103 : SATISFACTORY

WE HEREBY CERTIFY THAT THE PRODUCT DESCRIBED HEREIN HAS BEEN MANUFACTURED IN ACCORDANCE WITH THE SPECIFICATIONS CONCERNED AND ALSO WITH THE PURCHASER'S REQUIREMENTS AND THAT THE TEST RESULTS SHOWN HEREIN ARE CORRECT.

Our Plan

MANAGER OF Q.A. DEPT.

(NOTE): A: HOT FORMED WITH FINAL TEMPERATURE BETWEEN 820°C-980°C, AIR COOLING.

N: NORMALIZING AT TEMPERATURE 880°C X 0.5HR, AIR COOLING.

NACE MR-01-75 & NACE MR 0103 : SATISFACTORY

WE HEREBY CERTIFY THAT THE PRODUCT DESCRIBED HEREIN HAS BEEN MANUFACTURED IN ACCORDANCE WITH THE SPECIFICATIONS CONCERNED AND ALSO WITH THE PURCHASER'S REQUIREMENTS AND THAT THE TEST RESULTS SHOWN HEREIN ARE CORRECT.

Ou E Lan

MANAGER OF Q.A. DEPT.

96172

See 3"x2" XH 6G3570



INSPECTION CERTIFICATE

RIGID INDUSTRIES CO., LTD.

PURCHASER : SEYBOLD
ASTM A234 WPB-06
STANDARD : ASME SA234 WPB-01

8, MEI-CHUNG RD. NIAO-SONG,
KAOHSIUNG HSIEN, 83301 TAIWAN
TEL: 886-77310527-8
FAX: 886-77315887

MATERIALS : ASTM A106 Gr.B / JIS G3103 SB410
INSP. SPEC. : ASME B16.9 - 03

ACCORDING TO EN10204/DIN50049/3.1

CERTIF. NO. 602

DATE: 2006 - 11 - 14
ORDER NO.: 57619108009
P.I. NO.: 6E14-3

INSP. SPEC. : ASME B16.9-03																
ITEM NO.	PRODUCT & SIZE	QUANTITY PCS	MFG NO.	VISUAL & DIMENTIONAL INSPECTION	HARDNESS MAX 197 HB	HEAT TREATMENT (NOTE)	MAGNETIC PARTICLE EXAMINATION	IMPACT TEST (J)								
-11	ECC-RED 4X2 7510543 XH	6	6G3213	GOOD	139 - 149	N										
-12	ECC-RED 6X3 7515022 STD	10	6F7475	GOOD	123 - 138	N										
-13	ECC-RED 6X4 7511460 XH	2	6E4985	GOOD	128 - 145	N										
-14	TEE 2" 7512040 XH	1000	6G3902	GOOD	129 - 138	N	GOOD									
-15	TEE 4" 7512139 XH	180	6G3878	GOOD	171 - 177	N	GOOD									
-16	RED-TEE 3X2 7513453 XH	300	6G3570	GOOD	145 - 168	N	GOOD									
-17	RED-TEE 4X2 7513791 STD	100	6F4048	GOOD	130 - 178	N	GOOD									
-18	RED-TEE 4X3 7513578 XH	50	6E3076	GOOD	159 - 167	N	GOOD									
-19	RED-TEE 6X2 7513011 STD	15	6F3895	GOOD	125 - 188	N	GOOD									
-20	RED-TEE 6X3 7512849 STD	61	6E4595	GOOD	142 - 147	N	GOOD									
CHEMICAL COMPOSITION %																
ITEM NO.	MATERIAL CHARGE NO.	C x100	Si x100	Mn x100	P x1000	S x1000	Cu x100	Ni x100	Cr x100	Mo x100	V x100	Nb x1000	Y S KSI	T S KSI	E %	C.E. x100
	STANDARD	MIN.	MAX.										35.0	80.0		50
11	308313	19	26	57	9	4	7	3	3	1	0	0	45.4	89.9	37.5	29
12	313275	19	25	56	7	1	8	3	2	0	0	1	43.4	89.1	35.0	29
13	JEK1495	10	27	127	13	3	1	2	12	0	0	0	43.4	88.3	45.1	33
14	314502	18	27	55	8	1	5	2	2	0	0	0	47.2	70.4	36.5	28
15	JEK1497B	12	28	134	13	3	2	3	12	1	0	0	46.4	71.5	41.1	37
16	JEK1497D	11	22	125	10	4	2	3	12	1	0	0	47.4	70.1	37.6	34
17	JEK4248	11	26	124	12	4	3	3	5	1	0	0	47.6	66.7	44.6	33
18	310176	17	26	59	8	2	7	2	2	0	0	1	42.4	66.7	40.0	28
19	JEK1495	10	27	127	13	3	1	2	12	0	0	0	42.5	89.2	42.3	33
20	JEK1495	10	27	127	13	3	1	2	12	0	0	0	42.5	89.2	42.3	33
(NOTE): A: HOT FORMED WITH FINAL TEMPERATURE BETWEEN 820°C-880°C, AIR COOLING.																
N: NORMALIZING AT TEMPERATURE 880°C X 0.5 HR, AIR COOLING.																
NACE MR-01-75 & NACE MR 0103 : SATISFACTORY																
WE HEREBY CERTIFY THAT THE PRODUCT DESCRIBED HEREIN HAS BEEN MANUFACTURED IN ACCORDANCE WITH THE SPECIFICATIONS CONCERNED AND ALSO WITH THE PURCHASER'S REQUIREMENTS AND THAT THE TEST RESULTS SHOWN HEREIN ARE CORRECT.																
VERIFIED BY <u> </u> MANAGER OF Q.A. DEPT.																
On E Pan																

(NOTE) A. HOT FORMED WITH FINAL TEMPERATURE BETWEEN 820°C-980°C AIR COOLING.
N. NORMALIZING AT TEMPERATURE 880°C X 0.5 HR. AIR COOLING.
MADE MR-01-75 & NACE MR 0103 : 8ATISFACTORY
WE HEREBY CERTIFY THAT THE PRODUCT DESCRIBED HEREIN HAS BEEN MANUFACTURED IN ACCORDANCE WITH THE SPECIFICATIONS CONCERNED AND ALSO WITH THE PURCHASERS REQUIREMENTS AND THAT THE TEST RESULTS SHOWN HEREIN ARE CORRECT.

VERIFIED BY **Q. E. Lam**
MANAGER OF Q.A. DEPT.

WESTLUND *[Signature]*

EN 10204 3.1B

Purchaser: NATIONAL OILWELL INC.

INSPECTION CERTIFICATE



D M Y Certificate No.
15/11/2004 F-2004200993

E.No. Purchase Order No. Job No.
M-973 10619273

No.	MFG. No. (Heat Identification No.)	Specification for Material Made from Seamless Pipe										Specification for Inspection		Visual Examination	Dimensional Inspection	
		ASTM A234-08/ASME SA234 WPB CSA Z245.11 GR241 CAT 1 NACE MR0175-2000										ASME / ANSI B16.9				
		Product & Size (T*1)										Quantity	Heat Treatment (Note 1)	Symbol No.		
1		04K20012	RC WPB 6 X 3 S40										91	N	7513585	
2		04M20018	RC WPB 10 X 8 S40										31/42	N	7513763	
3		04M20091	RC WPB 10 X 8 S40										11/42	N	7513763	
4		04M20017	RC WPB 12 X 10 STD										20	N	7513801	
5	47K20005	RC WPB 3 X 2 STD/XS										125	N	7510428		
Specification			Chemical Composition %										Tension Test *2			
		C	Si	Mn	P	S	Cu	Ni	Cr	Mo	V	Nb	C.E.	YS	TS	E
	Min.	X 100	X 100	X 100	X 1000	X 1000	X 100	X 100	X 100	X 100	X 1000	X 1000	X 100	MPa.		%
	Max.		10	29										240	415	30
Material Heat No.		23		106	50	58	40	40	40	15	80	20			585	
1	61131	21	20	65	9	2	5	3	4	3	2	1	34	334	490	39
2	61492	19	20	63	11	1	7	3	4	2	1	1	32	331	481	43
3	61273	18	21	66	9	1	3	2	2	1	1	1	30	316	454	40
4	JAK8196	21	20	68	8	6	1	2	4	0	0	0	33	319	477	46
5	48B8645	17	26	84	11	4	14	8	11	2	4	1	36	277	437	41

(NOTE 1) A : HOT FORMED WITH FINAL TEMPERATURE BETWEEN 820 C - 980 C, AIR COOLING
N : NORMALIZING 810-850 C, AIR COOLING S : STRESS RELIEVING 675 C, AIR COOLING
We hereby certify that the product described herein has been manufactured in accordance with the specifications concerned and also with the purchaser's requirements and that the test results shown herein are correct.

* 1 : "T" symbolized wall thickness in mm. * 2 : YS Yield strength TS = Tensile strength E = Elongation
Form T7.6R

82262

Quality Assurance Manager
Thai Benkan Co., Ltd.
58 Soi Wakkruai, Bangkok, Prapadaeng,
Samprakan, 10130 Thailand.

Concentric Reducer 47K20005
3" x 2" Std.

Concentric Reducer 49 A20135
3" X 2" STD



Purchaser : NATIONAL OILWELL INC.

INSPECTION CERTIFICATE

Thai Benkan Co., Ltd.
55 Soi Wakkana, Bangkok, Prapadaeng,
Samutprakan, 10130 Thailand.

E.No. Purchase Order No. Job No.
MA-495 10819910

~~FOR EXPORT~~
TO EN10204 3.1

D M Y Certificate No.
22/03/2006 T-2006200279

No.	MFG. No. (Heat Identification No.)	Specification for Material				Specification for Inspection		Visual Examination	Dimensional Inspection								
		ASTM A234-04/ASME SA234 WPB CSA Z245.11 GR241 CAT 1 NACE MR0175-2003				ASME B16.8-2003											
		Product & Size				Quantity	Heat Treatment (Note 1)			Symbol No.							
1	05N20503	RE WPB 8 X 6 S40				3/75	N	7515189									
2	06C20007	RC WPB 12 X 10 STD				45	N	7513801									
3	49A20135	RC WPB 3 X 2 STD/XS				205/425	N	7510428									
4	06A20111	RC WPB 12 X 6 STD				22	N	7513828									
5	05K20093	RE WPB 8 X 6 S40				2/75	N	7515189									
Specification		Chemical Composition %											Tension Test *2				
		C	Si	Mn	P	S	Cu	Ni	Cr	Mo	V	Nb	C.E.	YS	TS	E	
		X	X	X	X	X	X	X	X	X	X	X	X	MPa.		%	
		100	100	100	1000	1000	100	100	100	100	1000	1000	100				
Min.			10	29										240	415	30	HARDNESS MAX 197 HB : GOOD
Max.																	
Material Heat No.		23		106	50	58	40	40	40	15	80	20			585		
1	65510	20	20	65	10	2	8	7	5	3	1	1	34	337	497	40	
2	32796	17	30	74	11	8	26	10	7	4	0.7	0.0	34	318	475	41	
3	74504	18	18	72	11	1	6	4	4	3	1	1	32	323	468	35	
4	24723	17	29	67	9	3.5	11.3	4	3	2.4	0	0	30	361	449	40	
5	65510	20	20	65	10	2	8	7	5	3	1	1	34	337	497	40	

(Note 1) A : Hot formed with final temperature between 620°C-980°C, Air Cooling N : Normalizing 910°Cx0.5 HR, Air Cooling S : Stress Relieving 675°Cx0.5 HR, Air Cooling

C.E. = C+Mn/6+(Cr+Mo+V)/5+(Ni+Cu)/15

MAGNETIC PARTICLE EXAMINATION FOR TEE ONLY :

We hereby certify that the product described herein has been manufactured in accordance with the specifications concerned and also with the purchaser's requirements and that the test results shown herein are correct.

* 1 : "T" symbolized wall thickness in mm. * 2 : YS Yield strength TS = Tensile strength E = Elongation
Form TZ-6A/1

93172

Quality Assurance Manager
Thai Benkan Co., Ltd.

Purchaser : OCTF

INSPECTION CERTIFICATE

EN 10204 3.1B

E.No. Purchase Order No. Job No.

BENKAN

D M Y Certificate No.

M-841 4810008-00

05/04/2004 T-2004200350

No.	BENKAN No.	MFG. No. (Heat Identification No.)	Specification for Material Made from Seamless Pipe ASTM A234-02/ASME SA234 WPB CSA Z245.11 GR241 CAT I NACE MR0175-2000				Specification for Inspection ASME / ANSI B16.9		Visual Examination	Dimensional Insp								
			Product & Size (T*1)		Quantity	Heat Treatment (Note 1)	Item No.											
1		47C20007	RC WPB 4 X 2 STD/XS				3	N	7510431	Good								
2		01620088	RE WPB 3 X 2 S80				7	S	7514409									
3		02620063	RE WPB 4 X 3 S80				3	N	7510519									
4		47C20006	RC WPB 3 X 2 STD/XS				22	N	7510428									
5																		
Specification			Chemical Composition %										Tension Test #2		E	HARDNESS MAX		
			C	Si	Mn	P	S	Cu	Ni	Cr	Mo	V	Nb	C.E.			YS	TS
Min.			X	X	X	X	X	X	X	X	X	X	X	X				
Max.			100	100	100	1000	1000	100	100	100	100	1000	1000	100				
Material Heat No.			23	10	29										240	415	30	197 HB : GOOD
1	J3LB320	20	19	73	16	6	2	2	5	1	0	1	1	34	324	489	36	
2	43511	18	21	69	12	1	5	2	3	2	1	1	1	31	336	461	35	
3	43378	19	20	70	8	1	7	2	2	1	1	1	1	32	332	469	39	
4	72727	16	26	75	15	1	20	10	6	3	4	1	1	33	350	498	40	
5																		

(NOTE 1) N:Normalizing 910 C X 0.5 HR. Air Cooling S:Stress Relieving 675 C X 0.5 HR. Air Cooling
DOCUMENTARY CREDIT NO. J18672/206761 MAGNETIC PARTICLE EXAMINATION FOR TEE ONLY:
C.E. = C+Mn/6+(Cr+Mo+V)/5+(Ni+Cu)/15

We hereby certify that the product described herein has been manufactured in accordance with the specifications concerned and also with the purchaser's requirements and that the test results shown herein are correct.

* 1 : "T" symbolized wall thickness in mm. * 2 : YS Yield strength TS = Tensile strength E = Elongation
Q-065/1

82805

* A. Bat Ruked Joppan

Quality Assurance Manager
Thai Benkan Co., Ltd.
38 Soi Walkrunai, Bangkok, Prapadeng,
Samutprakan, 10130 Thailand.

47C20006

Tee TH4
1/2" 3M



INDUSTRIA MECCANICA LIGURE SPA

INSPECTION CERTIFICATE EN 10204:2004 / 3.1
COMPANY WITH QUALITY SYSTEM ISO 9001:2000
CERTIFIED BY RINA

SEYBOLD INTERNATIONAL CORP.
20 Holly Street, Unit 205
TORONTO M4S 3B1 CANADA

Certificate Nr. 15461
Invoice Nr. 607
Del. Note Nr. 909
CA

16030 CASARZA LIGURE - Genova - Italy - P.zza Marco Cappellari 4 - Tel.010.55.457661 - Fax 010.55.466510 / MATERIAL TEST DEPARTMENT This certificate has been generated by computer and need not to be signed for validity according to DIN EN 10204 Page 9 - 9

HEAT CODE	HEAT	ITEM	YOUR P.O.	OUR REFERENCE	Q.TY	DESCRIPTION	DIM. ACC. TO	VISUAL & DIMENS.															
GP1	70277	005	4660	2004-2E209-0003035-005	1100	FITTING 90 ELB. THIRD NPT 2M 1" A105N CODE: 3957	SEE NOTE	SATISFACTORY															
CAE	75817	009	4660	2004-2E209-0003035-009	265	FITTING 90 ELB. THIRD NPT 3M 2" A105N CODE: 3972	SEE NOTE	SATISFACTORY															
TH4	73854	035	4660	2004-2E209-0003035-035	50	FITTING TEE THIRD NPT 3M 1/2" A350LF2 CODE: 8425050 POS. NOT SHIPPED AGAINST...	SEE NOTE	SATISFACTORY															
HEAT CODE	HEAT	ITEM	MATERIAL	C%	S%	Mn%	S%	P%	Cr%	Ni%	Mo%	Ti%	Cu%	V%	Nb%	N%	Al%	C.E.%	OTHER ELEMENTS				
GP1	70277	005	ASTM A105	0,205	0,160	1,030	0,020	0,012	0,070	0,050	0,010	1,000	0,130	0,003	0,000	0,000	0,007	0,409					
CAE	75817	009	ASTM A105	0,200	0,190	1,140	0,012	0,011	0,060	0,050	0,010	0,022	0,170	0,028	0,001	0,000	0,025	0,424					
TH4	73854	035	ASTM A350 LF2 cl.1	0,185	0,210	0,940	0,027	0,015	0,110	0,060	0,020	0,012	0,200	0,002	0,001	0,000	0,005	0,385					
HEAT CODE	HEAT	ITEM	TEST SPECIMEN SECT. and LEIGHT mm	YIELD POINT N/mm2 min.	TENSILE STRENGTH N/mm2 min.	ELONGATION %	REDUCTION OF AREA %	HARDNESS HB	BEND TEST	FLATTENING TEST	IMPACT TEST - JOULES			SHAPE			WELD POINT						
GP1	70277	005	122,65 50,00	332,0	537,0	31,2	55,4	162 - 168	0,0	0,0	KV	20	101	107	104	1	0,0						
CAE	75817	009	122,65 50,00	354,0	575,0	32,0	57,0	174 - 178	0,0	0,0	KV	20	103	106	100	1	0,0						
TH4	73854	035	122,65 50,00	326,0	503,0	34,5	55,5	148 - 156	0,0	0,0	KV	-46	62	65	60	1	0,0						
HEAT CODE	HEAT	ITEM	MATERIAL IN ACCORDANCE TO										HEAT TREATMENT			FURNACE			STEEL MILL	Our Ref.			
GP1	70277	005	ASME SA ASTM A105-03										Normalized at 880-920 °C / Air Cool			ELECTRIC FURNACE			RIVA ACCIAI	041383			
CAE	75817	009	ASME SA ASTM A105-03										Normalized at 880-920 °C / Air Cool			ELECTRIC FURNACE			RIVA ACCIAI	052014			
TH4	73854	035	ASME SA ASTM A350-04a Gr. LF2 cl.1										Normalized at 800 °C / Air Cool			ELECTRIC FURNACE			RIVA ACCIAI	051106			
NOTES ASME B16.11/01 - BS.3789 - ANSI B31.1/B31.3 - IML STD - ANSI B1.1-B18.2.2 - NACE MR0175 ISO 15156/1 - SUPPLIED MATERIAL MEETS SPECIFICATIONS AND P.O. REQUIREMENTS																							
INSPECTION AUTHORITY						QUALITY CONTROL DEPARTMENT						MANUFACTURER'S SYMBOL						MANUFACTURER'S SYMBOL					
87807						BORIS RIZZOTTI						FITTINGS IML						STUBBOLTS					

CERTIFIED MILL TEST REPORT



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Date 03/15/06

CUSTOMER'S Order No.: 9106933-00

Bonney Order No. 029648

SHIPPED TO: WESTLUND INDUSTRIAL SUPPLY
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350631

EDMONTON ALBERTA
 EDMONTON ALBERTA, T6E5S5 CANAD

ITEM	QUANTITY	LOT NO.	GRADE OR SPECIFICATION NO. CHEMICAL ANALYSIS, PHYSICAL PROPERTIES, REMARKS:					
			SA/A105N					
010	210	3434	7522762	3/4 3000 A105N CAP T				
				C .190 MN 1.070 P .008 S .023 SI .200				
				NI .030 CU .150 CO .003 CR .040 MO .013				
				V .000 AL .024 NB .013				
				CE(LONG FORMULA) = 0.39				
				T/S 78978 Y/S 53436 EL 32.00 RA 57.00				
				BRINELL HARDNESS1: 151 HARDNESS2: 154				
014	325	56687	7523173	1/2 3000 A105N TEE T				
				C .200 MN 1.030 P .005 S .019 SI .210				
				NI .030 CU .150 CR .040 MO .020 V .000				
				AL .024 NB .014				
				CE(LONG FORMULA) = 0.40				
				T/S 80750 Y/S 53750 EL 30.25 RA 63.00				
				BRINELL HARDNESS1: 156 HARDNESS2: 153				
016	40	56669	7523238	1 3000 A105N TEE T				
				C .190 MN 1.000 P .010 S .023 SI .200				
				NI .040 CU .130 CR .050 MO .010 V .002				
				AL .021 NB .015				
				CE(LONG FORMULA) = 0.38				
				T/S 78000 Y/S 49500 EL 29.00 RA 65.00				
				BRINELL HARDNESS1: 156 HARDNESS2: 159				
029	48	56683	7525346	3 2M A105N TEE T				
				C .170 MN 1.060 P .010 S .021 SI .250				
				NI .100 CU .220 CO .007 CR .100 MO .020				
				V .039 AL .020 NB .003				
				CE(LONG FORMULA) = 0.40				
				T/S 84500 Y/S 57750 EL 28.75 RA 64.70				
				BRINELL HARDNESS1: 150 HARDNESS2: 156				

***** CONTINUED ON NEXT PAGE *****

We certify that the data on this sheet is a true copy taken from our records of material furnished us by the production mill, or as obtained by additional laboratory checks.

by

Cris Childers

CMTR: REV 1

QUALITY PROCESS MANAGER

1/2" 3000 FS SCRD TEE
56687

Tmo

1/2" 3M TEE
A105N



INDUSTRIA MECCANICA LIGURE SPA

INSPECTION CERTIFICATE EN 102012004 / 3.1

COMPANY WITH QUALITY SYSTEM ISO 9001:2000
CERTIFIED BY RINA

SEYBOLD INTERNATIONAL CORP.

28 Hwy Steel, Unit 205
TORONTO, ONT M9S 3B1 CANADA

Certificate Nr. 15841
Invoice Nr. 1172
Del. Note Nr. 1738
CA

Dated 17.10.2005
Dated 17.10.2005
Dated 17.10.2005

16030 CASARZA LIGURE - Genova - Italy - P.zza Marco Capelli, 4 - Tel. 010.65.467651 - Fax 010.65.466510 / MATERIAL TEST DEPARTMENT This certificate has been generated by computer and need not to be signed for validity according to DIN EN 10204 Page 1 - 5

HEAT CODE	HEAT	ITEM	YOUR P.O.	OUR REFERENCE	QTY	DESCRIPTION	DIM. ACC. TO	VISUAL & DIMENS.											
TH4	73854	011	4670	2004-2E209-0003046-011	200	FITTING TEE THRD NPT 3M 1/2" A105N CODE: 4035	SEE NOTE	SATISFACTORY											
TMO	75498	011	4670	2004-2E209-0003046-011	1125	FITTING TEE THRD NPT 3M 1/2" A105N CODE: 4035	SEE NOTE	SATISFACTORY											
G16	73850	023	4670	2004-2E209-0003046-023	775	FITTING 90 ELB. SW 3M 1" A105N CODE: 6170	SEE NOTE	SATISFACTORY											
CHC	37626	025	4670	2004-2E209-0003046-025	246	FITTING 90 ELB. SW 3M 2" A105N CODE: 6455	SEE NOTE	SATISFACTORY											
CIO	74275	008	4670	2004-2E209-0003046-008	435	FITTING 90 ELB. THRD NPT 3M 2" A105N CODE: 3972	SEE NOTE	SATISFACTORY											
G20	73569	024	4670	2004-2E209-0003046-024	220	FITTING 90 ELB. SW 3M 1 1/2" A105N CODE: 6172	SEE NOTE	SATISFACTORY											
CHC	37626	025	4670	2004-2E209-0003046-025	98	FITTING 90 ELB. SW 3M 2" A105N CODE: 6455	SEE NOTE	SATISFACTORY											
GR6	73852	005	4670	2004-2E209-0003046-005	650	FITTING 90 ELB. THRD NPT 3M 3/4" A105N CODE: 3968	SEE NOTE	SATISFACTORY											
HEAT CODE	HEAT	ITEM	MATERIAL	%	SI%	MIN%	SI%	PN%	CN%	NI%	MO%	TI%	CU%	VN%	NI%	N%	AN%	C.E.%	OTHER ELEMENTS
TH4	73854	011	ASTM A105	0.185	0.210	0.940	0.027	0.015	0.110	0.060	0.020	0.012	0.200	0.002	0.001	0.000	0.005	0.385	
TMO	75498	011	ASTM A105	0.185	0.170	1.020	0.026	0.014	0.090	0.060	0.010	0.005	0.230	0.002	0.000	0.000	0.012	0.395	
G16	73850	023	ASTM A105	0.185	0.150	1.010	0.017	0.018	0.140	0.060	0.010	0.010	0.260	0.002	0.001	0.000	0.005	0.405	
CHC	37626	025	ASTM A105	0.185	0.250	0.930	0.021	0.020	0.200	0.120	0.020	0.010	0.250	0.005	0.002	0.000	0.005	0.410	
CIO	74275	008	ASTM A105	0.200	0.220	0.950	0.024	0.017	0.120	0.080	0.020	0.013	0.230	0.002	0.001	0.000	0.006	0.407	
G20	73569	024	ASTM A105	0.205	0.170	1.050	0.021	0.018	0.120	0.060	0.010	0.025	0.180	0.018	0.001	0.000	0.023	0.426	
CHC	37626	025	ASTM A105	0.185	0.250	0.930	0.021	0.020	0.200	0.120	0.020	0.010	0.250	0.005	0.002	0.000	0.005	0.410	
GR6	73852	005	ASTM A105	0.190	0.270	1.000	0.027	0.019	0.150	0.070	0.020	0.014	0.250	0.002	0.001	0.000	0.005	0.412	
HEAT CODE	HEAT	ITEM	TEST SPECIFICATION	YIELD POINT	TENSILE STRENGTH	ELONGATION	REDUCTION OF AREA	HARDNESS	BEND TEST	FLATTENING TEST	TYPE 1	TYPE 2	TYPE 3	TYPE 4	TYPE 5	TYPE 6	TYPE 7	TYPE 8	YIELD POINT
TH4	73854	011	122.65	50.00	520.0	33.5	59.0	152 - 158	0.0	0.0	KV	20	106	102	104	1	0.0		
TMO	75498	011	122.65	50.00	530.0	30.0	56.0	161 - 165	0.0	0.0	KV	20	106	100	104	1	0.0		
G16	73850	023	122.65	50.00	535.0	30.0	57.0	165 - 160	0.0	0.0	KV	20	105	101	103	1	0.0		
CHC	37626	025	122.65	50.00	521.0	33.0	62.0	159 - 163	0.0	0.0	KV	20	103	106	102	1	0.0		
CIO	74275	008	122.65	50.00	539.0	31.0	60.0	163 - 165	0.0	0.0	KV	20	109	102	104	1	0.0		
G20	73569	024	122.65	50.00	557.0	31.0	56.0	160 - 162	0.0	0.0	KV	20	114	106	108	1	0.0		
CHC	37626	025	122.65	50.00	521.0	33.0	62.0	159 - 163	0.0	0.0	KV	20	103	106	102	1	0.0		
GR6	73852	005	122.65	50.00	532.0	32.5	57.0	160 - 164	0.0	0.0	KV	20	106	100	104	1	0.0		
HEAT CODE	HEAT	ITEM	MATERIAL	IN ACCORDANCE TO	HEAT TREATMENT	FURNACE	STEEL MILL	OUR Ref.											
TH4	73854	011	ASME SA ASTM A105-03		Normalized at 880°-920°C / Air Cool	ELECTRIC FURNACE	RIVA ACCIAI	051106											
TMO	75498	011	ASME SA ASTM A105-03		Normalized at 880°-920°C / Air Cool	ELECTRIC FURNACE	RIVA ACCIAI	051227											
G16	73850	023	ASME SA ASTM A105-03		Normalized at 880°-920°C / Air Cool	ELECTRIC FURNACE	RIVA ACCIAI	051050											
CHC	37626	025	ASME SA ASTM A105-03		Normalized at 880°-920°C / Air Cool	ELECTRIC FURNACE	RIVA ACCIAI	052032											
CIO	74275	008	ASME SA ASTM A105-03		Normalized at 880°-920°C / Air Cool	ELECTRIC FURNACE	RIVA ACCIAI	052031											
G20	73569	024	ASME SA ASTM A105-03		Normalized at 880°-920°C / Air Cool	ELECTRIC FURNACE	RIVA ACCIAI	051166											
CHC	37626	025	ASME SA ASTM A105-03		Normalized at 880°-920°C / Air Cool	ELECTRIC FURNACE	RIVA ACCIAI	052032											
GR6	73852	005	ASME SA ASTM A105-03		Normalized at 880°-920°C / Air Cool	ELECTRIC FURNACE	RIVA ACCIAI	051054											
NOTES ASME B16.1/01 - BS.3799 - ANSI B31.1/BS1.3 - IMI. STD. - ANSI B1.1-B18.2.2 - NACE MR0175 ISO 15166/1 - SUPPLIED MATERIAL MEETS SPECIFICATIONS AND P.O. REQUIREMENTS																			
INSPECTION AUTHORITY																			
QUALITY CONTROL DEPARTMENT																			
MANUFACTURER'S SYMBOL																			
MANUFACTURER'S SYMBOL																			
90122																			
BORIS FIZZOTTI																			
FITTINGS																			
IMI																			
STUDBOLTS																			

ZMO
1" 3m TEE
A105N

SEYBOLD INTERNATIONAL CORP.
3080 YONGE ST. SUITE 204
TORONTO M4M 1C4 CANADA CA

Certificate No. 13152
Invoice No. 2156
Doc. No. 18 203
Date: 18/12/2003
Date: 18/12/2003

COMPANY WITH QUALITY SYSTEM ISO 9002
CERTIFIED BY RIVA



INSPECTION CERTIFICATE DIN 50443.1B - EN 10204.1B

18030 CASARZA LIGURE - Genova - Italy - P.zza Marco Capelli, 4 - Tel. 0185.46761 - Fax 0185.466510 / MATERIAL TEST DEPARTMENT This certificate has been generated by computer and need not to be signed for validity according to DIN EN 10204 Page 2 - 14

HEAT CODE	HEAT	ITEM	YOUR P.O.	OUR REFERENCE	Q.TY	DESCRIPTION	DIM. ACC. TO	VISUAL & DIMENS.												
ZU	76528	035	4211	2003-2E209-0003000-035	375	FITTING TEE THIRD NPT 3M 1/2" A105N CODE: 4035	SEE NOTE	SATISFACTORY												
ZMO	71623	037	4211	2003-2E209-0003000-037	340	FITTING TEE THIRD NPT 3M 1" A105N CODE: 4037	SEE NOTE	SATISFACTORY												
	27899	041	4211	2003-2E209-0003000-041	64	FITTING CROSS THIRD NPT 3M 2" A105N CODE: 3918	SEE NOTE	SATISFACTORY												
	72251	050	4211	2003-2E209-0003000-050	350	FITTING COUPLING THIRD NPT 3M 1" A105N CODE: 3903	SEE NOTE	SATISFACTORY												
	78702	051	4211	2003-2E209-0003000-051	300	FITTING COUPLING THIRD NPT 3M 1 1/4" A105N CODE: 3905	SEE NOTE	SATISFACTORY												
GAO	73417	068	4211	2003-2E209-0003000-068	50	FITTING 90 ELB. SW 3M 1" A105N CODE: 6170	SEE NOTE	SATISFACTORY												
DCS	78105	002	4211	2003-2E209-0003000-002	25	FITTING HEX BUSHING M/F THIRD NPT 3/8M 1 1/2"x1 1/4" A105N CODE: 13222	SEE NOTE	SATISFACTORY												
DCT	78105	003	4211	2003-2E209-0003000-003	50	FITTING HEX BUSHING M/F THIRD NPT 3/8M 1 1/2"x1 1/2" A105N CODE: 3871	SEE NOTE	SATISFACTORY												
N17	78703		4211	2003-2E209-0003000-005	75	FITTING HEX BUSHING M/F THIRD NPT 3/8M 2"x1 1/2" A105N CODE: 3873	SEE NOTE	SATISFACTORY												
HEAT CODE	HEAT	ITEM	MATERIAL	C%	Si%	Mn%	S%	P%	C%	N%	MO%	TT%	Cu%	V%	Nb%	Al%	C.E.%	OTHER ELEMENTS		
ZU	76528	035	ASTM A105	0.200	0.200	0.080	0.024	0.015	0.080	0.050	0.010	0.013	0.160	0.003	0.000	0.005	0.395			
ZMO	71623	037	ASTM A105	0.200	0.210	0.090	0.013	0.011	0.080	0.050	0.010	0.020	0.180	0.020	0.000	0.025	0.419			
	27899	041	ASTM A105	0.200	0.200	0.080	0.019	0.012	0.120	0.100	0.037	0.000	0.160	0.000	0.000	0.000	0.408			
	72251	050	ASTM A105	0.185	0.180	0.080	0.020	0.018	0.120	0.070	0.010	0.000	0.240	0.004	0.000	0.006	0.417			
	78702	051	ASTM A105	0.190	0.200	0.080	0.013	0.011	0.090	0.050	0.010	0.019	0.180	0.025	0.000	0.025	0.405			
GAO	73417	068	ASTM A105	0.185	0.180	0.080	0.015	0.011	0.070	0.050	0.010	0.022	0.170	0.021	0.000	0.026	0.402			
DCS	78105	002	ASTM A105	0.190	0.240	0.080	0.010	0.011	0.060	0.050	0.010	0.000	0.160	0.001	0.000	0.000	0.389			
DCT	78105	003	ASTM A105	0.190	0.190	0.080	0.012	0.012	0.090	0.050	0.010	0.017	0.170	0.017	0.000	0.021	0.372			
N17	78703		ASTM A105	0.185	0.180	0.080	0.012	0.012	0.090	0.050	0.010	0.020	0.180	0.017	0.000	0.025	0.417			
HEAT CODE	HEAT	ITEM	TEST SPECIFIER	SECT. mm2	LENGHT mm	YIELD POINT Minmax 2x41.5%	TENSILE STRENGTH Minmax 2x	ELONGATION %	REDUCTION OF AREA %	HARDNESS HB	BEND TEST	FLATNESS TEST	TYPE TOLERANCE	IMPACT TEST - JOULES	TEMPERATURE °C	1	2	3	SHAPE 1+0 2+0	YIELD POINT Minmax 2x41.5%
ZU	76528	035		122.65	50.00	335.0	642.0	33.0	59.0	150 - 154	0.0	0.0	KV	98	98	99	101	1	0.0	
ZMO	71623	037		122.65	50.00	368.0	587.0	34.0	58.0	150 - 168	0.0	0.0	KV	20	20	99	105	1	0.0	
	27899	041		122.65	50.00	395.0	567.0	37.0	57.0	160 - 164	0.0	0.0	KV	20	20	85	85	1	0.0	
	72251	050		122.65	50.00	398.0	578.0	32.0	56.0	150 - 164	0.0	0.0	KV	20	20	108	114	1	0.0	
	78702	051		122.65	50.00	348.0	551.0	40.0	56.0	154 - 165	0.0	0.0	KV	20	20	88	88	1	0.0	
GAO	73417	068		122.65	50.00	352.0	560.0	33.0	54.0	162 - 166	0.0	0.0	KV	20	20	89	95	1	0.0	
DCS	78105	002		122.65	50.00	316.0	510.0	32.0	57.0	165 - 170	0.0	0.0	KV	20	20	81	95	1	0.0	
DCT	78105	003		122.65	50.00	328.0	519.0	31.0	59.0	168 - 168	0.0	0.0	KV	20	20	86	88	1	0.0	
N17	78703			122.65	50.00	386.0	537.0	31.0	59.0	160 - 164	0.0	0.0	KV	20	20	96	90	1	0.0	
HEAT CODE	HEAT	ITEM	MATERIAL IN ACCORDANCE TO																	
ZU	76528	035	ASME SA ASTM A105-01																	
ZMO	71623	037	ASME SA ASTM A105-01																	
	27899	041	ASME SA ASTM A105-01																	
	72251	050	ASME SA ASTM A105-01																	
	78702	051	ASME SA ASTM A105-01																	
GAO	73417	068	ASME SA ASTM A105-01																	
DCS	78105	002	ASME SA ASTM A105-01																	
DCT	78105	003	ASME SA ASTM A105-01																	
N17	78703		ASME SA ASTM A105-01																	
HEAT CODE	HEAT	ITEM	MATERIAL IN ACCORDANCE TO																	OUR Ref.
ZU	76528	035	ASME SA ASTM A105-01																	021449
ZMO	71623	037	ASME SA ASTM A105-01																	031158
	27899	041	ASME SA ASTM A105-01																	021162
	72251	050	ASME SA ASTM A105-01																	031425
	78702	051	ASME SA ASTM A105-01																	021432
GAO	73417	068	ASME SA ASTM A105-01																	021338
DCS	78105	002	ASME SA ASTM A105-01																	015011
DCT	78105	003	ASME SA ASTM A105-01																	032019
N17	78703		ASME SA ASTM A105-01																	023224
NOTES ASME B16.11.98 - BS.3799 - ANSI B31.1/BS31.3 - INL. STD. - NACE MR0175-99 -																				
ANSI B1.1-81B.2.2 - NACE MR0175-02																				
INSPECTION AUTHORITY							QUALITY CONTROL DEPARTMENT							MANUFACTURER'S SYMBOL						
BORIS PEZZOTTI							FITTINGS							L.M.L.						
														STUD BOLTS						

1" 3m Tee

TM3
76747

INSPECTION CERTIFICATE EN 10204:2004 / 3.1
COMPANY WITH QUALITY SYSTEM ISO 9001:2000
CERTIFIED BY RINA

SEYBOLD INTERNATIONAL CORP.
20 Holly Street, Unit 205
TORONTO M4S 3B1 CANADA

Certificate Nr. 16208
Invoice Nr. 152
Del. Note Nr. 242
CA

16030 CASAREZA LIGURE - Genova - Italy - P.zza Marco Capripollà - Tel. 0185.437861 - Fax 0185.466310 / MATERIAL TEST DEPARTMENT This certificate has been generated by computer and need not to be signed for validity according to DIN EN 10204 Page 2 - 11

HEAT CODE	HEAT	ITEM	YOUR P.O.	OUR REFERENCE	Q.TY	DESCRIPTION	DIM. ACC. TO	VISUAL & DIMENS.											
DIU	77180	025	5137	2005-2E209-0003052-025	304	FITTING TEE THRD NPT 3M 2" A105N CODE: 4375	SEE NOTE	SATISFACTORY											
G28	77255	017	5137	2005-2E209-0003052-017	505	FITTING 90 ELB. THRD NPT 3M 2" A105N CODE: 3872	SEE NOTE	SATISFACTORY											
H77	75750	015	5137	2005-2E209-0003052-015	420	FITTING 90 ELB. THRD NPT 3M 1" A105N CODE: 3889	SEE NOTE	SATISFACTORY											
TM3	76747	023	5137	2005-2E209-0003052-023	670	FITTING TEE THRD NPT 3M 1" A105N CODE: 4037	SEE NOTE	SATISFACTORY											
UP0	74379	030	5137	2005-2E209-0003052-030	30	FITTING UNION F/F THRD NPT 3M 2" A105N CODE: 5609	SEE NOTE	SATISFACTORY											
NB3	76607	014	5137	2005-2E209-0003052-014	1005	FITTING HEX.H. PLUG THRD NPT 3/8M 2" A105N CODE: 4009	SEE NOTE	SATISFACTORY											
UP0	74379	030	5137	2005-2E209-0003052-030	170	FITTING UNION F/F THRD NPT 3M 2" A105N CODE: 5609	SEE NOTE	SATISFACTORY											
H1	75347	002	5137	2005-2E209-0003052-002	210	FITTING HEX.BUSHING M/F THRD NPT 3/8M 2"x1/2" A105N CODE: 3878	SEE NOTE	SATISFACTORY											
HEAT CODE	HEAT	ITEM	MATERIAL	C%	Si%	Mn%	S%	P%	C%	N%	Mo%	Ti%	Cu%	V%	Nb%	N%	Al%	C.E.%	OTHER ELEMENTS
DIU	77180	025	ASTM A105	0.180	0.180	0.380	0.019	0.018	0.090	0.050	0.010	0.005	0.170	0.002	0.000	0.000	0.017	0.378	
G28	77255	017	ASTM A105	0.180	0.170	0.380	0.017	0.011	0.070	0.040	0.010	0.005	0.130	0.001	0.000	0.000	0.013	0.358	
H77	75750	015	ASTM A105	0.185	0.240	0.080	0.013	0.009	0.080	0.050	0.010	0.019	0.150	0.023	0.000	0.000	0.023	0.411	
TM3	76747	023	ASTM A105	0.185	0.230	0.380	0.018	0.018	0.080	0.040	0.010	0.005	0.170	0.002	0.001	0.000	0.013	0.377	
UP0	74379	030	ASTM A105	0.190	0.220	0.380	0.019	0.013	0.120	0.060	0.010	0.014	0.230	0.002	0.000	0.000	0.005	0.388	
NB3	76607	014	ASTM A105	0.190	0.190	0.380	0.021	0.017	0.080	0.010	0.020	0.015	0.160	0.002	0.000	0.000	0.021	0.371	
UP0	74379	030	ASTM A105	0.190	0.220	0.380	0.019	0.013	0.120	0.060	0.010	0.014	0.230	0.002	0.000	0.000	0.005	0.389	
H1	75347	002	ASTM A105	0.185	0.180	1.000	0.018	0.016	0.110	0.080	0.010	0.005	0.210	0.002	0.001	0.000	0.013	0.394	
HEAT CODE	HEAT	ITEM	TEST PROCEDURE	YIELD POINT	TENSILE STRENGTH	ELONGATION	REDUCTION OF AREA	IMPACT	BEND TEST	FLATNESS TEST	TYPE TENSILE	HEAD TEST	JOINTS	WELD	WELD	WELD	WELD	WELD	WELD
DIU	77180	025	RECT. and	327.0	528.0	33.0	58.0	159 - 163	0.0	0.0	KV	20	106	100	102	1	0.0		
G28	77255	017	RECT. and	306.0	538.0	36.0	56.0	160 - 168	0.0	0.0	KV	20	106	118	105	1	0.0		
H77	75750	015	RECT. and	305.0	538.0	31.0	56.0	160 - 168	0.0	0.0	KV	20	114	105	109	1	0.0		
TM3	76747	023	RECT. and	325.0	522.0	33.0	58.0	159 - 164	0.0	0.0	KV	20	103	105	99	1	0.0		
UP0	74379	030	RECT. and	325.0	520.0	34.0	59.0	160 - 165	0.0	0.0	KV	20	98	103	100	1	0.0		
NB3	76607	014	RECT. and	340.0	522.0	35.0	56.0	158 - 166	0.0	0.0	KV	20	103	100	98	1	0.0		
UP0	74379	030	RECT. and	325.0	520.0	34.0	59.0	160 - 165	0.0	0.0	KV	20	96	103	100	1	0.0		
H1	75347	002	RECT. and	364.0	543.0	31.0	54.0	160 - 164	0.0	0.0	KV	20	105	107	100	1	0.0		
HEAT CODE	HEAT	ITEM	MATERIAL	IN ACCORDANCE TO	HEAT TREATMENT	FURNACE	STEEL MILL	OUR Ref.											
DIU	77180	025	ASTM SA ASTM A105-05		Normalized at 880°-920°C / Air Cool	ELECTRIC FURNACE	RIVA ACCIAI	052058											
G28	77255	017	ASTM SA ASTM A105-05		Normalized at 880°-920°C / Air Cool	ELECTRIC FURNACE	RIVA ACCIAI	051343											
H77	75750	015	ASTM SA ASTM A105-05		Normalized at 880°-920°C / Air Cool	ELECTRIC FURNACE	RIVA ACCIAI	M12023											
TM3	76747	023	ASTM SA ASTM A105-05		Normalized at 880°-920°C / Air Cool	ELECTRIC FURNACE	RIVA ACCIAI	051313											
UP0	74379	030	ASTM SA ASTM A105-05		Normalized at 880°-920°C / Air Cool	ELECTRIC FURNACE	RIVA ACCIAI	051107											
NB3	76607	014	ASTM SA ASTM A105-05		Normalized at 880°-920°C / Air Cool	ELECTRIC FURNACE	RIVA ACCIAI	051303											
UP0	74379	030	ASTM SA ASTM A105-05		Normalized at 880°-920°C / Air Cool	ELECTRIC FURNACE	RIVA ACCIAI	051107											
H1	75347	002	ASTM SA ASTM A105-05		Normalized at 880°-920°C / Air Cool	ELECTRIC FURNACE	RIVA ACCIAI	051229											
NOTES				INSPECTION AUTHORITY				QUALITY CONTROL DEPARTMENT		MANUFACTURER'S SYMBOL		MANUFACTURER'S SYMBOL							
B1-1818.2.2 - NACE MR0175 ISO 15156/1 - SUPPLIED MATERIAL MEETS SPECIFICATIONS AND P.O. REQUIREMENTS				42355				BORIS PIZZOTTI		FITTINGS IML		STUDEBOLTS							



I.M.L.

INDUSTRIA MECCANICA LIGURE SPA

INSPECTION CERTIFICATE EN 10204:2004 / 3.1

COMPANY WITH QUALITY SYSTEM ISO 9001-2000
CERTIFIED BY RINA

SEYBOLD INTERNATIONAL CORP.

20 Holly Street, Unit 205
TORONTO M4S 3B1 CANADA

CA

Certificate Nr 15509
Invoice Nr 718
Del. Note Nr 1085

Dated 20.06.2005
Dated 13.06.2005
Dated 13.06.2005

16030 CASARZA LIGURE - Genova - Italy - P.zza Marco Capelli, 4 - Tel.0185.467661 - Fax 0185.466510 / MATERIAL TEST DEPARTMENT This certificate has been generated by computer and need not to be signed for validity according to DIN EN 10204 Page 8 - 8

HEAT CODE	HEAT	ITEM	YOUR P.O.	OUR REFERENCE	Q. TV	DESCRIPTION	DIM. ACC. TO	VISUAL & DIMENS.
ACF	76295	012	4661	2004-2E209-0003036-012	375	THREADOLET NPT 3M 1"x3"-3 1/2" A105N CODE: 5120	SEE NOTE	SATISFACTORY
ACF	76295	014	4661	2004-2E209-0003036-014	125	THREADOLET NPT 3M 1"x6"-10" A105N CODE: 5914	SEE NOTE	SATISFACTORY
ABZ	37678	018	4661	2004-2E209-0003036-018	40	WEIDOLET BW STD 2"x6" A105N CODE: 5913	SEE NOTE	SATISFACTORY
ACK	76663	020	4661	2004-2E209-0003036-020	50	SOCKOLET SW 3/4"x6"-12" A105N CODE: 45637	SEE NOTE	SATISFACTORY
T54	76786	053	4661	2004-2E209-0003036-053	28	FITTING TEE THRD NPT 2/3M 1/4" A350/LF2 CODE: 9043	SEE NOTE	SATISFACTORY
TH5	73215	053	4661	2004-2E209-0003036-053	22	FITTING TEE THRD NPT 2/3M 1/4" A350/LF2 CODE: 9043	SEE NOTE	SATISFACTORY
L320	X21947	055	4661	2004-2E209-0003036-055	270	FITTING UNION F/F SW 3M 1" A105N CODE: 77960/270 PCS. NOT SHIPPED AGAINST P.O. ...	SEE NOTE	SATISFACTORY
H45	73854	056	4661	2004-2E209-0003036-056	500	FITTING RED. TEE THRD NPT 3M 1"x1/2" A105N CODE: 45668	SEE NOTE	SATISFACTORY

HEAT CODE	HEAT	ITEM	MATERIAL	C%	SI%	Mn%	S%	P%	Cr%	Ni%	Mo%	TI%	Cu%	V%	Nb%	N%	Al%	C.E.%	OTHER ELEMENTS
ACF	76295	012	ASTM A105	0.195	0.220	0.920	0.009	0.008	0.100	0.060	0.020	0.018	0.200	0.021	0.001	0.000	0.025	0.394	
ACF	76295	014	ASTM A105	0.195	0.220	0.920	0.009	0.008	0.100	0.060	0.020	0.018	0.200	0.021	0.001	0.000	0.025	0.394	
ABZ	37678	018	ASTM A105	0.180	0.240	0.980	0.023	0.012	0.080	0.070	0.010	0.000	0.180	0.001	0.001	0.000	0.000	0.378	
ACK	76663	020	ASTM A105	0.195	0.220	0.900	0.010	0.011	0.140	0.070	0.010	0.000	0.190	0.017	0.001	0.000	0.000	0.396	
T54	76786	053	ASTM A350 LF2 cl.1	0.220	0.210	0.880	0.010	0.018	0.100	0.050	0.010	0.014	0.200	0.016	0.000	0.000	0.018	0.408	
TH5	73215	053	ASTM A350 LF2 cl.1	0.190	0.180	0.960	0.010	0.012	0.110	0.050	0.010	0.018	0.170	0.016	0.001	0.000	0.020	0.392	
L320	X21947	055	ASTM A105	0.200	0.270	0.850	0.028	0.011	0.110	0.100	0.030	0.003	0.110	0.003	0.001	0.000	0.028	0.384	
H45	73854	056	ASTM A105	0.185	0.210	0.940	0.027	0.015	0.110	0.060	0.020	0.012	0.200	0.002	0.001	0.000	0.005	0.385	

HEAT CODE	HEAT	ITEM	SECT. mm2	LENGTH mm	YIELD POINT N/mm2 >=0.2%	TENSILE STRENGTH N/mm2 >=	ELONGATION %>=	REDUCTION OF AREA %>=	HARDNESS HB	BEND TEST	FLATTENING TEST	IMPACT TEST - JOULE/cm2			SHAPE 1=O 2=□	YIELD POINT N/mm2 >=1.0%		
												TYPE 10x10mm	℃	1	2	3		
ACF	76295	012	50.00	318.0	615.0	31.5	56.0	158 - 164	0.0	0.0	0.0	KV	20	99	103	102	1	0.0
ACF	76295	014	50.00	318.0	615.0	31.5	56.0	158 - 164	0.0	0.0	0.0	KV	20	99	103	102	1	0.0
ABZ	37678	018	50.00	311.0	520.0	32.0	65.0	159 - 163	0.0	0.0	0.0	KV	20	87	95	101	1	0.0
ACK	76663	020	50.00	312.0	502.0	33.2	58.0	159 - 165	0.0	0.0	0.0	KV	20	79	85	88	1	0.0
T54	76786	053	50.00	342.0	565.0	35.0	61.0	164 - 168	0.0	0.0	0.0	KV	-46	51	50	52	1	0.0
TH5	73215	053	50.00	315.0	525.0	31.0	58.0	154 - 160	0.0	0.0	0.0	KV	-46	56	60	52	1	0.0
L320	X21947	055	50.00	361.0	525.0	30.0	57.0	152 - 156	0.0	0.0	0.0	KV	20	106	100	105	1	0.0
H45	73854	056	50.00	320.0	525.0	34.0	55.0	160 - 165	0.0	0.0	0.0	KV	20	109	102	104	1	0.0

HEAT CODE	HEAT	ITEM	MATERIAL IN ACCORDANCE TO	HEAT TREATMENT	FURNACE	STEEL MILL	Our Ref.
ACF	76295	012	ASME SA ASTM A105-03	Normalized at 880 °920 °C / Air Cool	ELECTRIC FURNACE	RIVA ACCIAI	
ACF	76295	014	ASME SA ASTM A105-03	Normalized at 880 °920 °C / Air Cool	ELECTRIC FURNACE	RIVA ACCIAI	
ABZ	37678	018	ASME SA ASTM A105-03	Normalized at 880 °920 °C / Air Cool	ELECTRIC FURNACE		N30007
ACK	76663	020	ASME SA ASTM A105-03	Normalized at 880 °920 °C / Air Cool	ELECTRIC FURNACE		N30003
T54	76786	053	ASME SA ASTM A350-04a Gr. LF2 cl.1	Normalized at 900 °C / Air Cool	ELECTRIC FURNACE		
TH5	73215	053	ASME SA ASTM A350-04a Gr. LF2 cl.1	Normalized at 900 °C / Air Cool	ELECTRIC FURNACE		
L320	X21947	055	ASME SA ASTM A105-03	Normalized at 880 °920 °C / Air Cool	ELECTRIC FURNACE		
H45	73854	056	ASME SA ASTM A105-03	Normalized at 880 °920 °C / Air Cool	ELECTRIC FURNACE		

NOTES	ASME B16.11/01 - BS.3799 - ANSI B31.1/B31.3 - IML STD - ANSI B1.1-B18.2.2 - NACE MR0175 ISO 15156/1 - MSS SP83 - SUPPLIED MATERIAL MEETS SPECIFICATIONS AND P.O. REQUIREMENTS	INSPECTION AUTHORITY	QUALITY CONTROL DEPARTMENT	MANUFACTURERS SYMBOL	FITTINGS	IML	STUBBOLTS
		88037	BORIS FIZZOTTI				



I.M.L.

INDUSTRIA MECCANICA LIGURE SPA

INSPECTION CERTIFICATE DIN 50048.1B - EN 10204.3.1B

COMPANY WITH QUALITY SYSTEM ISO 9001:2000
CERTIFIED BY RINASEYBOLD INTERNATIONAL CORP.
20 High Street, Unit 205
TORONTO M5S 3B1 CANADA

CA	Certificate No. 14460	Dated 16/12/2004
	Invoice No. 1789	Dated 14/12/2004
	Del. No. 16 2230	Dated 14/12/2004

16030 CASARZA LIGURE - Genova - Italy - P.zza Marco Capelli, 4 - Tel.010.547651 - Fax 010.5465310 / MATERIAL TEST DEPARTMENT This certificate has been generated by computer and need not to be signed for validity according to DIN EN 10204 Page 1 - 15

HEAT CODE	HEAT	ITEM	YOUR P.O.	OUR REFERENCE	QTY	DESCRIPTION	DIN ACC. TO
NX	78927	001	4585	2004-2E209-0003028-001	180	FITTING HEXBUSHING M/F THIRD NPT 2"x1/2" A105N 38M CODE: 3878	SEE NOTE
TES	78927	002	4585	2004-2E209-0003028-002	300	FITTING TEE THIRD NPT 2M 1/2" A105N CODE: 4025	SATISFACTORY
GL3	78927	005	4585	2004-2E209-0003028-005	475	FITTING 90 ELB. THIRD NPT 3M 3/4" A105N CODE: 3898	SEE NOTE
Z66	78184	006	4585	2004-2E209-0003028-006	30	FITTING 90 ELB. THIRD NPT 3M 1/4" A105N CODE: 3870	SATISFACTORY
BHH	77900	008	4585	2004-2E209-0003028-008	48	FITTING TEE THIRD NPT 3M 1/4" A105N CODE: 4039	SEE NOTE
TES	78927	013	4585	2004-2E209-0003028-013	128	FITTING UNION F/F THIRD NPT 3M 1/2" A105N CODE: 5608	SEE NOTE
GL3	78927	016	4585	2004-2E209-0003028-016	90	FITTING RED TEE THIRD NPT 3M 1/2" A105N CODE: 45668	SEE NOTE
TC3	45281	017	4585	2004-2E209-0003028-017	90	FITTING RED TEE THIRD NPT 3M 1/2" A105N CODE: 45669	SEE NOTE
BNL	78974	018	4585	2004-2E209-0003028-018	60	FITTING RED TEE THIRD NPT 3M 2"x1/2" A105N CODE: 28705	SEE NOTE
BNL	78974	019	4585	2004-2E209-0003028-019	84	FITTING RED TEE THIRD NPT 3M 2"x1" A105N CODE: 11017	SEE NOTE

HEAT CODE	HEAT	ITEM	MATERIAL	C%	S%	M%	P%	C%	N%	M%	T%	C%	V%	NB%	N%	AT%	C.E%	OTHER ELEMENTS
NX	78927	001	ASTM A105	0.185	0.200	0.080	0.022	0.010	0.070	0.060	0.010	0.008	0.180	0.003	0.001	0.000	0.005	0.382
TES	78927	002	ASTM A105	0.185	0.200	0.080	0.022	0.010	0.070	0.060	0.010	0.008	0.180	0.003	0.001	0.000	0.005	0.382
GL3	78927	005	ASTM A105	0.185	0.200	0.080	0.022	0.010	0.070	0.060	0.010	0.008	0.180	0.003	0.001	0.000	0.005	0.382
Z66	78184	006	ASTM A105	0.190	0.200	0.080	0.022	0.016	0.120	0.050	0.010	0.012	0.180	0.002	0.000	0.007	0.380	
BHH	77900	008	ASTM A105	0.205	0.170	0.040	0.022	0.015	0.130	0.070	0.010	0.013	0.200	0.003	0.001	0.000	0.005	0.386
TES	78927	013	ASTM A105	0.200	0.210	0.080	0.020	0.019	0.090	0.050	0.000	0.018	0.180	0.025	0.000	0.000	0.005	0.408
GL3	78927	016	ASTM A105	0.200	0.210	0.080	0.020	0.019	0.100	0.050	0.010	0.008	0.240	0.003	0.000	0.000	0.005	0.408
TC3	45281	017	ASTM A105	0.200	0.210	0.080	0.020	0.019	0.100	0.050	0.010	0.008	0.240	0.003	0.000	0.000	0.005	0.408
BNL	78974	018	ASTM A105	0.185	0.190	0.090	0.017	0.012	0.150	0.060	0.010	0.009	0.240	0.002	0.001	0.000	0.000	0.379
BNL	78974	019	ASTM A105	0.185	0.190	0.090	0.017	0.012	0.110	0.060	0.010	0.009	0.240	0.002	0.001	0.000	0.000	0.379

HEAT CODE	HEAT	ITEM	MATERIAL IN ACCORDANCE TO	SECT. mm	LENGTH mm	Wt. kg	YIELD POINT TENSILE STRENGTH	ELONGATION	REDUCTION OF AREA	HARDNESS	REMARKS	FLATTENING TEST	TYPE 180° BEND	IMPACT TEST - JOULES	TEMP. °C	SHAPE	YIELD POINT
NX	78927	001	ASTM A105-02	122.65	50.00	329.0	530.0	33.5	54.5	154 - 160	0.0	0.0	0.0	20	103	105	101
TES	78927	002	ASTM A105-02	122.65	50.00	329.0	530.0	33.0	57.0	154 - 160	0.0	0.0	0.0	20	100	106	103
GL3	78927	005	ASTM A105-02	122.65	50.00	318.0	516.0	33.0	58.0	156 - 159	0.0	0.0	0.0	20	106	104	1
Z66	78184	006	ASTM A105-02	122.65	50.00	329.0	528.0	33.0	55.5	156 - 160	0.0	0.0	0.0	20	100	106	104
BHH	77900	008	ASTM A105-02	122.65	50.00	318.0	528.0	31.0	60.0	159 - 163	0.0	0.0	0.0	20	95	99	110
TES	78927	013	ASTM A105-02	122.65	50.00	365.0	567.0	31.0	64.0	160 - 162	0.0	0.0	0.0	20	96	88	94
GL3	78927	016	ASTM A105-02	122.65	50.00	329.0	528.0	31.0	55.0	156 - 160	0.0	0.0	0.0	20	105	100	102
TC3	45281	017	ASTM A105-02	122.65	50.00	364.0	578.0	32.0	59.0	160 - 162	0.0	0.0	0.0	20	96	80	104
BNL	78974	018	ASTM A105-02	122.65	50.00	320.0	519.0	32.0	60.0	156 - 159	0.0	0.0	0.0	20	104	100	102
BNL	78974	019	ASTM A105-02	122.65	50.00	320.0	519.0	32.0	60.0	156 - 159	0.0	0.0	0.0	20	104	100	102

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INDUSTRIA MECCANICA LIGURE SPA

INSPECTION CERTIFICATE EN 10204:2004 / 3.1
COMPANY WITH QUALITY SYSTEM ISO 9001:2000
CERTIFIED BY RINA

SEBOLD INTERNATIONAL CORP.
20 Hwy Steel Unit 205
TORONTO M4S 3B1 CANADA
CA

Certificate Nr 17035
Invoice Nr 1154
Del. Note Nr 1833
Dated 22.11.2005
05.11.2005
06.11.2005

16030 CASARZA LIGURE - Genova - Italy - P.zza Marco Capelli/4 - Tel.010/54.67.661 - Fax.010/54.65.610 MATERIAL TEST DEPARTMENT This certificate has been generated by computer and need not to be signed for validity according to DIN EN 10204 Page 1 - 11

HEAT CODE	HEAT	ITEM	YOUR P.O.	OUR REFERENCE	QTY	DESCRIPTION	DIN ACC. TO	VISUAL & DIMENS.										
H46	73851	028	5942	2006-2E209-0003068-028	690	FITTING TEE THRD NPT 2M 1" A105N CODE: 4027	SEE NOTE	SATISFACTORY										
DDN	75754	028	5942	2006-2E209-0003068-028	240	FITTING TEE THRD NPT 2M 1" A105N CODE: 4027	SEE NOTE	SATISFACTORY										
	78482	072	5942	2006-2E209-0003068-072	250	FITTING COUPLING THRD NPT 3M 1/2" A350L/F2 CODE: 8416	SEE NOTE	SATISFACTORY										
	78457	073	5942	2006-2E209-0003068-073	150	FITTING COUPLING THRD NPT 3M 1" A350L/F2 CODE: 8418	SEE NOTE	SATISFACTORY										
CAQ	75618	075	5942	2006-2E209-0003068-075	75	FITTING 90 ELB. THRD NPT 3M 2" A350L/F2 CODE: 8420	SEE NOTE	SATISFACTORY										
TM6	77612	076	5942	2006-2E209-0003068-076	100	FITTING TEE THRD NPT 3M 1/2" A350L/F2 CODE: 8425	SEE NOTE	SATISFACTORY										
HA7	78879	084	5942	2006-2E209-0003068-084	90	FITTING RED TEE THRD NPT 3M 1/4" A105N CODE: 45668	SEE NOTE	SATISFACTORY										
ECI	75745	001	5942	2006-2E209-0003068-001	150	FITTING HEX BUSHING M/F THRD NPT 3/8M 1.1/4"x1" A105N CODE: 3871	SEE NOTE	SATISFACTORY										
HEAT CODE	HEAT	ITEM	MATERIAL	C%	SI%	Mn%	P%	C%	Ni%	Mo%	Ti%	Cu%	V%	Nb%	N%	Al%	C.E.%	OTHER ELEMENTS
H46	73851	028	ASTM A105	0.200	0.170	1.030	0.024	0.018	0.120	0.090	0.020	0.008	0.003	0.001	0.000	0.001	0.423	
DDN	75754	028	ASTM A105	0.180	0.220	0.960	0.018	0.015	0.110	0.080	0.020	0.005	0.170	0.002	0.000	0.011	0.382	
	78482	072	ASTM A350 LF2 cl.1	0.185	0.190	1.020	0.022	0.016	0.090	0.050	0.010	0.160	0.002	0.001	0.000	0.012	0.389	
	78457	073	ASTM A350 LF2 cl.1	0.205	0.230	0.900	0.026	0.018	0.100	0.050	0.010	0.005	0.170	0.002	0.002	0.008	0.382	
CAQ	75618	075	ASTM A350 LF2 cl.1	0.210	0.220	1.150	0.011	0.012	0.070	0.050	0.010	0.023	0.160	0.002	0.001	0.000	0.025	0.400
TM6	77612	076	ASTM A350 LF2 cl.1	0.185	0.200	0.900	0.021	0.013	0.100	0.060	0.010	0.005	0.190	0.002	0.001	0.000	0.014	0.374
HA7	78879	084	ASTM A105	0.180	0.190	0.950	0.020	0.020	0.120	0.070	0.010	0.005	0.002	0.000	0.000	0.013	0.381	
ECI	75745	001	ASTM A105	0.190	0.190	0.960	0.013	0.010	0.080	0.050	0.010	0.005	0.190	0.001	0.000	0.017	0.384	
HEAT CODE	HEAT	ITEM	TEST SPECIMEN	YIELD POINT	TENSILE STRENGTH	ELONGATION	REDUCTION OF AREA	HARDNESS	BEND TEST	FLATTENING TEST	TYPE TOLERANCE	IMPACT TEST - JOULE/cm2	SHAPE	YIELD POINT				
H46	73851	028	122.65	50.00	336.0	561.0	34.0	56.0	160 - 166	0.0	0.0	0.0	97	95				
DDN	75754	028	122.65	50.00	319.0	517.0	32.0	59.0	156 - 158	0.0	0.0	0.0	103	102				
	78482	072	122.65	50.00	306.0	548.0	31.0	54.0	160 - 166	0.0	0.0	0.0	54	50				
	78457	073	122.65	50.00	326.0	547.0	35.0	60.0	158 - 166	0.0	0.0	0.0	64	60				
CAQ	75618	075	122.65	50.00	325.0	533.0	33.0	61.0	163 - 165	0.0	0.0	0.0	53	59				
TM6	77612	076	122.65	50.00	307.0	506.0	30.0	56.0	162 - 170	0.0	0.0	0.0	54	50				
HA7	78879	084	122.65	50.00	306.0	539.0	31.0	49.0	160 - 162	0.0	0.0	0.0	98	98				
ECI	75745	001	122.65	50.00	309.0	549.0	31.0	56.0	160 - 166	0.0	0.0	0.0	88	85				
HEAT CODE	HEAT	ITEM	MATERIAL IN ACCORDANCE TO	HEAT TREATMENT	FURNACE	STEEL MILL	OUR RAT.											
H46	73851	028	ASME SA ASTM A105-05	Normalized at 880-920°C / Air Cool	ELECTRIC FURNACE	RIVA ACCIAI	052080											
DDN	75754	028	ASME SA ASTM A105-05	Normalized at 880-920°C / Air Cool	ELECTRIC FURNACE	RIVA ACCIAI	061090											
	78482	072	ASME SA ASTM A350-04a Gr. LF2 cl.1	Normalized at 900°C / Air Cool	ELECTRIC FURNACE	RIVA ACCIAI	061027											
	78457	073	ASME SA ASTM A350-04a Gr. LF2 cl.1	Normalized at 900°C / Air Cool	ELECTRIC FURNACE	RIVA ACCIAI	052021											
CAQ	75618	075	ASME SA ASTM A350-04a Gr. LF2 cl.1	Normalized at 900°C / Air Cool	ELECTRIC FURNACE	RIVA ACCIAI	051400											
TM6	77612	076	ASME SA ASTM A350-04a Gr. LF2 cl.1	Normalized at 900°C / Air Cool	ELECTRIC FURNACE	RIVA ACCIAI	081086											
HA7	78879	084	ASME SA ASTM A105-05	Normalized at 880-920°C / Air Cool	ELECTRIC FURNACE	RIVA ACCIAI	062028											
ECI	75745	001	ASME SA ASTM A105-05	Normalized at 880-920°C / Air Cool	ELECTRIC FURNACE	RIVA ACCIAI	062028											
NOTES ASME B16.11/05 - ANSI B31.1/B31.3 - IMI STD. - ANSI B1.1B12.2 - NACE MR0175 ISO 15156/1 - MSS SP 83 - SUPPLIED MATERIAL MEETS SPECIFICATIONS AND P.O. REQUIREMENTS																		
INSPECTION AUTHORITY																		
QUALITY CONTROL DEPARTMENT																		
MANUFACTURER'S SYMBOL																		
MANUFACTURER'S SYMBOL																		
FITTINGS																		
IML																		
STUDBOLTS																		

Elbow 1/2" 3M 90°

448



INDUSTRIA MECCANICA LIGURE SPA

INSPECTION CERTIFICATE EN 10204:2004 / 3.1
COMPANY WITH QUALITY SYSTEM ISO 9001:2000
CERTIFIED BY RINA

SETBOLD INTERNATIONAL CORP.
20 Holly Street, Unit 205
TORONTO M4S 3B1 CANADA
CA

Certificate Nr. 17337
Invoice Nr. 1232
Del. Name Nr. 1509
Dated 22.11.2006
Dated 16.11.2006
Dated 16.11.2006

16030 CASARZA LIGURE - Genova - Italy - P.zza Marco Capellini, 4 - Tel. 0105.467661 - Fax 0105.466510 / MATERIAL TEST DEPARTMENT This certificate has been generated by computer and need not to be signed for validity according to DIN EN 10204 - Page 3 - 5

HEAT CODE	HEAT	ITEM	YOUR P.O.	OUR REFERENCE	Q.TY	DESCRIPTION	DIM. ACC. TO	VISUAL & DIMENS.																		
ERF	72291	021	5943	2006-2E209-0003067-021	224	FITTING RED. TEE THIRD NPT 3M 2"x1" A105N CODE: 11017 J11.11.2006 : 224 PCS. NOT S...	SEE NOTE	SATISFACTORY																		
HB	79168	005	5943	2006-2E209-0003067-005	750	FITTING COUPLING THIRD NPT 3M 2" A105N CODE: 3906	SEE NOTE	SATISFACTORY																		
HB	78457	001	5943	2006-2E209-0003067-001	450	FITTING HEX. BUSHING M/F THIRD NPT 3/8M 2"x1" A105N CODE: 3880	SEE NOTE	SATISFACTORY																		
A48	78878	008	5943	2006-2E209-0003067-008	1375	FITTING 90 ELB. THIRD NPT 3M 1/2" A105N CODE: 3967	SEE NOTE	SATISFACTORY																		
DHO	78196	008	5943	2006-2E209-0003067-008	225	FITTING 90 ELB. THIRD NPT 3M 1/2" A105N CODE: 3967	SEE NOTE	SATISFACTORY																		
TP6	72108	014	5943	2006-2E209-0003067-014	300	FITTING TEE THIRD NPT 23M 1/4" A105N CODE: 4033	SEE NOTE	SATISFACTORY																		
	79427	020	5943	2006-2E209-0003067-020	195	FITTING COUPLING THIRD NPT 3M 1.1/2" A105N CODE: 3905/311.11.2008 : 195 PCS. NOT ...	SEE NOTE	SATISFACTORY																		
HEAT CODE	HEAT	ITEM	MATERIAL	C%	Si%	Mn%	S%	P%	C%	Ni%	Mo%	Ti%	Cu%	V%	Nb%	N%	Al%	C.E.%	OTHER ELEMENTS							
ERF	72291	021	ASTM A105	0.180	0.240	0.980	0.017	0.013	0.080	0.050	0.010	0.006	0.150	0.001	0.000	0.000	0.023	0.377								
HB	79168	005	ASTM A105	0.180	0.200	0.970	0.021	0.017	0.160	0.050	0.010	0.005	0.190	0.002	0.001	0.000	0.020	0.392								
HB	78457	001	ASTM A105	0.205	0.230	0.900	0.026	0.018	0.100	0.050	0.010	0.005	0.170	0.002	0.002	0.000	0.008	0.392								
A48	78878	008	ASTM A105	0.185	0.220	0.960	0.023	0.016	0.110	0.050	0.010	0.006	0.180	0.001	0.000	0.000	0.017	0.385								
DHO	78196	008	ASTM A105	0.190	0.200	1.020	0.022	0.023	0.130	0.080	0.010	0.005	0.210	0.002	0.002	0.000	0.011	0.406								
TP6	72108	014	ASTM A105	0.190	0.210	0.890	0.009	0.013	0.100	0.070	0.010	0.015	0.160	0.019	0.001	0.000	0.021	0.378								
TP6	79427	020	ASTM A105	0.185	0.190	0.890	0.021	0.010	0.080	0.050	0.010	0.013	0.180	0.002	0.000	0.000	0.006	0.368								
HEAT CODE	HEAT	ITEM	TEST SPECIMEN	SECT. mm	LENGTH mm	YIELD POINT	TENSILE STRENGTH	ELONGATION	REDUCTION OF AREA	HARDNESS HB	BEAD TEST	FLATFACING TEST	TYP. TOLERANCE	IMPACT TEST - JOULES	SHAVE	YIELD POINT										
ERF	72291	021	122.65	50.00	309.0	549.0	31.0	54.0	160 - 166	0.0	0.0	0.0	KV	20	108	100	105	0.0								
HB	79168	005	122.65	50.00	320.0	525.0	34.0	55.0	156 - 164	0.0	0.0	0.0	KV	20	100	93	99	0.0								
HB	78457	001	122.65	50.00	309.0	546.0	34.0	57.0	162 - 168	0.0	0.0	0.0	KV	20	104	100	105	0.0								
A48	78878	008	122.65	50.00	308.0	529.0	31.0	56.0	160 - 166	0.0	0.0	0.0	KV	20	105	100	106	0.0								
DHO	78196	008	122.65	50.00	333.0	537.0	32.0	56.0	159 - 163	0.0	0.0	0.0	KV	20	98	103	99	0.0								
TP6	72108	014	122.65	50.00	309.0	546.0	31.0	54.0	160 - 162	0.0	0.0	0.0	KV	20	104	105	110	0.0								
TP6	79427	020	122.65	50.00	320.0	510.0	34.0	56.5	153 - 158	0.0	0.0	0.0	KV	20	99	103	100	0.0								
HEAT CODE	HEAT	ITEM	MATERIAL IN ACCORDANCE TO				HEAT TREATMENT										FURNACE			STEEL MILL		OUR Ref.				
ERF	72291	021	ASME SA ASTM A105-05				Normalized at 880-920°C / Air Cool										ELECTRIC FURNACE			RIVA ACCIAI		061070				
HB	79168	005	ASME SA ASTM A105-05				Normalized at 880-920°C / Air Cool										ELECTRIC FURNACE			RIVA ACCIAI		061027				
HB	78457	001	ASME SA ASTM A105-05				Normalized at 880-920°C / Air Cool										ELECTRIC FURNACE			RIVA ACCIAI		061085				
A48	78878	008	ASME SA ASTM A105-05				Normalized at 880-920°C / Air Cool										ELECTRIC FURNACE			RIVA ACCIAI		062010				
DHO	78196	008	ASME SA ASTM A105-05				Normalized at 880-920°C / Air Cool										ELECTRIC FURNACE			RIVA ACCIAI		062010				
TP6	72108	014	ASME SA ASTM A105-05				Normalized at 880-920°C / Air Cool										ELECTRIC FURNACE			RIVA ACCIAI		062010				
TP6	79427	020	ASME SA ASTM A105-05				Normalized at 880-920°C / Air Cool										ELECTRIC FURNACE			RIVA ACCIAI		041296				
NOTES ASME B16.1105 - ANSI B31.1/B31.3 - IML STD - ANSI B1.1-B16.2.2 - NACE MR0175 ISO 15156/1 - MSS SP 83 - SUPPLIED MATERIAL MEETS SPECIFICATIONS AND P.O. REQUIREMENTS																			INSPECTION AUTHORITY		QUALITY CONTROL DEPARTMENT		MANUFACTURER'S SYMBOL		MANUFACTURER'S SYMBOL	
																			BORIS FIZZOTTI		FITTINGS		IML		STUBBOLTS	
																										

97173



JUL 07 2006

INDUSTRIA MECCANICA LIGURE SPA

INSPECTION CERTIFICATE EN 10204:2004 / 3.1

COMPANY WITH QUALITY SYSTEM ISO 9001:2000
CERTIFIED BY RINA

IRACO LIMITED- CASTLE HOUSE

STATION ROAD - NEW BARNET
HERTFORDSHIRE EN5 1PE - UNITED KINGDOM

Certificate Nr 16663
Invoice Nr 706
Del. Note Nr 1100

Dated	21.06.2006
Dated	19.06.2006
Dated	19.06.2006

16030 CASARZA LIGURE - Genova - Italy - P.zza Marco Cappelli, 4 - Tel. 0185.467861 - Fax 0185.466510 / MATERIAL TEST DEPARTMENT

This certificate has been generated by computer and need not to be signed for validity according to DIN EN 10204 Page 1 - 9

HEAT CODE	HEAT	ITEM	MATERIAL	C%	Si%	Mn%	S%	P%	Cr%	NI%	Mo%	TT%	CU%	V%	Nb%	N%	Al%	C.E.%	OTHER ELEMENTS
G99	75349	2	ASTM A105	0.190	0.240	0.910	0.020	0.027	0.150	0.070	0.010	0.002	0.190	0.002	0.000	0.000	0.014	0.391	
TM6	77612	4	ASTM A105	0.185	0.200	0.900	0.021	0.013	0.100	0.060	0.010	0.005	0.190	0.002	0.001	0.000	0.014	0.374	
ZH7	71624	17	ASTM A105	0.180	0.200	1.110	0.011	0.012	0.060	0.060	0.010	0.019	0.190	0.022	0.000	0.000	0.025	0.406	
DDN	75764	5	ASTM A105	0.180	0.220	0.960	0.018	0.015	0.110	0.060	0.020	0.005	0.170	0.002	0.000	0.000	0.011	0.382	
DDN	75754	5	ASTM A105	0.180	0.220	0.960	0.018	0.015	0.110	0.060	0.020	0.005	0.170	0.002	0.000	0.000	0.011	0.382	
A32	76747	7	ASTM A105	0.185	0.230	0.960	0.018	0.018	0.080	0.040	0.010	0.005	0.170	0.002	0.001	0.000	0.013	0.377	
G30	76263	1	ASTM A105	0.190	0.220	1.000	0.019	0.012	0.080	0.050	0.010	0.005	0.210	0.001	0.000	0.000	0.013	0.392	
A32	76747	7	ASTM A105	0.185	0.230	0.960	0.018	0.018	0.080	0.040	0.010	0.005	0.170	0.002	0.001	0.000	0.013	0.377	

HEAT CODE	HEAT	ITEM	TEST SPECIMEN		YIELD POINT Minm2 >=0.2%	TENSILE STRENGTH Minm2 >=	ELONGATION %	REDUCTION OF AREA %	HARDNESS HV	BEND TEST	FLATTENING TEST	IMPACT TEST - JOULE/cm2			SHAPE 1=O 2=□	YIELD POINT Minm2 >=1.5%		
			SECT. mm	LENGHT. mm								TYPE 10x10mm	°C	1			2	3
G99	75349	2	122.65	50.00	361.0	533.0	34.0	56.0	160-166	0.0	0.0	KV	20	105	119	107	1	0.0
TM6	77612	4	122.65	50.00	334.0	520.0	35.0	55.0	158-166	0.0	0.0	KV	20	96	106	104	1	0.0
ZH7	71624	17	122.65	50.00	385.0	572.0	32.5	54.5	164-169	0.0	0.0	KV	20	94	98	92	1	0.0
DDN	75754	5	122.65	50.00	319.0	517.0	32.0	59.0	156-159	0.0	0.0	KV	20	103	108	102	1	0.0
DDN	75754	5	122.65	50.00	319.0	517.0	32.0	59.0	156-159	0.0	0.0	KV	20	103	108	102	1	0.0
A32	76747	7	122.65	50.00	325.0	523.0	34.0	55.0	156-162	0.0	0.0	KV	20	103	96	99	1	0.0
G30	76253	1	122.65	50.00	306.0	522.0	30.0	56.0	160-168	0.0	0.0	KV	20	104	100	106	1	0.0
A32	76747	7	122.65	50.00	325.0	523.0	34.0	55.0	156-162	0.0	0.0	KV	20	103	96	99	1	0.0

HEAT CODE	HEAT	ITEM	MATERIAL IN ACCORDANCE TO	HEAT TREATMENT	FURNACE	STEEL MILL	Our Ref.
G9U	75349	2	ASME SA ASTM A105-05	Normalized at 880°-920° C / Air Cool	ELECTRIC FURNACE	RIVA ACCIAI	051212
TM6	77612	4	ASME SA ASTM A105-05	Normalized at 880°-920° C / Air Cool	ELECTRIC FURNACE	RIVA ACCIAI	051400
ZH7	71624	17	ASME SA ASTM A105-05	Normalized at 880°-920° C / Air Cool	ELECTRIC FURNACE	RIVA ACCIAI	052080
DDN	75754	5	ASME SA ASTM A105-05	Normalized at 880°-920° C / Air Cool	ELECTRIC FURNACE	RIVA ACCIAI	052080
DDN	75754	5	ASME SA ASTM A105-05	Normalized at 880°-920° C / Air Cool	ELECTRIC FURNACE	RIVA ACCIAI	051313
A32	76747	7	ASME SA ASTM A105-05	Normalized at 880°-920° C / Air Cool	ELECTRIC FURNACE	RIVA ACCIAI	051362
G30	76253	1	ASME SA ASTM A105-05	Normalized at 880°-920° C / Air Cool	ELECTRIC FURNACE	RIVA ACCIAI	051313
A32	76747	7	ASME SA ASTM A105-05	Normalized at 880°-920° C / Air Cool	ELECTRIC FURNACE	RIVA ACCIAI	051313

ASME B16.1/105 - ANSI B31.1/B31.3 - IML STD - ANSI B1.1-B18.2.2 -
NACE MR0175/ISO 15156/1 - MSS SP 83 - SUPPLIED MATERIAL MEETS
SPECIFICATIONS AND P.O. REQUIREMENTS

INSPECTION AUTHORITY

QUALITY CONTROL DEPARTMENT

MANUFACTURER'S SYMBOL

MANUFACTURER'S SYMBOL

BORIS FIZZOTTI

FITTINGS

STUDBOLTS



Elbow 1/2" 3M 90° 432



INDUSTRIA MECCANICA LIGURE SPA

INSPECTION CERTIFICATE DIN 50448/3.1B - EN 10204/3.1B
COMPANY WITH QUALITY SYSTEM ISO 9001:2000
CERTIFIED BY RINA

SEYBOLD INTERNATIONAL CORP.
20 Holly Street, Unit 205
TORONTO, ONTARIO M6H 3B1 CANADA

CA Certificate No. 14501
Invoice No. 1423
Del. Note No. 1823
Dated 05.10.2004
30.09.2004

1/2" 90 ELB. Third. NPT 2m

GL5
76958

This certificate has been generated by computer and need not to be signed for validity according to DIN EN 10204 Page 12 - 18

HEAT CODE	HEAT	ITEM	YOUR P.O.	OUR REFERENCE	QTY	DESCRIPTION	DIM. ACC. TO	VISUAL & DIMENS.											
G37	76110	012	4228	2004-2E208-0003017-012	216	FITTING 90 ELB. THIRD NPT 2M 1/2" A105N CODE: 3855	SEE NOTE	SATISFACTORY											
GL5	76958	012	4228	2004-2E208-0003017-012	34	FITTING 90 ELB. THIRD NPT 2M 1/2" A105N CODE: 3855	SEE NOTE	SATISFACTORY											
TE2	74148	021	4228	2004-2E208-0003017-021	150	FITTING 90 ELB. THIRD NPT 2M 1/2" A105N CODE: 3855	SEE NOTE	SATISFACTORY											
TE5	78927	022	4228	2004-2E208-0003017-022	360	FITTING TEE THRD NPT 2M 1/2" A105N CODE: 4023	SEE NOTE	SATISFACTORY											
S01	20470	024	4228	2004-2E208-0003017-024	300	FITTING TEE THRD NPT 2M 1/2" A105N CODE: 4025	SEE NOTE	SATISFACTORY											
ZX6	78184	035	4228	2004-2E208-0003017-035	25	FITTING CROSS THRD NPT 2M 1/2" A105N CODE: 45515	SEE NOTE	SATISFACTORY											
TE2	74148	042	4228	2004-2E208-0003017-042	20	FITTING 90 ELB. THIRD NPT 3M 1/4" A105N CODE: 3970	SEE NOTE	SATISFACTORY											
AHP	77085	052	4228	2004-2E208-0003017-052	300	FITTING TEE THRD NPT 2M 1/2" A105N CODE: 4033	SEE NOTE	SATISFACTORY											
AHP	72284	105	4228	2004-2E208-0003017-105	600	FITTING CAP THRD NPT 3M 3/4" A105N CODE: 6530	SEE NOTE	SATISFACTORY											
					5	FITTING 90 ELB. SW 6M 2" A105N CODE: 26410	SEE NOTE	SATISFACTORY											
HEAT CODE	HEAT	ITEM	MATERIAL	C%	SI%	Mn%	S%	P%	C%	N%	Mo%	TT%	Cu%	V%	Nb%	N%	Al%	C.E.%	OTHER ELEMENTS
G37	76110	012	ASTM A105	0.195	0.220	0.190	0.017	0.019	0.100	0.050	0.010	0.007	0.190	0.002	0.000	0.000	0.005	0.383	
GL5	76958	012	ASTM A105	0.190	0.180	0.190	0.017	0.019	0.080	0.050	0.020	0.000	0.170	0.003	0.000	0.000	0.000	0.384	
TE2	74148	021	ASTM A105	0.200	0.210	0.190	0.014	0.015	0.100	0.050	0.010	0.020	0.200	0.023	0.001	0.000	0.026	0.386	
TE5	78927	022	ASTM A105	0.185	0.180	0.180	0.010	0.010	0.080	0.050	0.010	0.015	0.140	0.029	0.000	0.000	0.021	0.382	
S01	20470	024	ASTM A105	0.195	0.200	0.190	0.010	0.010	0.080	0.050	0.010	0.008	0.180	0.003	0.001	0.000	0.000	0.382	
ZX6	78184	035	ASTM A105	0.190	0.190	0.190	0.022	0.009	0.050	0.050	0.008	0.008	0.130	0.001	0.001	0.000	0.019	0.375	
TE2	74148	042	ASTM A105	0.190	0.200	0.190	0.022	0.016	0.110	0.070	0.010	0.013	0.200	0.003	0.001	0.000	0.005	0.386	
AHP	77085	052	ASTM A105	0.185	0.180	0.180	0.021	0.010	0.110	0.070	0.010	0.015	0.140	0.029	0.000	0.000	0.021	0.382	
AHP	72284	105	ASTM A105	0.180	0.170	0.180	0.021	0.016	0.080	0.050	0.010	0.000	0.270	0.002	0.001	0.000	0.000	0.382	
															</				

NOTES ASME B16.1.1B - BS 3799 - ANSI B31.1/BS1.3 - IML STD - MACE MR0175-89 -

ANSI B1.1 - B16.2.2 - MACE MR0175-89 - MSS SP83

INSPECTION AUTHORITY

QUALITY CONTROL DEPARTMENT: MANUFACTURER'S SYMBOL

BORIS PIZLOTTI

FITTINGS

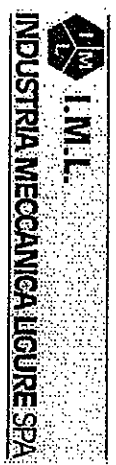
IML

STUDBOLTS



1/2" 2m 90° Elbow

GZ5



INSPECTION CERTIFICATE EN 10204:2004 / 3.1
COMPANY WITH QUALITY SYSTEM ISO 9001:2000
CERTIFIED BY RIVA

SETBOLD INTERNATIONAL CORP.
20 High Street, Unit 205
TORONTO, ONT M5S 3B1 CANADA

Certificate No. 16119
Invoice No. 74
D.M. Note No. 115
CA

16200 CASARZA LIGURE - Genova - Italy - P.zza Marco Capelli, 4 - Tel. 010.54.477851 - Fax 010.54.485510 / MATERIAL TEST DEPARTMENT This certificate has been generated by computer and need not to be signed for validity according to DIN EN 10204 Page 4 - 11

HEAT CODE	HEAT	ITEM	YOUR P.O.	OUR REFERENCE	QTY	DESCRIPTION	DIM. ACC. TO	VISUAL & DIMENS.											
H85	77613	003	5136	2005-2E209-0003051-003	138	FITTING 45 ELB. THRD NPT 2M 2" A105N CODE: 3984	SEE NOTE	SATISFACTORY											
TM1	74884	012	5136	2005-2E209-0003051-012	200	FITTING TEE THRD NPT 25M 1/4" A105N CODE: 4033	SEE NOTE	SATISFACTORY											
CPR	75335	015	5136	2005-2E209-0003051-015	296	FITTING TEE THRD NPT 3M 2" A105N CODE: 4376	SEE NOTE	SATISFACTORY											
G25	76077	001	5136	2005-2E209-0003051-001	350	FITTING 90 ELB. THRD NPT 2M 1/2" A105N CODE: 3955	SEE NOTE	SATISFACTORY											
H85	75358	001	5136	2005-2E209-0003051-003	3150	FITTING 90 ELB. THRD NPT 2M 1/2" A105N CODE: 3955	SEE NOTE	SATISFACTORY											
ABG	0370298	018	5136	2005-2E209-0003051-018	100	THREADOLET NPT 3M 1/2"x1 1/2"-20" A105N CODE: 3984	SEE NOTE	SATISFACTORY											
ABN	116122	019	5136	2005-2E209-0003051-019	48	THREADOLET NPT 3M 3/4"x1 1/2"-38" A105N CODE: 12759	SEE NOTE	SATISFACTORY											
HEAT CODE	HEAT	ITEM	MATERIAL	CK	SK	MM	PK	CH	NR	MoK	TK	ChK	VK	NRK	NK	AK	C.E.%	OTHER ELEMENTS	
H85	77613	003	ASTM A105	0.185	0.180	0.890	0.018	0.014	0.110	0.060	0.010	0.005	0.180	0.002	0.001	0.000	0.012	0.374	
TM1	74884	012	ASTM A105	0.185	0.180	0.910	0.005	0.012	0.090	0.070	0.010	0.015	0.180	0.021	0.000	0.000	0.020	0.378	
CPR	75335	015	ASTM A105	0.190	0.160	0.920	0.020	0.013	0.090	0.060	0.010	0.005	0.210	0.001	0.000	0.000	0.011	0.382	
G25	76077	001	ASTM A105	0.185	0.200	1.110	0.015	0.009	0.050	0.050	0.010	0.022	0.160	0.027	0.000	0.000	0.025	0.401	
H85	75358	001	ASTM A105	0.180	0.200	0.870	0.021	0.011	0.100	0.080	0.020	0.001	0.220	0.002	0.000	0.000	0.013	0.369	
ABG	0370298	003	ASTM A105	0.185	0.190	0.890	0.018	0.014	0.110	0.060	0.010	0.005	0.190	0.002	0.001	0.000	0.012	0.374	
ABN	116122	018	ASTM A105	0.185	0.210	0.910	0.010	0.010	0.100	0.070	0.000	0.020	0.200	0.020	0.000	0.000	0.023	0.379	
ABN	116122	019	ASTM A105	0.195	0.258	1.038	0.003	0.005	0.112	0.130	0.028	0.000	0.202	0.001	0.002	0.000	0.035	0.417	
HEAT CODE	HEAT	ITEM	TEST METHOD	YIELD POINT	TENSILE STRENGTH	ELONGATION	REDUCTION OF AREA	HARDNESS	BEND TEST	FLATNESS TEST	TYPE TIGHTNESS	IMPACT TEST	COLLEGE	SHAKE	YIELD POINT				
H85	77613	003	RECT. MEAS. LENGTH mm	306.0	533.0	34.0	57.0	180 - 186	0.0	0.0	KV	20	105	100	98	0.0			
TM1	74884	012	RECT. MEAS. LENGTH mm	320.0	516.0	34.0	55.0	182 - 168	0.0	0.0	KV	20	106	105	100	0.0			
CPR	75335	015	RECT. MEAS. LENGTH mm	329.0	531.0	34.0	59.0	183 - 165	0.0	0.0	KV	20	108	103	100	0.0			
G25	76077	001	RECT. MEAS. LENGTH mm	337.0	542.0	33.0	57.0	183 - 169	0.0	0.0	KV	20	101	106	104	0.0			
H85	75358	001	RECT. MEAS. LENGTH mm	322.0	510.0	36.0	59.0	152 - 159	0.0	0.0	KV	20	103	100	105	0.0			
ABG	0370298	003	RECT. MEAS. LENGTH mm	306.0	533.0	34.0	57.0	180 - 166	0.0	0.0	KV	20	105	100	100	0.0			
ABN	116122	018	RECT. MEAS. LENGTH mm	315.0	507.0	32.9	57.5	152 - 155	0.0	0.0	KV	20	98	105	110	0.0			
ABN	116122	019	RECT. MEAS. LENGTH mm	400.0	554.0	30.0	86.0	159 - 164	0.0	0.0	KV	20	99	98	93	0.0			
HEAT CODE	HEAT	ITEM	MATERIAL IN ACCORDANCE TO	HEAT TREATMENT	INSPECTION AUTHORITY	QUALITY CONTROL DEPARTMENT	MANUFACTURER'S SYMBOL	MANUFACTURER'S SYMBOL											
H85	77613	003	ASME SA ASTM A105-03	Normalized at 880°-920°C / Air Cool	91857	BORIS FIZZOTTI	IML	STUBOLTS											
TM1	74884	012	ASME SA ASTM A105-03	Normalized at 880°-920°C / Air Cool															
CPR	75335	015	ASME SA ASTM A105-03	Normalized at 880°-920°C / Air Cool															
G25	76077	001	ASME SA ASTM A105-03	Normalized at 880°-920°C / Air Cool															
H85	75358	001	ASME SA ASTM A105-03	Normalized at 880°-920°C / Air Cool															
ABG	0370298	003	ASME SA ASTM A105-03	Normalized at 880°-920°C / Air Cool															
ABN	116122	018	ASME SA ASTM A105-03	Normalized at 880°-920°C / Air Cool															
ABN	116122	019	ASME SA ASTM A105-03	Normalized at 880°-920°C / Air Cool															
NOTES	ASME B16.11/01 - BS.3799 - ANSI B31.1/BS1.3 - IMI STD. - ANSI B1.1-818.2.2 - NACE MR0175 ISO 15156/1 - SUPPLIED MATERIAL MEETS SPECIFICATIONS AND P.O. REQUIREMENTS																		


INDUSTRIA MECCANICA LIGURE SPA

 INSPECTION CERTIFICATE EN 10204:2004 / 3.1
 COMPANY WITH QUALITY SYSTEM ISO 9001:2000
 CERTIFIED BY RINA

 SERVOLO INTERNATIONAL CORP.
 20 Holy Street, Unit 205
 TORONTO M4S 3B1 CANADA

 Certificate No 16991
 Invoice No 1117
 Del. Note No 1743

 CA
 Dated 02.11.2006
 Dated 20.10.2006
 Dated 20.10.2006

16130 CASARZA LIGURE - Genova - Italy - P.zza Marco Capelli 4 - Tel. 010.5.467661 - Fax 010.5.466510 / MATERIAL TEST DEPARTMENT This certificate has been generated by computer and need not to be signed for validity according to DIN EN 10204 Page 1 - 12

HEAT CODE	HEAT	ITEM	YOUR P.O.	OUR REFERENCE	QTY	DESCRIPTION	DIM. ACC. TO	VISUAL & DIMENS.											
H89	77613	027	5248	2005-2E209-0003065-027	1010	FITTING TEE THRD NPT 3M 1" A105N CODE: 4037	SEE NOTE	SATISFACTORY											
GR5	39700	001	5248	2005-2E209-0003065-001	200	FITTING 90 ELB. THRD NPT 2M 3/4" A105N CODE: 3956	SEE NOTE	SATISFACTORY											
TM6	77612	007	5248	2005-2E209-0003065-007	100	FITTING TEE THRD NPT 2M 3/4" A105N CODE: 4026	SEE NOTE	SATISFACTORY											
HAT	78879	009	5248	2005-2E209-0003065-009	10	FITTING TEE THRD NPT 2M 1 1/4" A105N CODE: 4028	SEE NOTE	SATISFACTORY											
H80	78092	010	5248	2005-2E209-0003065-010	60	FITTING CROSS THRD NPT 2M 1" A105N CODE: 7801	SEE NOTE	SATISFACTORY											
DVN	75795	011	5248	2005-2E209-0003065-011	28	FITTING CROSS THRD NPT 2M 2" A105N CODE: 3915	SEE NOTE	SATISFACTORY											
N58	AK4583	014	5248	2005-2E209-0003065-014	10100	FITTING HEX.H.PLUG THRD NPT 3/8M 1/2" A105N CODE: 4004	SEE NOTE	SATISFACTORY											
HCG	70058	020	5248	2005-2E209-0003065-020	1515	FITTING 90 ELB. THRD NPT 3M 1" A105N CODE: 3969	SEE NOTE	SATISFACTORY											
HEAT CODE	HEAT	ITEM	MATERIAL	C%	SI%	Mo%	S%	P%	C-1%	NI%	Mo%	TI%	Cu%	V%	Nb%	N%	Al%	C.E.%	OTHER ELEMENTS
H89	77613	027	ASTM A105	0.185	0.190	0.890	0.018	0.014	0.110	0.060	0.010	0.005	0.190	0.002	0.001	0.000	0.012	0.374	
GR5	39700	001	ASTM A105	0.190	0.230	1.090	0.015	0.014	0.110	0.090	0.020	0.018	0.160	0.036	0.001	0.000	0.025	0.422	
TM6	77612	007	ASTM A105	0.185	0.200	0.900	0.021	0.013	0.100	0.080	0.010	0.005	0.190	0.002	0.001	0.000	0.014	0.374	
HAT	78879	009	ASTM A105	0.180	0.190	0.950	0.020	0.020	0.120	0.070	0.010	0.005	0.170	0.002	0.000	0.000	0.013	0.381	
H80	78092	010	ASTM A105	0.180	0.190	0.850	0.020	0.020	0.130	0.060	0.010	0.005	0.250	0.001	0.000	0.000	0.009	0.371	
DVN	75795	011	ASTM A105	0.190	0.170	0.930	0.020	0.014	0.120	0.080	0.020	0.005	0.210	0.001	0.000	0.000	0.010	0.383	
N58	AK4583	014	ASTM A105	0.195	0.240	0.990	0.006	0.010	0.090	0.110	0.030	0.000	0.190	0.000	0.000	0.000	0.005	0.403	
HCG	70058	020	ASTM A105	0.200	0.220	0.890	0.023	0.020	0.140	0.070	0.010	0.005	0.250	0.002	0.000	0.000	0.016	0.398	
HEAT CODE	HEAT	ITEM	TEST SPECIFICATION	YIELD POINT	TENSILE STRENGTH	ELONGATION	REDUCTION OF AREA	HARDNESS HB	BRIN TEST	PLATINING TEST	TYPE 15 (10mm)	IMPACT TEST - JERGENS	SHAKE	YIELD POINT					
H89	77613	027	SECT. and LENGTH mm	330.0	520.0	35.0	55.0	156 - 164	0.0	0.0	KV	20	106	102					
GR5	39700	001	SECT. and LENGTH mm	345.0	564.0	34.0	56.0	160 - 164	0.0	0.0	KV	20	96	105					
TM6	77612	007	SECT. and LENGTH mm	334.0	520.0	35.0	55.0	156 - 166	0.0	0.0	KV	20	96	106					
HAT	78879	009	SECT. and LENGTH mm	306.0	539.0	31.0	49.0	160 - 162	0.0	0.0	KV	20	98	99					
H80	78092	010	SECT. and LENGTH mm	306.0	546.0	34.0	56.0	162 - 164	0.0	0.0	KV	20	88	95					
DVN	75795	011	SECT. and LENGTH mm	330.0	533.0	33.0	61.0	163 - 165	0.0	0.0	KV	20	105	110					
N58	AK4583	014	SECT. and LENGTH mm	366.0	549.0	32.0	49.0	160 - 164	0.0	0.0	KV	20	104	96					
HCG	70058	020	SECT. and LENGTH mm	306.0	587.0	31.0	54.0	160 - 162	0.0	0.0	KV	20	98	90					
HEAT CODE	HEAT	ITEM	MATERIAL IN ACCORDANCE TO	HEAT TREATMENT	FURNACE	STEEL MILL	OUR Ref.												
H89	77613	027	ASME SA ASTM A105-05	Normalized at 880-920C / Air Cool	ELECTRIC FURNACE	RIVA ACCIAI	051412												
GR5	39700	001	ASME SA ASTM A105-05	Normalized at 880-920C / Air Cool	ELECTRIC FURNACE	RIVA ACCIAI	051025												
TM6	77612	007	ASME SA ASTM A105-05	Normalized at 880-920C / Air Cool	ELECTRIC FURNACE	RIVA ACCIAI	051400												
HAT	78879	009	ASME SA ASTM A105-05	Normalized at 880-920C / Air Cool	ELECTRIC FURNACE	RIVA ACCIAI	051086												
H80	78092	010	ASME SA ASTM A105-05	Normalized at 880-920C / Air Cool	ELECTRIC FURNACE	RIVA ACCIAI	051423												
DVN	75795	011	ASME SA ASTM A105-05	Normalized at 880-920C / Air Cool	ELECTRIC FURNACE	RIVA ACCIAI	052049												
N58	AK4583	014	ASME SA ASTM A105-05	Normalized at 880-920C / Air Cool	ELECTRIC FURNACE	RIVA ACCIAI	051206												
HCG	70058	020	ASME SA ASTM A105-05	Normalized at 880-920C / Air Cool	ELECTRIC FURNACE	RIVA ACCIAI	051224												
NOTES ASME B16.11/05 - ANSI B31.1/83.1.3 - INL STD - ANSI B1.1-81.2.2 - INACE MRO175 ISO 1516/1 - MSS SP 83 - SUPPLIED MATERIAL MEETS SPECIFICATIONS AND P.O. REQUIREMENTS																			
				INSPECTION AUTHORITY	QUALITY CONTROL DEPARTMENT	MANUFACTURER'S SYMBOL	MANUFACTURER'S SYMBOL												
				96738	BORIS FIZZOTTI	FITTINGS IML	STUDBOLTS												

 H29
 1" 3Mq00°



Thai Benkan Co., Ltd.
58 Soi Waktana, Bangkok, Prapadaeng,
Samutprakan, 10130 Thailand.

65403
(06A00501)

Purchaser : NATIONAL OILWELL INC.

INSPECTION CERTIFICATE

E.No. 10818510 Purchase Order No. Job No.

TQ EN10204 3.1
70 EN10204 3.1D M Y Certificate No.
17/03/2006 T-2006200267

No.	MFG. No. (Heat Identification No.)	Specification for Material Made from Seamless Pipe ASTM A234-04/ASME SA234 WPB CSA Z245.11 GR241 CAT 1 NACE MR0175-2003				Specification for Inspection ASME B16.9-2003		Visual Examination	Dimensional Inspection								
		Product & Size				Quantity	Heat Treatment (Note 1)			Symbol No.							
1	05P00078	90 EL WPB 4 S80				100/700	A	7510885									
2	06A00008	90 EL WPB 8 S80				1/155	A	7511051									
3	06A00501	90 EL WPB 8 S80				95/155	A	7511051									
4	06B00054	45 EL WPB 4 S80				150	A	7511540									
5	06A00502	45 EL WPB 8 S80				13/25	A	7511604									
Specification		Chemical Composition %										Tension Test #2			HARDNESS MAX 197 HB : GOOD		
		C	Si	Mn	P	S	Cu	Ni	Cr	Mo	V	Nb	C.E.	YS		TS	E
		X 100	X 100	X 100	X 1000	X 1000	X 100	X 100	X 100	X 100	X 1000	X 1000	X 100	MPa.		%	
																30	
Min.																	
Max.																	
Material Heat No.		23		106	50	58	40	40	40	15	80	20			585		
1	39862	18	18	72	12	2	4	4	6	3	1	1	33	310	458	39	
2	58015	22	18	61	10	2	8	4	4	1	1	1	34	297	478	40	
3	65403	18	19	64	11	1	5	4	3	2	1	1	30	252	460	43	
4	J5KC419	20	20	70	19	7	1	2	7	3	0	1	34	310	492	38	
5	65403	18	19	64	11	1	5	4	3	2	1	1	30	252	460	43	

(Note 1) A : Hot formed with final temperature between 620°C-980°C. Air Cooling N : Normalizing 910°Cx0.5 HR. Air Cooling S : Stress Relieving 675°Cx0.5 HR. Air Cooling

C.E = C+Mn/6+(Cr+Mo+V)/5+(Ni+Cu)/15

We hereby certify that the product described herein has been manufactured in accordance with the specifications concerned and also with the purchaser's requirements and that the test results shown herein are correct.

* 1 : "T" symbolized wall thickness in mm. * 2 : YS Yield strength TS = Tensile strength E = Elongation
Form T7.64/1

92977

Quality Assurance Manager
Thai Benkan Co., Ltd.

Elbow 2" 3M 90° 488

I.M.L.

INDUSTRIA MECCANICA LIGURE SPA

INSPECTION CERTIFICATE EN 10204:2004 / 3.1
COMPANY WITH QUALITY SYSTEM ISO 9001:2000
CERTIFIED BY RINA

SETBOLD INTERNATIONAL CORP.
20 Holly Street, Unit 205
TORONTO M4S 3B1 CANADA

Certificate Nr 17095
Invoice Nr 5
Dbl. Note Nr 8

Dated 16.01.2007
Signed 03.01.2007
Signed 03.01.2007

16001 CASARZALIGURE - Genova - Italy - P.zza Marco Cappelli, 4 - Tel:0185/487861 - Fax:0185/485110 / MATERIAL TEST DEPARTMENT This certificate has been generated by computer and need not to be signed for validity according to DIN EN 10204 Page 1 / 7

HEAT CODE	HEAT	ITEM	YOUR P.O.	OUR REFERENCE	Q.TY	DESCRIPTION	DIM. ACC. TO	VISUAL & DIMENS.											
A88	73412	012	5944	2006-2E209-0003068-012	804	FITTING 90 ELB. THRD NPT 3M 2" A105N CODE: 3972	SEE NOTE	SATISFACTORY											
ECO	72290	006	5944	2006-2E209-0003068-006	5000	FITTING 80 ELB. THRD NPT 2M 2" A105N CODE: 3980	SEE NOTE	SATISFACTORY											
N59	77912	049	5944	2006-2E209-0003068-049	150	FITTING HEX.H PLUG THRD NPT 3/8M 1" A105N CODE: 4006	SEE NOTE	SATISFACTORY											
	17380	001	5944	2006-2E209-0003068-001	195	FITTING COUPLING THRD NPT 3M 1.1/4" A105N CODE: 3904	SEE NOTE	SATISFACTORY											
	79427	002	5944	2006-2E209-0003068-002	750	FITTING COUPLING THRD NPT 3M 1.1/2" A105N CODE: 3905	SEE NOTE	SATISFACTORY											
A64	79168	003	5944	2006-2E209-0003068-003	200	FITTING COUPLING THRD NPT 3M 2" A105N CODE: 3906	SEE NOTE	SATISFACTORY											
A53	78092	013	5944	2006-2E209-0003068-013	100	FITTING 45 ELB. THRD NPT 3M 3/4" A105N CODE: 3977	SEE NOTE	SATISFACTORY											
HEAT CODE	HEAT	ITEM	MATERIAL	C%	SI%	MM%	S%	P%	G%	NI%	MO%	TI%	CU%	V%	NB%	N%	AI%	C.E.%	OTHER ELEMENTS
A88	73412	012	ASTM A105	0.195	0.190	1.010	0.022	0.014	0.070	0.040	0.010	0.005	0.110	0.001	0.000	0.000	0.023	0.390	
ECO	72290	006	ASTM A105	0.190	0.250	1.070	0.021	0.014	0.060	0.060	0.010	0.005	0.200	0.003	0.001	0.000	0.024	0.400	
N59	77912	049	ASTM A105	0.190	0.160	0.910	0.023	0.009	0.070	0.050	0.010	0.010	0.170	0.002	0.001	0.000	0.005	0.373	
	17380	001	ASTM A105	0.180	0.250	0.880	0.015	0.009	0.060	0.110	0.010	0.007	0.290	0.001	0.001	0.000	0.033	0.370	
	79427	002	ASTM A105	0.185	0.190	0.890	0.021	0.010	0.080	0.050	0.010	0.013	0.190	0.002	0.000	0.000	0.006	0.368	
	79168	003	ASTM A105	0.180	0.200	0.970	0.021	0.017	0.160	0.050	0.010	0.005	0.190	0.002	0.001	0.000	0.020	0.392	
A64	77612	005	ASTM A105	0.185	0.200	0.900	0.021	0.013	0.100	0.060	0.010	0.005	0.190	0.002	0.001	0.000	0.004	0.374	
A53	78092	013	ASTM A105	0.180	0.190	0.850	0.020	0.010	0.130	0.080	0.010	0.005	0.250	0.001	0.000	0.000	0.009	0.371	
HEAT CODE	HEAT	ITEM	TEST SPECIFICATION	YIELD POINT	TENSILE STRENGTH	ELONGATION	REDUCTION OF AREA	HARDNESS	BEND TEST	FLATTENING TEST	TYPE	TEMP	1	2	3	SHAPE	YIELD POINT		
A88	73412	012	122.65	50.00	331.0	507.0	32.0	54.0	182 - 186	0.0	0.0	0.0	98	105	104	1	0.0		
ECO	72290	006	122.65	50.00	335.0	547.0	31.0	68.0	164 - 166	0.0	0.0	0.0	115	105	109	1	0.0		
N59	77912	049	122.65	50.00	361.0	552.0	32.0	56.0	160 - 168	0.0	0.0	0.0	105	100	109	1	0.0		
	17380	001	122.65	50.00	306.0	563.0	31.0	64.0	160 - 168	0.0	0.0	0.0	96	90	90	1	0.0		
	79427	002	122.65	50.00	320.0	510.0	34.0	56.5	153 - 158	0.0	0.0	0.0	100	93	100	1	0.0		
	79168	003	122.65	50.00	320.0	525.0	34.0	55.0	156 - 164	0.0	0.0	0.0	100	93	98	1	0.0		
A64	77612	005	122.65	50.00	336.0	548.0	31.0	54.0	160 - 166	0.0	0.0	0.0	94	92	90	1	0.0		
A53	78092	013	122.65	50.00	306.0	563.0	34.0	56.0	160 - 166	0.0	0.0	0.0	104	100	110	1	0.0		
HEAT CODE	HEAT	ITEM	MATERIAL IN ACCORDANCE TO														STEEL MILL	OUR Ref	
A88	73412	012	ASME SA ASTM A105-05														061506		
ECO	72290	006	ASME SA ASTM A105-05														062092		
N59	77912	049	ASME SA ASTM A105-05														041204		
	17380	001	ASME SA ASTM A105-05														061244		
	79427	002	ASME SA ASTM A105-05														041296		
	79168	003	ASME SA ASTM A105-05														061070		
A64	77612	005	ASME SA ASTM A105-05														051400		
A53	78092	013	ASME SA ASTM A105-05														051423		
NOTES ASME B16.11/05 - ANSI B31.3 - INL STD - ANSI B1.1-B18.2.2 - NACE MR0175 ISO 15156/1 - MSS SP 33 - SUPPLIED MATERIAL MEETS SPECIFICATIONS AND P.O. REQUIREMENTS																			
INSPECTION AUTHORITY																			
QUALITY CONTROL DEPARTMENT																			
BORIS FIZZOTTI																			
FITTINGS																			
IML																			
STUDBOLTS																			

HEAT NUMBER : **FRS**
 TRANS AM PIPING PRODUCTS - REV'D BY:
 Shipment/Seq #: **S 7 - 1536** **8**

2" CL 3000 FS SCR'D 90 ELL
 A105N



INDUSTRIA MECCANICA LIGURE SPA

16030 CASARZA LIGURE - Genova - Italy - P.zza Marco Capelli 4 - Tel. 0185.467861 - Fax 0185.466510 / MATERIAL TEST DEPARTMENT
 INSPECTION CERTIFICATE EN 10204:2004 / 3.1
 COMPANY WITH QUALITY SYSTEM ISO 9001:2000
 CERTIFIED BY RINA

TRANS AM PIPING PRODUCTS LTD.
 230051 Edgemoor Drive S.E.
 Calgary, Alberta T2P 2G6
 CA

Certificate Nr. 18140
 Invoice Nr. 1130
 Del. Note Nr. 1830

Dated 12.11.2007
 Dated 09.11.2007
 Dated 09.11.2007

2" 3M 90° Elbow
 A105N

FRS

HEAT CODE		HEAT	ITEM	YOUR P.O.	OUR REFERENCE	Q.TY	DESCRIPTION	DIM. ACC. TO	VISUAL & DIMENS.											
GBI	75791	038	038	CI-07 - 598 2007-2E201-0000963-038			FITTING COUPLING THRD NPT 3M 1" A105N	SEE NOTE	SATISFACTORY											
	72435	056	056	CI-07 - 598 2007-2E201-0000963-056			FITTING CAP THRD NPT 3M 2" A105N	SEE NOTE	SATISFACTORY											
	78154	092	092	CI-07 - 598 2007-2E201-0000963-092			FITTING 90 ELB. SW 3M 2" A105N	SEE NOTE	SATISFACTORY											
	73265	019	019	CI-07 - 598 2007-2E201-0000963-019			FITTING 90 ELB. THRD NPT 3M 2" A105N	SEE NOTE	SATISFACTORY											
	77912	080	080	CI-07 - 598 2007-2E201-0000963-080			FITTING HEX.H.PLUG THRD NPT 1" A105N	SEE NOTE	SATISFACTORY											
GBI	78154	092	092	CI-07 - 598 2007-2E201-0000963-092			FITTING 90 ELB. SW 3M 2" A105N	SEE NOTE	SATISFACTORY											
	73405	006	006	CI-07 - 598 2007-2E201-0000963-006			FITTING TEE THRD NPT 2M 2" A105N	SEE NOTE	SATISFACTORY											
NS8	AK4583	078	078	CI-07 - 598 2007-2E201-0000963-078			FITTING HEX.H.PLUG THRD NPT 1/2" A105N	SEE NOTE	SATISFACTORY											
HEAT CODE		HEAT	ITEM	MATERIAL	C%	SI%	Mn%	S%	P%	C%	N%	Mo%	Ti%	Cu%	V%	Nb%	N%	Al%	C.E.%	OTHER ELEMENTS
GBI	75791	038	038	ASTM A105	0.180	0.190	0.920	0.024	0.015	0.100	0.080	0.010	0.005	0.200	0.002	0.001	0.000	0.020	0.373	
	72435	056	056	ASTM A105	0.205	0.230	0.940	0.021	0.013	0.090	0.050	0.010	0.005	0.160	0.001	0.000	0.000	0.012	0.396	
	78154	092	092	ASTM A105	0.180	0.210	0.880	0.021	0.012	0.090	0.040	0.010	0.005	0.170	0.001	0.001	0.000	0.023	0.361	
	73265	019	019	ASTM A105	0.195	0.200	0.980	0.019	0.017	0.110	0.060	0.020	0.005	0.220	0.002	0.001	0.000	0.022	0.403	
	77912	080	080	ASTM A105	0.190	0.160	0.910	0.023	0.009	0.070	0.050	0.010	0.010	0.170	0.002	0.001	0.000	0.005	0.373	
GBI	78154	092	092	ASTM A105	0.180	0.210	0.880	0.021	0.012	0.090	0.040	0.010	0.005	0.170	0.001	0.001	0.000	0.023	0.361	
	73405	006	006	ASTM A105	0.200	0.290	0.970	0.020	0.013	0.110	0.050	0.010	0.006	0.190	0.002	0.001	0.000	0.030	0.402	
NS8	AK4583	078	078	ASTM A105	0.195	0.240	0.990	0.006	0.010	0.090	0.110	0.030	0.000	0.190	0.000	0.001	0.000	0.005	0.403	
HEAT CODE		HEAT	ITEM	TEST SPECIFICATION	SECT. mm	LENGTH mm	YIELD POINT	TENSILE STRENGTH	ELONGATION	REDUCTION OF AREA	HARDNESS HB	BEND TEST	FLATTENING TEST	IMPACT TEST	TEMP. °C	1	2	3	SHAPE	YIELD POINT
GBI	75791	038	038	122.65	50.00	360.0	538.0	32.0	32.0	52.0	162 - 164	0.0	0.0	20	99	100	101	1	0.0	
	72435	056	056	122.65	50.00	309.0	546.0	31.0	32.0	56.0	160 - 162	0.0	0.0	20	104	105	98	1	0.0	
	78154	092	092	122.65	50.00	318.0	510.0	32.0	32.0	59.0	153 - 156	0.0	0.0	20	100	99	101	1	0.0	
	73265	019	019	122.65	50.00	333.0	539.0	33.0	32.0	58.0	163 - 165	0.0	0.0	20	105	101	102	1	0.0	
	77912	080	080	122.65	50.00	361.0	552.0	32.0	32.0	56.0	160 - 168	0.0	0.0	20	105	100	108	1	0.0	
GBI	78154	092	092	122.65	50.00	318.0	510.0	32.0	32.0	59.0	153 - 156	0.0	0.0	20	100	99	101	1	0.0	
	73405	006	006	122.65	50.00	340.0	542.0	32.0	32.0	59.0	164 - 166	0.0	0.0	20	100	100	104	1	0.0	
NS8	AK4583	078	078	122.65	50.00	366.0	549.0	32.0	32.0	49.0	160 - 164	0.0	0.0	20	104	100	96	1	0.0	
HEAT CODE		HEAT	ITEM	MATERIAL	IN ACCORDANCE TO	HEAT TREATMENT	FURNACE	OUR REF.												
GBI	75791	038	038	ASME SA ASTM A105-05		Normalized at 880°-920°C / Air Cool	ELECTRIC FURNACE	071125												
	72435	056	056	ASME SA ASTM A105-05		Normalized at 880°-920°C / Air Cool	ELECTRIC FURNACE	061480												
	78154	092	092	ASME SA ASTM A105-05		Normalized at 880°-920°C / Air Cool	ELECTRIC FURNACE	072063												
	73265	019	019	ASME SA ASTM A105-05		Normalized at 880°-920°C / Air Cool	ELECTRIC FURNACE	072039												
	77912	080	080	ASME SA ASTM A105-05		Normalized at 880°-920°C / Air Cool	ELECTRIC FURNACE	041204												
GBI	78154	092	092	ASME SA ASTM A105-05		Normalized at 880°-920°C / Air Cool	ELECTRIC FURNACE	072063												
	73405	006	006	ASME SA ASTM A105-05		Normalized at 880°-920°C / Air Cool	ELECTRIC FURNACE	072106												
NS8	AK4583	078	078	ASME SA ASTM A105-05		Normalized at 880°-920°C / Air Cool	ELECTRIC FURNACE	011206												
NOTES																				
ASME B16.11/05 - ANSI B31.1/03.3 - IML STD - ANSI B1.1-B18.2.2 -																				
NACE MR0175 ISO 15156/1 - MSS SP 83 - SUPPLIED MATERIAL MEETS																				
SPECIFICATIONS AND P.O. REQUIREMENTS - BEND TEST ON PIPE																				
NIPPLES: SATISFACTORY																				
INSPECTION AUTHORITY																				
QUALITY CONTROL DEPARTMENT																				
MANUFACTURER'S SYMBOL																				
MANUFACTURER'S SYMBOL																				

BORIS FIZZOTTI

FITTINGS

IML

STUB BOLTS



E00
2" am 90° Elbow
A105N

I.M.L.
INDUSTRIA MECCANICA LIGURE SPA

INSPECTION CERTIFICATE EN 10204:2004 / 3.1
COMPANY WITH QUALITY SYSTEM ISO 9001:2000
CERTIFIED BY RINA

SETBOLD INTERNATIONAL CORP.
20 Holly Street, Unit 205
TORONTO M4S 3B1 CANADA

Certificate Nr 10391
Invoice Nr 1117
Del. Nota Nr 1743
CA

10030 CASARZUA LIGURE - Genova - Italy - P.zza Marco Capelli, 4 - Tel.010.55.407061 - Fax 010.55.465510 / MATERIAL TEST DEPARTMENT This certificate has been generated by computer and need not to be signed for validity according to DIN EN 10204 Page 6 - 12

HEAT CODE		HEAT	ITEM	YOUR P.O.	OUR REFERENCE	Q.TY	DESCRIPTION										DIM. ACC. TO	VISUAL & DIMENS.		
G23	76536	053	5248	2005-2E209-0003065-053	100	FITTING HALF COUPL. THRD NPT 3M 1" A105N CODE: 4085	SEE NOTE	SATISFACTORY												
	75347	054	5248	2005-2E209-0003065-054	25	FITTING HALF COUPL. THRD NPT 3M 1 1/2" A105N CODE: 6450	SEE NOTE	SATISFACTORY												
	75500	056	5248	2005-2E209-0003065-056	25	FITTING 90 ELB. THRD NPT 6M 1/2" A105N CODE: 3988	SEE NOTE	SATISFACTORY												
	A47	75441	057	5248	2005-2E209-0003065-057	10	FITTING 90 ELB. THRD NPT 6M 1" A105N CODE: 3989	SEE NOTE	SATISFACTORY											
	DVI	75712	058	5248	2005-2E209-0003065-058	8	FITTING 90 ELB. THRD NPT 6M 2" A105N CODE: 3990	SEE NOTE	SATISFACTORY											
TN4	78877	059	5248	2005-2E209-0003065-059	15	FITTING TEE THRD NPT 6M 1/2" A105N CODE: 4042	SEE NOTE	SATISFACTORY												
	78041	060	5248	2005-2E209-0003065-060	10	FITTING TEE THRD NPT 6M 1" A105N CODE: 4043	SEE NOTE	SATISFACTORY												
EOO	72290	003	5248	2005-2E209-0003065-003	606	FITTING 90 ELB. THRD NPT 2M 2" A105N CODE: 3960	SEE NOTE	SATISFACTORY												
HEAT CODE	HEAT	ITEM	MATERIAL	C%	Si%	Mn%	S%	P%	C-%	Ni%	Mo%	Ti%	Cu%	V%	Nb%	N%	Al%	C.E.%	OTHER ELEMENTS	
G23	76536	053	ASTM A105	0.175	0.220	1.010	0.022	0.018	0.090	0.050	0.010	0.009	0.150	0.002	0.000	0.000	0.005	0.377		
A47	75347	054	ASTM A105	0.185	0.180	1.000	0.018	0.016	0.110	0.060	0.010	0.005	0.210	0.002	0.001	0.000	0.013	0.384		
DVI	75500	056	ASTM A105	0.180	0.230	1.010	0.021	0.011	0.090	0.070	0.010	0.002	0.230	0.002	0.001	0.000	0.014	0.389		
TN4	79441	057	ASTM A105	0.185	0.190	0.900	0.019	0.014	0.100	0.080	0.020	0.005	0.150	0.001	0.001	0.000	0.011	0.375		
H88	75712	058	ASTM A105	0.195	0.220	0.870	0.019	0.013	0.070	0.050	0.010	0.005	0.240	0.002	0.002	0.000	0.013	0.376		
TN4	78877	059	ASTM A105	0.195	0.220	0.960	0.018	0.018	0.120	0.080	0.010	0.005	0.200	0.002	0.000	0.000	0.018	0.399		
H88	78041	060	ASTM A105	0.190	0.170	0.930	0.019	0.013	0.100	0.050	0.020	0.005	0.160	0.002	0.001	0.000	0.007	0.383		
EOO	72290	003	ASTM A105	0.190	0.250	1.070	0.021	0.014	0.060	0.060	0.010	0.005	0.200	0.003	0.001	0.000	0.024	0.400		
HEAT CODE	HEAT	ITEM	TEST SPECIMEN	SECT. mm	LENGTH mm	YIELD POINT N/mm2	TENSILE STRENGTH N/mm2	ELONGATION %	REDUCTION OF AREA %	THICKNESS mm	BEND TEST	FLATFEMING TEST	TYPE (ASTM)	IMPACT TEST - JOUR 2nd	TEMP. °C	1	2	3	SHAPE	YIELD POINT N/mm2
G23	76556	053	122.65	50.00	314.0	582.0	582.0	33.0	58.0	168 - 170	0.0	0.0	KV	20	96	96	96	1	0.0	
A47	75347	054	122.65	50.00	330.0	530.0	530.0	34.0	58.0	162 - 165	0.0	0.0	KV	20	106	103	105	1	0.0	
G23	75500	056	122.65	50.00	374.0	526.0	526.0	34.0	51.0	162 - 166	0.0	0.0	KV	20	106	107	94	1	0.0	
A47	79441	057	122.65	50.00	309.0	563.0	563.0	31.0	54.0	162 - 168	0.0	0.0	KV	20	105	110	108	1	0.0	
DVI	75712	058	122.65	50.00	327.0	528.0	528.0	34.0	60.0	159 - 163	0.0	0.0	KV	20	106	100	105	1	0.0	
TN4	78877	059	122.65	50.00	309.0	547.0	547.0	32.0	56.0	160 - 166	0.0	0.0	KV	20	104	100	96	1	0.0	
H88	78041	060	122.65	50.00	328.0	528.0	528.0	34.0	54.0	156 - 164	0.0	0.0	KV	20	106	96	101	1	0.0	
EOO	72290	003	122.65	50.00	335.0	547.0	547.0	31.0	68.0	164 - 166	0.0	0.0	KV	20	115	105	109	1	0.0	
HEAT CODE	HEAT	ITEM	MATERIAL IN ACCORDANCE TO																	
G23	76556	053	ASME SA ASTM A105-05	Normalized at 880°±20°C / Air Cool																
A47	75347	054	ASME SA ASTM A105-05	Normalized at 880°±20°C / Air Cool																
G23	75500	056	ASME SA ASTM A105-05	Normalized at 880°±20°C / Air Cool																
DVI	79441	057	ASME SA ASTM A105-05	Normalized at 880°±20°C / Air Cool																
TN4	75712	058	ASME SA ASTM A105-05	Normalized at 880°±20°C / Air Cool																
H88	78877	059	ASME SA ASTM A105-05	Normalized at 880°±20°C / Air Cool																
TN4	78041	060	ASME SA ASTM A105-05	Normalized at 880°±20°C / Air Cool																
EOO	72290	003	ASME SA ASTM A105-05	Normalized at 880°±20°C / Air Cool																
NOTES				ASME B16.1/105 - ANSI B31.1/831.3 - IML STD - ANSI B1.1/818.2.2 - NACE MR0175 ISO 15166/1 - MSS SP 83 - SUPPLIED MATERIAL MEETS SPECIFICATIONS AND P.O. REQUIREMENTS																
				INSPECTION AUTHORITY																
				QUALITY CONTROL DEPARTMENT																
				MANUFACTURER'S SYMBOL																
				MANUFACTURER'S SYMBOL																
				96742																
				BORIS FIZZOTTI																
				FITTINGS																
				IML																
				STUDEBOLTS																



I.M.L.

INDUSTRIA MECCANICA LIGURE SPA

INSPECTION CERTIFICATE DIN 50049/3.1B - EN 10204/3.1B

COMPANY WITH QUALITY SYSTEM ISO 9001-2000
CERTIFIED BY RINA

SEYBOLD INTERNATIONAL CORP.
20 Holly Street, Unit 205
TORONTO M4S 3B1 CANADA CA

Certificate Nr 14323
Invoice Nr 1224
Del. Note Nr 1579
Dated 25.08.2004
Dated 10.08.2004
Dated 10.08.2004

16030 CASARZA LIGURE - Genova - Italy - P.zza Marco Capelli, 4 - Tel. 010.68.467081 - Fax 010.68.466510 / MATERIAL TEST DEPARTMENT

This certificate has been generated by computer and need not to be signed for validity according to DIN EN 10204 Page 2 - 3

HEAT CODE HEAT ITEM YOUR P.O. OUR REFERENCE Q.TY DESCRIPTION

GES	45258	026	4226	2004-2E209-0003015-026	200	FITTING 90 ELB. SW 3M 3/4" A105N CODE: 6169	DIM. ACC. TO VISUAL & DIMENS.
GH9	78249	011	4226	2004-2E209-0003015-011	300	FITTING 90 ELB. THRD NPT 3M 1/2" A105N CODE: 3967	SEE NOTE SATISFACTORY
BIF	77877	013	4226	2004-2E209-0003015-013	450	FITTING 90 ELB. THRD NPT 3M 2" A105N CODE: 3972	SEE NOTE SATISFACTORY
ZU3	76772	014	4226	2004-2E209-0003015-014	250	FITTING TEE THRD NPT 3M 1/2" A105N CODE: 4035	SEE NOTE SATISFACTORY
TC8	76076	015	4226	2004-2E209-0003015-015	105	FITTING TEE THRD NPT 3M 3/4" A105N CODE: 4036	SEE NOTE SATISFACTORY
TY8	25689	003	4226	2004-2E209-0003015-003	200	FITTING TEE THRD NPT 2M 1/2" A105N CODE: 4025	SEE NOTE SATISFACTORY
NK2	79210	007	4226	2004-2E209-0003015-007	2500	FITTING HEX.H.PLUG THRD NPT 1/2" A105N CODE: 4004	SEE NOTE SATISFACTORY
N08	78927	010	4226	2004-2E209-0003015-010	690	FITTING HEX.H.PLUG THRD NPT 2" A105N CODE: 4009	SEE NOTE SATISFACTORY
BAM	74918	017	4226	2004-2E209-0003015-017	24	FITTING TEE THRD NPT 3M 1/4" A105N CODE: 4039	SEE NOTE SATISFACTORY
UHO	24391	019	4226	2004-2E209-0003015-019	200	FITTING UNION F/F THRD NPT 3M 3/4" A105N CODE: 5807	SEE NOTE SATISFACTORY

HEAT CODE HEAT ITEM

TEST SPECIMEN	YIELD POINT	TENSILE STRENGTH	ELONGATION	REDUCTION OF AREA	HARDNESS HB	BEND TEST	FLATTENING TEST	IMPACT TEST - JOULE/CM2	SHAPE	YIELD POINT
SECT. mm2	LENGTH mm	MINIMUM >=2%	MINIMUM >=	% >=	% >=	180°	180°	°C	1" O 2" D	MINIMUM >=10%
GES	45258	026	122.65	50.00	369.0	604.0	32.0	80.0	160 - 168	0.0
GH9	78249	011	122.65	50.00	329.0	523.0	33.5	55.5	152 - 160	0.0
BIF	77877	013	122.65	50.00	331.0	534.0	34.0	60.0	164 - 166	0.0
ZU3	76772	014	122.65	50.00	328.0	525.0	32.5	53.5	152 - 158	0.0
TC8	76076	015	122.65	50.00	325.0	564.0	31.0	56.0	160 - 162	0.0
TY8	25689	003	122.65	50.00	346.0	520.0	34.0	53.0	158 - 162	0.0
NK2	79210	007	122.65	50.00	345.0	567.0	30.5	55.5	160 - 166	0.0
N08	78927	010	122.65	50.00	331.0	530.0	30.0	59.0	158 - 165	0.0
BAM	74918	017	122.65	50.00	321.0	533.0	30.0	59.0	163 - 165	0.0
UHO	24391	019	122.65	50.00	429.0	580.0	30.0	65.0	160 - 166	0.0

HEAT CODE HEAT ITEM MATERIAL IN ACCORDANCE TO

HEAT TREATMENT	FURNACE	STEEL MILL	Our Ref.
Normalised at 880°-920°C / Air Cool	ELECTRIC FURNACE	FERROSIDER	031368
Normalised at 880°-920°C / Air Cool	ELECTRIC FURNACE	RIVA ACCIAI	041162
Normalised at 880°-920°C / Air Cool	ELECTRIC FURNACE	RIVA ACCIAI	042071
Normalised at 880°-920°C / Air Cool	ELECTRIC FURNACE	RIVA ACCIAI	041064
Normalised at 880°-920°C / Air Cool	ELECTRIC FURNACE	RIVA ACCIAI	920085
Normalised at 880°-920°C / Air Cool	ELECTRIC FURNACE	RIVA ACCIAI	041242
Normalised at 880°-920°C / Air Cool	ELECTRIC FURNACE	RIVA ACCIAI	032083
Normalised at 880°-920°C / Air Cool	ELECTRIC FURNACE	RIVA ACCIAI	042062

NOTES ASME B16.11.96 - BS.3799 - ANSI B31.1/B31.3 - IML STD - NACE MR0175-99 -
ANSI B1.1-B18.2.2 - NACE MR0175-02

INSPECTION AUTHORITY

QUALITY CONTROL DEPARTMENT MANUFACTURER'S SYMBOL

BORIS FIZZOTTI

FITTINGS

IML

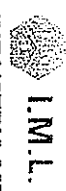
STUDBOLTS



Elbow BIF
90° 3M 2"

FILE
2" 90° 2m Elbow
A105N

MTR View



INDUSTRIA MECCANICA LICURE SPA

INSPECTION CERTIFICATE EN 10204:2004 / 3.1
COMPANY WITH QUALITY SYSTEM ISO 9001-2000
CERTIFIED BY RINA

SEYBOLD INTERNATIONAL CORP. 20 Holly Street, Unit 205 TORONTO M4S 3B1 CANADA CA	Certificate No. 113713 Invoice No. 322 Def. Note No. 508	Dated 23.03.2007 Dated 16.03.2007 Dated 16.03.2007
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16030 CASARZA LIGURE - Genova - Italy - P.22a Marco Cappella 4 - Tel.0185.467661 - Fax 0185.468510 / MATERIAL TEST DEPARTMENT This certificate has been generated by computer and need not to be signed for validity according to DIN EN 10204 Page 7 - 8

DESCRIPTION																					
HEAT CODE	HEAT	ITEM	YOUR P.O.	OUR REFERENCE	QTY														DIM. ACC. TO	VISUAL & DIMENS.	
EEK	72505	034	5950	2006-2E209-0003074-034	1005	FITTING HEX.H.PLUG THRD NPT 3/8M 2" A105N CODE: 4009													SEE NOTE	SATISFACTORY	
EEK	74406	023	5950	2006-2E209-0003074-023	336	FITTING 90 ELB. THRD NPT 2M 2" A105N CODE: 3960													SEE NOTE	SATISFACTORY	
EEK	74413	056	5950	2006-2E209-0003074-056	140	FITTING RED.TEE THRD NPT 3M 2"x1" A105N CODE: 11017													SEE NOTE	SATISFACTORY	
EEK	AR2240	003	5950	2006-2E209-0003074-003	100	FITTING HEX.BUSHING M/F THRD NPT 3/8M 1/2"x1/8" A105N CODE: 3857													SEE NOTE	SATISFACTORY	
EEK	AR2240	004	5950	2006-2E209-0003074-004	650	FITTING HEX.BUSHING M/F THRD NPT 3/8M 1/2"x1/4" A105N CODE: 3858													SEE NOTE	SATISFACTORY	
EEK	AR2240	009	5950	2006-2E209-0003074-009	300	FITTING HEX.BUSHING M/F THRD NPT 3/8M 1"x1/4" A105N CODE: 3865													SEE NOTE	SATISFACTORY	
EEK	AR5084	009	5950	2006-2E209-0003074-009	100	FITTING HEX.BUSHING M/F THRD NPT 3/8M 1"x1/4" A105N CODE: 3865													SEE NOTE	SATISFACTORY	
EEK	727145	013	5950	2006-2E209-0003074-013	150	FITTING HEX.BUSHING M/F THRD NPT 3/8M 1.1/4"x1" A105N CODE: 3871													SEE NOTE	SATISFACTORY	
HEAT CODE	HEAT	ITEM	MATERIAL	C%	Si%	Mn%	S%	P%	Cr%	Ni%	Mo%	Ti%	Cu%	V%	Nb%	N%	Al%	C.E.%	OTHER ELEMENTS		
EEK	72505	034	ASTM A105	0.185	0.180	0.180	0.013	0.011	0.070	0.040	0.010	0.021	0.140	0.029	0.000	0.000	0.025	0.410			
EEK	74406	023	ASTM A105	0.185	0.230	0.940	0.017	0.010	0.080	0.040	0.010	0.005	0.120	0.002	0.001	0.000	0.017	0.371			
EEK	74413	056	ASTM A105	0.185	0.180	0.970	0.019	0.018	0.130	0.050	0.010	0.005	0.190	0.001	0.001	0.000	0.023	0.391			
EEK	AR2240	003	ASTM A105	0.185	0.250	0.950	0.024	0.008	0.160	0.140	0.040	0.000	0.190	0.001	0.000	0.000	0.000	0.408			
EEK	AR2240	004	ASTM A105	0.185	0.250	0.950	0.024	0.008	0.160	0.140	0.040	0.000	0.190	0.001	0.001	0.000	0.000	0.408			
EEK	AR2240	009	ASTM A105	0.185	0.250	0.980	0.020	0.007	0.100	0.110	0.030	0.000	0.140	0.002	0.000	0.000	0.025	0.393			
EEK	AR5084	009	ASTM A105	0.185	0.260	1.300	0.029	0.012	0.140	0.020	0.005	0.000	0.030	0.002	0.001	0.000	0.000	0.417			
EEK	727145	013	ASTM A105	0.190	0.190	0.960	0.013	0.010	0.090	0.050	0.010	0.005	0.180	0.001	0.000	0.000	0.017	0.384			
HEAT CODE	HEAT	ITEM	TEST SPECIMEN	SECT. mm	LEIGHT mm	WELD POINT	TENSILE STRENGTH	ELONGATION	REDUCTION OF AREA	HARDNESS HB	BEND TEST	FLATNESS TEST	TYPE TENSILE	IMPACT TEST - JOULES	YIELD POINT	SHAPE	YIELD POINT				
EEK	72505	034	122.65	50.00	306.0	529.0	32.0	54.0	160 - 166	0.0	0.0	0.0	KV	20	98	106	110	1	0.0		
EEK	74406	023	122.65	50.00	309.0	563.0	31.0	54.0	160 - 166	0.0	0.0	0.0	KV	20	105	104	100	1	0.0		
EEK	74413	056	122.65	50.00	318.0	549.0	32.0	54.0	162 - 168	0.0	0.0	0.0	KV	20	95	94	90	1	0.0		
EEK	AR2240	003	122.65	50.00	306.0	564.0	31.0	54.0	160 - 162	0.0	0.0	0.0	KV	20	104	100	99	1	0.0		
EEK	AR2240	004	122.65	50.00	367.0	648.0	34.0	58.0	160 - 166	0.0	0.0	0.0	KV	20	96	90	84	1	0.0		
EEK	AR2240	009	122.65	50.00	366.0	621.0	32.0	58.0	162 - 170	0.0	0.0	0.0	KV	20	105	100	94	1	0.0		
EEK	AR5084	009	122.65	50.00	338.0	541.0	30.0	56.0	165 - 168	0.0	0.0	0.0	KV	20	96	96	96	1	0.0		
EEK	727145	013	122.65	50.00	309.0	549.0	31.0	56.0	160 - 166	0.0	0.0	0.0	KV	20	88	95	96	1	0.0		
HEAT CODE	HEAT	ITEM	MATERIAL IN ACCORDANCE TO										HEAT TREATMENT			FURNACE			STEEL MILL		Our Ref.
EEK	72505	034	ASME SA ASTM A105-05										Normalized at 880-920°C / Air Cool			ELECTRIC FURNACE			RIVA ACCIAI		
EEK	74406	023	ASME SA ASTM A105-05										Normalized at 880-920°C / Air Cool			ELECTRIC FURNACE			RIVA ACCIAI		
EEK	74413	056	ASME SA ASTM A105-05										Normalized at 880-920°C / Air Cool			ELECTRIC FURNACE			RIVA ACCIAI		
EEK	AR2240	003	ASME SA ASTM A105-05										Normalized at 880-920°C / Air Cool			ELECTRIC FURNACE			RIVA ACCIAI		
EEK	AR2240	004	ASME SA ASTM A105-05										Normalized at 880-920°C / Air Cool			ELECTRIC FURNACE			RIVA ACCIAI		
EEK	AR5084	009	ASME SA ASTM A105-05										Normalized at 880-920°C / Air Cool			ELECTRIC FURNACE			RIVA ACCIAI		
EEK	727145	013	ASME SA ASTM A105-05										Normalized at 880-920°C / Air Cool			ELECTRIC FURNACE			RIVA ACCIAI		
EEK	75745	013	ASME SA ASTM A105-05										Normalized at 880-920°C / Air Cool			ELECTRIC FURNACE			RIVA ACCIAI		
NOTES ASME B16.11/05 - ANSI B31.1/B31.3 - IML STD. - ANSI B1.1-B18.2.2 - NACE MR0175 ISO 151661 - MSS SP 83 - MSS SP 97 - SUPPLIED MATERIAL MEETS SPECIFICATIONS AND P.O. REQUIREMENTS																					
INSPECTION AUTHORITY																					
QUALITY CONTROL DEPARTMENT																					
BORIS FIZZOTTI																					
FITTINGS																					
IML																					
STUDBOLTS																					
MANUFACTURER'S SYMBOL																					
MANUFACTURER'S SYMBOL																					



INSPECTION CERTIFICATE EN 10204:2004 / 3.1
COMPANY WITH QUALITY SYSTEM ISO 9001:2000
CERTIFIED BY RINA

SEYBOLD INTERNATIONAL CORP.
20 Holly Street, Unit 205
TORONTO, ONT. M4S 3B1 CANADA

CA

Certificate Nr. 15506
Invoice Nr. 890
Det. Note Nr. 1350
Date
23.07.2005
Date
23.07.2005

16500 CASARZA LIGURE - Genova - Italy - P.zza Marco Cappelli, 4 - Tel. 010.55.457651 - Fax 010.55.465510 / MATERIAL TEST DEPARTMENT This certificate has been generated by computer and need not to be signed for validity according to DIN EN 10204 Page 3 - 7

HEAT CODE	HEAT	ITEM	OUR P.O.	OUR REFERENCE	Q.TY	DESCRIPTION	DWG. ACC. TO	VISUAL & DIMENS.																					
BSC	79326	005	4665	2004-2E209-0003040-005	12	FITTING TEE THRD NPT 2M 2" A105N CODE: 4030	SEE NOTE	SATISFACTORY																					
N59	77912	008	4665	2004-2E209-0003040-008	2000	FITTING HEX.H.PLUG THRD NPT 1" A105N 3/8M CODE: 4006	SEE NOTE	SATISFACTORY																					
N55	73094	010	4665	2004-2E209-0003040-010	435	FITTING HEX.H.PLUG THRD NPT 2" A105N 3/8M CODE: 4009	SEE NOTE	SATISFACTORY																					
TG6	79905	019	4665	2004-2E209-0003040-019	16	FITTING RED.TEE THRD NPT 3M 2"x1" A105N CODE: 11017	SEE NOTE	SATISFACTORY																					
N24	76569	035	4665	2004-2E209-0003040-035	45	FITTING HEX.H.PLUG THRD NPT 2" A350LFP2 3/8M CODE: 8424	SEE NOTE	SATISFACTORY																					
N55	73094	010	4665	2004-2E209-0003040-010	915	FITTING HEX.H.PLUG THRD NPT 2" A105N 3/8M CODE: 4009	SEE NOTE	SATISFACTORY																					
TG5	70278	012	4665	2004-2E209-0003040-012	400	FITTING TEE THRD NPT 3M 1" A105N CODE: 4037	SEE NOTE	SATISFACTORY																					
N58	AK4583	007	4665	2004-2E209-0003040-007	6500	FITTING HEX.H.PLUG THRD NPT 1/2" A105N 3/8M CODE: 4004	SEE NOTE	SATISFACTORY																					
HEAT CODE	HEAT	ITEM	MATERIAL	C%	SI%	MN%	S%	P%	C-%	NI%	MO%	TI%	CU%	V%	Nb%	N%	AI%	C.E.%	OTHER ELEMENTS										
BSC	79326	005	ASTM A105	0.190	0.220	0.940	0.019	0.012	0.120	0.060	0.010	0.014	0.240	0.003	0.001	0.000	0.014	0.393											
N59	77912	008	ASTM A105	0.190	0.160	0.910	0.023	0.009	0.070	0.050	0.010	0.010	0.170	0.002	0.001	0.000	0.005	0.373											
N55	73094	010	ASTM A105	0.195	0.220	1.020	0.014	0.020	0.120	0.060	0.010	0.017	0.200	0.025	0.000	0.000	0.025	0.413											
TG6	79905	019	ASTM A105	0.210	0.210	0.960	0.019	0.020	0.130	0.080	0.010	0.013	0.250	0.003	0.001	0.000	0.006	0.421											
N24	76569	035	ASTM A350 LF2 cl.1	0.185	0.220	1.100	0.012	0.009	0.090	0.070	0.010	0.023	0.130	0.023	0.000	0.000	0.025	0.406											
N55	73094	010	ASTM A105	0.195	0.220	1.020	0.014	0.020	0.120	0.060	0.010	0.017	0.200	0.025	0.000	0.000	0.025	0.413											
TG5	70278	012	ASTM A105	0.180	0.210	0.980	0.026	0.014	0.080	0.050	0.010	0.013	0.230	0.003	0.000	0.000	0.006	0.381											
N58	AK4583	007	ASTM A105	0.195	0.240	0.990	0.006	0.010	0.110	0.010	0.030	0.000	0.190	0.000	0.000	0.000	0.005	0.403											
HEAT CODE	HEAT	ITEM	TEST SPECIMEN	YIELD POINT	TENSILE STRENGTH	ELONGATION	REDUCTION OF AREA	HARDNESS HB	BEND TEST	FLATTENING TEST	TYPE Tensile	IMPACT TEST - JOULES	TEMPERATURE	SHAPE	YIELD POINT														
BSC	79326	005	SECT. 1002	122.65	50.00	334.0	539.0	34.0	58.0	163 - 165	0.0	0.0	KV	20	105	101	104	1	0.0										
N59	77912	008	SECT. 1002	122.65	50.00	361.0	552.0	32.0	56.0	160 - 168	0.0	0.0	KV	20	105	100	109	1	0.0										
N55	73094	010	SECT. 1002	122.65	50.00	378.0	566.0	32.0	56.0	162 - 168	0.0	0.0	KV	20	114	106	109	1	0.0										
TG6	79905	019	SECT. 1002	122.65	50.00	332.0	540.0	33.5	56.5	162 - 169	0.0	0.0	KV	20	103	102	108	1	0.0										
N24	76569	035	SECT. 1002	122.65	50.00	367.0	552.0	30.0	54.0	169 - 174	0.0	0.0	KV	-46	60	64	62	1	0.0										
N55	73094	010	SECT. 1002	122.65	50.00	378.0	566.0	32.0	56.0	162 - 168	0.0	0.0	KV	20	114	106	109	1	0.0										
TG5	70278	012	SECT. 1002	122.65	50.00	332.0	529.0	33.5	58.0	164 - 162	0.0	0.0	KV	20	109	106	104	1	0.0										
N58	AK4583	007	SECT. 1002	122.65	50.00	365.0	549.0	32.0	49.0	160 - 164	0.0	0.0	KV	20	104	100	96	1	0.0										
HEAT CODE	HEAT	ITEM	MATERIAL IN ACCORDANCE TO										HEAT TREATMENT				FURNACE			STEEL MILL			Our Ref.						
BSC	79326	005	ASME SA ASTM A105-03										Normalized at 880 °920 °C / Air Cool				ELECTRIC FURNACE			RIVA ACCIAI			042120						
N59	77912	008	ASME SA ASTM A105-03										Normalized at 880 °920 °C / Air Cool				ELECTRIC FURNACE			RIVA ACCIAI			041204						
N55	73094	010	ASME SA ASTM A105-03										Normalized at 880 °920 °C / Air Cool				ELECTRIC FURNACE			RIVA ACCIAI			051027						
TG6	79905	019	ASME SA ASTM A105-03										Normalized at 880 °920 °C / Air Cool				ELECTRIC FURNACE			RIVA ACCIAI			051022						
N24	76569	035	ASME SA ASTM A350-04a Gr. LF2 cl.1										Normalized at 900 °C / Air Cool				ELECTRIC FURNACE			RIVA ACCIAI			051022						
N55	73094	010	ASME SA ASTM A105-03										Normalized at 880 °920 °C / Air Cool				ELECTRIC FURNACE			RIVA ACCIAI			051027						
TG5	70278	012	ASME SA ASTM A105-03										Normalized at 880 °920 °C / Air Cool				ELECTRIC FURNACE			RIVA ACCIAI			041328						
N58	AK4583	007	ASME SA ASTM A105-03										Normalized at 880 °920 °C / Air Cool				ELECTRIC FURNACE			ORI MARTIN			011206						
NOTES ASME B16.11/01 - BS.3799 - ANSI B31.1/B31.3 - IML STD - ANSI B1.1-B18.2.2 - NACE MR0175 ISO 15161 - SUPPLIED MATERIAL MEETS SPECIFICATIONS AND P.O. REQUIREMENTS - MSS SP88																													
INSPECTION AUTHORITY										QUALITY CONTROL DEPARTMENT										MANUFACTURER'S SYMBOL									
BORIS FIZZOTTI										FITTINGS										IML									
STUDBOLTS										STUDBOLTS										STUDBOLTS									

87742

BORIS RIZZOTTI

IML

STUDBOLTS

N58

CERTIFIED MILL TEST REPORT



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 www.bonneyforge.com

CUSTOMER: CCTF CORPORATION

Date 08/11/06

CUSTOMER'S Order No.: 4021417-00

Bonney Order No. 39748

SHIPPED TO: CCTF CORPORATION

376746

1387 CORNWALL RD.

OAKVILLE, ONTARIO, L6J7T5 CANA

ITEM	QUANTITY	LOT NO.	GRADE OR SPECIFICATION NO.	
			CHEMICAL ANALYSIS, PHYSICAL PROPERTIES, REMARKS:	

SA/A105-QT

014	1500	3453	7522541	1/2 3M/6M A105 Q&T HXPL T					
				C .170 MN .790 P .006 S .005 SI .220					
				NI .010 CU .020 CR .020 MD .006 V .000					
				CB .020					
				CE(LONG FORMULA) = 0.31					
				BRINELL HARDNESS1: 139 HARDNESS2: 162					

***** CONTINUED ON NEXT PAGE *****

We certify that the data on this sheet is a true copy taken from our records of material furnished us by the production mill, or as obtained by additional laboratory checks.

by
 Cris Childers

CMTR: REV 1

QUALITY PROCESS MANAGER

Hex Plug 3453
 1/2" 3M

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LOG NO. 302061 PAGE 7

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CUSTOMER: CCTF CORPORATION

Date 08/11/06

CUSTOMER'S Order No.: 4021417-00

Bonney Order No. 039748

SHIPPED TO: CCTF CORPORATION

376746

1387 CORNWALL RD.

OAKVILLE, ONTARIO, L6J7T5 CANA

ITEM QUANTITY LOT NO.

GRADE OR SPECIFICATION NO.
CHEMICAL ANALYSIS, PHYSICAL PROPERTIES, REMARKS:

1. THE MATERIAL SUPPLIED IDENTIFIED AS A105QT WAS QUENCHED AND TEMPERED IN ACCORDANCE WITH ASTM A105 HEAT TREATING REQUIREMENTS.
2. THE FITTINGS SUPPLIED ARE IN ACCORDANCE WITH PURCHASE ORDER SPECIFICATIONS.
3. THE MATERIAL SUPPLIED IDENTIFIED AS A105N WAS NORMALIZED IN ACCORDANCE WITH ASTM A105 HEAT TREATING REQUIREMENTS.
4. CERTIFYING ASTM A105-05 / ASME SA105-04 EDITION.
5. THE MATERIAL SUPPLIED WAS INSPECTED AND MANUFACTURED IN ACCORDANCE WITH EN DIN 10204 3.1.B.
6. THE MATERIAL SUPPLIED MEETS THE REQUIREMENTS OF BOTH NACE MR0103-2003 AND NACE MR0175-2003.
7. ELONGATION TEST RESULTS ARE OBTAINED USING STANDARD ROUND SPECIMEN, 2 INCH OR 50 MM GAGE LENGTH.

***** END OF CERTIFICATION *****

We certify that the data on this sheet is a true copy taken from our records of material furnished us by the production mill, or as obtained by additional laboratory checks.

by

Cris Childers

CMTR: REV 1

QUALITY PROCESS MANAGER



I.M.L.

INDUSTRIA MECCANICA LIGURE SPA

INSPECTION CERTIFICATE EN 10204:2004 / 2.1

COMPANY WITH QUALITY SYSTEM ISO 9001:2000
CERTIFIED BY RINA

SEYBOLD INTERNATIONAL CORP.

20 Hedy Street, Unit 205
TORONTO M4S 3B1 CANADACertificate No. 20080438
Invoice No.
DOL. NOME INT.Date
Date

16030 CASARZA LIGURE - Genova - Italy - P.zza Marco Capulli 4 - Tel.0185/467661 - Fax 0185/466510 / MATERIAL TEST DEPARTMENT This certificate has been generated by computer and need not to be signed for validity according to DIN EN 10204 Page 1 - 1

HEAT CODE	HEAT	ITEM	YOUR P.O.	OUR REFERENCE	Q.TY	DESCRIPTION														DIM. ACC. TO	VISUAL & DIMENS.
C23	AA3490 76556 76556				1 1 1	FITTING HEX.H.PLUG THRD NPT 1" A105N FITTING TEE THRD NPT 3M 1" A105N FITTING HEX.H.PLUG THRD NPT 1" A105N														SEE NOTE SEE NOTE SEE NOTE	SATISFACTORY SATISFACTORY SATISFACTORY
HEAT CODE	HEAT	ITEM	MATERIAL	C%	Si%	Mn%	S%	P%	Cr%	Ni%	Mo%	Ti%	Cu%	V%	Nb%	N%	Al%	C.E.%	OTHER ELEMENTS		
C23	AA3490 76556 76556		ASTM A105 ASTM A105 ASTM A105	0.200 0.175 0.175	0.250 0.220 0.220	0.330 1.010 1.010	0.027 0.022 0.022	0.011 0.018 0.018	0.090 0.090 0.090	0.110 0.050 0.050	0.030 0.010 0.010	0.000 0.009 0.009	0.160 0.150 0.150	0.002 0.002 0.002	0.001 0.000 0.000	0.000 0.000 0.000	0.023 0.005 0.005	0.397 0.377 0.377			
HEAT CODE	HEAT	ITEM	TEST SPECIMEN SECT. mm	YIELD POINT N/mm ² >=0.2%	TENSILE STRENGTH N/mm ² >=	ELONGATION %>=	REDUCTION OF AREA %>=	HARDNESS H _V	BEND TEST	FLATTENING TEST	IMPACT TEST - JOULES			SHAPE	YIELD POINT N/mm ² >=0.2%						
C23	AA3490 76556 76556		122.65 122.65 122.65	50.00 50.00 50.00	306.0 582.0 582.0	34.0 33.0 33.0	56.0 58.0 58.0	160 - 166 168 - 170 168 - 170	0.0 0.0 0.0	0.0 0.0 0.0	KV KV KV	20 20 20	106 96 96	107 96 96	1 1 1	0.0 0.0 0.0					
HEAT CODE	HEAT	ITEM	MATERIAL IN ACCORDANCE TO														FURNACE		STEEL MILL	Our Ref.	
C23	AA3490 76556 76556		ASME SA ASTM A105-05 ASME SA ASTM A105-05 ASME SA ASTM A105-05														ELECTRIC FURNACE ELECTRIC FURNACE ELECTRIC FURNACE		RODACCI ACC. TANARO ACC. TANARO	N10281 891341 991341	
HEAT CODE	HEAT	ITEM	HEAT TREATMENT																		
C23	AA3490 76556 76556		Normalized at 880°±20°C / Air Cool Normalized at 880°±20°C / Air Cool Normalized at 880°±20°C / Air Cool																		
NOTES ASME B16.11/05 - ANSI B31.1/B31.3 - IML STD. - ANSI B1.1-B18.2.2 - NACE MR0175 ISO 15156/1 - MSS SP 83 - SUPPLIED MATERIAL MEETS SPECIFICATIONS AND P.O. REQUIREMENTS																					
INSPECTION AUTHORITY										QUALITY CONTROL DEPARTMENT					MANUFACTURER'S SYMBOL					MANUFACTURER'S SYMBOL	
BORIS FIZZOTTI															IML					STUBBOLTS	

96269

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 www.bonneyforge.com

CUSTOMER: CCTF - DIV OF EMCO CORPORATION

Date 10/18/04

CUSTOMER'S Order No.: 4640879-00

Bonney Order No. 001212

SHIPPED TO: CCTF - DIV OF EMCO CORPORATION

275639

5407 - 53 AVENUE

EDMONTON ALBERTA, T6B 3G2 CANA

ITEM QUANTITY LOT NO

SA/A105N-02

039	9	2293	7524153	2 3M A105N UNAR T					
		FEMALE		C	.190 MN	1.040 P	.009 S	.024 SI	.260
				NI	.040 CU	.150 CR	.070 MD	.008 V	.024
				AL	.001 NB	.001			
				CE(LONG FORMULA) = 0.40					
				T/S 81875 Y/S 56625 EL 29.60 RA 61.80					
				BRINELL HARDNESS1: 147 HARDNESS2: 147					
		2541	7524153	2 3M A105N UNAR T					
		NUT		C	.200 MN	1.000 P	.018 S	.027 SI	.280
				NI	.170 CU	.260 CR	.210 MD	.042 V	.003
				AL	.020 NB	.002			
				CE(LONG FORMULA) = 0.45					
				T/S 83875 Y/S 58625 EL 29.30 RA 61.30					
				BRINELL HARDNESS1: 153 HARDNESS2: 153					
		2786	7524153	2 3M A105N UNAR T					
		MALE		C	.260 MN	.800 P	.009 S	.021 SI	.240
				NI	.070 CU	.200 CR	.080 MD	.020 V	.001
				NB	.000				
				CE(LONG FORMULA) = 0.43					
				T/S 73684 Y/S 45112 EL 36.50 RA 62.90					
				BRINELL HARDNESS1: 141 HARDNESS2: 141					
073	100	2905	7522576	1 3M/6M A105N HXPL T					
				C	.200 MN	1.030 P	.009 S	.023 SI	.240
				NI	.010 CU	.040 CO	.001 CR	.040 MD	.007
				V	.025 AL	.001 NB	.000		
				CE(LONG FORMULA) = 0.39					
				T/S 76269 Y/S 53173 EL 30.25 RA 64.37					
				BRINELL HARDNESS1: 147 HARDNESS2: 147					

***** CONTINUED ON NEXT PAGE *****

We certify that the data on this sheet is a true copy taken from our records of material furnished us by the production mill, or as obtained by additional laboratory checks.



by

Cris Childers

QUALITY PROCESS MANAGER

1" 3/6M
HEX PLUG 2905

2K3



INDUSTRIA MECCANICA LIGURE SPA

INSPECTION CERTIFICATE DIN 60049.1B - EN 10204.1B
COMPANY WITH QUALITY SYSTEM ISO 9001:2000
CERTIFIED BY RINA

SEYBOLD INTERNATIONAL CORP.
20 Hobbs Street, Unit 205
TORONTO, M6S 3B1 CANADA

Certificate Nr 15245
Invoice Nr 409
Del. Note Nr 595
CA

16030 CASARZA LIGURE - Genova - Italy - P.zza Marco Capelli, 6 - Tel. 0185.467661 - Fax 0185.466510 / MATERIAL TEST DEPARTMENT This certificate has been generated by computer and need not to be signed for validity according to DIN EN 10204 Page 7 - 8

HEAT CODE	HEAT	ITEM	YOUR P.O.	OUR REFERENCE	Q.TY	DESCRIPTION	DIM. ACC. TO	VISUAL & DIMENS.											
UE8	76177	019	4658	2004-2E209-0003033-019	355	FITTING UNION F/F THIRD NPT 3M 2" A105N CODE: 5603	SEE NOTE	SATISFACTORY											
NS2	71647	008	4658	2004-2E209-0003033-008	1350	FITTING HEX.H. PLUG THIRD NPT 3/8M 2" A105N CODE: 4009	SEE NOTE	SATISFACTORY											
NS3	73786	007	4658	2004-2E209-0003033-007	1900	FITTING HEX.H. PLUG THIRD NPT 3/8M 1" A105N CODE: 4006	SEE NOTE	SATISFACTORY											
UE9	X21947	014	4658	2004-2E209-0003033-014	300	FITTING UNION F/F THIRD NPT 3M 1/2" A105N CODE: 5698	SEE NOTE	SATISFACTORY											
UHO	24391	015	4658	2004-2E209-0003033-015	400	FITTING UNION F/F THIRD NPT 3M 3/4" A105N CODE: 5607	SEE NOTE	SATISFACTORY											
	78926	022	4658	2004-2E209-0003033-022	135	FITTING COUPLING THRD NPT 3M 1 1/2" A105N CODE: 3905	SEE NOTE	SATISFACTORY											
AWX	78703	022	4658	2004-2E209-0003033-022	75	FITTING COUPLING THRD NPT 3M 1 1/2" A105N CODE: 3905	SEE NOTE	SATISFACTORY											
	75779	035	4658	2004-2E209-0003033-035	20	THREADOLET NPT 3M 2"x3/4" A105N CODE: 34538	SEE NOTE	SATISFACTORY											
HEAT CODE	HEAT	ITEM	MATERIAL	C%	SI%	Mo%	S%	P%	Cr%	NI%	Mo%	TI%	Cu%	V%	NE%	N%	Al%	C.E.%	OTHER ELEMENTS
UE8	76177	019	ASTM A105	0.190	0.210	1.040	0.015	0.008	0.060	0.050	0.010	0.190	0.170	0.021	0.000	0.000	0.280	0.396	
NS2	71647	008	ASTM A105	0.190	0.200	1.140	0.012	0.011	0.060	0.050	0.010	0.026	0.160	0.022	0.000	0.000	0.026	0.412	
NS3	73786	007	ASTM A105	0.220	0.210	0.880	0.005	0.018	0.100	0.050	0.010	0.014	0.200	0.016	0.000	0.000	0.018	0.409	
UE9	X21947	014	ASTM A105	0.200	0.270	0.850	0.028	0.011	0.110	0.100	0.030	0.003	0.110	0.003	0.001	0.000	0.028	0.384	
UHO	24391	015	ASTM A105	0.180	0.270	0.800	0.016	0.021	0.250	0.030	0.000	0.000	0.200	0.006	0.002	0.011	0.015	0.393	
	78926	022	ASTM A105	0.195	0.220	0.950	0.022	0.013	0.080	0.050	0.010	0.010	0.130	0.003	0.001	0.000	0.006	0.384	
AWX	78703	022	ASTM A105	0.195	0.200	1.100	0.012	0.012	0.090	0.050	0.000	0.020	0.180	0.026	0.000	0.000	0.025	0.417	
	75779	035	ASTM A105	0.200	0.280	0.890	0.023	0.013	0.090	0.060	0.010	0.010	0.160	0.002	0.000	0.000	0.005	0.383	
HEAT CODE	HEAT	ITEM	TEST SPECIFICATION	YIELD POINT	TENSILE STRENGTH	ELONGATION	REDUCTION OF AREA	HARDNESS IN	BEND TEST	FLATTENING TEST	TYPE 180 TON	TEMPERATURE	1	2	3	SHAPE	YIELD POINT		
UE8	76177	019	122.65	50.00	348.0	567.0	32.0	54.0	160 - 162	0.0	0.0	KV	20	106	105	107	1	0.0	
NS2	71647	008	122.65	50.00	342.0	537.0	31.0	55.0	160 - 166	0.0	0.0	KV	20	102	103	106	1	0.0	
NS3	73786	007	122.65	50.00	315.0	596.0	36.0	70.0	160 - 166	0.0	0.0	KV	20	96	106	105	1	0.0	
UE9	X21947	014	122.65	50.00	355.0	529.0	30.5	55.5	156 - 160	0.0	0.0	KV	20	96	102	99	1	0.0	
UHO	24391	015	122.65	50.00	428.0	580.0	30.0	65.0	160 - 165	0.0	0.0	KV	20	100	103	99	1	0.0	
	78926	022	122.65	50.00	328.0	528.0	33.5	55.5	154 - 160	0.0	0.0	KV	20	103	98	102	1	0.0	
AWX	78703	022	122.65	50.00	339.0	568.0	37.0	62.0	156 - 158	0.0	0.0	KV	20	100	101	101	1	0.0	
	75779	035	122.65	50.00	330.0	545.0	30.0	57.0	159 - 165	0.0	0.0	KV	20	98	97	89	1	0.0	
HEAT CODE	HEAT	ITEM	MATERIAL IN ACCORDANCE TO	HEAT TREATMENT	QUALITY CONTROL DEPARTMENT	MANUFACTURER'S SYMBOL	MANUFACTURER'S SYMBOL	STUDBOLTS											
UE8	76177	019	ASME SA ASTM A105-03	Normalized at 880°-920°C / Air Cool	BORIS FIZZOTTI	IML	STUDBOLTS												
NS2	71647	008	ASME SA ASTM A105-03	Normalized at 880°-920°C / Air Cool															
NS3	73786	007	ASME SA ASTM A105-03	Normalized at 880°-920°C / Air Cool															
UE9	X21947	014	ASME SA ASTM A105-03	Normalized at 880°-920°C / Air Cool															
UHO	24391	015	ASME SA ASTM A105-03	Normalized at 880°-920°C / Air Cool															
	78926	022	ASME SA ASTM A105-03	Normalized at 880°-920°C / Air Cool															
AWX	78703	022	ASME SA ASTM A105-03	Normalized at 880°-920°C / Air Cool															
	75779	035	ASME SA ASTM A105-03	Normalized at 880°-920°C / Air Cool															
NOTES	ASME B16.11/01 - BS.3799 - ANSI B31.1/BS1.3 - IML STD - ANSI B1.1-8/18.2.2 - NACE MR0175 ISO 15156/1																		

87517



I.M.L.

INDUSTRIA MECCANICA LIGURE SPA

INSPECTION CERTIFICATE DIN 50049.3.1B - EN 10204.3.1B

COMPANY WITH QUALITY SYSTEM ISO 9001:2000

CERTIFIED BY IRMA

SEYBOLD INTERNATIONAL CORP.
20 Holly Street, Unit 205
TORONTO M8S 3B1 CANADA CACertificate Nr. 15355
Invoice Nr. 595
Del. Note Nr. 756
Dated 18.05.2005
Dated 28.04.2005
Dated 28.04.2005

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HEAT CODE	HEAT	ITEM	YOUR P.O.	OUR REFERENCE	Q.TY	DESCRIPTION	DIM. ACC. TO	VISUAL & DIMENS.														
ZZ9	76177	005	4659	2004-2E209-0003034-005	240	FITTING CROSS THRD NPT 2M 1" A105N CODE: 7601DA0DED 120 PCS. NOT SHIPPED AG...	SEE NOTE	SATISFACTORY														
GR2	39700	010	4659	2004-2E209-0003034-010	72	FITTING 45 ELB. THRD NPT 3M 1 1/2" A105N CODE: 6204	SEE NOTE	SATISFACTORY														
06	76568	030	4659	2004-2E209-0003034-030	165	FITTING UNION F/F THRD NPT 3M 1" A350L/F2 (NUT) CODE: 8430	SEE NOTE	SATISFACTORY														
08	76568	030	4659	2004-2E209-0003034-030	165	FITTING UNION F/F THRD NPT 3M 1" A350L/F2 (MALE) CODE: 8430	SEE NOTE	SATISFACTORY														
06	76568	030	4659	2004-2E209-0003034-030	165	FITTING UNION F/F THRD NPT 3M 1" A350L/F2 (FEMALE) CODE: 8430	SEE NOTE	SATISFACTORY														
NS9	77912	039	4659	2004-2E209-0003034-039	100	FITTING HEX.H.PLUG THRD NPT 1" A105N 3/6M CODE: 4066D100 PCS. NOT SHIPPED AG...	SEE NOTE	SATISFACTORY														
HEAT CODE	HEAT	ITEM	MATERIAL	C%	S1%	Mn%	S%	P%	Cr%	NI%	MO%	TI%	CU%	V%	NB%	N%	AL%	C.E.%	OTHER ELEMENTS			
ZZ9	76177	005	ASTM A105	0,190	0,210	1,040	0,015	0,008	0,060	0,050	0,010	0,019	0,170	0,021	0,000	0,000	0,026	0,396				
GR2	39700	010	ASTM A105	0,190	0,230	1,090	0,015	0,014	0,110	0,080	0,020	0,018	0,180	0,030	0,001	0,000	0,025	0,422				
06	76568	030	ASTM A350 LF2 cl.1	0,200	0,200	1,110	0,010	0,009	0,080	0,050	0,010	0,022	0,140	0,024	0,000	0,000	0,023	0,420				
08	76568	030	ASTM A350 LF2 cl.1	0,200	0,200	1,110	0,010	0,009	0,080	0,050	0,010	0,022	0,140	0,024	0,000	0,000	0,023	0,420				
06	76568	030	ASTM A350 LF2 cl.1	0,200	0,200	1,110	0,010	0,009	0,080	0,050	0,010	0,022	0,140	0,024	0,000	0,000	0,023	0,420				
NS9	77912	039	ASTM A105	0,190	0,160	0,910	0,023	0,009	0,070	0,060	0,010	0,010	0,170	0,002	0,001	0,000	0,005	0,373				
HEAT CODE	HEAT	ITEM	TEST SPECIFIER	SECT. mm2	LENGTH mm	YIELD POINT N/mm2 >0,2%	TENSILE STRENGTH N/mm2 >2%	ELONGATION % >2%	REDUCTION OF AREA % >2%	HARDNESS HB	BEND TEST	FLATTENING TEST	TYPE TOLERANCE	IMPACT TEST - JOULE/CM2	TEMP. °C	1	2	3	SHAPE 1=O 2=D	YIELD POINT N/mm2 >0,2%		
ZZ9	76177	005	122,65	50,00	332,0	532,0	32,0	34,0	56,0	150 - 158	0,0	0,0	KV	20	103	98	105	1	0,0			
GR2	39700	010	122,65	50,00	366,0	601,0	34,0	34,0	56,0	160 - 162	0,0	0,0	KV	20	106	110	110	1	0,0			
06	76568	030	122,65	50,00	340,0	540,0	31,5	31,5	55,5	156 - 160	0,0	0,0	KV	46	46	49	47	1	0,0			
08	76568	030	122,65	50,00	365,0	515,0	30,0	30,0	52,0	154 - 158	0,0	0,0	KV	46	62	60	57	1	0,0			
06	76568	030	122,65	50,00	340,0	540,0	31,5	31,5	55,5	156 - 160	0,0	0,0	KV	46	46	49	47	1	0,0			
NS9	77912	039	122,65	50,00	361,0	552,0	32,0	32,0	56,0	160 - 168	0,0	0,0	KV	20	105	100	109	1	0,0			
HEAT CODE	HEAT	ITEM	MATERIAL IN ACCORDANCE TO										HEAT TREATMENT									
ZZ9	76177	005	ASME SA ASTM A105-03										Normalized at 880 ° 920 °C / Air Cool									
GR2	39700	010	ASME SA ASTM A105-03										Normalized at 880 ° 920 °C / Air Cool									
06	76568	030	ASME SA ASTM A350-04 Gr. LF2 cl.1										Normalized at 900 °C / Air Cool									
08	76568	030	ASME SA ASTM A350-04 Gr. LF2 cl.1										Normalized at 900 °C / Air Cool									
06	76568	030	ASME SA ASTM A350-04 Gr. LF2 cl.1										Normalized at 900 °C / Air Cool									
NS9	77912	039	ASME SA ASTM A105-03										Normalized at 880 ° 920 °C / Air Cool									
NOTES																						
BS16.1/01 - BS.3799 - ANSI B31.1/BS31.3 - IML STD - ANSI B1.1-B18.2.2 - NACE MR0175 ISO 15156/1 - MSS SP88																						
INSPECTION AUTHORITY											QUALITY CONTROL DEPARTMENT											
BORIS FIZZOTTI											FITTINGS IML											
STUDEBOLTS											STUDEBOLTS											

87630



Certificado Nr 18414	Dated	20.04.2008
Invoice Nr 445	Dated	13.04.2008
Del. Note Nr 683	Dated	13.04.2008

85468310 / MATERIAL TEST DEPARTMENT This card

DESCRIPTION										DIM. ACC. TO		VISUAL & DIMENS.								
HEAT CODE	HEAT	ITEM	YOUR P.O.	OUR REFERENCE	QTY															
NK	1629	022	5140	2005-4E208-0003055-022	400	FITTING HEX.H.PLUG THRD NPT 3/8IN 3/8" A105N CODE: 4003					SEE NOTE	SATISFACTORY								
NK	78457	025	5140	2005-4E208-0003055-025	1005	FITTING HEX.H.PLUG THRD NPT 3/8IN 3/8" A105N CODE: 4009					SEE NOTE	SATISFACTORY								
DIU	77180	035	5140	2005-4E208-0003055-035	204	FITTING TEE THRD NPT 3M 2" A105N CODE: 4375					SEE NOTE	SATISFACTORY								
NT1	72452	001	5140	2005-4E208-0003055-001	25	FITTING HEX.BUSHING M/F THRD NPT 3/8IN 1.14"x3/4" A105N CODE: 3870					SEE NOTE	SATISFACTORY								
NT1	72452	002	5140	2005-4E208-0003055-002	75	FITTING HEX.BUSHING M/F THRD NPT 3/8IN 1.14"x3/4" A105N CODE: 3871					SEE NOTE	SATISFACTORY								
H2	653188	003	5140	2005-4E208-0003055-003	50	FITTING HEX.BUSHING M/F THRD NPT 3/8IN 1.12"x1/2" A105N CODE: 3873					SEE NOTE	SATISFACTORY								
H2	78457	009	5140	2005-4E208-0003055-009	45	FITTING HEX.BUSHING M/F THRD NPT 3/8IN 2"x3/4" A105N CODE: 3879					SEE NOTE	SATISFACTORY								
H2	74285	027	5140	2005-4E208-0003055-027	960	FITTING 90 ELB. THRD NPT 3M 1" A105N CODE: 3859					SEE NOTE	SATISFACTORY								
HEAT CODE	HEAT	ITEM	MATERIAL	C%	Si%	Mn%	S%	P%	C%	Ni%	Mo%	Ti%	CU%	VA%	Nb%	N%	Al%	C.E.%	OTHER ELEMENTS	
NK	1629	022	ASTM A105	0.195	0.250	1.050	0.015	0.020	0.130	0.060	0.010	0.000	0.200	0.003	0.001	0.000	0.000	0.416		
NK	78457	025	ASTM A105	0.205	0.230	0.900	0.026	0.018	0.100	0.050	0.010	0.005	0.170	0.002	0.002	0.000	0.008	0.392		
DIU	77180	035	ASTM A105	0.180	0.180	0.980	0.019	0.016	0.090	0.050	0.010	0.005	0.170	0.002	0.000	0.000	0.017	0.378		
NT1	72452	001	ASTM A105	0.200	0.170	0.990	0.018	0.024	0.130	0.070	0.010	0.013	0.240	0.002	0.000	0.000	0.005	0.412		
NT1	72452	002	ASTM A105	0.200	0.170	0.880	0.018	0.024	0.130	0.070	0.010	0.013	0.240	0.002	0.000	0.000	0.005	0.412		
H2	653188	003	ASTM A105	0.184	0.266	0.860	0.004	0.009	0.040	0.000	0.020	0.002	0.050	0.005	0.002	0.000	0.044	0.344		
H2	78457	009	ASTM A105	0.205	0.230	0.900	0.026	0.018	0.100	0.050	0.010	0.005	0.170	0.002	0.002	0.000	0.008	0.392		
H2	74285	027	ASTM A105	0.180	0.220	0.940	0.024	0.016	0.110	0.060	0.010	0.013	0.240	0.002	0.001	0.000	0.008	0.391		
HEAT CODE	HEAT	ITEM	TEST SPECIFIER	YIELD POINT	TENSILE STRENGTH	ELONGATION	REDUCTION OF AREA	HARDNESS	BEND TEST	FLATTENING TEST	TYP. TOLERANCE	IMPACT TEST	JOULES	SHAPE	YIELD POINT					
NK	1629	022	122.65 50.00	325.0	533.0	31.0	59.0	158 - 160	0.0	0.0	KV	20	88	97	0.0					
DIU	78457	025	122.65 50.00	309.0	549.0	31.0	56.0	160 - 168	0.0	0.0	KV	20	96	90	0.0					
DIU	77180	035	122.65 50.00	327.0	528.0	33.0	58.0	159 - 163	0.0	0.0	KV	20	106	100	0.0					
NT1	72452	001	122.65 50.00	321.0	539.0	33.0	58.0	160 - 166	0.0	0.0	KV	20	88	95	0.0					
NT1	72452	002	122.65 50.00	321.0	539.0	33.0	58.0	160 - 166	0.0	0.0	KV	20	88	96	0.0					
H2	653188	003	122.65 50.00	341.0	524.0	31.0	68.0	158 - 164	0.0	0.0	KV	20	90	96	0.0					
H2	78457	009	122.65 50.00	306.0	563.0	34.0	57.0	160 - 168	0.0	0.0	KV	20	109	110	0.0					
H2	74285	027	122.65 50.00	320.0	525.0	34.0	55.0	154 - 160	0.0	0.0	KV	20	96	100	0.0					
HEAT CODE	HEAT	ITEM	MATERIAL IN ACCORDANCE TO			HEAT TREATMENT										FURNACE			STEEL MILL	Our Ref.
NK	1629	022	ASME SA ASTM A105-05			Normalized at 880±920°C / Air Cool										ELECTRIC FURNACE				
NK	78457	025	ASME SA ASTM A105-05			Normalized at 880±920°C / Air Cool										ELECTRIC FURNACE				
DIU	77180	035	ASME SA ASTM A105-05			Normalized at 880±920°C / Air Cool										ELECTRIC FURNACE				
NT1	72452	001	ASME SA ASTM A105-05			Normalized at 880±920°C / Air Cool										ELECTRIC FURNACE				
NT1	72452	002	ASME SA ASTM A105-05			Normalized at 880±920°C / Air Cool										ELECTRIC FURNACE				
NT1	653188	003	ASME SA ASTM A105-05			Normalized at 880±920°C / Air Cool										ELECTRIC FURNACE				
H2	78457	009	ASME SA ASTM A105-05			Normalized at 880±920°C / Air Cool										ELECTRIC FURNACE				
H2	74285	027	ASME SA ASTM A105-05			Normalized at 880±920°C / Air Cool										ELECTRIC FURNACE				
NOTES																		MANUFACTURER'S SYMBOL		
ASME B16.1/101 - BS 3799 - ANSI B31.1/B31.3 - IMI STD - ANSI																		IML		
81.1-818.2.2 - NACE MR0175 ISO 158181 - SUPPLIED MATERIAL MEETS																		STUDBOLTS		
SPECIFICATIONS AND P.O. REQUIREMENTS																		IML		
INSPECTION AUTHORITY																		STUDBOLTS		
QUALITY CONTROL DEPARTMENT																		IML		
MANUFACTURER'S SYMBOL																		STUDBOLTS		
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EEK.
2" 3/6m HEX PLUG
A105N

SEYBOLD INTERNATIONAL CORP.
20 Holly Street, Unit 205
TORONTO M4S 3B1 CANADA
CA

Certificate Nr 17373
Invoice Nr 322
Del. Note Nr 508

Dated 23.03.2007
Dated 16.03.2007
Dated 16.03.2007

INSPECTION CERTIFICATE EN 10204:2004 / 3.1
COMPANY WITH QUALITY SYSTEM ISO 9001:2000
CERTIFIED BY RINA

I.M.L.
INDUSTRIA MECCANICA LIGURE SPA

16030 CASARZA LIGURE - Genova - Italy - P.zza Marco Cappelletti 4 - Tel.0185.467661 - Fax 0185.466510 / MATERIAL TEST DEPARTMENT This certificate has been generated by computer and need not to be signed for validity according to DIN EN 10204 Page 7 - 8

HEAT CODE		HEAT	ITEM	YOUR P.O.	OUR REFERENCE	Q.TY	DESCRIPTION										DIM. ACC. TO	VISUAL & DIMENS.						
EEK	72505	034	5950	2006-2E209-003074-034	1005	FITTING HEX.H.PLUG THRD NPT 3/6M 2" A105N CODE: 4009	SEE NOTE										SEE NOTE	SATISFACTORY						
FIE	74406	023	5950	2006-2E209-003074-023	396	FITTING 90 ELB. THRD NPT 2M 2" A105N CODE: 3960	SEE NOTE										SEE NOTE	SATISFACTORY						
FGB	74413	056	5950	2006-2E209-003074-056	140	FITTING RED TEE THRD NPT 3M 2"x1" A105N CODE: 11017	SEE NOTE										SEE NOTE	SATISFACTORY						
C21	AR2240	003	5950	2006-2E209-003074-003	100	FITTING HEX.BUSHING M/F THRD NPT 3/6M 1/2"x1/8" A105N CODE: 3857	SEE NOTE										SEE NOTE	SATISFACTORY						
C7	AR2240	004	5950	2006-2E209-003074-004	650	FITTING HEX.BUSHING M/F THRD NPT 3/6M 1/2"x1/4" A105N CODE: 3858	SEE NOTE										SEE NOTE	SATISFACTORY						
C15	AR5064	009	5950	2006-2E209-003074-009	300	FITTING HEX.BUSHING M/F THRD NPT 3/6M 1"x1/4" A105N CODE: 3865	SEE NOTE										SEE NOTE	SATISFACTORY						
A7	727145	009	5950	2006-2E209-003074-009	100	FITTING HEX.BUSHING M/F THRD NPT 3/6M 1"x1/4" A105N CODE: 3865	SEE NOTE										SEE NOTE	SATISFACTORY						
ECI	75745	013	5950	2006-2E209-003074-013	150	FITTING HEX.BUSHING M/F THRD NPT 3/6M 1 1/4"x1" A105N CODE: 3871	SEE NOTE										SEE NOTE	SATISFACTORY						
HEAT CODE		HEAT	ITEM	MATERIAL		C%	Si%	Mn%	S%	P%	C%	Ni%	Mo%	Ti%	Cu%	V%	Nb%	N%	Al%	G.E.%	OTHER ELEMENTS			
EEK	72505	034	ASTM A105	ASTM A105		0.195	0.180	1.090	0.013	0.011	0.070	0.040	0.010	0.021	0.140	0.029	0.000	0.000	0.025	0.410				
FIE	74406	023	ASTM A105	ASTM A105		0.185	0.230	0.940	0.017	0.010	0.080	0.040	0.010	0.005	0.120	0.032	0.001	0.000	0.017	0.371				
FGB	74413	056	ASTM A105	ASTM A105		0.185	0.180	0.970	0.019	0.018	0.130	0.050	0.010	0.005	0.190	0.001	0.001	0.000	0.023	0.391				
C21	AR2240	003	ASTM A105	ASTM A105		0.185	0.250	0.950	0.024	0.008	0.160	0.140	0.040	0.000	0.180	0.001	0.000	0.000	0.000	0.406				
C7	AR2240	004	ASTM A105	ASTM A105		0.185	0.250	0.950	0.024	0.008	0.160	0.140	0.040	0.000	0.180	0.001	0.000	0.000	0.000	0.406				
C15	AR5064	009	ASTM A105	ASTM A105		0.190	0.260	0.960	0.020	0.007	0.100	0.110	0.030	0.000	0.140	0.002	0.000	0.000	0.025	0.393				
A7	727145	009	ASTM A105	ASTM A105		0.186	0.239	1.300	0.029	0.012	0.140	0.020	0.005	0.000	0.030	0.002	0.001	0.000	0.000	0.417				
ECI	75745	013	ASTM A105	ASTM A105		0.190	0.190	0.960	0.013	0.010	0.080	0.050	0.010	0.005	0.180	0.001	0.000	0.000	0.017	0.384				
HEAT CODE		HEAT	ITEM	TEST SPECIMEN SECT. mm2	LENGTH mm	YIELD POINT N/mm2	TENSILE STRENGTH N/mm2	ELONGATION %	REDUCTION OF AREA %		HARDNESS HB		BEND TEST	FLATNESS TEST		TYPE TEST	IMPACT TEST - JOULES		SHAPE 1=O 2=U 3=V		YIELD POINT N/mm2			
EEK	72505	034	122.65	50.00	306.0	529.0	32.0	54.0	54.0		160 - 166		0,0	0,0		KV	20	98	110	1	0,0			
FIE	74406	023	122.65	50.00	308.0	563.0	31.0	54.0	54.0		160 - 166		0,0	0,0		KV	20	105	104	100	1	0,0		
FGB	74413	056	122.65	50.00	318.0	549.0	32.0	54.0	54.0		162 - 168		0,0	0,0		KV	20	95	94	90	1	0,0		
C21	AR2240	003	122.65	50.00	308.0	564.0	31.0	54.0	54.0		160 - 162		0,0	0,0		KV	20	104	100	99	1	0,0		
C7	AR2240	004	122.65	50.00	387.0	649.0	34.0	58.0	58.0		160 - 165		0,0	0,0		KV	20	96	90	84	1	0,0		
C15	AR5064	009	122.65	50.00	396.0	621.0	32.0	58.0	58.0		162 - 170		0,0	0,0		KV	20	105	100	94	1	0,0		
A7	727145	009	122.65	50.00	338.0	541.0	30.0	56.0	56.0		165 - 168		0,0	0,0		KV	20	96	96	96	1	0,0		
ECI	75745	013	122.65	50.00	308.0	549.0	31.0	58.0	58.0		160 - 166		0,0	0,0		KV	20	88	95	96	1	0,0		
HEAT CODE		HEAT	ITEM	MATERIAL IN ACCORDANCE TO															HEAT TREATMENT		FURNACE		STEEL MILL	Our Ref.
EEK	72505	034	ASME SA ASTM A105-05	Normalized at 880°±20°C / Air Cool															ELECTRIC FURNACE		RIVA ACCIAI			
FIE	74406	023	ASME SA ASTM A105-05	Normalized at 880°±20°C / Air Cool															ELECTRIC FURNACE		RIVA ACCIAI			
FGB	74413	056	ASME SA ASTM A105-05	Normalized at 880°±20°C / Air Cool															ELECTRIC FURNACE		RIVA ACCIAI			
C21	AR2240	003	ASME SA ASTM A105-05	Normalized at 880°±20°C / Air Cool															ELECTRIC FURNACE		RODACCIAI	N10228		
C7	AR2240	004	ASME SA ASTM A105-05	Normalized at 880°±20°C / Air Cool															ELECTRIC FURNACE		RODACCIAI	N10228		
C15	AR5064	009	ASME SA ASTM A105-05	Normalized at 880°±20°C / Air Cool															ELECTRIC FURNACE		RODACCIAI	N10243		
A7	727145	009	ASME SA ASTM A105-05	Normalized at 880°±20°C / Air Cool															ELECTRIC FURNACE		RODACCIAI	205029		
ECI	75745	013	ASME SA ASTM A105-05	Normalized at 880°±20°C / Air Cool															ELECTRIC FURNACE		RIVA ACCIAI	082028		
NOTES			ASME B16.11/05 - ANSI B31.1/B31.3 - IML STD - ANSI B1.1-B18.2.2 - NACE MR0175 ISO 15168/1 - MSS SP 83 - MSS SP 97 - SUPPLIED MATERIAL MEETS SPECIFICATIONS AND P.O. REQUIREMENTS															INSPECTION AUTHORITY		QUALITY CONTROL DEPARTMENT		MANUFACTURER'S SYMBOL		
			98373															BORIS FIZZOTTI		FITTINGS		IML		
																						STUDBOLTS		



I.M.L.

INDUSTRIA MECCANICA LIGURE SPA

INSPECTION CERTIFICATE EN 10204:2004 / 3.1

COMPANY WITH QUALITY SYSTEM ISO 9001-2000
CERTIFIED BY DINA

CERTIFIED BY RINA

SEIBOLD INTERNATIONAL CORP.

20 Healy Street, Unit 205
TROY, NY 12180

10RUNDU WAS 381 CALVADA

2

Certifikat Nr 1564
Invoice Nr 677
Dol. Noto Nr 1037

Dated	13.03.2001
Dated	12.06.2001
Dated	12.06.2001

This certificate has been generated by computer and need not to be signed for validity according to DIN EN 10204 Page 11 - 14

HEAT CODE	HEAT	ITEM	OUR P.O.	OUR REFERENCE	Q.TY	DESCRIPTION	DIM. ACC. TO	VISUAL & DIMENS.																
G29	76305	079	5143	2005-2E209-0003058-079	6	FITTING 90 ELB. SW 6M 1.1/2" A105N CODE: 26244	SEE NOTE	SATISFACTORY																
G26	75945	082	5143	2005-2E209-0003058-082	75	FITTING 90 ELB. THRD NPT 3M 1/2" A350L/F2 CODE: 8419	SEE NOTE	SATISFACTORY																
H14	79376	085	5143	2005-2E209-0003059-085	15	FITTING 45 ELB. THRD NPT 3M 1" A350L/F2 CODE: 9079	SEE NOTE	SATISFACTORY																
H14	75751	093	5143	2005-2E209-0003059-093	12	FITTING CROSS THRD NPT 2M 2" A105N CODE: 3915C29.05.06 -> N 28 PCS NOT SHIPP...	SEE NOTE	SATISFACTORY																
BLA	79957	093	5143	2005-2E209-0003058-093	16	FITTING CROSS THRD NPT 2M 2" A105N CODE: 3915C29.05.06 -> N 28 PCS NOT SHIPP...	SEE NOTE	SATISFACTORY																
EBP	70061	094	5143	2005-2E209-0003058-094	375	FITTING HEX.H.PLUG THRD NPT 2" A105N CODE: 4009C29.05.06 -> TOTAL N 765 PCS N...	SEE NOTE	SATISFACTORY																
HCB	79427	010	5143	2005-2E209-0003058-010	100	FITTING 45 ELB. THRD NPT 3M 1/2" A105N CODE: 3976C04.21.2006 : ADDED 50 PCS. NOT...	SEE NOTE	SATISFACTORY																
TN3	78749	013	5143	2005-2E209-0003058-013	200	FITTING TEE THRD NPT 23M 1/4" A105N CODE: 4033	SEE NOTE	SATISFACTORY																
HEAT CODE	HEAT	ITEM	MATERIAL	%	5%	Mn%	5%	P%	C-%	Ni%	Mo%	TS%	Cu%	V%	Nb%	N%	Al%	C.E.%	OTHER ELEMENTS					
G29	76305	079	ASTM A105	0.180	0.180	0.910	0.017	0.010	0.080	0.060	0.010	0.066	0.220	0.001	0.001	0.000	0.010	0.361						
G26	75945	082	ASTM A350 LF2 cl.1	0.210	0.200	0.900	0.025	0.020	0.110	0.060	0.010	0.005	0.210	0.002	0.000	0.000	0.013	0.402						
H14	79376	085	ASTM A500 LF2 cl.1	0.180	0.210	0.870	0.023	0.020	0.140	0.070	0.010	0.010	0.280	0.003	0.000	0.000	0.006	0.389						
DIF	75751	093	ASTM A105	0.180	0.180	0.930	0.012	0.017	0.090	0.060	0.010	0.005	0.200	0.010	0.000	0.000	0.011	0.384						
BLA	79957	093	ASTM A105	0.180	0.180	0.930	0.012	0.017	0.090	0.060	0.010	0.005	0.200	0.010	0.000	0.000	0.005	0.396						
EBP	70061	094	ASTM A105	0.190	0.150	1.030	0.025	0.017	0.110	0.060	0.010	0.010	0.240	0.003	0.001	0.000	0.005	0.396						
HCB	79427	010	ASTM A105	0.190	0.220	0.910	0.025	0.015	0.100	0.070	0.010	0.002	0.230	0.002	0.000	0.000	0.012	0.384						
TN3	78749	013	ASTM A105	0.185	0.180	0.880	0.021	0.010	0.010	0.060	0.050	0.013	0.190	0.002	0.000	0.000	0.006	0.364						
HEAT CODE	HEAT	ITEM	TEST SPECIMEN	YIELD POINT	TENSILE STRENGTH	ELONGATION	REDUCTION OF AREA	HARDNESS HB	BEND TEST	FLATTENING TEST	TYPE 100000	IMPACT TEST - 500000	SHAKE	YIELD POINT										
G29	76305	079	SECT. 1000	306.0	534.0	34.0	57.0	160 - 164	0.0	0.0	KV	20	105	100	97	1	0.0							
G26	75945	082	SECT. 1000	348.0	522.0	31.0	57.0	156 - 164	0.0	0.0	KV	46	55	50	59	1	0.0							
H14	79376	085	SECT. 1000	323.0	520.0	34.5	58.5	153 - 160	0.0	0.0	KV	48	59	62	57	1	0.0							
DIF	75751	093	SECT. 1000	330.0	533.0	34.0	60.0	163 - 165	0.0	0.0	KV	20	105	100	96	1	0.0							
BLA	79957	093	SECT. 1000	326.0	530.0	40.0	60.0	152 - 160	0.0	0.0	KV	20	105	100	102	1	0.0							
EBP	70061	094	SECT. 1000	309.0	548.0	31.0	64.0	160 - 168	0.0	0.0	KV	20	104	100	105	1	0.0							
HCB	79427	010	SECT. 1000	306.0	529.0	31.0	54.0	160 - 166	0.0	0.0	KV	20	96	104	105	1	0.0							
TN3	78749	013	SECT. 1000	305.0	509.0	30.0	56.0	160 - 168	0.0	0.0	KV	20	105	100	108	1	0.0							
HEAT CODE	HEAT	ITEM	MATERIAL IN ACCORDANCE TO				HEAT TREATMENT														FURNACE	STEEL MILL		
G29	76305	079	ASME SA ASTM A105-05				Normalized at 880+920C / Air Cool														ELECTRIC FURNACE	RIVA ACCIAI		
G26	75945	082	ASME SA ASTM A350-04 Gr. LF2 cl.1				Normalized at 900C / Air Cool														ELECTRIC FURNACE	RIVA ACCIAI		
H14	79376	085	ASME SA ASTM A350-04 Gr. LF2 cl.1				Normalized at 880+920C / Air Cool														ELECTRIC FURNACE	RIVA ACCIAI		
DIF	75751	093	ASME SA ASTM A105-05				Normalized at 880+920C / Air Cool														ELECTRIC FURNACE	RIVA ACCIAI		
BLA	79957	093	ASME SA ASTM A105-05				Normalized at 880+920C / Air Cool														ELECTRIC FURNACE	RIVA ACCIAI		
EBP	70061	094	ASME SA ASTM A105-05				Normalized at 880+920C / Air Cool														ELECTRIC FURNACE	RIVA ACCIAI		
HCB	79427	010	ASME SA ASTM A105-05				Normalized at 880+920C / Air Cool														ELECTRIC FURNACE	RIVA ACCIAI		
TN3	78749	013	ASME SA ASTM A105-05				Normalized at 880+920C / Air Cool														ELECTRIC FURNACE	RIVA ACCIAI		
NOTES			ASME B16.1105 - ANSI B31.1/B31.3 - IML STD - ANSI B1.1-B18.2.2 - NACE MR0175 ISO 15156-1 - MSS SP 83 - SUPPLIED MATERIAL MEETS SPECIFICATIONS AND P.O. REQUIREMENTS														INSPECTION AUTHORITY		QUALITY CONTROL DEPARTMENT		MANUFACTURER'S SYMBOL		MANUFACTURER'S SYMBOL	
			BORIS RIZZOTTI														FITTINGS		IML		STUDBOULTS			





I.M.L.

INDUSTRIA MECCANICA LIGURE SPA

INSPECTION CERTIFICATE DIN 50049.3.1B - EN 10204.3.1B
COMPANY WITH QUALITY SYSTEM ISO 9001-2000
CERTIFIED BY RINA

IML (UK) LTD.
Suite 2, 1st Floor, Castle House, Station Road
NEW BARNET, HERTFORDSHIRE EN5 1PEB

Certificate No. 14978
Invoice No. 51
Del. Note No. 87
Dated 25.07.2005
Dated 21.01.2005
Dated 21.07.2007

Page 20 of 22

Hex Plug N40
2" 3M

HEAT CODE	HEAT	ITEM	YOUR P.O.	OUR REFERENCE	Q.TY	DESCRIPTION	DIM. ACC. TO	VISUAL & DIMENS.
N40	79624	52	FFE 2996	2004-2E201-0001404-040	1600	FITTING HEX.H.PLUG THIRD NPT 2" A105N	SEE NOTE	SATISFACTORY

HEAT CODE	HEAT	ITEM	MATERIAL	C%	Si%	Mn%	S%	P%	Cr%	Ni%	Mo%	Ti%	Cu%	V%	Nb%	N%	Al%	C.E.%	OTHER ELEMENTS
N40	79624	52	ASTM A105	0.180	0.180	0.900	0.017	0.013	0.080	0.060	0.010	0.012	0.180	0.003	0.001	0.000	0.006	0.365	

HEAT CODE	HEAT	ITEM	TEST SPECIMEN	YIELD POINT	TENSILE STRENGTH	ELONGATION	REDUCTION OF AREA	HARDNESS HB	BEND TEST	FLATTENING TEST	IMPACT TEST	JOULES	SHAPE	YIELD POINT					
N40	79624	52	SECT. mm2 LENGTH mm N/mm2 >=0.2% N/mm2 >= %>= %>=	122.65	50.00	322.0	512.0	34.5	56.5	151 - 154	0.0	0.0	0.0	20	103	106	107		

HEAT CODE	HEAT	ITEM	MATERIAL IN ACCORDANCE TO	HEAT TREATMENT	FURNACE	STEEL MILL	OUR Ref.
N40	79624	52	ASME SA ASTM A105-02	Normalized at 880°-920°C / Air Cool	ELECTRIC FURNACE	RIVA ACCIA.	231507

VERIFIED TRUE COPY
OF ORIGINAL
FORGED FLANGES &
FITTINGS LIMITED

NOTES ASME B16.11/01 - BS 3799 - ANSI B31.1/B31.3 - IML STD - ANSI B1.1-B18.2.2.
NACE MR0175 ISO 15156/1

INSPECTION AUTHORITY QUALITY CONTROL DEPARTMENT MANUFACTURER'S SYMBOL MANUFACTURER'S SYMBOL
BORIS FIZZOTTI FITTINGS IML STUDBOLTS



CERTIFIED MILL TEST REPORT



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LOG NO. 306771 PAGE 1

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CUSTOMER: WESTLUND INDUSTRIAL SUPPLY

Date 01/29/07

CUSTOMER'S Order No.: 9110682-00

Bonney Order No. 47838

SHIPPED TO: WESTLUND INDUSTRIAL SUPPLY
 5105 75TH STREET

11420

EDMONTON ALBERTA
 EDMONTON ALBERTA, T6E5S5 CANAD

ITEM QUANTITY LOT NO.

GRADE OR SPECIFICATION NO.
CHEMICAL ANALYSIS, PHYSICAL PROPERTIES, REMARKS:

SA/A105N

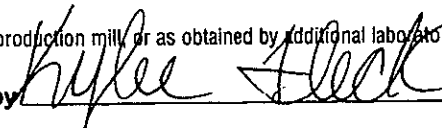
026	350	3605	7524773	3/4X 1/2 3M/6M A105N HXBU T				
				C .200 MN 1.000 P .009 S .020 SI .180				
				NI .040 CU .150 CO .003 CR .060 MO .010				
				V .000 AL .021 NB .015				
				CE(LONG FORMULA) = 0.39				
				T/S 74750 Y/S 53875 EL 33.15 RA 67.25				
				BRINELL HARDNESS1: 132 HARDNESS2: 135				

1. THE FITTINGS SUPPLIED ARE IN ACCORDANCE WITH PURCHASE ORDER SPECIFICATIONS.
2. THE MATERIAL SUPPLIED IDENTIFIED AS A105N WAS NORMALIZED IN ACCORDANCE WITH ASTM A105 HEAT TREATING REQUIREMENTS.
3. THE MATERIAL SUPPLIED MEETS THE REQUIREMENTS OF BOTH NACE MR0103-2003 AND NACE MR0175-2003.
4. CERTIFYING ASTM A105-05 / ASME SA105-04 EDITION.
5. THE MATERIAL SUPPLIED WAS INSPECTED AND MANUFACTURED IN ACCORDANCE WITH EN DIN 10204 3.1.B. (EUROPEAN STANDARD). 2005 EDITION.
6. ELONGATION TEST RESULTS ARE OBTAINED USING STANDARD ROUND SPECIMEN, 2 INCH OR 50 MM GAGE LENGTH.

3/4 x 1/2" Hex Bushing
(3m/6m) A105N

***** END OF CERTIFICATION *****

We certify that the data on this sheet is a true copy taken from our records of material furnished us by the production mill, or as obtained by additional laboratory checks.

by 
 Kylee Fleck

Kylee Fleck

CMTR: REV 1

QUALITY PROCESS MANAGER

3605

I.M.L.

**COMPANY WITH QUALITY SYSTEM ISO 9001:2000
CERTIFIED BY RINA**

Certificate Nr 100869	Dated	22.11.2005
Invoice Nr 474	Dated	17.11.2005
Del. Note Nr 729	Dated	17.11.2005

Page 1 - 5

[illegible]



INDUSTRIA MECCANICA LIGURE SPA

INSPECTION CERTIFICATE EN 10204:2004 / 3.1
COMPANY WITH QUALITY SYSTEM ISO 9001:2000
CERTIFIED BY RINA

SETBOLD INTERNATIONAL CORP.
20 Hwy. Stead, Unit 205
TORONTO, M5S 3H1 CANADA

Certificate No. 601009
RINA No. 523
Det. No. 795

Dated 20.12.2005
15.12.2005
15.12.2005

16030 CASARZA LIGURE - Genova - Italy - P.zza Marco Capelli, 4 - Tel. 0185.466510 / MATERIAL TEST DEPARTMENT This certificate has been generated by computer and need not to be signed for validity according to DIN EN 10204 Page 3 - 3

HEAT CODE	HEAT	ITEM	YOUR P.O.	OUR REFERENCE	QTY	DESCRIPTION	DIM. ACC. TO	VISUAL & DIMENS.											
D7	AC0819	001	5134	2005-IE209-0003049-001	50	FITTING HEX BUSHING M/F THRD NPT 3/8M 1/2"x1/8" A105N CODE: 3857	SEE NOTE	SATISFACTORY											
C15	ARS084	006	5134	2005-IE209-0003049-006	850	FITTING HEX BUSHING M/F THRD NPT 3/8M 1"x1/2" A105N CODE: 3867	SEE NOTE	SATISFACTORY											
AVU	37455	007	5134	2005-IE209-0003049-007	15	FITTING 45 ELB. THRD NPT 2M 4" A105N CODE: 5753	SEE NOTE	SATISFACTORY											
A3	78059	008	5134	2005-IE209-0003049-008	5100	FITTING HEX H PLUG THRD NPT 1/4" A105N CODE: 4002	SEE NOTE	SATISFACTORY											
C18	73851	012	5134	2005-IE209-0003049-012	58	FITTING COUPLING THRD NPT 3M 3" A105N CODE: 3908	SEE NOTE	SATISFACTORY											
	ARS084	020	5134	2005-IE209-0003049-020	50	FITTING HEX BUSHING M/F THRD NPT 3/8M 1"x3/8" A350L F2 CODE: 9031	SEE NOTE	SATISFACTORY											
	77825	021	5134	2005-IE209-0003049-021	50	FITTING HALF COUPL. THRD NPT 3M 1" A350L F2 CODE: 28632	SEE NOTE	SATISFACTORY											
HEAT CODE	HEAT	ITEM	MATERIAL	C%	S%	M%	8%	P%	C%	N%	M%	T%	Cu%	V%	Nb%	N%	Al%	C.E.%	OTHER ELEMENTS
D7	AC0819	001	ASTM A105	0.200	0.260	0.930	0.026	0.013	0.050	0.080	0.020	0.000	0.150	0.000	0.000	0.000	0.024	0.384	
C15	ARS084	006	ASTM A105	0.190	0.280	0.960	0.020	0.007	0.100	0.110	0.030	0.000	0.140	0.002	0.000	0.000	0.025	0.393	
AVU	37455	007	ASTM A105	0.190	0.250	0.970	0.020	0.009	0.100	0.070	0.010	0.000	0.160	0.003	0.001	0.000	0.005	0.390	
A3	78059	008	ASTM A105	0.202	0.223	0.831	0.011	0.008	0.130	0.139	0.031	0.000	0.239	0.003	0.003	0.000	0.000	0.398	
C18	73851	012	ASTM A105	0.200	0.170	1.030	0.024	0.018	0.120	0.090	0.020	0.008	0.250	0.003	0.001	0.000	0.008	0.423	
	ARS084	020	ASTM A350 LF2 cl.1	0.190	0.260	0.960	0.020	0.007	0.100	0.110	0.030	0.000	0.140	0.002	0.000	0.000	0.025	0.393	
	77825	021	ASTM A350 LF2 cl.1	0.185	0.200	0.980	0.020	0.020	0.120	0.050	0.020	0.000	0.140	0.003	0.000	0.000	0.000	0.386	
HEAT CODE	HEAT	ITEM	TEST SPECIMEN	YIELD POINT	TENSILE STRENGTH	ELONGATION	REDUCTION OF AREA	HARDNESS HB	BEAD TEST	FLATTENING TEST	IMPACT TEST - JOULES	1	2	3	SHAPE	YIELD POINT			
D7	AC0819	001	SECT. mm 50.00	459.0	826.0	35.0	55.0	182 - 184	0.0	0.0	78	82	90	1		0.0			
C15	ARS084	006	50.00	396.0	821.0	32.0	68.0	182 - 170	0.0	0.0	105	100	94	1		0.0			
AVU	37455	007	50.00	323.0	531.0	30.0	84.0	180 - 162	0.0	0.0	94	99	105	1		0.0			
A3	78059	008	50.00	344.0	562.0	32.0	55.0	185 - 168	0.0	0.0	83	98	96	1		0.0			
C18	73851	012	50.00	327.0	522.0	30.5	54.0	159 - 165	0.0	0.0	98	106	103	1		0.0			
	ARS084	020	50.00	466.0	598.0	31.0	56.0	160 - 164	0.0	0.0	46	64	60	58	1	0.0			
	77825	021	50.00	324.0	520.0	32.0	54.0	154 - 158	0.0	0.0	58	62	54	1		0.0			
HEAT CODE	HEAT	ITEM	MATERIAL IN ACCORDANCE TO	HEAT TREATMENT	FURNACE	STEEL MILL	Our Ref.												
D7	AC0819	001	ASME SA ASTM A105-03	Normalized at 880°-920°C / Air Cool	ELECTRIC FURNACE	RODACCIAI	N10159												
C15	ARS084	006	ASME SA ASTM A105-03	Normalized at 880°-920°C / Air Cool	ELECTRIC FURNACE	RODACCIAI	N10243												
AVU	37455	007	ASME SA ASTM A105-03	Normalized at 880°-920°C / Air Cool	ELECTRIC FURNACE	RODACCIAI	N30118												
A3	78059	008	ASME SA ASTM A105-03	Normalized at 880°-920°C / Air Cool	ELECTRIC FURNACE	RODACCIAI	205056												
C18	73851	012	ASME SA ASTM A105-03	Normalized at 880°-920°C / Air Cool	ELECTRIC FURNACE	RODACCIAI	051058												
	ARS084	020	ASME SA ASTM A350-04a Gr. LF2 cl.1	Normalized at 900°C / Air Cool	ELECTRIC FURNACE	RODACCIAI	N10243												
	77825	021	ASME SA ASTM A350-04a Gr. LF2 cl.1	Normalized at 900°C / Air Cool	ELECTRIC FURNACE	RODACCIAI	970000												
NOTES			ASME B16.1101 - BS 3799 - ANSI B31.1/BS31.3 - I.M.L. STD - ANSI			INSPECTION AUTHORITY													
B1.1-B16.2.2 - NACE MR0175 ISO 151691 - SUPPLIED MATERIAL MEETS			SPECIFICATIONS AND P.O. REQUIREMENTS			QUALITY CONTROL DEPARTMENT													
			90975			BORIS FIZZOTTI													
						FITTINGS													
						I.M.L.													
						STUDBOLTS													

C15
1x1/2 3/16m
Flex Bush



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Material Test Report

Report Number: 15446

Description: 2" SWAGES & BULL PLUGS

Specification: A234-WPB/SA234-WPB

Comment:

Date: Tue, Nov 30th 1999, 00:00

Heat Treatment: H.R.

Material: C1022

CRN: OA7470.5C

Chemical Analysis

Heat Code: **K1235**

Heat Number: 5F2469

C	0.190	Cu	0.180	Al	
Mn	0.910	Ni	0.070	Ti	0.000
P	0.008	Cr	0.090		0.000
S	0.017	Mo	0.030		0.000
Si	0.290	V	0.001		0.000
N	0.000	Nb	0.003		

Carbon Equivalency Formula Used:
 $C + (Mn/6) + (Cr + Mo + V)/5 + (Ni + Cu)/15$
 CE= 0.383

Mechanical Tests

Yield PSI: 45400

% Elongation @ 31 2

Size: 2.375" RND

Tensile PSI: 73000

Reduction of Area % 60

Brinell Hardness: 134

Charpy Impact Test

Individual Values: N/A

(V1) 0 (V2) 0 (V3) 0

This Material Test Report meets DIN50049/en10201 3.1B Standard 1991

We hereby Certify that the material described has been tested in accordance with the specifications, and the results are correct as contained in the records of the Company.

Q.A. Manager and Customer Service

Sarnia

Toll Free: 1-866-511-1381
 By regular telephone at:
 519-336-2960
 By fax at 519-344-3181

Mailing Address:
 PO Box 999,
 645 Kedddco St.
 Sarnia, ON
 N7T 7K6

Edmonton

Toll Free: 1-800-661-3809
 By regular telephone at:
 780-438-4944
 By fax at 780-435-3917

Mailing Address:
 4120 - 78 Av.
 Edmonton, AB
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Swage 2" 3M K1235



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Material Test Report

Report Number: 15756

Description: 2" SWAGES & BULL PLUGS

Specification: A234-WPB/SA234-WPB

Comment:

Date: Tue, Nov 30th 1999, 00:00

Heat Treatment: H.R.

Material: C1018

CRN: OA7470.5C

Chemical Analysis

Heat Code: **K1269**

Heat Number: 9B2129

C	0.160	Cu	0.240	Al	
Mn	0.780	Ni	0.070	Ti	0.002
P	0.024	Cr	0.070	Al	0.001
S	0.027	Mo	0.020		0.000
Si	0.270	V	0.000		0.000
N	0.008	Nb	0.000		

Carbon Equivalency Formula Used:
 $C + (Mn/6) + (Cr + Mo + V)/5 + (Ni + Cu)/15$
 CE = 0.329

Mechanical Tests

Yield PSI: 38500

% Elongation @ 33 2

Size: 2.375" RND

Tensile PSI: 72500

Reduction of Area % 63

Brinell Hardness: 143

Charpy Impact Test

Individual Values: N/A

(V1) 0 (V2) 0 (V3) 0

This Material Test Report meets DIN50048/en10201 3.1B Standard 1991

We hereby Certify that the material described has been tested in accordance with the specifications, and the results are correct as contained in the records of the Company.

Q.A. Manager and Customer Service

Sarnia

Toll Free: 1-866-511-1381

By regular telephone at:

519-336-2960

By fax at 519-344-3181

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Sarnia, ON

N7T 7K6

Edmonton

Toll Free: 1-800-661-3809

By regular telephone at:

780-438-4944

By fax at 780-435-3917

Mailing Address:

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Edmonton, AB

T6B 3M8

2" Swage
K1269

KEDDCO MFG. LTD.
PO Box 999
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Toll Free: 1-866-511-1381



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4120 - 78 Av.
Edmonton, AB T6B 3M8
Tel: (780)438-4944
Fax: (780)435-3917
Toll Free: 1-800-661-3809

Material Test Report

Report Number: 14814
Description: 2" SWAGES & BULL PLUGS
Specification: A234-WPB/SA234-WPB

Date: 28-Mar-06
Heat Treatment: H.R.
Material: C1018
CRN: OA7470.5C

Chemical Analysis

Heat Code:

K1131

Heat Number:

66523

C	0.180	Cu	0.250	Al	0.006
Mn	0.780	Ni	0.100		
P	0.016	Cr	0.130		
S	0.022	Mo	0.030	Ti	0.000
Si	0.240	V	0.023		
N	0.000	Nb	0.000		

Mechanical Tests

Yield PSI: 51500
Elongation @ 2" % 32
Size: 2.375" RND
Brinell Hardness: 156
Tensile PSI: 77700
Reduction of Area % 64
CE= 0.370

Charpy Impact Test

Individual Values (ft/lbs.)

(1) (2) (3) @ N/A

We hereby Certify that the material described has been tested in accordance with the specifications, and the results are correct as contained in the records of the Company.

Ian Shields
Quality Assurance Manager

KEDDCO MFG LTD

SWAGE K1131

2"

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Edmonton, AB T6B 3M8
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Fax: (780) 435-3917
Toll Free: 1-800-661-3809

Material Test Report

Report Number:	15634	Date:	26-Sep-06
Description:	2" SWAGES & BULL PLUGS	Heat Treatment:	H.R.
Specification:	A234-WPB/SA234-WPB	Material:	C1018
		CRN:	OA7470.5C

Chemical Analysis

Heat Code:	K1261	C	0.180	Cu	0.190	Sn	0.014
Heat Number:	C61862	Mn	0.760	Ni	0.080	Al	0.001
		P	0.019	Cr	0.140		
		S	0.026	Mo	0.036	Ti	0.000
		Si	0.240	V	0.000		
		N	0.000	Nb	0.000		

Mechanical Tests

Yield PSI:	42587	Tensile PSI:	72452
Elongation @ 2"%:	35	Reduction of Area %:	0
Size:	2.375" RND	Brinell Hardness:	141
		CE=	0.360

Charpy Impact Test

Individual Values (ft/lbs.)	(1)	(2)	(3)	@	N/A
------------------------------------	-----	-----	-----	---	-----

We hereby Certify that the material described has been tested in accordance with the specifications, and the results are correct as contained in the records of the Company.

Ian Shields
Quality Assurance Manager

KEDDCO MFG LTD

Material Test Report

Report Number: 15480

Date: Tue, Nov 30th 1999, 00:00

Description: 1" SWAGES & BULL
PLUGS

Heat Treatment: H.R.

Specification: A234-WPB/SA234-WPB

Material: 1522 MOD

Comment:

CRN: OA7470.5C

Chemical AnalysisHeat Code: **K1243**

Heat Number: Z33730A

C	0.210	Cu	0.180	Al	
Mn	1.100	Ni	0.040	Ti	0.000
P	0.008	Cr	0.040		0.000
S	0.023	Mo	0.007		0.000
Si	0.190	V	0.001		0.000
N	0.000	Nb	0.018		

Carbon Equivalency Formula Used:
 $C + (Mn/6) + (Cr + Mo + V)/5 + (Ni + Cu)/15$
 CE = 0.416

Mechanical Tests

Yield PSI: 53000

Tensile PSI: 86000

% Elongation @ 30 2

Reduction of 63
Area %

Size: 1.315" RND

Brinell Hardness: 163

Charpy Impact Test

Individual Values: N/A

(V1) 0 (V2) 0 (V3) 0

This Material Test Report meets DIN 50 049/EN 10 204
 3.1,B Standard 1995

We hereby Certify that the material described has been
 tested in accordance with the specifications, and the results
 are correct as contained in the records
 of the Company.

Ian Shields
 Q.A. Manager and Customer Service

**Sarnia**

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 511-1381
 By regular
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 519-336-2960
 By fax at 519-344-
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 Sarnia, ON
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Swage 1" K1243



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Spectacle Blinds, Bleed Rings, and Strainers.

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Material Test Report

Report Number: 15156

Description: 1/2" SWAGES & BULL PLUGS

Specification: A234-WPB/SA234-WPB

Comment:

Date: Tue, Nov 30th 1999, 00:00

Heat Treatment: H.R.

Material: 1522 MOD

CRN: OA7470.5C

Chemical Analysis

Heat Code: **K1197**

Heat Number: 9B2085

C	0.200	Cu	0.110	Al	
Mn	1.020	Ni	0.040	Ti	0.002
P	0.006	Cr	0.060	AL	0.001
S	0.022	Mo	0.011	Sn	0.006
Si	0.250	V	0.025		0.000
N	0.000	Nb	0.002		

Carbon Equivalency Formula Used:
 $C + (Mn/6) + (Cr + Mo + V)/5 + (Ni + Cu)/15$
 CE = 0.399

Mechanical Tests

Yield PSI: 48500

% Elongation @ 33 2

Size: .840" RND

Tensile PSI: 76500

Reduction of Area % 69

Brinell Hardness: 159

Charpy Impact Test

Individual Values: N/A

(V1) 0 (V2) 0 (V3) 0

This Material Test Report meets DIN50049/en10201 3.1B Standard 1991

We hereby Certify that the material described has been tested in accordance with the specifications, and the results are correct as contained in the records of the Company.

Q.A. Manager and Customer Service

Sarnia

Toll Free: 1-866-511-1381

By regular telephone at:

519-336-2960

By fax at 519-344-3181

Mailing Address:

PO Box 999,

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By regular telephone at:

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By fax at 780-435-3917

Mailing Address:

4120 - 78 Av.

Edmonton, AB

T6B 3M8

K1197
1/2" Swags

KEDDCO MFG. LTD.
PO Box 999
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Sarnia, Ontario N7T 7K6
Tel: (519) 336-2980
Fax: (519) 344-3181
Toll Free: 1-866-511-1381



KEDDCO MFG. LTD.
4120 - 78 Av
Edmonton, AB T6B 3M8
Tel: (780) 438-4944
Fax: (780) 435-3917
Toll Free: 1-800-661-3809

Material Test Report

Report Number:
Description:
Specification:

13120
1/2" SWAGES & BULL PLUGS
A234-WPB/SA234-WPB

Date: 23-Mar-05
Heat Treatment: H.R.
Material: C1018
CRN: OA7470.5C

Chemical Analysis

Heat Code:

Heat Number:

K900

91995

C	0.230	Cu	0.002	Al	0.004
Mn	0.780	Ni	0.110		
P	0.008	Cr	0.120		
S	0.027	Mo	0.030	Ti	0.000
Si	0.230	V	0.002		
N	0.000	Nb	0.002		

Mechanical Tests

Yield PSI:
Elongation @ 2"%
Size:

51000
30
.840" RND

Brinell Hardness:

Tensile PSI: 82500
Reduction of Area % 63
CE= 0.406

Individual Values (ft/lbs.)

Charpy Impact Test

(1) (2) (3) @ N/A

We hereby Certify that the material described has been tested in accordance with the specifications, and the results are correct as contained in the records of the Company.

[Signature]
Ian Shields
Quality Assurance Manager

KEDDCO MFG LTD



This Material Test Report
meets DIN50049/en10204
3.1B Standard 1991

K900



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Material Test Report

Report Number: 15479

Description: 1" SWAGES & BULL PLUGS

Specification: A234-WPB/SA234-WPB

Comment:

Date: Tue, Nov 30th 1999, 00:00

Heat Treatment: H.R.

Material: C1022

CRN: OA7470.5C

Chemical Analysis

Heat Code: K1242
Heat Number: 9B2137

C	0.200	Cu	0.100	Al	
Mn	1.010	Ni	0.030	Ti	0.000
P	0.016	Cr	0.060		0.000
S	0.023	Mo	0.017		0.000
Si	0.230	V	0.000		0.000
N	0.000	Nb	0.014		

Carbon Equivalency Formula Used:
 $C + (Mn/6) + (Cr + Mo + V)/5 + (Ni + Cu)/15$
 CE= 0.392

Mechanical Tests

Yield PSI: 50624

% Elongation @ 33 2

Size: 1.315" RND

Tensile PSI: 77072

Reduction of Area % 64

Brinell Hardness: 149

Charpy Impact Test

Individual Values: N/A

(V1) 0 (V2) 0 (V3) 0

This Material Test Report meets DIN50049/en10201 3.1B Standard 1991

We hereby Certify that the material described has been tested in accordance with the specifications, and the results are correct as contained in the records of the Company.

Q.A. Manager and Customer Service

Sarnia

Toll Free: 1-866-511-1381
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By fax at 780-435-3917

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4120 - 78 Av.
Edmonton, AB
T6B 3M8

Swage 1"
K1242

Material Test Report

Report Number: 15480

Date: Tue, Nov 30th 1999, 00:00

Description: 1" SWAGES & BULL
PLUGS

Heat Treatment: H.R.

Specification: A234-WPB/SA234-WPB

Material: 1522 MOD

Comment:

CRN: OA7470.5C

Chemical AnalysisHeat Code: **K1243**

Heat Number: Z33730A

C	0.210	Cu	0.180	Al	
Mn	1.100	Ni	0.040	Ti	0.000
P	0.008	Cr	0.040		0.000
S	0.023	Mo	0.007		0.000
Si	0.190	V	0.001		0.000
N	0.000	Nb	0.018		

Carbon Equivalency Formula Used:
 $C + (Mn/6) + (Cr + Mo + V)/5 + (Ni + Cu)/15$
 CE = 0.416

Mechanical Tests

Yield PSI: 53000

Tensile PSI: 86000

% Elongation @ 30 2

Reduction of 63
Area %

Size: 1.315" RND

Brinell Hardness: 163

Charpy Impact Test

Individual Values: N/A

(V1) 0 (V2) 0 (V3) 0

This Material Test Report meets DIN 50 049/EN 10 204
 3.1,B Standard 1995

We hereby Certify that the material described has been
 tested in accordance with the specifications, and the results
 are correct as contained in the records
 of the Company.

Ian Shields
 Q.A. Manager and Customer Service

**Sarnia**

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 T6B 3M8

Swage 1" K1243

7540074

**Material Test Report**

Report Number: 16183

Description: 1" SWAGES & BULL PLUGS

Specification: A234-WPB/SA234-WPB

Comment:

Date: Thu, Mar 1st 2007, 20:36

Heat Treatment: H.R.

Material: C1035

CRN: OA7470.5C

Chemical Analysis→ Heat Code: **K1328**

Heat Number: 5M9590

C	0.340	Cu	0.120	Al	0.027
Mn	0.670	Ni	0.070	Ti	0.001
P	0.008	Cr	0.050		
S	0.023	Mo	0.030		
Si	0.190	V	0.003		
N		Nb	0.001		

Carbon Equivalency Formula Used:
 $C + (Mn/6) + (Cr + Mo + V)/5 + (Ni + Cu)/15$
 CE = 0.481

Mechanical Tests

Yield PSI: 47700

% Elongation @ 2" 26

Size: 1.315" RND

Tensile PSI: 84500

Reduction of Area % 54

Brinell Hardness: 167

Charpy Impact Test

Individual Values:

(V1) (V2) (V3)

This Material Test Report meets DIN 50 048/EN 10 204 3.1.B Standard 1995

We hereby Certify that the material described has been tested in accordance with the specifications, and the results are correct as contained in the records of the Company.

Ian Shields

Q.A. Manager and Customer Service

Sarnia

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Swage

1"

K 1328



INSPECTION CERTIFICATE EN 10204:2004 / 3.1
COMPANY WITH QUALITY SYSTEM ISO 9001:2000
CERTIFIED BY RINA

CA

Dated	13.06.2005
Dated	12.05.2006
Dated	12.06.2006

163030 CASARZA LIGURE - Genova - Italy - P.zza Marco Coppedè,4 - Tel.0185.457681 - Fax 0185.555510 / MATERIAL TEST DEPARTMENT
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Page 8 - 14

HEAT CODE	HEAT	ITEM	OUR P.O.	OUR REFERENCE	Q.TY	DESCRIPTION	DIM. ACC. TO	VISUAL & DIMENS.										
CSU	37629	004	5143	2005-2E209-0003058-004	35	FITTING 90 ELB. THRD NPT 2M 2" A105N CODE: 3960	SEE NOTE	SATISFACTORY										
BID	77906	004	5143	2005-2E209-0003058-004	6	FITTING 90 ELB. THRD NPT 2M 2" A105N CODE: 3960	SEE NOTE	SATISFACTORY										
UU	16836	022	5143	2005-2E209-0003058-022	1515	FITTING UNION F/F THRD NPT 3M 1" A105N CODE: 3968	SEE NOTE	SATISFACTORY										
H15	79944	003	5143	2005-2E209-0003058-003	30	FITTING 90 ELB. THRD NPT 2M 1 1/4" A105N CODE: 3958	SEE NOTE	SATISFACTORY										
TG5	70278	006	5143	2005-2E209-0003058-006	10	FITTING TEE THRD NPT 2M 1 1/4" A105N CODE: 4028	SEE NOTE	SATISFACTORY										
GZ5	75358	009	5143	2005-2E209-0003058-009	50	FITTING 90 ELB. THRD NPT 3M 3/8" A105N CODE: 3966	SEE NOTE	SATISFACTORY										
L12	77951	024	5143	2005-2E209-0003058-024	160	FITTING UNION F/F THRD NPT 3M 2" A105N CODE: 3965	SEE NOTE	SATISFACTORY										
HEAT CODE	HEAT	ITEM	MATERIAL	QTY	DESCRIPTION	Q.TY	SEE NOTE	SATISFACTORY										
CSU	37629	004	ASTM A105	0.195	0.250	0.920	0.019	0.017	0.170	0.090	0.020	0.010	0.230	0.001	0.000	0.005	0.408	OTHER ELEMENTS
BID	77906	004	ASTM A105	0.185	0.260	0.880	0.019	0.010	0.070	0.060	0.010	0.012	0.230	0.002	0.000	0.006	0.389	
UU	16836	022	ASTM A105	0.202	0.260	0.980	0.002	0.007	0.130	0.130	0.020	0.002	0.140	0.003	0.000	0.027	0.414	
H15	79944	003	ASTM A105	0.195	0.190	0.880	0.025	0.020	0.130	0.070	0.010	0.009	0.240	0.002	0.000	0.008	0.391	
TG5	70278	006	ASTM A105	0.180	0.210	0.990	0.026	0.014	0.080	0.050	0.010	0.013	0.230	0.003	0.000	0.006	0.381	
GZ5	75358	009	ASTM A105	0.160	0.200	0.870	0.021	0.011	0.100	0.080	0.020	0.001	0.220	0.002	0.000	0.003	0.369	
L12	77951	024	ASTM A105	0.180	0.210	0.880	0.018	0.013	0.090	0.050	0.010	0.005	0.170	0.001	0.000	0.011	0.358	
HEAT CODE	HEAT	ITEM	TEST SPECIFIER	YIELD POINT	TENSILE STRENGTH	ELONGATION	REDUCTION OF AREA	HARDNESS	BEND TEST	FLATTENING TEST	IMPACT TEST - 1000 FT/LBS	TEMP	1000 FT/LBS	TEMP	1000 FT/LBS	TEMP	1000 FT/LBS	YIELD POINT
CSU	37629	004	SECT. 1002	341.0	523.0	33.0	61.0	159-163	0.0	0.0	0.0	20	103	96	102	1	0.0	
BID	77906	004	50.00	311.0	523.0	32.0	65.0	156-159	0.0	0.0	0.0	20	96	102	98	1	0.0	
UU	16836	022	50.00	306.0	523.0	31.0	54.0	160-166	0.0	0.0	0.0	20	115	108	109	1	0.0	
H15	79944	003	50.00	364.0	536.0	31.0	56.0	164-166	0.0	0.0	0.0	20	104	104	105	1	0.0	
TG5	70278	006	50.00	322.0	528.0	33.5	58.0	154-162	0.0	0.0	0.0	20	109	108	104	1	0.0	
GZ5	75358	009	50.00	322.0	510.0	36.0	59.0	152-159	0.0	0.0	0.0	20	103	108	105	1	0.0	
L12	77951	024	50.00	308.0	498.0	33.0	56.0	156-166	0.0	0.0	0.0	20	100	108	104	1	0.0	
HEAT CODE	HEAT	ITEM	YIELD POINT	TENSILE STRENGTH	ELONGATION	REDUCTION OF AREA	HARDNESS	BEND TEST	FLATTENING TEST	IMPACT TEST - 1000 FT/LBS	TEMP	1000 FT/LBS	TEMP	1000 FT/LBS	TEMP	1000 FT/LBS	TEMP	YIELD POINT
CSU	37629	004	122.65	523.0	33.0	61.0	159-163	0.0	0.0	0.0	20	103	96	102	1	0.0		
BID	77906	004	122.65	523.0	32.0	65.0	156-159	0.0	0.0	0.0								



I.M.L.

INDUSTRIA MECCANICA LIGURE SPA

INSPECTION CERTIFICATE EN 10204:2004 / 3.1

COMPANY WITH QUALITY SYSTEM ISO 9001:2000

CERTIFIED BY RINA

SEYBOLD INTERNATIONAL CORP.

20 Hwy Street, Unit 205
TORONTO M5S 3B1 CANADA

CA

Certificate N° 16910

Invoice N° 1030

Dati, Note N° 1558

Dated 30.09.2006

Dated 28.09.2006

Uua
1"3M UNION

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DESCRIPTION																			DIM. ACC. TO		VISUAL & DIMENS.	
HEAT CODE	HEAT	ITEM	YOUR P.O.	OUR REFERENCE	Q.TY																	
U12	33952	020	5247	2005-2E209-0003064-020	1515	FITTING UNION F/F THRD NPT 3M 1" A105N CODE: 5468													SEE NOTE	SATISFACTORY		
EEA	78092	028	5247	2005-2E209-0003064-028	1010	FITTING COUPLING THRD NPT 3M 2" A105N CODE: 3905													SEE NOTE	SATISFACTORY		
HG8	77178	019	5247	2005-2E209-0003064-019	404	FITTING TEE THRD NPT 3M 2" A105N CODE: 4375													SEE NOTE	SATISFACTORY		
DMU	77182	015	5247	2005-2E209-0003064-015	608	FITTING 45 ELB. THRD NPT 2M 2" A105N CODE: 3964													SEE NOTE	SATISFACTORY		
EID	71403	014	5247	2005-2E209-0003064-014	132	FITTING 90 ELB. THRD NPT 2M 2" A105N CODE: 3960													SEE NOTE	SATISFACTORY		
EBN	AA0965	029	5247	2005-2E209-0003064-029	308	FITTING 90 ELB. THRD NPT 2M 2" A105N CODE: 3960													SEE NOTE	SATISFACTORY		
NZ4	76569	030	5247	2005-2E209-0003064-030	25	FITTING HEX.H.PLUG THRD NPT 3/8M 1.1/2" A350L.F2 CODE: 9065													SEE NOTE	SATISFACTORY		
					60	FITTING HEX.H.PLUG THRD NPT 3/8M 2" A350L.F2 CODE: 9424													SEE NOTE	SATISFACTORY		
HEAT CODE	HEAT	ITEM	MATERIAL	C%	Si%	Mn%	S%	P%	C%	N%	Mo%	Ti%	Cu%	V%	Nb%	N%	Al%	C.E.%	OTHER ELEMENTS			
U12	33952	020	ASTM A105	0.180	0.250	0.810	0.022	0.015	0.150	0.100	0.024	0.002	0.200	0.003	0.002	0.012	0.021	0.370				
EEA	78092	028	ASTM A105	0.180	0.190	0.850	0.020	0.020	0.130	0.060	0.010	0.005	0.250	0.001	0.000	0.000	0.009	0.371				
HG8	77178	019	ASTM A105	0.185	0.180	0.880	0.021	0.012	0.080	0.050	0.010	0.005	0.160	0.001	0.000	0.011	0.366					
DMU	77661	015	ASTM A105	0.185	0.220	0.930	0.020	0.017	0.120	0.080	0.010	0.005	0.210	0.002	0.002	0.000	0.013	0.386				
EID	77182	014	ASTM A105	0.190	0.170	0.980	0.021	0.021	0.100	0.050	0.010	0.005	0.200	0.002	0.000	0.000	0.016	0.394				
EBN	AA0965	029	ASTM A350 LF2 cl.1	0.190	0.240	0.870	0.024	0.020	0.150	0.070	0.010	0.005	0.230	0.002	0.001	0.000	0.015	0.387				
NZ4	76569	030	ASTM A350 LF2 cl.1	0.185	0.200	0.960	0.002	0.011	0.150	0.110	0.020	0.002	0.140	0.002	0.001	0.000	0.028	0.401				
HEAT CODE	HEAT	ITEM	TEST SPECIFICATION	YIELD POINT Minval 340 MPa	TENSILE STRENGTH Minval 540 MPa	ELONGATION % Minval 30.0	REDUCTION OF AREA % Minval 54.0	HARDNESS HB Minval 169-174	BEND TEST	FLATTENING TEST	TYPE TOLERANCE	IMPACT TEST - JOULE ENERGY	SHAPE 1+0.2/1.0	YIELD POINT Minval 340 MPa								
U12	33952	020	122.65	50.00	306.0	548.0	31.0	56.0	160-162	0.0	0.0	20	105	100	97	1	0.0					
EEA	78092	028	122.65	50.00	320.0	515.0	35.0	56.0	159-164	0.0	0.0	20	104	107	100	1	0.0					
HG8	77178	019	122.65	50.00	321.0	519.0	32.0	58.0	159-163	0.0	0.0	20	89	90	94	1	0.0					
DMU	77661	015	122.65	50.00	328.0	563.0	31.0	54.0	162-170	0.0	0.0	20	95	94	94	1	0.0					
EID	77182	014	122.65	50.00	338.0	546.0	34.0	59.0	164-166	0.0	0.0	20	106	100	102	1	0.0					
EBN	AA0965	029	122.65	50.00	322.0	518.0	31.0	56.0	159-159	0.0	0.0	20	99	90	97	1	0.0					
NZ4	76569	030	122.65	50.00	324.0	538.0	34.0	57.0	156-164	0.0	0.0	46	64	60	60	1	0.0					
MATERIAL IN ACCORDANCE TO														62	1	0.0						
HEAT CODE	HEAT	ITEM	HEAT TREATMENT																			
U12	33952	020	ASTM SA ASTM A105-05																			
EEA	78092	028	ASTM SA ASTM A105-05																			
HG8	77178	019	ASTM SA ASTM A105-05																			
DMU	77661	015	ASTM SA ASTM A105-05																			
EID	77182	014	ASTM SA ASTM A105-05																			
EBN	AA0965	029	ASTM SA ASTM A350-04a Gr. LF2 cl.1																			
NZ4	76569	030	ASTM SA ASTM A350-04a Gr. LF2 cl.1																			
NOTES																						
ASME B16.11/05 - ANSI B31.1/B31.3 - IML STD - ANSI B1.1/B18.2.2 - NACE MR0175 ISO 15156/1 - MSS SP 83 - SUPPLIED MATERIAL MEETS SPECIFICATIONS AND P.O. REQUIREMENTS																						
INSPECTION AUTHORITY																						
BORIS FIZZOTTI																						
FITTINGS IML																						
STUDBOULTS																						



INDUSTRIA MECCANICA LIGURE SPA

INSPECTION CERTIFICATE EN 10204:2004 / 3.1
COMPANY WITH QUALITY SYSTEM ISO 9001:2000
CERTIFIED BY RINA

SEYBOLD INTERNATIONAL CORP.
20 Holly Street, Unit 205
TORONTO M4S 3B1 CANADA

Certificate Nr 16991	Dated	02.11.2003
Invoice Nr 1117	Dated	20.10.2003
Dol. Note Nr 1743	Dated	20.10.2003

16303 CASARZA LIGURE - Genova - Italy - P. 424 Marco Cappelli, 4 - Tel. 0185.467661 - Fax 0185.466510 / MATERIAL TEST DEPARTMENT

HEAT CODE		HEAT	ITEM	YOUR P.O.	OUR REFERENCE	QTY	DESCRIPTION										DIM. ACC. TO	VISUAL & DIMENS.							
G25	HG6	75358	062	5248	2005-2E209-0003065-062	100	FITTING 90 ELB. SW 3M 1/2" A105N CODE: 6168										SEE NOTE	SATISFACTORY							
		78483	071	5248	2005-2E209-0003065-071	50	FITTING TEE SW 3M 1 1/2" A105N CODE: 6178										SEE NOTE	SATISFACTORY							
		72436	078	5248	2005-2E209-0003065-078	100	FITTING COUPLING SW 3M 1" A105N CODE: 3101										SEE NOTE	SATISFACTORY							
		79427	079	5248	2005-2E209-0003065-079	150	FITTING COUPLING SW 3M 1 1/2" A105N CODE: 6159										SEE NOTE	SATISFACTORY							
UP0	U04	72430	080	5248	2005-2E209-0003065-080	145	FITTING UNION F/F THRD NPT 3M 2" A105N CODE: 5609D10-10-2006 : ADDED 1,230 PCS...										SEE NOTE	SATISFACTORY							
U04	U04	74379	089	5248	2005-2E209-0003065-089	480	FITTING UNION F/F THRD NPT 3M 2" A105N CODE: 5609D10-10-2006 : ADDED 1,230 PCS...										SEE NOTE	SATISFACTORY							
HEAT CODE	HEAT	ITEM	MATERIAL	C%	S1%	MN%	S%	P%	C-%	NI%	MO%	TI%	CU%	V%	NI%	AI%	C.E.%	OTHER ELEMENTS							
G25	HG6	75358	062	ASTM A105	0.180	0.200	0.870	0.021	0.011	0.100	0.090	0.020	0.001	0.220	0.002	0.000	0.013	0.369							
		78483	071	ASTM A105	0.190	0.190	0.980	0.020	0.017	0.090	0.050	0.010	0.005	0.190	0.003	0.001	0.000	0.012							
		72436	078	ASTM A105	0.195	0.230	0.980	0.020	0.015	0.090	0.060	0.010	0.005	0.200	0.002	0.000	0.010	0.391							
		79427	079	ASTM A105	0.185	0.190	0.980	0.021	0.010	0.080	0.050	0.010	0.013	0.190	0.002	0.000	0.006	0.368							
UP0	U04	72430	080	ASTM A105	0.195	0.200	0.940	0.020	0.013	0.090	0.060	0.010	0.005	0.110	0.003	0.001	0.000	0.012							
U04	U04	74379	089	ASTM A105	0.190	0.220	0.920	0.019	0.013	0.120	0.060	0.010	0.014	0.230	0.002	0.000	0.005	0.389							
		22469	089	ASTM A105	0.180	0.290	0.850	0.017	0.010	0.090	0.080	0.010	0.007	0.170	0.001	0.002	0.032	0.359							
HEAT CODE	HEAT	ITEM	TENSILE STRENGTH	YIELD POINT	ELONGATION	REDUCTION OF AREA	HARDNESS	BEND TEST	FLATTENING TEST	TYPE TENSION	TEMP	1	2	3	SHAPE	YIELD POINT									
			SECT. AREA	MIN	MIN	%	MIN	MIN	MIN	MIN	MIN	MIN	MIN	MIN	MIN	MIN									
G25	HG6	75358	062	122.65	50.00	32.20	510.0	38.0	59.0	152 - 159	0.0	0.0	0.0	103	100	105									
		78483	071	122.65	50.00	309.0	547.0	31.0	58.0	160 - 166	0.0	0.0	0.0	97	94	97									
		72436	078	122.65	50.00	309.0	546.0	31.0	54.0	160 - 162	0.0	0.0	0.0	100	105	105									
		79427	079	122.65	50.00	310.0	510.0	34.0	56.5	153 - 158	0.0	0.0	0.0	99	103	100									
UP0	U04	72430	080	122.65	50.00	308.0	569.0	31.0	54.0	160 - 168	0.0	0.0	0.0	105	107	99									
U04	U04	74379	089	122.65	50.00	325.0	520.0	34.0	59.0	160 - 165	0.0	0.0	0.0	96	103	100									
		22469	089	122.65	50.00	309.0	569.0	31.0	56.0	158 - 164	0.0	0.0	0.0	94	90	96									
HEAT CODE	HEAT	ITEM	MATERIAL	IN ACCORDANCE TO	HEAT TREATMENT													STEEL MILL							
G25	HG6	75358	062	ASME SA ASTM A105-05	Normalized at 880±920°C / Air Cool													OUR Ref.							
		78483	071	ASME SA ASTM A105-05	Normalized at 880±920°C / Air Cool													RIVA ACCIAI							
		72436	078	ASME SA ASTM A105-05	Normalized at 880±920°C / Air Cool													RIVA ACCIAI							
		79427	079	ASME SA ASTM A105-05	Normalized at 880±920°C / Air Cool													RIVA ACCIAI							
UP0	U04	72430	080	ASME SA ASTM A105-05	Normalized at 880±920°C / Air Cool													RIVA ACCIAI							
U04	U04	74379	089	ASME SA ASTM A105-05	Normalized at 880±920°C / Air Cool													RIVA ACCIAI							
		22469	089	ASME SA ASTM A105-05	Normalized at 880±920°C / Air Cool													LEAU SPA							
NOTES					ANSI B16.1/ASME B1.3 - IM1, STD - ANSI B1.1-B18.2.2 - NACE MR0175 ISO 15156-1 - MSS SP 83 - SUPPLIED MATERIAL MEETS SPECIFICATIONS AND P.O. REQUIREMENTS													INSPECTION AUTHORITY		QUALITY CONTROL DEPARTMENT		MANUFACTURER'S SYMBOL		MANUFACTURER'S SYMBOL	
					96746													BORIS FIZZOTTI		FITTINGS		IML		STUDBOLTS	

2" 300# Threaded Union
WPO



I.M.L.

INDUSTRIA MECCANICA LIGURE SPA

INSPECTION CERTIFICATE EN 10204:2004 / 3.1

COMPANY WITH QUALITY SYSTEM ISO 9001:2000
CERTIFIED BY RINA

16020 CASARZA LIGURE - Genova - Italy - P.zza Marco Capellini, 4 - Tel.0185.467651 - Fax 0185.466510 / MATERIAL TEST DEPARTMENT This certificate has been generated by computer and need not to be signed for validity according to DIN EN 10204 Page 5 - 7

SEYBOLD INTERNATIONAL CORP.
20 Holly Street, Unit 205
TORONTO M5S 3B1 CANADACertificate Nr. 15508
Invoice Nr. 830
Dtd. 22.07.2005
Dtd. 23.07.2005

HEAT CODE	HEAT	ITEM	YOUR P.O.	OUR REFERENCE	Q.TY	DESCRIPTION	DIM. ACC. TO	VISUAL & DIMENS.														
CAE	75817	011	4665	2004-2E209-0003040-011	110	FITTING 90 ELB. THRD NPT 3/4" 2" A105N CODE: 3972	SEE NOTE	SATISFACTORY														
UPO	74379	017	4665	2004-2E209-0003040-017	430	FITTING UNION F/F THRD NPT 3/4" 2" A105N CODE: 3972	SEE NOTE	SATISFACTORY														
CAE	75817	011	4665	2004-2E209-0003040-011	270	FITTING 90 ELB. THRD NPT 3/4" 2" A105N CODE: 3972	SEE NOTE	SATISFACTORY														
ACK	76663	021	4665	2004-2E209-0003040-021	500	THREADOLET NPT 3M 3/4"x3"-5" A105N CODE: 5482	SEE NOTE	SATISFACTORY														
A6N	116122/3	021	4665	2004-2E209-0003040-021	50	THREADOLET NPT 3M 3/4"x3"-5" A105N CODE: 5482	SEE NOTE	SATISFACTORY														
ARY	71036	021	4665	2004-2E209-0003040-021	25	THREADOLET NPT 3M 3/4"x3"-5" A105N CODE: 5482	SEE NOTE	SATISFACTORY														
ABH	03/7/1127	021	4665	2004-2E209-0003040-021	25	THREADOLET NPT 3M 3/4"x3"-5" A105N CODE: 5482	SEE NOTE	SATISFACTORY														
ACF	76295	023	4665	2004-2E209-0003040-023	650	THREADOLET NPT 3M 1"x2" A105N CODE: 3857	SEE NOTE	SATISFACTORY														
HEAT CODE	HEAT	ITEM	MATERIAL	C%	SI%	Mn%	S%	P%	Cr%	NI%	Mo%	TT%	CU%	V%	Nb%	N%	AR%	C.E.%	OTHER ELEMENTS			
CAE	75817	011	ASTM A105	0.200	0.190	1.140	0.012	0.011	0.060	0.050	0.010	0.022	0.170	0.028	0.001	0.000	0.025	0.424				
UPO	74379	017	ASTM A105	0.190	0.220	0.920	0.019	0.013	0.120	0.060	0.010	0.014	0.230	0.002	0.000	0.000	0.005	0.389				
CAE	75817	011	ASTM A105	0.200	0.190	1.140	0.012	0.011	0.060	0.050	0.010	0.022	0.170	0.028	0.001	0.000	0.025	0.424				
ACK	76663	021	ASTM A105	0.195	0.220	0.900	0.010	0.011	0.140	0.070	0.010	0.000	0.190	0.017	0.001	0.000	0.000	0.396				
A6N	116122/3	021	ASTM A105	0.195	0.258	1.038	0.003	0.001	0.112	0.130	0.026	0.000	0.202	0.001	0.000	0.000	0.000	0.418				
ARY	71036	021	ASTM A105	0.170	0.230	1.120	0.013	0.010	0.133	0.131	0.030	0.000	0.213	0.001	0.001	0.000	0.000	0.412				
ABH	03/7/1127	021	ASTM A105	0.195	0.190	0.940	0.008	0.014	0.080	0.050	0.000	0.016	0.150	0.021	0.000	0.000	0.023	0.385				
ACF	76295	023	ASTM A105	0.195	0.220	0.920	0.009	0.008	0.100	0.060	0.020	0.018	0.200	0.021	0.001	0.000	0.025	0.394				
HEAT CODE	HEAT	ITEM	TEST SPECIFICATION	SECT. mm2	LENGTH mm	YIELD POINT N/mm2 >=0.2%	TENSILE STRENGTH N/mm2 >=	ELONGATION % >=	REDUCTION OF AREA % >=	HARDNESS HB	BEND TEST	FLATTENING TEST	TYPE EXAMIN	IMPACT TEST - JOULE ENRG	TEMP °C	1	2	3	SHAPE 1+0 >=10	YIELD POINT N/mm2 >=0.2%		
CAE	75817	011	122.65	50.00	354.0	575.0	32.0	57.0	174 - 178	0.0	0.0	0.0	KV	20	103	106	100	1	0.0			
UPO	74379	017	122.65	50.00	325.0	520.0	34.0	59.0	160 - 165	0.0	0.0	0.0	KV	20	96	103	100	1	0.0			
CAE	75817	011	122.65	50.00	354.0	575.0	32.0	57.0	174 - 178	0.0	0.0	0.0	KV	20	103	106	100	1	0.0			
ACK	76663	021	122.65	50.00	312.0	502.0	33.2	58.0	159 - 165	0.0	0.0	0.0	KV	20	79	85	88	1	0.0			
A6N	116122/3	021	122.65	50.00	396.0	552.0	27.0	67.0	155	0.0	0.0	0.0	KV	20	113	115	110	1	0.0			
ARY	71036	021	122.65	50.00	370.0	545.0	34.0	61.0	158 - 160	0.0	0.0	0.0	KV	20	95	111	96	1	0.0			
ABH	03/7/1127	021	122.65	50.00	320.0	518.0	32.4	56.5	155 - 158	0.0	0.0	0.0	KV	20	102	93	95	1	0.0			
ACF	76295	023	122.65	50.00	318.0	615.0	31.5	56.0	158 - 164	0.0	0.0	0.0	KV	20	99	103	102	1	0.0			
HEAT CODE	HEAT	ITEM	MATERIAL IN ACCORDANCE TO										HEAT TREATMENT									
CAE	75817	011	ASME SA ASTM A105-03										Normalized at 880 °920 °C / Air Cool									
UPO	74379	017	ASME SA ASTM A105-03										Normalized at 880 °920 °C / Air Cool									
CAE	75817	011	ASME SA ASTM A105-03										Normalized at 880 °920 °C / Air Cool									
ACK	76663	021	ASME SA ASTM A105-03										Normalized at 880 °920 °C / Air Cool									
A6N	116122/3	021	ASME SA ASTM A105-03										Normalized at 880 °920 °C / Air Cool									
ARY	71036	021	ASME SA ASTM A105-03										Normalized at 880 °920 °C / Air Cool									
ABH	03/7/1127	021	ASME SA ASTM A105-03										Normalized at 880 °920 °C / Air Cool									
ACF	76295	023	ASME SA ASTM A105-03										Normalized at 880 °920 °C / Air Cool									
NOTES																						
ASME B16.1/01 - BS 3799 - ANSI B31.1/B31.3 - IML STD - ANSI B1.1-B18.2.2 - NACE MR0175 ISO 15156/1 - SUPPLIED MATERIAL MEETS SPECIFICATIONS AND P.O. REQUIREMENTS - MSS SP83																						
INSPECTION AUTHORITY										QUALITY CONTROL DEPARTMENT										MANUFACTURER'S SYMBOL		
BORIS FIZZOTTI										IML										MANUFACTURER'S SYMBOL		
STUDBOLTS										STUDBOLTS										STUDBOLTS		

KEMPER VALVE & FITTINGS CORPORATION

December 19, 2006

Midfield Supply
9610 - 39 Ave
Edmonton, AB T6E 5T9
PH: (780) 446-8122
FX: (780) 446-9624

Attention: Jim

PO#: 500363

Qty	Item	Description	Union Material	O-Ring Material
187	916800	1" 3000# HS Octagon O-ring Union	Low Carbon Steel in full compliance with ASTM A105	N.B.R. Nitrile Butadiene Rubber 70-90 Durometer

CERTIFICATE OF CONFORMANCE

This is to certify that the above named Kemper unions have been manufactured in the UNITED STATES OF AMERICA using materials and processes in compliance with applicable Kemper Engineering Specifications, Quality Assurance Procedures and the requirements of accepted industry standards.

Material:

Forged and Normalized Low Carbon Steel in compliance with the latest revision of ASTM Specification A-105 "Forgings, Carbon Steel, for Piping Components".

Percent Chemical Composition	C	Mn	P	S	Si	Fe
	.35	.60	.04	.05	.35	
	max.	1.05	max.	max.	max.	bal.

Typical Mechanical Properties	Tensile Strength	Yield Strength	Elongation in 2"	Reduction of Area	Hardness (HB)
	70,000 psi	36,000 psi	22%	30%	187 max.

In addition this product also complies with dimensional specification MSS SP-83 "Carbon Steel Pipe Unions, Socket Welding and Threaded" (excepting Seal and Hi-Speed Nut configuration), and MSS SP-25 "Standard Marking System for Valves, Fittings, Flanges and Unions".

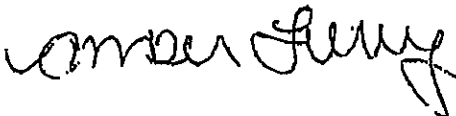
These unions are also supplied with a "NBR" Nitrile Butadiene Rubber O-Ring as the primary sealing component in accordance with your purchase order requirements.

Thank you for your interest in our products.

KEMPER VALVE & FITTINGS CORPORATION

Quality Assurance Department

Prepared by: Amber Levy



PO Box 400 Wauconda, Illinois 60084

phone 847-526-2166 / 800-323-1659
e-mail salesdesk@kempervalve.com

fax 847-526-2241

Union 1" FF 3M

ML-106-04

KEMPER VALVE & FITTINGS CORPORATION

December 19, 2006

Midfield Supply
9610 - 39 Ave
Edmonton, AB T6E 5T9
PH: (780) 446-8122
FX: (780) 446-9624

Attention: Jim

PO#: 500363

Qty	Item	Description	Union Material	O-Ring Material
187	916800	1" 3000# HS Octagon O-ring Union	Low Carbon Steel in full compliance with ASTM A105	N.B.R. Nitrile Butadiene Rubber 70-90 Durometer

CERTIFICATE OF CONFORMANCE

This is to certify that the above named Kemper unions have been manufactured in the UNITED STATES OF AMERICA using materials and processes in compliance with applicable Kemper Engineering Specifications, Quality Assurance Procedures and the requirements of accepted industry standards.

Material:

Forged and Normalized Low Carbon Steel in compliance with the latest revision of ASTM Specification A-105 "Forgings, Carbon Steel, for Piping Components".

Percent Chemical Composition	C .35 max.	Mn .60 1.05	P .04 max.	S .05 max.	Si .35 max.	Fe bal.
Typical Mechanical Properties	Tensile Strength 70,000 psi	Yield Strength 36,000 psi	Elongation in 2" 22%	Reduction of Area 30%	Hardness (HB) 187 max.	

In addition this product also complies with dimensional specification MSS SP-83 "Carbon Steel Pipe Unions, Socket Welding and Threaded" (excepting Seat and Hi-Speed Nut configuration), and MSS SP-25 "Standard Marking System for Valves, Fittings, Flanges and Unions".

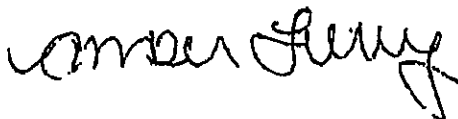
These unions are also supplied with a "NBR" Nitrile Butadiene Rubber O-Ring as the primary sealing component in accordance with your purchase order requirements.

Thank you for your interest in our products.

KEMPER VALVE & FITTINGS CORPORATION

Quality Assurance Department

Prepared by: Amber Levy



PO Box 400 Wauconda, Illinois 60084

phone 847-526-2166 / 800-323-1659
e-mail salesdesk@kempervalve.com

fax 847-526-2241

Union 1" FF 3M

ML-011-99

CERTIFIED MILL TEST REPORT



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LOG NO. 320774 PAGE 1

BONNEY FORGE
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(814) 542-2545 • (800) 345-7548 • FAX (814) 542-4906
www.bonneyforge.com

CUSTOMER: CCTF CORPORATION

Date 07/14/05

CUSTOMER'S Order No.: 4018957-00

Bonney Order No. 1014198

SHIPPED TO: CCTF CORPORATION

311419

1387 CORNWALL RD

OAKVILLE, ONTARIO, L6J7T5 CANA

ITEM	QUANTITY	LOT NO.	GRADE OR SPECIFICATION	MECHANICAL ANALYSIS	PHYSICAL PROPERTIES	REMARKS
SA/A105N						
010	25	56418	7522991	1 3M A105N 45 EL T		
				C .180 MN 1.000 P .009 S .018 SI .240		
				NI .020 CU .140 CO .003 CR .040 MO .011		
				V .023 AL .001 NB .001		
				CE(LONG FORMULA) = 0.37		
				T/S 76256 Y/S 52513 EL 33.35 RA 67.29		
				BRINELL HARDNESS1: 137 HARDNESS2: 144		
		56462	7522991	1 3M A105N 45 EL T		
				C .190 MN .990 P .008 S .025 SI .250		
				NI .040 CU .190 CO .003 CR .070 MO .011		
				V .023 AL .001 NB .001		
				CE(LONG FORMULA) = 0.39		
				T/S 76875 Y/S 52250 EL 32.65 RA 65.60		
				BRINELL HARDNESS1: 147 HARDNESS2: 144		
017	150	3137	7520131	3/4X1/2 3M A105N REDU T		
				C .180 MN 1.040 P .010 S .017 SI .240		
				NI .030 CU .100 CO .004 CR .060 MO .010		
				V .022 AL .001 NB .002		
				CE(LONG FORMULA) = 0.38		
				T/S 76375 Y/S 54125 EL 31.80 RA 68.15		
				BRINELL HARDNESS1: 144 HARDNESS2: 153		
033	25	56342	7520850	1 1/4 X1 1/4X1 3000 A105N TEE S		
				C .200 MN 1.020 P .008 S .023 SI .260		
				NI .020 CU .110 CO .002 CR .030 MO .006		
				V .025 AL .001 NB .000		
				CE(LONG FORMULA) = 0.39		
				T/S 75425 Y/S 51750 EL 32.50 RA 64.70		
				BRINELL HARDNESS1: 144 HARDNESS2: 144		

***** CONTINUED ON NEXT PAGE *****

We certify that the data on this sheet is a true copy taken from our records of material furnished us by the production mill, or as obtained by additional laboratory checks.

by 
Chris Childers

CMTR: REV 1

QUALITY PROCESS MANAGER

Elbow 1" 3M 45° 56462

CERTIFIED MILL TEST REPORT



**The Best Value
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All The Time.**

LOG NO. 220774 PAGE 2
BONNEY FORGE
P.O. BOX 330 • U.S. RTE 522 SOUTH • MOUNT UNION, PA 17066-0330
(814) 542-2545 • (800) 345-7546 • FAX (814) 542-4906
www.bonneyforge.com

CUSTOMER: CCTF CORPORATION

Date 07/14/05

CUSTOMER'S Order No.: 4018957-00

Bonney Order No. 1014198

SHIPPED TO: CCTF CORPORATION

311419

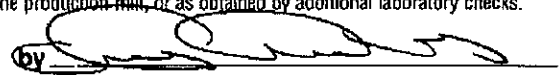
1387 CORNWALL RD.

OAKVILLE, ONTARIO, L6J7T5 CANA

ITEM QUANTITY LOT NO				GRADE OR SPEC. CONDITION CHEMICAL ANALYSIS THROUGH A. T. T. REPORTED IN TABLE			
				SA/A105N			
045	25	1186	7520793	1/8 3M/4M A105N RDPL T			
				C .190 MN .950 P .008 S .023 SI .260			
				NI .054 CU .110 CR .067 MO .013 V .020			
				CB .013			
				CE(LONG FORMULA) = 0.38			
				T/S 78500 Y/S 55375 EL 34.70 RA 63.25			
				BRINELL HARDNESS: 144			
053	20	56172	7520014	3/4 3M A105N/GALV 45EL T			
				C .200 MN 1.070 P .006 S .026 SI .250			
				NI .010 CU .060 CO .002 CR .040 MO .005			
				V .024 AL .001 NB .000			
				CE(LONG FORMULA) = 0.40			
				T/S 77625 Y/S 51875 EL 31.90 RA 65.60			
				BRINELL HARDNESS1: 144 HARDNESS2: 141			
055	25	2991	7520024	1/2 3000 A105N/GALV COUP T			
				C .180 MN .980 P .009 S .030 SI .240			
				NI .040 CU .200 CO .003 CR .050 MO .011			
				V .025 AL .001 NB .000			
				CE(LONG FORMULA) = 0.38			
				T/S 77375 Y/S 54250 EL 29.85 RA 64.50			
				BRINELL HARDNESS1: 144 HARDNESS2: 141			

***** CONTINUED ON NEXT PAGE *****

We certify that the data on this sheet is a true copy taken from our records of material furnished us by the production mill, or as obtained by additional laboratory checks.

by 
Cris Childers

CMTR: REV 1

QUALITY PROCESS MANAGER

CERTIFIED MILL TEST REPORT



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CUSTOMER: CCTF CORPORATION

Date 07/14/05

CUSTOMER'S Order No.: 4018957-00

Bonney Order No. 1014198

SHIPPED TO: CCTF CORPORATION

311419

1387 CORNWALL RD.

DAKVILLE, ONTARIO, L6J7T5 CANA

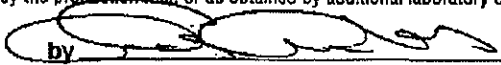
ITEM	QUANTITY	LOT NO.
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GRADE OR SPECIFICATION CHEMICAL ANALYSIS TENSILE YIELD ELONGATION BOLTS NUTS WASHERS ANCHORS
--

1. THE FITTINGS SUPPLIED ARE IN ACCORDANCE WITH PURCHASE ORDER SPECIFICATIONS.
2. THE MATERIAL SUPPLIED IDENTIFIED AS A105N WAS NORMALIZED IN ACCORDANCE WITH ASTM A105 HEAT TREATING REQUIREMENTS.
3. CERTIFYING ASTM A105-03 / ASME SA105-04 EDITION.
4. ELONGATION TEST RESULTS ARE OBTAINED USING STANDARD ROUND SPECIMEN, 2 INCH OR 50 MM GAGE LENGTH.
5. THE MATERIAL SUPPLIED WAS INSPECTED AND MANUFACTURED IN ACCORDANCE WITH EN DIN 10204 3.1. B.

***** END OF CERTIFICATION *****

We certify that the data on this sheet is a true copy taken from our records of material furnished us by the production mill, or as obtained by additional laboratory checks.

by 

Cris Childers

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www.bonneyforge.com

CUSTOMER: WESTLUND INDUSTRIAL SUPPLY

Date 01/31/05

CUSTOMER'S Order No.: 9199675-00

Bonney Order No. 006105

SHIPPED TO: WESTLUND INDUSTRIAL SUPPLY
5105 75TH STREET

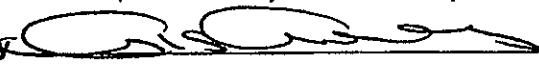
289755

EDMONTON ALBERTA
EDMONTON ALBERTA, T6E5S5 CANAD

ITEM	QUANTITY	LOT NO.	GRADE OR SPECIFICATION NO. CHEMICAL ANALYSIS, PHYSICAL PROPERTIES, REMARKS:					
			SA/A105N-02					
042	1080	56269	7522819	2 3000 A105N 90EL T				
				C .190 MN 1.020 P .009 S .024 SI .250				
				NI .030 CU .120 CO .002 CR .060 MD .011				
				V .024 AL .001 NB .001				
				CE(LONG FORMULA) = 0.39				
				T/S 80250 Y/S 57250 EL 30.60 RA 66.75				
				BRINELL HARDNESS1: 153 HARDNESS2: 141				
044	25	56216	7522967	3/4 3M A105N 45 EL T				
				C .190 MN 1.010 P .012 S .024 SI .230				
				NI .020 CU .100 CO .002 CR .040 MD .008				
				V .025 AL .001 NB .000				
				CE(LONG FORMULA) = 0.38				
				T/S 78125 Y/S 53500 EL 31.90 RA 65.85				
				BRINELL HARDNESS1: 144 HARDNESS2: 144				
045	100	56112	7522991	1 3M A105N 45 EL T				
				C .200 MN 1.000 P .006 S .024 SI .260				
				NI .090 CU .270 CR .120 MD .026 V .002				
				AL .004 NB .011 SN .008				
				CE(LONG FORMULA) = 0.42				
				T/S 81125 Y/S 54750 EL 31.05 RA 61.30				
				BRINELL HARDNESS1: 153 HARDNESS2: 153				
		56121	7522991	1 3M A105N 45 EL T				
				C .190 MN 1.030 P .010 S .024 SI .240				
				NI .030 CU .130 CR .040 MD .016 V .024				
				AL .001 NB .000				
				CE(LONG FORMULA) = 0.39				
				T/S 78625 Y/S 55250 EL 32.30 RA 66.10				
				BRINELL HARDNESS1: 147 HARDNESS2: 150				

***** CONTINUED ON NEXT PAGE *****

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by 
Cris Childers

CMTR: REV 1

QUALITY PROCESS MANAGER

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CUSTOMER: WESTLUND INDUSTRIAL SUPPLY

Date 05/21/04

CUSTOMER'S Order No.: 9193144-00

Bonney Order No. 890712

SHIPPED TO: WESTLUND INDUSTRIAL SUPPLY
5105 75TH STREET

Mark 201799

EDMONTON ALBERTA
EDMONTON ALBERTA, T6E5S5 CANAD

ITEM	QUANTITY	LOT NO.	GRADE OR SPECIFICATION NO. CHEMICAL ANALYSIS. PHYSICAL PROPERTIES. REMARKS:	
			SA/A105N-02	

0/20	50	56039	7522991	1	3M A105N 45 EL T					
					C .190 MN .990 P .012 S .026 SI .250					
					NI .060 CU .210 CR .070 MO .018 V .023					
					AL .001 NB .000					
					CE(LONG FORMULA) = 0.40					
					T/S 77500 Y/S 55000 EL 30.00 RA 71.00					
					BRINELL HARDNESS1: 159 HARDNESS2: 156					

1. THE FITTINGS SUPPLIED ARE IN ACCORDANCE WITH PURCHASE ORDER SPECIFICATIONS.
2. THE MATERIAL SUPPLIED IDENTIFIED AS A105N WAS NORMALIZED IN ACCORDANCE WITH ASTM A105 HEAT TREATING REQUIREMENTS.
3. CERTIFYING ASTM A105-02 / ASME SA105-02 EDITION.
4. ELONGATION TEST RESULTS ARE OBTAINED USING STANDARD ROUND SPECIMEN, 2 INCH OR 50 MM GAGE LENGTH.

***** END OF CERTIFICATION *****

We certify that the data on this sheet is a true copy taken from our records of material furnished us by the production mill, or as obtained by additional laboratory checks



by

Cris Childers

QUALITY CONTROL MANAGER

56039

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INSPECTION CERTIFICATE EN 10204:2004 / 3.1

COMPANY WITH QUALITY SYSTEM ISO 9001:2000
CERTIFIED BY RINA

SEYBOLD INTERNATIONAL CORP.
20 Holly Street, Unit 205
TORONTO M4S 3B1 CANADA CA

Certificate Nr. 17432
Invoice Nr. 392
Del. Note Nr. 594

Dated 23.04.2007
Dated 30.03.2007
Dated 30.03.2007

I.M.L.
INDUSTRIA MECCANICA LIGURE SPA

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HEAT CODE		HEAT	ITEM	YOUR P.O.	OUR REFERENCE	Q.TY	DESCRIPTION										DIR. ACC. TO	VISUAL & DIMENS.					
A64	77612	022	5951	2006-2E209-0003075-022	200	FITTING 90 ELB. THRD NPT 2M 3/4" A105N CODE: 3956	SEE NOTE	SATISFACTORY															
A93	72430	029	5951	2006-2E209-0003075-029	100	FITTING 45 ELB. THRD NPT 3M 3/4" A105N CODE: 3977	SEE NOTE	SATISFACTORY															
HC7	78092	030	5951	2006-2E209-0003075-030	150	FITTING 45 ELB. THRD NPT 3M 1" A105N CODE: 3978	SEE NOTE	SATISFACTORY															
NK	1629	032	5951	2006-2E209-0003075-032	300	FITTING HEX.H.PLUG THRD NPT 3/8M 3/8" A105N CODE: 4003	SEE NOTE	SATISFACTORY															
TM6	77612	038	5951	2006-2E209-0003075-038	100	FITTING TEE THRD NPT 2M 3/4" A105N CODE: 4026	SEE NOTE	SATISFACTORY															
TN1	78878	041	5951	2006-2E209-0003075-041	1200	FITTING TEE THRD NPT 3M 1/2" A105N CODE: 4035	SEE NOTE	SATISFACTORY															
	72978	045	5951	2006-2E209-0003075-045	300	FITTING HALF COUPL THRD NPT 3M 1" A105N CODE: 4085	SEE NOTE	SATISFACTORY															
HL5	72028	080	5951	2006-2E209-0003075-080	300	FITTING RED.TEE THRD NPT 3M 1"x1/2" A105N CODE: 45688	SEE NOTE	SATISFACTORY															
HEAT CODE		HEAT	ITEM	MATERIAL	C%	Si%	Mn%	S%	P%	C%	Ni%	Mo%	Ti%	Cu%	V%	Nb%	N%	A1%	C.E.%	OTHER ELEMENTS			
A64	77612	022	ASTM A105	0,185	0,200	0,900	0,021	0,013	0,100	0,060	0,010	0,005	0,190	0,005	0,002	0,001	0,000	0,004	0,374				
A93	72430	029	ASTM A105	0,195	0,200	0,940	0,020	0,013	0,080	0,050	0,010	0,005	0,110	0,005	0,003	0,001	0,000	0,012	0,381				
HC7	78092	030	ASTM A105	0,180	0,190	0,850	0,020	0,020	0,130	0,060	0,010	0,005	0,250	0,005	0,001	0,000	0,000	0,009	0,371				
NK	1629	032	ASTM A105	0,195	0,250	1,050	0,015	0,020	0,130	0,060	0,010	0,000	0,200	0,000	0,003	0,001	0,000	0,000	0,416				
TM6	77612	038	ASTM A105	0,185	0,200	0,900	0,021	0,013	0,100	0,060	0,010	0,005	0,190	0,005	0,002	0,001	0,000	0,014	0,374				
TN1	78878	041	ASTM A105	0,185	0,220	0,960	0,023	0,016	0,110	0,050	0,010	0,006	0,180	0,006	0,001	0,000	0,000	0,017	0,385				
	72978	045	ASTM A105	0,205	0,230	0,860	0,022	0,012	0,100	0,060	0,010	0,012	0,200	0,002	0,000	0,000	0,000	0,005	0,388				
HL5	72028	080	ASTM A105	0,185	0,210	0,970	0,017	0,017	0,130	0,060	0,010	0,005	0,170	0,005	0,002	0,000	0,000	0,017	0,390				
HEAT CODE		HEAT	ITEM	TEST SPECIMEN	YIELD POINT	TENSILE STRENGTH	ELONGATION	REDUCTION OF AREA		HARDNESS IN		BIOD TEST	FLATTENING TEST		IMPACT TEST		SHAPE		YIELD POINT				
A64	77612	022	122,65	50,00	548,0	31,0	54,0	160 - 166	0,0	0,0	0,0	KV	20	94	92	90	1	1	1	0,0			
A93	72430	029	122,65	50,00	549,0	32,0	56,0	162 - 166	0,0	0,0	0,0	KV	20	98	104	105	1	1	1	0,0			
HC7	78092	030	122,65	50,00	548,0	32,0	54,0	158 - 166	0,0	0,0	0,0	KV	20	104	100	105	1	1	1	0,0			
NK	1629	032	122,65	50,00	533,0	31,0	59,0	158 - 160	0,0	0,0	0,0	KV	20	86	87	97	1	1	1	0,0			
TM6	77612	038	122,65	50,00	520,0	35,0	55,0	158 - 166	0,0	0,0	0,0	KV	20	96	106	104	1	1	1	0,0			
TN1	78878	041	122,65	50,00	536,0	31,0	56,0	160 - 168	0,0	0,0	0,0	KV	20	109	105	109	1	1	1	0,0			
	72978	045	122,65	50,00	522,0	34,0	58,0	154 - 160	0,0	0,0	0,0	KV	20	108	104	105	1	1	1	0,0			
HL5	72028	080	122,65	50,00	548,0	32,0	54,0	160 - 166	0,0	0,0	0,0	KV	20	108	104	100	1	1	1	0,0			
HEAT CODE		HEAT	ITEM	MATERIAL IN ACCORDANCE TO				HEAT TREATMENT				FURNACE				STEEL MILL		Our Ref.					
A64	77612	022	ASME SA ASTM A105-05	Normalized at 880°-920°C / Air Cool				ELECTRIC FURNACE				ELECTRIC FURNACE				RIVA ACCIAI		051400					
A93	72430	029	ASME SA ASTM A105-05	Normalized at 880°-920°C / Air Cool				ELECTRIC FURNACE				ELECTRIC FURNACE				RIVA ACCIAI		081353					
HC7	78092	030	ASME SA ASTM A105-05	Normalized at 880°-920°C / Air Cool				ELECTRIC FURNACE				ELECTRIC FURNACE				RIVA ACCIAI		051423					
NK	1629	032	ASME SA ASTM A105-05	Normalized at 880°-920°C / Air Cool				ELECTRIC FURNACE				ELECTRIC FURNACE				RIVA ACCIAI		051400					
TM6	77612	038	ASME SA ASTM A105-05	Normalized at 880°-920°C / Air Cool				ELECTRIC FURNACE				ELECTRIC FURNACE				RIVA ACCIAI		061085					
TN1	78878	041	ASME SA ASTM A105-05	Normalized at 880°-920°C / Air Cool				ELECTRIC FURNACE				ELECTRIC FURNACE				RIVA ACCIAI		N10245					
	72978	045	ASME SA ASTM A105-05	Normalized at 880°-920°C / Air Cool				ELECTRIC FURNACE				ELECTRIC FURNACE				RIVA ACCIAI		061358					
HL5	72028	080	ASME SA ASTM A105-05	Normalized at 880°-920°C / Air Cool				ELECTRIC FURNACE				ELECTRIC FURNACE				RIVA ACCIAI		061358					
NOTES				ASME B16.11/05 - ANSI B31.1/B31.3 - IML STD - ANSI B1.1-18.2.2 - NACE MR0175 ISO 15156/1 - MSS SP 83 - SUPPLIED MATERIAL MEETS SPECIFICATIONS AND P.O. REQUIREMENTS				INSPECTION AUTHORITY				QUALITY CONTROL DEPARTMENT				MANUFACTURER'S SYMBOL							
								98577				BORIS FIZZOTTI				FITTINGS				IML			
																STUDBOLTS							

HL5

1" x 1/2 3M TEE

SEYBOLD INTERNATIONAL CORP.
20 Holly Street, Unit 205
TORONTO M4S 3B1 CANADA

CA

Certificate No. 17432
Invoice No. 382
Del. Note No. 584

Dated 23.04.2007
Dated 30.03.2007
Dated 30.03.2007

INSPECTION CERTIFICATE EN 10204:2004 / 3.1
COMPANY WITH QUALITY SYSTEM ISO 9001:2000
CERTIFIED BY RINA

I.M.L.
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HEAT CODE		HEAT	ITEM	YOUR P.O.	OUR REFERENCE	Q.TY	DESCRIPTION										DIM. ACC. TO	VISUAL & DIMENS.
A84	77612	022	5951	2006-2E209-0003075-022	200	FITTING 90 ELB. THRD NPT 2M 3/4" A105N CODE: 3956	SEE NOTE	SATISFACTORY										
A93	72430	029	5951	2006-2E209-0003075-029	100	FITTING 45 ELB. THRD NPT 3M 3/4" A105N CODE: 3977	SEE NOTE	SATISFACTORY										
HC7	78092	030	5951	2006-2E209-0003075-030	150	FITTING 45 ELB. THRD NPT 3M 1" A105N CODE: 3978	SEE NOTE	SATISFACTORY										
NK	1629	032	5951	2006-2E209-0003075-032	300	FITTING HEX.H.PLUG THRD NPT 3/8M 3/8" A105N CODE: 4003	SEE NOTE	SATISFACTORY										
TM6	77612	038	5951	2006-2E209-0003075-038	100	FITTING TEE THRD NPT 2M 3/4" A105N CODE: 4026	SEE NOTE	SATISFACTORY										
TN1	78878	041	5951	2006-2E209-0003075-041	1200	FITTING TEE THRD NPT 3M 1/2" A105N CODE: 4035	SEE NOTE	SATISFACTORY										
HL5	72978	045	5951	2006-2E209-0003075-045	300	FITTING HALF COUPL THRD NPT 3M 1" A105N CODE: 4085	SEE NOTE	SATISFACTORY										
HL5	72028	080	5951	2006-2E209-0003075-080	300	FITTING RED.TEE THRD NPT 3M 1"x1/2" A105N CODE: 45668	SEE NOTE	SATISFACTORY										
HEAT CODE	HEAT	ITEM	MATERIAL	C%	SI%	Mn%	S%	P%	CR%	NI%	CU%	V%	NP%	N%	AT%	C.E.%	OTHER ELEMENTS	
A84	77612	022	ASTM A105	0.185	0.200	0.900	0.021	0.013	0.100	0.080	0.010	0.005	0.190	0.002	0.001	0.000	0.374	
A93	72430	029	ASTM A105	0.195	0.200	0.840	0.020	0.013	0.080	0.050	0.010	0.005	0.110	0.003	0.001	0.000	0.381	
HC7	78092	030	ASTM A105	0.180	0.190	0.850	0.020	0.020	0.130	0.060	0.010	0.005	0.250	0.001	0.000	0.000	0.371	
NK	1629	032	ASTM A105	0.195	0.250	1.050	0.015	0.020	0.130	0.060	0.010	0.000	0.200	0.003	0.001	0.000	0.416	
TM6	77612	038	ASTM A105	0.185	0.200	0.900	0.021	0.013	0.100	0.080	0.010	0.005	0.190	0.002	0.001	0.000	0.374	
TN1	78878	041	ASTM A105	0.185	0.220	0.860	0.022	0.016	0.110	0.050	0.010	0.006	0.180	0.001	0.000	0.000	0.385	
HL5	72978	045	ASTM A105	0.205	0.230	0.860	0.022	0.012	0.100	0.060	0.010	0.012	0.200	0.002	0.000	0.000	0.388	
HL5	72028	080	ASTM A105	0.185	0.210	0.970	0.017	0.017	0.130	0.060	0.010	0.005	0.170	0.002	0.000	0.000	0.390	
HEAT CODE	HEAT	ITEM	TEST SPECIMEN	YIELD POINT	TENSILE STRENGTH	ELONGATION	REDUCTION OF AREA	HARDNESS IR	BEND TEST	FLATTENING TEST	TYPE 100mm	IMPACT TEST - JOULES	SHAPE	YIELD POINT				
A84	77612	022	122,65	50,00	336,0	31,0	54,0	160 - 166	0,0	0,0	KV	20	94	92				
A93	72430	029	122,65	50,00	318,0	32,0	56,0	162 - 166	0,0	0,0	KV	20	98	104				
HC7	78092	030	122,65	50,00	307,0	32,0	54,0	158 - 166	0,0	0,0	KV	20	104	100				
NK	1629	032	122,65	50,00	325,0	31,0	59,0	158 - 160	0,0	0,0	KV	20	86	87				
TM6	77612	038	122,65	50,00	334,0	35,0	55,0	158 - 166	0,0	0,0	KV	20	96	106				
TN1	78878	041	122,65	50,00	305,0	31,0	56,0	160 - 168	0,0	0,0	KV	20	109	105				
HL5	72978	045	122,65	50,00	326,0	34,0	58,0	164 - 160	0,0	0,0	KV	20	108	104				
HL5	72028	080	122,65	50,00	309,0	32,0	54,0	160 - 166	0,0	0,0	KV	20	108	104				
HEAT CODE	HEAT	ITEM	MATERIAL IN ACCORDANCE TO										FURNACE		Our Ref.			
A84	77612	022	ASME SA ASTM A105-05										ELECTRIC FURNACE		051400			
A93	72430	029	ASME SA ASTM A105-05										ELECTRIC FURNACE		081353			
HC7	78092	030	ASME SA ASTM A105-05										ELECTRIC FURNACE		051423			
NK	1629	032	ASME SA ASTM A105-05										ELECTRIC FURNACE		051400			
TM6	77612	038	ASME SA ASTM A105-05										ELECTRIC FURNACE		061085			
TN1	78878	041	ASME SA ASTM A105-05										ELECTRIC FURNACE		110245			
HL5	72978	045	ASME SA ASTM A105-05										ELECTRIC FURNACE		061358			
HL5	72028	080	ASME SA ASTM A105-05										ELECTRIC FURNACE		061358			
NOTES												MANUFACTURER'S SYMBOL		MANUFACTURER'S SYMBOL				
ASME B16.11/05 - ANSI B31.1/B31.3 - IML STD - ANSI B1.1-B18.2.2 -												QUALITY CONTROL DEPARTMENT		MANUFACTURER'S SYMBOL				
NACE MR0175 ISO 15156/1 - MSS SP 83 - SUPPLIED MATERIAL MEETS SPECIFICATIONS AND P.O. REQUIREMENTS												BORIS FIZZOTTI		IML				
												FITTINGS		STUDBOLTS				

NOTES: ASME B16.11/05 - ANSI B31.1/B31.3 - IML STD - ANSI B1.1-B18.2.2 - NACE MR0175 ISO 15156/1 - MSS SP 83 - SUPPLIED MATERIAL MEETS SPECIFICATIONS AND P.O. REQUIREMENTS

HEAT NUMBER : UX6
TRANS AM PIPING PRODUCTS - REV'D BY: 1" CL 3000 FS SCD UNION
SHIPMENT/SEQ # : 5 7 - 1366 25



INDUSTRIA MECCANICA LIGURE SPA

16030 CASARZA LIGURE - Genova - Italy - P.zza Marco Cappelli, 4 - Tel. 0165.467661 - Fax 0165.467661 - This certificate has been generated by computer and need not to be signed for validity according to DIN EN 10204 Page 8 - 22

INSPECTION CERTIFICATE EN 10204:2004 / 3.1
COMPANY WITH QUALITY SYSTEM ISO 9001:2000
CERTIFIED BY RINA
TRANS AM PIPING PRODUCTS LTD.
233051 Endeavor Drive S.E.
Calgary, Alberta T2P 2G6
CA

Certificate Nr 17729
Invoice Nr 723
Del. Note Nr 1141
Dated 03.07.2007
Dated 29.06.2007
Dated 29.06.2007

HEAT CODE	HEAT	ITEM	YOUR P.O.	OUR REFERENCE	Q.TY	DESCRIPTION	DIM. ACC. TO VISUAL & DIMENS														
C14	AR5084	173	CI-07 - 164	2007-2E201-0000138-173		FITTING HEX.H.PLUG THRD NPT 3/4" A350/LF2	SEE NOTE	SATISFACTORY													
	72431	185	CI-07 - 164	2007-2E201-0000138-185		FITTING CAP SW 3M 1 1/2" A350/LF2	SEE NOTE	SATISFACTORY													
	36001	017	CI-07 - 380	2007-2E201-0000541-017		FITTING UNION F/F THRD NPT 3M 1" A105N(NUT+MALE)	SEE NOTE	SATISFACTORY													
	17164	017	CI-07 - 380	2007-2E201-0000541-017		FITTING UNION F/F THRD NPT 3M 1" A105N(FEMALE)	SEE NOTE	SATISFACTORY													
	71549	017	CI-07 - 380	2007-2E201-0000541-017		FITTING UNION F/F THRD NPT 3M 1" A105N(NUT)	SEE NOTE	SATISFACTORY													
	36001	017	CI-07 - 380	2007-2E201-0000541-017		FITTING UNION F/F THRD NPT 3M 1" A105N(FEMALE)	SEE NOTE	SATISFACTORY													
	75736	015	CI-07 - 184	2007-2E201-0000138-015		FITTING 45 ELB. THRD NPT 2M 3" A105N	SEE NOTE	SATISFACTORY													
	74851	015	CI-07 - 164	2007-2E201-0000138-015		FITTING 45 ELB. THRD NPT 2M 3" A105N	SEE NOTE	SATISFACTORY													
HEAT CODE	HEAT	ITEM	MATERIAL		YIELD POINT	TENSILE STRENGTH	ELONGATION	REDUCTION OF AREA			HARDNESS H _B		BEND TEST		FLATTERING TEST		IMPACT TEST - JOULE/CM ²		SHAPE	YIELD POINT	
					MPa	MPa	%	%	%											MPa	
C14	AR5084	173	ASTM A350 LF2 cl.1	0.190	0.260	0.960	0.020	0.007	0.100	0.110	0.030	0.000	0.140	0.002	0.002	0.000	0.000	0.025	0.393	1	0.0
	72431	185	ASTM A350 LF2 cl.1	0.195	0.200	0.970	0.021	0.014	0.090	0.050	0.010	0.005	0.100	0.002	0.000	0.000	0.012	0.387	1	0.0	
	36001	017	ASTM A105	0.180	0.280	0.990	0.024	0.014	0.220	0.160	0.043	0.002	0.200	0.003	0.002	0.010	0.024	0.422	1	0.0	
	17164	017	ASTM A105	0.190	0.280	0.970	0.024	0.008	0.100	0.160	0.030	0.004	0.150	0.003	0.002	0.000	0.013	0.399	1	0.0	
	71549	017	ASTM A105	0.195	0.250	0.960	0.023	0.013	0.180	0.050	0.010	0.005	0.170	0.003	0.001	0.000	0.015	0.408	1	0.0	
	36001	017	ASTM A105	0.180	0.280	0.990	0.024	0.014	0.220	0.160	0.043	0.002	0.200	0.003	0.002	0.010	0.024	0.422	1	0.0	
	75736	015	ASTM A105	0.200	0.180	1.130	0.010	0.010	0.080	0.070	0.010	0.022	0.180	0.028	0.001	0.000	0.025	0.429	1	0.0	
	74851	015	ASTM A105	0.180	0.230	1.070	0.014	0.012	0.080	0.050	0.010	0.020	0.190	0.025	0.001	0.000	0.025	0.397	1	0.0	
HEAT CODE	HEAT	ITEM	MATERIAL		YIELD POINT	TENSILE STRENGTH	ELONGATION	REDUCTION OF AREA			HARDNESS H _B		BEND TEST		FLATTERING TEST		IMPACT TEST - JOULE/CM ²		SHAPE	YIELD POINT	
					MPa	MPa	%	%	%											MPa	
C14	AR5084	173	122.65	50.00	435.0	578.0	31.0	56.0	160 - 162	0.0	0.0	0.0	0.0	KV	-46	64	59	1	0.0		
	72431	185	122.65	50.00	316.0	566.0	34.0	52.0	160 - 165	0.0	0.0	0.0	0.0	KV	-46	60	57	1	0.0		
	36001	017	122.65	50.00	395.0	585.0	32.5	58.0	163 - 169	0.0	0.0	0.0	0.0	KV	20	101	99	1	0.0		
	17164	017	122.65	50.00	308.0	563.0	31.0	58.0	160 - 166	0.0	0.0	0.0	0.0	KV	20	85	91	1	0.0		
	71549	017	122.65	50.00	305.0	583.0	31.0	54.0	160 - 166	0.0	0.0	0.0	0.0	KV	20	105	100	1	0.0		
	36001	017	122.65	50.00	395.0	585.0	32.5	58.0	163 - 169	0.0	0.0	0.0	0.0	KV	20	101	99	1	0.0		
	75736	015	122.65	50.00	317.0	527.0	31.0	63.0	156 - 163	0.0	0.0	0.0	0.0	KV	20	105	109	1	0.0		
	74851	015	122.65	50.00	314.0	519.0	31.0	67.0	156 - 159	0.0	0.0	0.0	0.0	KV	20	90	95	1	0.0		
HEAT CODE	HEAT	ITEM	MATERIAL IN ACCORDANCE TO				HEAT TREATMENT				FURNACE		STEEL MILL		Our Ref.						
C14	AR5084	173	ASME SA ASTM A350-04a Gr. LF2 cl.1				Normalized at 900°C / Air Cool				ELECTRIC FURNACE		RODAC/CI		N10253						
	72431	185	ASME SA ASTM A350-04a Gr. LF2 cl.1				Normalized at 880°-920° C / Air Cool				ELECTRIC FURNACE		RIVA ACCIAI		081351						
	36001	017	ASME SA ASTM A105-05				Normalized at 880°-920° C / Air Cool				ELECTRIC FURNACE		ABS		082126						
	17164	017	ASME SA ASTM A105-05				Normalized at 880°-920° C / Air Cool				ELECTRIC FURNACE		RIVA ACCIAI		082125						
	71549	017	ASME SA ASTM A105-05				Normalized at 880°-920° C / Air Cool				ELECTRIC FURNACE										
	36001	017	ASME SA ASTM A105-05				Normalized at 880°-920° C / Air Cool				ELECTRIC FURNACE										
	75736	015	ASME SA ASTM A105-05				Normalized at 880°-920° C / Air Cool				ELECTRIC FURNACE										
	74851	015	ASME SA ASTM A105-05				Normalized at 880°-920° C / Air Cool				ELECTRIC FURNACE										