

Benteler Stahl/Rohr GmbH

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BENTELER

Stahl/Rohr

ABNAHMEPRÜFZEUGNIS EN 10204-3.1

INSPECTION CERTIFICATE EN 10204-3.1

CERTIFICAT DE RECEPTION EN 10204-3.1

EN 10204:2006-01

Benteler Stahl/Rohr GmbH - Postfach 1340 - 33043 Paderborn - Deutschland

Comco Pipe & Supply Co.

PO Box 457

EDMONTON, AB T5J 2K1

KANADA

Dokument-Nr.: 65-309518/001/P

Document No.: No. du document:

Kunden-Bestell-Nr.: 05-5554 / E1006690

Purchase Order No.: No. de commande du client:

Benteler Auftrags-Nr.: 1137588

Benteler Order No.: No. de commande Benteler:

Versandanzeigen-Nr.: 6582455

Dispatch Note No.: No. d'avis d'expédition:

Produkt: NAHTLOSE STAHLROHRE

Product: SEAMLESS STEEL TUBES

Produit: TUBES D'ACIER SANS SOUDURE

Prüf-Nr.:

Inspection No.:

Hersteller:

Manufacturer:

Producteur:

Herstellereichen:

Manufacturer's brand:

Marque du producteur:

Stempel des Abnahmebeauftragten: WA

Stamp of the inspection representative:

Timbre du contrôleur:

Stahlschmelzungsverfahren: ELEKTROSTAHL

Steelmaking process: ELECTRIC FURNACE

Procédé d'élaboration de l'acier: FOUR ELECTRIQUE

Lieferbedingungen:

Terms of delivery:

Conditions de livraison:

CSA Standard Z245.1-02 Category I, API Specification 5L Forty-Third Edition, March 2004, PSL 1, ASTM-A 106-2004b, S5, ASME SA-106, ASME Section II Part A Edition 2004 Addenda 2005, S5, NACE Standard MR0175-03

Maße - Toleranzen:

Dimensions-tolerances:

Dimensions-tolérances:

ASME B36.10M-2004, ASME SA-530, ASME Section II Part A Edition 2004 Addenda 2005, ASTM-A 530-2004a

Stahlsorte:

Steel grade:

Nuance d'acier:

GRADE 290, GRADE B, GRADE X 42

Lieferzustand:

Delivery condition:

État de livraison:

Hot rolled

Produktkennzeichnung:

Product marking:

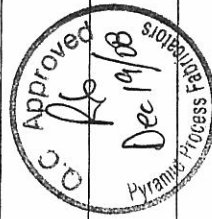
Marquage du produit:

FS: BENTELER Z.245.1, Spec.5L-PSL1, A/SA-106 S5 B/X42/290 HEAT-NO. TEST PRESSUR E

DIMENSIONS WEIGHT CLASS WA GERMANY E1006690

FK = Farbkennzeichnung, colour marking, marquage par couleur FS = Farbschablonierung, paint stencilling, marquage par peinture FSD = Farbschablonierung, Colour, let printer, imprimante à jet d'encre de couleur LS = Längsschablonierung, longitudinal stencilling, marquage longitudinal par peinture PKE = Etikettenkennzeichnung, tag marking, marquage sur étiquette PS = Prägestempel, die stamp, marquage par poinçonnage TS = Tintenstrahlkennzeichnung, ink jet spray marking, imprimante à jet d'encre

Pos.	Stück	Maße	Länge	Gewicht	Schmelzen-Nr.	Prüfdruck	Rohr-Nr.-Gruppe	Vielfachlängen
Item	Number	Dimensions	Length	Weight	Heat No.	Test pressure	Tube number group	Multiple lengths
Poste	Nombre	Dimensions	Longueur	Poids	No. de coulée	Pression d'épreuve	Série de no. des tubes	Longueurs multiples
		feet	feet	lbs		bar	\$	
0007 26	3" NPS * XXS		1086,25	20058	531816	207	5	
	38 FT - 42 FT							



ABNAHMEPRÜFZEUGNIS EN 10204-3.1 Dokument-Nr.: 65-309518/001/P

INSPECTION CERTIFICATE EN 10204-3.1
CERTIFICAT DE RECEPTION EN 10204-3.1

Prüf-Nr.:
Inspection No.:
No. du certificat:

Blatt: 2 / 4
Page:
Page:

Schmelzenanalyse [%] / Heat analysis [%] / Analyse sur coulée [%]

Pos.	Schmelzen-Nr.	Item	Heat No.	C	SI	MN	P	S	CR	MO	NI	CU	V	NB	TI	B
Poste	No. de coulée															
0007	531816			0,140	0,200	0,83	0,007	0,005	0,09	0,02	0,08	0,11	0,001	0,010	0,003	0,0001

1. Formel: $CE\ IIW = C + (Mn/6) + ((Cr + Mo + V)/5) + ((Cu + Ni)/15) \leq 0,40\ %$
2. Formel: $CEV = C + F^* ((Mn/6) + (Si/24) + (Cu/15) + ((Ni/20) + ((Cr + Mo + V + Nb)/5) + (5 \cdot B))) \leq 0,40$
3. Formel: $Mn/C \geq 3/1$
4. Formel: $Cr + Cu + Mo + Ni + V \leq 1,00\ %$

Formelergebnisse / Formula results / Résultats des formules

Pos.	Schmelzen-Nr.	Item	Heat No.	1. Formel	2. Formel	3. Formel	4. Formel
Poste	No. de coulée			1. Formule	2. Formule	3. Formule	4. Formule
0007	531816			0,313	0,295	5,929	0,301

Produktanalyse [%] / Product analysis [%] / Analyse sur produit [%]

Pos.	Schmelzen-Nr.	Item	Heat No.	C	SI	MN	P	S	CR	MO	NI	CU	V	NB	TI	B
Poste	No. de coulée															
0007	531816			0,140	0,190	0,86	0,007	0,004	0,10	0,02	0,09	0,11	0,001	0,010	0,002	0,0003
0007	531816			0,140	0,180	0,86	0,007	0,004	0,10	0,02	0,08	0,11	0,001	0,010	0,002	0,0003

1. Formel: $CE\ IIW = C + (Mn/6) + ((Cr + Mo + V)/5) + ((Cu + Ni)/15) \leq 0,40\ %$
2. Formel: $CEV = C + F^* ((Mn/6) + (Si/24) + (Cu/15) + ((Ni/20) + ((Cr + Mo + V + Nb)/5) + (5 \cdot B))) \leq 0,40$
3. Formel: $Mn/C \geq 3/1$
4. Formel: $Cr + Cu + Mo + Ni + V \leq 1,00\ %$

Formelergebnisse / Formula results / Résultats des formules

Pos.	Schmelzen-Nr.	Item	Heat No.	1. Formel	2. Formel	3. Formel	4. Formel
Poste	No. de coulée			1. Formule	2. Formule	3. Formule	4. Formule
0007	531816			0,321	0,302	6,143	0,321



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		252001-05.04.07		318453-002		2/...	
MATERIAL TEST REPORT (MTR)				B01 Product			
A05 Established inspecting body DH		A06 Purchaser ARCELOR CANADA, BURLI EDMONTON STEEL, EDMON		A07.1 No. 61216 A07.2 No. E10421-J1010-LG		HOT ROLLED PLATES	
B02/ Steel design. SA516-70							
B03 Any suppl. requirements DIL-HUE-2:R21-2006-04-27							
C30-C39 Hardness test							
B14 Item No.	B07.2 Heat No.	B05 Reference (heat) treatment	C01	C02/C01	C03 Temp. GR.F	C33 Testing method	C35 C31 Individual values
02	292924	99513	K1	O	RT	HBW 10/3000	HB 146 146 146
C40-C49 Impact test							
B14 Item No.	B07.1 Rol.plate/ Test No.	B05 Reference (heat) treatment	C01	C02/ C01	C03 Temp. GR.F	C40 Type of test piece	C44 Testing method
02	292924	99513	K1	LV	-51	CHP-V	
C70-C99 Chemical composition % - Heat analysis							
B07.2 Heat	C70	C	SI	MN	P	S	N
292924	Y	0,183	0,371	1,19	0,008	0,0006	0,0067
B07.2 Heat	C70	TI	B				
292924	Y	0,001	0,0001				
C94 Heat analysis Carbon equivalent / Alloying restrictions							
B07.2 Heat		FO-02=	0,40	FO-55=	0,14	FO-78=	0,06
292924							
C95 Ladle treatment							
B07.2 Heat		FO-91=	6,5				
292924							
ITEM NO.: 01-02							
HEAT OF THE INDICATED ITEM: VACUUM DEGASSED / SULPHIDE SHAPE CONTROL							
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 Postfach 1580, D-66748 Dillingen/Saar Inspection department		A01	
		QM-System: Certification as per ISO 9001		AHB		Date 05.04.07	
Manufacturer's mark		Test House Manager B. MUELLER		Inspector's stamp		KW 1	



DILLINGER HÜTTE

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

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)

Established inspecting body	A06 Purchaser	A07.1 No.	A07.2 No.	HOT ROLLED PLATES
DH	ARCELOR CANADA, BURLI	60047	E10369-J1010-LF	
Final receiver	EDMONTON STEEL, EDMON			
SA20-S5				
Steel grade	SA516-70			
Specifications	ASME-2A:04			
	DIL-HUE2:REV.19-03.10.05			

B06 Marking

ITEM NO.: 01,03

STEEL GRADE SA516 70 MTLTV SA516 60 MTLTV

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

C10-C29 Tensile test

Item No.	B08 Heat No.	B07 Rol.plate/ Test No.	B05 Reference condition	C01 C02/ C03 C01 Temp. GR.F	C10 C11 KSI RP02	C12 RM	C13	A % L0=8IN	A % L0=2IN	C14-C15
01	79418	18943	K1 Q	RT	50,8	74,8		29,4		
02	79418	18944	K1 Q	RT	50,9	74,4		27,5		
03	79418	18945	K1 Q	RT	50,6	74,7		28,0		
04	79420	18928	K1 QV	RT	48,0	74,7			31,4	



C30-C39 Hardness test

Item No.	B08 Heat No.	B07 Rol.plate/ Test No.	B05 Reference condition	C01 C02/ C03 C01 Temp. GR.F	C33 Testing method	C35 C31 Individual values	C32 Average value
01	79418	18943	K1	O	RT HBW 10/3000	HB 143 144	144
02	79418	18944	K1	O	RT HBW 10/3000	HB 149 152	150
03	79418	18945	K1	O	RT HBW 10/3000	HB 142 142	142
04	79420	18928	K1	O	RT HBW 10/3000	HB 135 139	137

C40-C49 Impact test

Item No.	B08 Heat No.	B07 Rol.plate/ Test No.	B05 Reference condition	C01 C02/ C03 C01 Temp. GR.F	C41 Specimen width	C40 Type of specimen	C44 Testing method	C46 Energy	C45 C42 Individual values AV=FT.LBF	C43 Average value
01	79418	18943	K1	LV	-51	CHP-V			AV 205 201	132
02	79418	18944	K1	LV	-51	CHP-V			AV 165 197	99
03	79418	18945	K1	LV	-51	CHP-V			AV 152 145	143
04	79418	18945	K1	LV	-51	CHP-V				147

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

AGB

AG der Dillinger Hüttenwerke

Postfach 1580, D-66748 Dillingen/Saar

Inspection department

B. MUELLER

Test House Manager

Inspector's stamp

Date 18.04.06

KW 1



Trademark



DILLINGER HÜTTE

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

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)

5	Established inspecting body	A06 Purchaser	ARCELOR CANADA, BURLI	A07.1 No.	60047
	DH	Final receiver	EDMONTON STEEL, EDMON	A07.2 No.	E10369-J1010-LF

2/ Steel grade **SA516-70**

3 Specifications **ASME-2A:04**

DIL-HUE2:REV.19-03.10.05

SA20-S5

A09	Advice of dispatch No./ Date of dispatch	210308-18.04.06
A08/	Manufacturer's order/ Certificate No.	305610-003
B01	Product	HOT ROLLED PLATES

Sheet

3/...

C40-C49 Impact test

09	B08	B07	B05	Reference condition	C01	C02/	C03	C41	C40	C44	C46	C45	C42	C43
em	Heat No.	Rot.plate/ Test No.					Temp.	Specimen	Type of	Testing method	Energy	Individual values	AV=FT.LBF	Average
o.							GRF	width	specimen					value
13	79420	18928			K1	LV	-51		CHP-V			AV	91	107

C70-C99 Chemical composition % - Heat analysis

108	Heat	C70	C	SI	MN	P	S	N	AL	CU	MO	NI	CR	V	NB	SN
79418	Y		0,173	0,368	1,19	0,011	0,0010	0,0055	0,035	0,015	0,009	0,028	0,023	0,000	0,000	0,000
79420	Y		0,169	0,364	1,17	0,008	0,0007	0,0067	0,035	0,026	0,005	0,025	0,025	0,000	0,001	0,001

C94 Heat analysis Carbon equivalent / Alloying restrictions

308	Heat	C94	FO-02=	0,38	FO-55=	0,08	FO-78=	0,03	FO-91=	6,9
79418	Y		FO-02=	0,37	FO-55=	0,08	FO-78=	0,03	FO-91=	6,9
79420	Y									

C95 Ladle treatment

ITEM NO.: 01,03
HEAT OF THE INDICATED ITEM: VACUUM DEGASSED / SULPHIDE SHAPE CONTROL



Z01/Z02 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

B. MUELLER

Test House Manager

Inspector's stamp

Date 18.04.06

KW

1



ISO 9001:2000

TRI-LAD FLANGE AND FITTINGS INC.

30 WOODSLEE AVE.
PARIS, ON, CANADA N3L 3V1
(PHONE) 519-442-6520
(FAX) 519-442-7658
www.tri-lad.com

7200 MYKAWA RD.
HOUSTON, TX, USA 77033
(PHONE) 800-498-2136
(FAX) 888-727-7982
www.tri-lad.com



6A-0707

CERTIFIED MATERIAL TEST REPORTCertificate No. **08122172**

EN 10204 3.1

Date of Report **11/20/2008**

Customer
ALLIED FITTING - CANADA WEST
172 TURBO DRIVE

SHERWOOD PARK

AB T8H 2J6

Customer Order No.
282085

Quantity
2

Tri-Lad Order No. **465528** Line No. **1**

Specification A105N-05 (ASTM-2008 ANNUAL)		Heat Treatment NORMALISED	
Item Description 14 150 WN S160 RF A105N (814250)		Temperature Init 1650 F 898 C	
Shop Order/Trace No.		Time N-3.5HR AC	Lot Definition A
Lot No.			
Heat Code 95978			
C.E. 45	Melt Practice	FINE GRAIN PRACTICE	

Chemical Composition										
	C	Mn	P	S	Si	Cu	Ni	Cr	Mo	V
Heat Product	.17	1.17	.008	.002	.24	.17	.13	.24	.05	.005
Heat Product										
Heat Product										

Mechanical Properties								Impact Values		Shear Fracture
Yield Ksi 45 Mpa 313	Tensile Ksi 75 Mpa 519	Elongation 34 %	Reduction of Area 72 %	Hardness BHN 154 BHN 154	Impact Test Temperature					
Tensile Specimen STD RD										
Lateral Expansion		Impact Type VNOTCH		Impact Orientation LONGITUDINAL		Starting Material		Impact Specimen FULL SIZE		

Notes

NACE MR0175 LATEST ED.
NACE MR0103 LATEST ED.

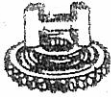


NO WELD REPAIR

We hereby certify that all information presented on this CMTR conforms to the above specification.

We hereby certify the results to be a true copy of the records of the company.

Les Mansfield, CET
Quality Assurance Manager



ECHJAY INDUSTRIES PVT. LTD.
LALPARI LAKE ROAD,
RAJKOT-360 003 (INDIA)

INV. NO. 5354
DTD. 12.02.07.

T.C. No. : EBR/44451/2007
DATE : 07/02/2007
PAGE : 1 of 1

CERTIFICATE OF COMPLIANCE

PURCHASER'S NAME	PURCHASE ORDER NO. & DATE	WORK ORDER
ALLIED FITTING - CANADA	092606AEI Dt. 22/09/2006	018465 E0171771

ITEM NO.	DESCRIPTION	QTY.	MATERIAL	LOT NO.	ITEM STS.	MFR. PROC.	DIMENSIONAL STD./Cust. DRG.
40	4" CL.150 WN RF Sch-160 125-250 RNS	30	ASTM A105N-05	AU426	C	D/F	ASME B16.5-03
41	4" CL.150 WN RF Sch-XIX 125-250 RNS	30	ASTM A105N-05	AU426	C	D/F	ASME B16.5-03

HEAT NO.	LOT NO.	CHEMICAL COMPOSITION % (Ladle)														CE
		C	Si	Mn	S	P	Cr	Ni	Mo	V	Nb	Cu	Ti	N	Al	
A1990	AU426	0.200	0.220	0.910	0.0090	0.0250	0.040	0.040	0.0100	Nil	Nil	0.0270	---	---	0.010	0.36
Prod. Ana.	AU426	0.210	0.220	0.930	0.0100	0.0250	0.029	0.033	0.0040	0.0020	Nil	0.0190	---	---	---	

TENSILE TEST	LOT No.	Y.S. MPa	U.T.S. MPa	%RA	%EL	BIIN	HEAT TREATMENT DETAILS
	AU426	398.29	568.98	68.08	30.85	163/ 173	N - 910°C

1) $Fe + Mn + Cr + Ni \dots\dots\dots 0.117 < 1\%$
 2) $Cr + Mo \dots\dots\dots 0.05 < 0.32\%$
 3) $C.E. = Fe + (Mn/6) + (Cr + Mo + Ni)/5 + (Ni + Cu)/15, 0.36 < 0.47$
 4) MATERIAL IN ACCORDANCE WITH NACE STD. MR-01-75 2003 EDITION
 5) FLANGES NORMALISED AT 910 DEG.CEN. SOAKED FOR 1 HR. 45 MTS. AIR COOL.

IMPACT TEST	LOT No.	TEST METHOD Sp. SIZE (10X10X55mm)	TEMP	ENERGY ABSORBED				LATERAL EXPANSION		
				I	II	III	Average	I	II	III
	AU426	2mm V Notch Charpy	-46.0°C	54.93	51.01	60.82	55.59 Joules	-	-	-

	TEST STD.	ACCEPTANCE STD.	Products conform to the respective material specifications mentioned as above.
UT	---	---	
PT	---	---	
MT	---	---	
BEND TEST	---	---	



Authorised Signatory
Quality Dept.

For, ECHJAY INDUSTRIES PVT. LTD.

IDENTIFICATION MARKINGS ON PRODUCT :
ECHJAY LOGO, SIZE, PRESSURE CLASS, FACING, TYPE, B16.5, BORE, MATERIAL, LOT NO., INDIA,



METALFAR

PRODOTTI INDUSTRIALI S.P.A.
23861 CESANA BRIANZA (LC) ITALY
Tel. 031.655441 - Fax 031.655149

MATERIAL TEST DEPARTMENT
SALA PROVE ED ANALISI MATERIALI

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

TRANS AM PIPING PRODUCTS LTD
9335 REXDAVE DRIVE S.E.
CALGARY-ALBERTA T3S 0 A1

INSPECTION CERTIFICATE EN 10204/3-1

CERTIFICATO DI COLLAUDO

3737/ 08/08/2008
N. 2433/ 06/08/2008
INVOICE / FATIURA 55322
S. 4745/ 06/08/2008
DEL NOTE / BOLLA

ITEM POS.	HEAT COLATA	YOUR P.O. VS. ORDINE	OUR REFERENCE VS. ORDINE	QUANTITY QUANTITA'	DESCRIPTION DESCRIZIONE	DIM. ACCORDANCE TO DIM. IN ACCORDO A	VISUAL & DIMENSIONAL VISIVO E DIMENSIONALE
74968/1		CI08-417	08003065 0074		S/O 150 RP 24" A105	ASME/ANSI B16.5	SATISFACTORY
81523/1		CI08-417	08003065 0023		W/N 150 RP 24" XS A105	ASME/ANSI B16.5	SATISFACTORY
81523/1		CI08-417	08003065 0023		W/N 150 RP 24" XS A105	ASME/ANSI B16.5	SATISFACTORY
81523/1		CI08-417	08003065 0023		W/N 150 RP 24" XS A105	ASME/ANSI B16.5	SATISFACTORY

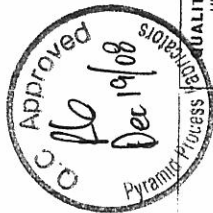
ITEM POS.	HEAT COLATA	MATERIAL MATERIALE	C %	SI %	Mn %	S %	P %	Cr %	NI %	Mo %	Ti %	Cu %	V %	Hb %	N %	Al %	C.E. %	ORIGI ORIGINE
74968/1		ASTM A 105	0.200	0.240	0.820	0.011	0.014	0.200	0.060	0.010	0.000	0.220	0.002	0.001	0.000	0.023	0.397	EUROPE
81523/1		ASTM A 105	0.190	0.250	0.820	0.008	0.013	0.200	0.070	0.020	0.000	0.130	0.004	0.001	0.000	0.023	0.384	EUROPE
81523/1		ASTM A 105	0.190	0.250	0.820	0.008	0.013	0.200	0.070	0.020	0.000	0.130	0.004	0.001	0.000	0.023	0.384	EUROPE
81523/1		ASTM A 105	0.190	0.250	0.820	0.008	0.013	0.200	0.070	0.020	0.000	0.130	0.004	0.001	0.000	0.023	0.384	EUROPE

ITEM POS.	HEAT COLATA	TEST SPECIMEN SECTION mm ² PROVETTA mm ² LUNGHEZZA mm LUNGHEZZA mm	YIELD POINT Suddivisione N/mm ² 0,2 %	TENSILE STRENGTH Rottura N/mm ² >	ELONGATION Allungamento % 2	REDUCTION OF AREA Contrazione % 2	HARDNESS Durezza HB	BEND TEST Prova	IMPACT TEST Subacqueo	IMPACT TEST - Resilienza Joule / cm ²	SHAPE FORMA 1.0 2.1.1	S	W	X	YIELD POINT Suddivisione N/mm ² 0,2 %	ORIGI ORIGINE	
74968/1		126.60	313.0	529	32.0	65.0	159-163	0.0	0.0	KV	20	86	88	88	88	88	0.0
81523/1		126.60	324.0	514	30.0	48.0	156-159	0.0	0.0	KV	20	86	80	82	82	82	0.0
81523/1		126.60	324.0	514	30.0	48.0	156-159	0.0	0.0	KV	20	86	80	82	82	82	0.0
81523/1		126.60	324.0	514	30.0	48.0	156-159	0.0	0.0	KV	20	86	80	82	82	82	0.0

ITEM POS.	HEAT COLATA	MATERIAL IN ACCORDANCE TO MATERIALE IN ACCORDO A	HEAT TREATMENT TRATTAMENTO TERMICO
74968/1		ASTM/ASME A 105/SA 105 M - 05	NORMALIZED AT 920 C - COOLED IN STILL AIR
81523/1		ASTM/ASME A 105/SA 105 M - 05	NORMALIZED AT 920 C - COOLED IN STILL AIR
81523/1		ASTM/ASME A 105/SA 105 M - 05	NORMALIZED AT 920 C - COOLED IN STILL AIR
81523/1		ASTM/ASME A 105/SA 105 M - 05	NORMALIZED AT 920 C - COOLED IN STILL AIR

Approved
C. De
Dec 19/08
SIO
Pyram

74968/1	ELECTRIC FURNACE
81523/1	ELECTRIC FURNACE
81523/1	ELECTRIC FURNACE
81523/1	ELECTRIC FURNACE



MATERIAL IN ACCORDANCE WITH NACE MR-0175/2005

QUALITY CONTROL DEPARTMENT UFFICIO CONTROLLO QUALITA'	INSPECTION AUTHORITY ENTE UFFICIALE COLLAUDO	MANUFACTURER'S SYMBOL MARCHIO PRODUZIONE
BRACCHI FLAVIO		(MFF)

HEAT NUMBER : 81523/1
TRANS AM PIPING PRODUCTS - REV'D BY: 1
SHIPMENT/Seq #: S 8 - 1353

SAN ENG STEEL FORGING CO LTD
311, Jen Hsin Road, Jen Wu Hsiang
Kaohsiung Hsien, Taiwan, R.O.C.
TEL: 07-3724249; FAX: 07-3712923
URL: www.saneng.com.tw
e-mail: saneng@ksis-steel.net.tw



(MILL TEST CERTIFICATE)

EN10204-3 1.8(DIN50049/3 1.8)

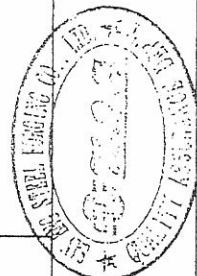
Customer: SEYBOLD INTERNATIONAL CORP.

Order No.: 7582(1)-CCTF

Certificate No.: SE-7582A
Date: 06/25/2008
Page: 1 OF 2

4882786

PRODUCT			MATERIAL SPECIFICATIONS										DIMENSIONAL SPECIFICATIONS									
FORGED CARBON STEEL FLANGES			ASTM A105-05/ASME SA105-07										ASME B16.5-03 CSA Z245.12									
Item No.	CODE NO	DESCRIPTION	QUANTITY	CHEMICAL COMPOSITION (%)													CE(*)					
				C	Si	Mn	P	S	Cu	Cr	Ni	Mo	V	Nb	N							
1	7534515	150 WNRF XXS 3" A105N	25 PCE	0.200	0.190	1.090	0.010	0.040	0.400	0.300	0.400	0.120	0.080	0.020		0.407						
2	7535384	150 SOFF 10" A105N	100 PCE	0.190	0.320	0.940	0.019	0.011	0.080	0.130	0.170	0.020	0.003	0.001	0.009	0.401						
3	7530346	150 THFF 3" A105N	25 PCE	0.210	0.170	1.060	0.007	0.013	0.060	0.050	0.030	0.005	0.003	0.005	0.009	0.404						
4	7533543	150 LJ 6" A105N	25 PCE	0.200	0.140	1.010	0.011	0.010	0.090	0.030	0.050	0.005	0.003	0.005	0.010	0.385						
5	7530232	150 LJ 10" A105N	10 PCE	0.180	0.270	0.920	0.016	0.012	0.190	0.130	0.140	0.020	0.003	0.001	0.010	0.385						
6	7530007	150 SWRF STD 2" A105N	12 PCE	0.200	0.230	1.120	0.007	0.011	0.050	0.070	0.030	0.005	0.003	0.005	0.008	0.407						
7	7530007	150 SWRF STD 2" A105N	13 PCE	0.200	0.140	1.010	0.011	0.010	0.090	0.030	0.050	0.005	0.003	0.005	0.010	0.385						
8	7530008	150 SWRF XS 1" A105N	200 PCE	0.190	0.210	1.090	0.014	0.018	0.060	0.040	0.040	0.007	0.003	0.005	0.009	0.388						
9	7530010	150 SWRF XS 2" A105N	50 PCE	0.200	0.200	1.160	0.007	0.011	0.060	0.040	0.030	0.005	0.003	0.005	0.010	0.408						
10	7530028	150 SWRF S160 1 1/2" A105N	25 PCE	0.200	0.230	1.120	0.007	0.011	0.050	0.070	0.030	0.005	0.003	0.005	0.008	0.407						
Item No.	Heat No.	T.S.(*) (MPa)	Y.S.(*) (MPa)	E.L.(*) (%)	Hardness (HB)	R.A.(*) (%)	Impact Test Temp:			Material Supplier	HEAT TREATMENT(°C)		REMARKS									
							Minimum:	Joule	3		N											
1	21520	513.9	337.3	34.2	187	66.8				OEMK		880°C X 3HRS	CONFORMS WITH NACE MR01-75/03 AND MR01-03/07/ISO15156.2									
2	64325	503.1	325.6	32.4	154	67.7				RED OCTOBER			CONFORMS WITH Z245.12 CAT I GR.248 SOUR SERVICE-05									
3	38912	497.2	369.3	32.6	159	66.8				OEMK												
4	48950	521.7	317.7	36.2	155	67.7				OEMK												
5	64324	509.9	307.9	33.8	148	67.7				RED OCTOBER												
6	41367	535.4	348.1	33.8	154	65.9				OEMK												
7	48950	521.7	317.7	36.2	155	67.7				OEMK												
8	19348	515.8	321.7	33.4	150	67.7				OEMK												
9	13144	519.8	311.9	33.2	150	65.9				OEMK												
10	41367	535.4	348.1	33.8	154	65.9				OEMK												
*1: T.S. = Tensile Strength, Y.S.=Yield Strength, E.L.=Elongation, R.A.=Reduction of Area.														Pyramidal Process Dec 19/08 Approved								
*2: N=Normalized, A=Annealed, Q=Quenched, T=Tempered, S.T=Solution Treated, S.R=Stress Relieved, A.C=Air Cooled, F.C=Furnace Cooled, W.C=Water Cooled, O.L=Oil Cooled.																						
*3: C.E. Value = C + (Mn /6) + (Cr + Mo +V) / 5 + (Ni + Cu) / 15																						
We hereby certify that the material has been tested in accordance with the above specification and also with the requirements called for by the above order.														Manager of Quality Assurance Dept								





METALFAR

PRODOTTI INDUSTRIALI S.P.A.
23861 GESSANA BRIANZA (LC) ITALY
Tel. 031.855441 - Fax 031.655149

MATERIAL TEST DEPARTMENT
SALA PROVE ED ANALISI MATERIALI

COMPANY
LIPACO LIMITED

WITH QUALITY MANAGEMENT
SYSTEM CERTIFIED BY DIN
= ISO 9001 : 2000 =

CASTLE HOUSE - STATION ROAD
NEW BARNET HERTFORDSHIRE

INSPECTION CERTIFICATE EN 10204/3.1

CERTIFICATO DI COLLAUDO

11/11/2006
15/01/2006
47403
18767
25/01/2006

HEAT CODE COD. COLATA	HEAT COLATA	ITEM POS.	YOUR P.O. VS. ORDINE	OUR REFERENCE VS. ORDINE	QUANTITY QUANTITÀ	DESCRIPTION DESCRIZIONE	DIM. ACCORDANCE TO DIM. IN ACCORDO A	VISUAL & DIMENSIONAL VISO E DIMENSIONALE																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																						
71485		0007	16982*CT	05004524 0029	147	BLIND 150 RP 4" A105 7535732	ASME/ANSI B16.5	SATISFACTORY																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																						
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70344		0002	17013*CT	06002072 0019	324	W/M 150 RP 2" 160 A105 7534019	ASME/ANSI B16.5	SATISFACTORY																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																						
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73552		0045	16988*CT	06000415 0108	196	W/M 150 RP 3" STD LP2 7586816	ASME/ANSI B16.5	SATISFACTORY																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																						
35742		0029	16988*CT	06000415 0073	54	W/M 300 RP 3" XSS A105 7535074	ASME/ANSI B16.5	SATISFACTORY																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																						
HEAT CODE COD. COLATA	HEAT COLATA	ITEM POS.	MATERIAL MATERIALE	C %	SI %	Mn %	S %	P %	Cr %	Ni %	Mo %	Ti %	Cu %	V %	Nb %	N %	Al %	C.E. %	ORIGIN ORIGINE																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																											
71485		0007	ASTM A 105	0.185	0.200	0.880	0.021	0.013	0.090	0.100	0.010	0.005	0.200	0.001	0.000	0.000	0.017	0.171	EUROPE																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																											
71485		0007	ASTM A 105	0.185	0.200	0.880	0.021	0.013	0.090	0.100	0.010	0.005	0.200	0.001	0.000	0.000	0.017	0.171	EUROPE																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																											
70344		0002	ASTM A 105	0.195	0.170	0.960	0.019	0.020	0.120	0.060	0.010	0.005	0.240	0.001	0.000	0.000	0.012	0.400	EUROPE																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																											
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73552		0045	ASTM A350 LP2 CL1/2	0.180	0.230	1.060	0.011	0.014	0.100	0.050	0.010	0.016	0.170	0.002	0.002	0.000	0.025	0.398	EUROPE																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																											
35742		0029	ASTM A 105	0.195	0.220	0.970	0.020	0.013	0.130	0.060	0.010	0.010	0.210	0.002	0.002	0.000	0.005	0.403	EUROPE																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																											
HEAT CODE COD. COLATA	HEAT COLATA	ITEM POS.	TEST SPECIMEN SECTION mm ² PROP/ET Sezione	YIELD POINT Stressamento N/mm ² & 0.2 % N/mm ² & 0.2 %	ELONGATION Allungamento % & z N/mm ² & z	REDUCTION OF AREA Riduzione di Area % & z N/mm ² & z	HARDNESS Durezza Hv N/mm ² & z	BEND TEST Prova N/mm ² & z	FLUTEM TEST Schlagtest N/mm ² & z	IMPACT TEST - Resilienza Joule / cm ² U.M. TYPE 1 PC - 100.0 mm ° C	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41	42	43	44	45	46	47	48	49	50	51	52	53	54	55	56	57	58	59	60	61	62	63	64	65	66	67	68	69	70	71	72	73	74	75	76	77	78	79	80	81	82	83	84	85	86	87	88	89	90	91	92	93	94	95	96	97	98	99	100	101	102	103	104	105	106	107	108	109	110	111	112	113	114	115	116	117	118	119	120	121	122	123	124	125	126	127	128	129	130	131	132	133	134	135	136	137	138	139	140	141	142	143	144	145	146	147	148	149	150	151	152	153	154	155	156	157	158	159	160	161	162	163	164	165	166	167	168	169	170	171	172	173	174	175	176	177	178	179	180	181	182	183	184	185	186	187	188	189	190	191	192	193	194	195	196	197	198	199	200	201	202	203	204	205	206	207	208	209	210	211	212	213	214	215	216	217	218	219	220	221	222	223	224	225	226	227	228	229	230	231	232	233	234	235	236	237	238	239	240	241	242	243	244	245	246	247	248	249	250	251	252	253	254	255	256	257	258	259	260	261	262	263	264	265	266	267	268	269	270	271	272	273	274	275	276	277	278	279	280	281	282	283	284	285	286	287	288	289	290	291	292	293	294	295	296	297	298	299	300	301	302	303	304	305	306	307	308	309	310	311	312	313	314	315	316	317	318	319	320	321	322	323	324	325	326	327	328	329	330	331	332	333	334	335	336	337	338	339	340	341	342	343	344	345	346	347	348	349	350	351	352	353	354	355	356	357	358	359	360	361	362	363	364	365	366	367	368	369	370	371	372	373	374	375	376	377	378	379	380	381	382	383	384	385	386	387	388	389	390	391	392	393	394	395	396	397	398	399	400	401	402	403	404	405	406	407	408	409	410	411	412	413	414	415	416	417	418	419	420	421	422	423	424	425	426	427	428	429	430	431	432	433	434	435	436	437	438	439	440	441	442	443	444	445	446	447	448	449	450	451	452	453	454	455	456	457	458	459	460	461	462	463	464	465	466	467	468	469	470	471	472	473	474	475	476	477	478	479	480	481	482	483	484	485	486	487	488	489	490	491	492	493	494	495	496	497	498	499	500	501	502	503	504	505	506	507	508	509	510	511	512	513	514	515	516	517	518	519	520	521	522	523	524	525	526	527	528	529	530	531	532	533	534	535	536	537	538	539	540	541	542	543	544	545	546	547	548	549	550	551	552	553	554	555	556	557	558	559	560	561	562	563	564	565	566	567	568	569	570	571	572	573	574	575	576	577	578	579	580	581	582	583	584	585	586	587	588	589	590	591	592	593	594	595	596	597	598	599	600	601	602	603	604	605	606	607	608	609	610	611	612	613	614	615	616	617	618	619	620	621	622	623	624	625	626	627	628	629	630	631	632	633	634	635	636	637	638	639	640	641	642	643	644	645	646	647	648	649	650	651	652	653	654	655	656	657	658	659	660	661	662	663	664	665	666	667	668	669	670	671	672	673	674	675	676	677	678	679	680	681	682	683	684	685	686	687	688	689	690	691	692	693	694	695	696	697	698	699	700	701	702	703	704	705	706	707	708	709	710	711	712	713	714	715	716	717	718	719	720	721	722	723	724	725	726	727	728	729	730	731	732	733	734	735	736	737	738	739	740	741	742	743	744	745	746	747	748	749	750	751	752	753	754	755	756	757	758	759	760	761	762	763	764	765	766	767	768	769	770	771	772	773	774	775	776	777	778	779	780	781	782	783	784	785	786	787	788	789	790	791	792	793	794	795	796	797	798	799	800	801	802	803	804	805	806	807	808	809	810	811	812	813	814	815	816	817	818	819	820	821	822	823	824	825	826	827	828	829	830	831	832	833	834	835	836	837	838	839	840	841	842	843	844	845	846	847	848	849	850	851	852	853	854	855	856	857	858	859	860	861	862	863	864	865	866	867	868	869	870	871	872	873	874	875	876	877	878	879	880	881	882	883	884	885	886	887	888	889	890	891	892	893	894	895	896	897	898	899	900	901	902	903	904	905	906	907	908	909	910	911	912	913	914	915	916	917	918	919	920	921	922	923	924	925	926	927	928	929	930	931	932	933	934	935	936	937	938	939	940	941	942	943	944	945	946	947	948	949	950	951	952	953	954	955	956	957	958	959	960	961	962	963	964	965	966	967	968	969	970	971	972	973	974	975	976	977	978	979	980	981	982	983	984	985	986	987	988	989	990	991	992	993	994	995	996	997	998	999	1000	1001	1002	1003	1004	1005	1006	1007	1008	1009	1010	1011	1012

DATE: 01/19/07
TIME: 05:03:18
SERIAL NO: F0040731

UNITED STATES STEEL
TUBULAR PRODUCTS
CERTIFIED TEST REPORT
(IN ACCORDANCE WITH ISO 10474/EN10204/DIN50049 3.1.b)

DATE: 01/19/07
TIME: 05:03:18
SERIAL NO: F0040731



MILL ORDER/ITEM NO TT02395 02	SHIPPER'S NO. P32908	P.O. NUMBER E1007417	VEHICLE ID NS192795	INVOICE NO 0443157
SOLD TO ADDRESS COMCO PIPE & SUPPLY CO DIV OF RUSSEL METALS BOX 457 EDMONTON AB T5J 2K1		MAIL TO ADDRESS VENDOR USS TUBULAR PRODUCTS USS FAIRFIELD WORKS P.O. BOX 599 FAIRFIELD ALABAMA 35064		

SPECIFICATION AND GRADE
PIPE CARBON SMLS STD PIPE API 5L-43RD EDITION DATED 3/04 PSL-1 ASTM A53-*06A ASTM A106-*06A GRADE B
TRIPLE STENCIL ASME SA53-*2004 EDITION ASME SA106-*2004 EDITION GRADE B CSA Z245.1-02 CAT I GRADE 290
EXCEPT MARKING BLK REG MILL COAT PE BEV 30 DEG MEETING ALL THE APPLICABLE REQUIREMENTS OF NACE STANDARD
MR-01-75 *2002

MATERIAL COND:		AS-ROLLED		O.D.: 6.625 (168.275)		WALL: 0.864 (21.945)		In (mm)		In (mm)		
PRODUCT IDENTIFICATION	TEST TYPE/ ORIENTATION	TEST COND.	GAUGE WIDTH IN	YIELD		EXT %	TENSILE PSI	Y/T	ELONG % (IN 2')	HARDNESS SCALE: HRB	MIN HYDRO PSI	DWELL (SEC)
				MIN:	MAX:							
X25851	STRIP/L/B	AR	1.5	45,700		.50						
X25851	STRIP/L/B	AR	1.5	45,900		.50						
				** END OF DATA THIS SHEET **								

LEGEND:		L - LONGITUDINAL U - UPSET		T - TRANSVERSE NM - NORMALIZED				QT - QUENCH & TEMPERED SR - STRESS RELIEVED				AR - AS ROLLED				B - BODY				W - WELD	
PRODUCT IDENTIFICATION				C	MIN	P	S	SI	CU	NI	CR	MO	AL	N	V	B	TI	CB	CO		C.E.*
X25851	HEAT			24	94	005	009	22	04	01	02	02	02	028		00					
X25851	PROD			25	95	005	008	22	04	01	02	02	02	032		00					
X25851	PROD			24	95	005	008	22	04	01	02	02	02	033		00					
** END OF DATA THIS SHEET **																					

*C.E. IS BASED ON THE FOLLOWING EQUATION(S):

DECIMAL POSITIONS FOR ELEMENTS ARE INDICATED BY THE LEFT MARGIN, VERTICAL DOTTED LINE OR DECIMAL POINT.





UNITED STATES STEEL

TUBULAR PRODUCTS

DATE: 01/19/07
TIME: 05:03:18
SERIAL NO: F0040731

CERTIFIED TEST REPORT
(IN ACCORDANCE WITH ISO 10474/EN10204/DIN50049 3.1.b)

MILL ORDER/ITEM NO TT02395 02		SHIPPERS NO. P32908		P.O. NUMBER E1007417		INVOICE NO 0443157											
MATERIAL COND: AS-ROLLED		O.D.: 6.625 (168.275)		WALL: 0.864 (21.945)		In (mm)											
PRODUCT IDENTIFICATION X25851	FLAT	BEND	GRAIN SIZE	MIN COLLAPSE	DIR	TEST LOC.	TEMP	SIZE	TEST COND.	CHARPY V-NOTCH IMPACT TESTING							
	OK						DEG			1	2	3	AVG	1	2	3	AVG
					** END OF DATA THIS SHEET **												
LEGEND				L - LONGITUDINAL		T - TRANSVERSE		B - BODY		W - WELD		HAZ - HEAT AFFECTED ZONE					
				TEST / INSPECTION		YES		RESULTS / COMMENTS									
FULL LENGTH VISUAL						X											
FULL LENGTH EMI						X											
FULL LENGTH MPI								OD X OD/ID L LT X 10.0% NOTCH									
FULL LENGTH UT						X		ID X OD/ID X L LT X 10.0/10.0% NOTCH									
END AREA INSPECTION (PLAIN END)						X		MPI X UT									
SPECIAL END AREA (SEA) INSP								MPI UT									
FULL LENGTH DRIFT								DRIFT MANDREL SIZE:									
ADDITIONAL NOTES/COMMENTS																	
ALL MELTING AND MANUFACTURING TOOK PLACE IN THE USA. MANUFACTURED IN AN ISO 9001 CERTIFIED FACILITY - CERTIFICATE #30727. NO REPAIRS BY WELDING. NO MERCURY OR MERCURY COMPOUNDS ARE ADDED TO THE STEEL AND ALL MERCURY BEARING EQUIPMENT IS PROTECTED BY A DOUBLE BOUNDARY OF CONTAINMENT. 01 MILL ALSO MEETS THE REQUIREMENTS OF ASTM A106-04B/ASME SA106-2004 ED. GRADE C MATERIAL WAS HOT FINISHED AND NO HEAT TREATMENT. ORDER MEETS ALL THE APPLICABLE REQUIREMENTS OF NACE STANDARD MR-01-75 ** END OF DATA **																	

THIS IS TO CERTIFY THAT THE PRODUCT DESCRIBED HEREIN WAS MANUFACTURED, SAMPLED, TESTED AND/OR INSPECTED IN ACCORDANCE WITH THE SPECIFICATION AND FULFILLS THE REQUIREMENTS IN SUCH RESPECTS.

PREPARED BY THE OFFICE OF: J.T. CLAYTON - MANAGER, Q.A.

DATE 01/19/07

479111003 K6106B51 0051485032

CAA 2-0-0 PAGE 2 OF 2

**



UNITED STATES STEEL

TUBULAR PRODUCTS
CERTIFIED TEST REPORT

(IN ACCORDANCE WITH ISO 10474/EN10204/DIN50049 3.1.b)

DATE: 01/19/07
TIME: 05:03:18
SERIAL NO: F0040731

MILL ORDER/ITEM NO TT02395 02		SHIPPERS NO. P32908		P.O. NUMBER E1007417		VEHICLE ID NS192795		INVOICE NO 0443157										
SOLD TO ADDRESS COMCO PIPE & SUPPLY CO DIV OF RUSSEL METALS BOX 457 EDMONTON AB T5J 2K1				MAIL TO ADDRESS				VENDOR USS TUBULAR PRODUCTS USS FAIRFIELD WORKS P.O. BOX 599 FAIRFIELD ALABAMA 35064										
SPECIFICATION AND GRADE PIPE CARBON SMLS STD PIPE API 5L-43RD EDITION DATED 3/04 PSL-1 ASTM A53-*06A ASTM A106-*06A GRADE B TRIPLE STENCIL ASME SA53-*2004 EDITION ASME SA106-*2004 EDITION GRADE B CSA Z245.1-02 CAT I GRADE 290 EXCEPT MARKING BLK REG MILL COAT PE BEV 30 DEG MEETING ALL THE APPLICABLE REQUIREMENTS OF NACE STANDARD MR-01-75 *2002																		
MATERIAL COND: AS-ROLLED		O.D.: 6.625 (168.275)		I.D.: 0.864 (21.945)		WALL: 0.864 (21.945)		In (mm)										
PRODUCT IDENTIFICATION	TEST TYPE/ ORIENTATION	TEST COND.	GAUGE WIDTH IN	YIELD	TENSILE	Y/T	ELONG % (IN 2')	HARDNESS SCALE: HRB	MIN HYDRO PSI	DWELL (SEC)								
											MIN: 35,000	MAX: 70,000	MIN: 29.5	MAX: 100.0	MIN: 2800	5		
X25851	STRIP/L/B	AR	1.5	45,700	.50	0.60	42.5	81.8	2800	5								
X25851	STRIP/L/B	AR	1.5	45,900	.50	0.59	41.5											
** END OF DATA THIS SHEET **																		
LEGEND: L - LONGITUDINAL U - UPSET																		
PRODUCT IDENTIFICATION	TYPE	T - TRANSVERSE NM - NORMALIZED				AR - AS ROLLED				B - BODY				W - WELD				
		C	MN	P	S	SI	CU	NI	CR	MO	AL	N	V	B	TI	CB	CO	C.E.*
X25851	HEAT	24	94	005	009	22	04	01	02	02	028		00					
X25851	PROD	25	95	005	008	22	04	01	02	02	032		00					
X25851	PROD	24	95	005	008	22	04	01	02	02	033		00					
** END OF DATA THIS SHEET **																		
*C.E. IS BASED ON THE FOLLOWING EQUATION(S):																		

DECIMAL POSITIONS FOR ELEMENTS ARE INDICATED BY THE LEFT MARGIN, VERTICAL DOTTED LINE OR DECIMAL POINT.

479111003

K6106B51

0051485032

CAA 2-0-0

PAGE

1 OF 2

DATE: 01/19/07
TIME: 05:03:18
SERIAL NO: F0040731

TUBULAR PRODUCTS

CERTIFIED TEST REPORT

(IN ACCORDANCE WITH ISO 10474/EN10204/DIN50049 3.1.b)

UNITED STATES STEEL



MILL ORDER/ITEM NO TT02395 02		SHIPPERS NO. P32908		P.O. NUMBER E1007417		INVOICE NO 0443157	
MATERIAL COND: AS-ROLLED		O.D.: 6.625 (168.275)		WALL: 0.864 (21.945)		In (mm)	
PRODUCT IDENTIFICATION X25851	FLAT	BEND	GRAIN SIZE	MIN COLLAPSE	DIR	TEST LOC.	TEMP
	OK						
T - TRANSVERSE				B - BODY		W - WELD	
TEST / INSPECTION				TESTING / INSPECTION INFORMATION		RESULTS / COMMENTS	
YES							
FULL LENGTH VISUAL				X			
FULL LENGTH EMI				X			
FULL LENGTH MPI							
FULL LENGTH UT				X			
END AREA INSPECTION (PLAIN END)				X			
SPECIAL END AREA (SEA) INSP				MPI X			
FULL LENGTH DRIFT				MPI UT			
DRIFT MANDREL SIZE:							
ADDITIONAL NOTES/COMMENTS ALL MELTING AND MANUFACTURING TOOK PLACE IN THE USA. MANUFACTURED IN AN ISO 9001 CERTIFIED FACILITY - CERTIFICATE #30727. NO REPAIRS BY WELDING. NO MERCURY OR MERCURY COMPOUNDS ARE ADDED TO THE STEEL AND ALL MERCURY BEARING EQUIPMENT IS PROTECTED BY A DOUBLE BOUNDARY OF CONTAINMENT. 01 MILL ALSO MEETS THE REQUIREMENTS OF ASTM A106-04B/ASME SA106-2004 ED. GRADE C MATERIAL WAS HOT FINISHED AND NO HEAT TREATMENT. ORDER MEETS ALL THE APPLICABLE REQUIREMENTS OF NACE STANDARD MR-01-75 ** END OF DATA **							

THIS IS TO CERTIFY THAT THE PRODUCT DESCRIBED HEREIN WAS MANUFACTURED, SAMPLED, TESTED AND/OR INSPECTED IN ACCORDANCE WITH THE SPECIFICATION AND FULFILLS THE REQUIREMENTS IN SUCH RESPECTS.

PREPARED BY THE OFFICE OF: J.T. CLAYTON - MANAGER, Q.A.

DATE 01/19/07

479111003

K6106B51

0051485032

CAA 2-0-0

PAGE

2 OF 2

**

1552396



MAY 25 2005

CERTIFICATE NO. : BYYJ3162R1 PAGE: 1 DATE: 2006-04-08

CUSTOMER	:CE FRANKLIN LTD.
ORDER NO.	:1203816-OR-2100 ITEM NO. 18
SHIPPER	:SUMITOMO CORPORATION 057 KEE 2244/1 4P1YS369216
COMMODITY	:SEAMLESS STEEL PIPE

STANDARD : CSA Z245.1-C1 GR.290 ASTM A106-99 / ASME 2001 (A03) SA-106 GR. B NDE
ASTM A53-01 / ASME 2001 (A03) SA-53 GR. B NDE

SPECIFICATION : CUSTOMER'S SPEC

MILL. WORK NO. :BYJJ3162 O.D.:NB4 W.T.:0.674inch LENGTH:40feet QUANTITY:15pcs. MASS:7506kg

HEAT NO.	PRODUCTS	PCS.
15L2533		15

HEAT TREATMENT:AS ROLLED
DEOXIDATION:KILLED

CHEMICAL COMPOSITION(%)

		C	Si	Mn	P	S	Cu	Cr	Ni	Mo	Ti	V	Nb	B	*U4	*CEQ	*CEL	*1	R: LADLE & PRODUCT ANALYSIS L: LADLE ANALYSIS P: PRODUCT ANALYSIS	
		*1																*2	*2	
SPEC. MIN.	R	-	10	29	-	-	-	-	-	-	-	-	-	-	-	-	-			
MAX.	R	26	50	106	30	35	40	40	40	15	11	8	11	1	100	40	40			
HEAT NO.																				
J6L2533	L	18	21	94	11	7	4	5	2	0	0	0	1	0	11	35	35	*2: X1000		
	P	18	20	96	12	6	6	6	2	0	0	0	1	0	13	36	35	*3: X1		
	P	19	20	95	12	6	5	6	2	0	0	0	1	0	13	37	36	OTHER: X100		
		*MC																		
		*1																*3		*U4: Cu+Ni+Cr+Mo+V
SPEC. MIN.	R	3																		*CEQ: C+F {Mn/6+Si/24+Cu/15+Ni/20+(Cr+Mo+V+Nb)/5+5B}
MAX.	R	-																		F=COEFFICIENT BY CSA STANDARD
HEAT NO.																				
J5L2533	L	5																	*CEL: C+Mn/6+ (Cr+Mo+V)/5+ (Cu+Ni)/15	
	P	6																		
	P	5																	*MC: Mn/C	

TENSILE TEST HARDNESS TEST

		YS		TS		EL	HV	TYPE OF SPECIMEN STRIP 1" (25mm) WIDTH GAUGE LENGTH 50.8mm KIND OF YS 0.5% EXTENSION UNDER LOAD *1 DIRECTION L: LONGITUDINAL *2 SAMPLING POSITION B: BASE METAL
	*1 *2	*3		*3		%	*4	
SPEC. MIN.	L B	M 290		M 414		29	C -	
MAX.	L B	M -		M -		-	C 248	
HEAT NO.								
J5L2533	L B	M 347		M 492		47	C 138	

WE HEREBY CERTIFY THAT THE MATERIAL HEREIN DESCRIBED HAS BEEN MANUFACTURED, SAMPLED, TESTED, AND INSPECTED IN ACCORDANCE WITH ABOVE STANDARD AND SPECIFICATION AND SATISFIES THE REQUIREMENTS.



7. Komite

MANAGER, QUALITY ASSURANCE SECTION

15

INSPECTION CERTIFICATE



SUMITOMO METAL INDUSTRIES, LTD.
PIPE & TUBE WORKS (KAINAN)
260-100, FUKUO, KAINAN, JAPAN

CERTIFICATE NO. : BYYJ3162R1

PAGE: 2

DATE: 2005-04-08

FLATTENING TEST:ACCEPTABLE
VISUAL & DIMENSIONS:ACCEPTABLE
HYDROSTATIC TEST 20700kPa:ACCEPTABLE
EDDY CURRENT EXAMINATION:ACCEPTABLE
NACE MR0175 HARDNESS (HRC 22 MAX.):GUARANTEED

*3 UNIT
M:MPa
*4 LOCATION
C:CROSS SECTION

WE HEREBY CERTIFY THAT THE MATERIAL HEREIN DESCRIBED HAS BEEN MANUFACTURED, SAMPLED, TESTED, AND INSPECTED IN ACCORDANCE WITH ABOVE STANDARD AND SPECIFICATION AND SATISFIES THE REQUIREMENTS.

MANAGER, QUALITY ASSURANCE SECTION

BUFFALO INSPECTION SERVICES (2005) INC.

8403 Davies Road N.W.

Edmonton, Alberta T6E 4N3

Phone: (780) 486-7344 Fax: (780) 486-4685

Email: reception@buffaloinspection.com



CLIENT: Pyramid - Nisku

Customer Job #:	DESCRIPTION:
3180-0000	MANWAY REPAD

HOURS: REG:

OT:

KMS:

OTHER:

LOCATION: Fab Shop - Nisku

HAZARDS IDENTIFIED:

☒ PEOPLE

ENVIRONMENT

☒ EQUIPMENT

☐ MATERIAL

[illegible]

Buffalo Inspection Services (2005) Inc. guarantees the film quality produced by its technicians; however, no liability will be accepted for failure of welds or other items radiographed. The interpretation of radiographs is the opinion of the radiograph technician and final acceptance of a weld (for example) is the responsibility of the customer. Liability for film quality is limited to the value of the film only – labour and equipment required to reproduce films will be borne by the customer – unless the customer rejects the film before signing this report, in which case radiographs will be retaken at no cost to the customer.

Customer Rep.
Signature:

Customer Rep.
Print:

BUFFALO INSPECTION SERVICES (2005) INC.



8403 Davies Road N.W.

Edmonton, Alberta T6E 4N3

Phone: (780) 486-7344 Fax: (780) 486-4685

Email: reception@buffaloinspection.com

CLIENT: Pyramid - Nisku

Customer Job #: 3180-0000 DESCRIPTION:

HOURS: REG:

OT:

KMS:

HAZARDS IDENTIFIED:

☒ PEOPLE

ENVIRONMENT

☒ EQUIPMENT

☐ MATERIAL

LOCATION: Fab Shop - Nisku

OTHER:

[illegible]

Buffalo Inspection Services (2005) Inc. guarantees the film quality produced by its technicians; however, no liability will be accepted for failure of welds or other items radiographed. The interpretation of radiographs is the opinion of the radiograph technician and final acceptance of a weld (for example) is the responsibility of the customer. Liability for film quality is limited to the value of the film only – labour and equipment required to reproduce films will be borne by the customer – unless the customer rejects the film before signing this report, in which case radiographs will be retaken at no cost to the customer.

Customer Rep.

Robert J. M. Jones

Customer Rep.

Print:

Robert Green

BUFFALO INSPECTION SERVICES (2005) INC.

8403 Davies Road N.W.

Edmonton, Alberta T6E 4N3

Phone: (780) 486-7344 Fax: (780) 486-4685

Email: reception@buffaloinspection.com



CLIENT: Pyramid - Nisku

Customer Job #: 3180-0000

HOURS: REG:

OT:

KMS:

DESCRIPTION :

HAZARDS IDENTIFIED:

☒ PEOPLE

☒ ENVIRONMENT☒ EQUIPMENT

☐ MATERIAL

LOCATION: Fab Shop - Nisku

OTHER:

[illegible]

Bufallo Inspection Services (2005) Inc. guarantees the film quality produced by its technicians; however, no liability will be accepted for failure of welds or other items radiographed. The interpretation of radiographs is the opinion of the radiograph technician and final acceptance of a weld (for example) is the responsibility of the customer. Liability for film quality is limited to the value of the film only – labour and equipment required to reproduce films will be borne by the customer – unless the customer rejects the film before signing this report, in which case radiographs will be retaken at no cost to the customer.

Customer Rep.

But Green

Customer Rep.

Print:

Robert Green

BUFFALO INSPECTION SERVICES (2005) INC.

8403 Davies Road N.W.

Edmonton, Alberta T6E 4N3

Phone: (780) 486-7344 Fax: (780) 486-4685

Email: reception@buffaloinspection.com



CLIENT: Pyramid - Nisku

Customer Job #: 3180-0000

HOURS: _____ **REG:** _____

OT: 5

KMS:

DESCRIPTION :

OTHER:

LOCATION: Fab Shop - Nisku

Date: December 20, 2008

P.O.#: 614 714

Buffalo Job No: 08-7512

HAZARDS IDENTIFIED:

☒ PEOPLE

☒

ENVIRONMENT

☐ EQUIPMENT

☐ MATERIAL

[illegible]

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Customer Rep.



Customer Rep.

Print:

Robert Green

BUFFALO INSPECTION SERVICES (2005) INC.

8403 Davies Road N.W.

Edmonton, Alberta T6E 4N3

Phone: (780) 486-7344 Fax: (780) 486-4685

Email: reception@buffaloinspction.com



CLIENT: Pyramid - Nisku

Customer Job #: 3180-0000

HOURS: REG:

OT: 5

KMS:

DESCRIPTION:

LOCATION: Fab Shop - Nisku

OTHER:

HAZARDS IDENTIFIED:

HAZARDS IDENTIFIED:		PEOPLE		ENVIRONMENT		EQUIPMENT		MATERIAL	
LF - Lack of Fusion IP - Incomplete Penetration IC - Internal Concavity		HB - Hollow Bead BT - Burn Through TI - Tungsten Inclusion AB - Arc Burn		LC - Low Cover IUC - Internal Undercut EUC - External Undercut EP - Excessive Penetration		P - Porosity S - Slag PH - Pin Hole		RC - Re Cap C - Crack HL - High Low	
Size & Thickness Plus Code max. reinforcement		Weld #		DRW #		Material		Proc #	
Film No.		Welder ID		Severity		Code		Comments	
CSIRI	78" x 3/4"	W.XX.Z	CSIRI	3180-0000-001	1	5			
	0 - 15"								
	15 - 30"								
	30 - 45"								
	45 - 60"								
	60 - 75"								
	75 - 90"								
	90 - 105"								
	105 - 120"								
	120 - 135"								
	135 - 150"								
	150 - 165"								
	165 - 180"								
	180 - 195"								
	195 - 210"								
Tech Name: <i>Todd Rubner</i>		Gordon Thomas		Level: II		CGSB# 6		SNT Level II # 08001	
Assistant Name: Todd Rubner		C.E.D.O. # 15012		TRAINEE		SNT Level I #		Disc: RT	
Assistant Name: Mark Thomas		C.E.D.O. # 12044		TRAINEE		SNT Level I #			

LIMITED LIABILITY POLICY

Buffalo Inspection Services (2005) Inc. guarantees the film quality produced by its technicians; however, no liability will be accepted for failure of welds or other items radiographed. The interpretation of radiographs is the opinion of the radiograph technician and final acceptance of a weld (for example) is the responsibility of the customer. Liability for film quality is limited to the value of the film only - labour and equipment required to reproduce films will be borne by the customer - unless the customer rejects the film before signing this report, in which case radiographs will be retaken at no cost to the customer.

Customer Rep. Signature: *Robert Green*

Customer Rep. Print: *Robert Green*

BUFFALO INSPECTION SERVICES (2005) INC.

8403 Davies Road N.W.

Edmonton, Alberta T6E 4N3

Phone: (780) 486-7344 Fax: (780) 486-4685

Email: reception@buffaloinspction.com

**CLIENT: Pyramid - Nisku****Customer Job #: 3180-0000 DESCRIPTION:****HOURS: REG: OT: KMS:****OTHER:****LOCATION: Fab Shop - Nisku****HAZARDS IDENTIFIED:**

LF - Lack of Fusion
IP - Incomplete Penetration
IC - Internal Concavity

HB - Hollow Bead
BT - Burn Through
TI - Tungsten Inclusion
AB - Arc Burn

LC - Low Cover
IUC - Internal Undercut
EUC - External Undercut
EP - Excessive Penetration

☒ **PEOPLE**☒ **ENVIRONMENT**☒ **EQUIPMENT**☒ **MATERIAL**

LF- Lack of Fusion IP-Incomplete Penetration IC -Internal Concavity			HB - Hollow Bead BT - Burn Through TI - Tungsten Inclusion AB - Arc Burn		LC - Low Cover IUC - Internal Undercut EUC - External Undercut EP - Excessive Penetration		P - Porosity S - Slag PH - Pin Hole		RC - Re Cap C - Crack HL- High Low		1 - ASME B31.3 N/S 2 - ASME B31.3 S/C 3 - CSA Z662 % 4 - CSA Z2662 100%		5 - ASME SEC VIII DIV 1 UW51 6 - ASME SEC VIII DIV 1 UW52 7 - ASME B31.1 8 - API-620 9 - API-650 10 - Other Customer Spec and Code 1	
Film No.	Size & Thickness Plus Code max. reinforcement	Welder ID	Weld #	DRW #	Material	Proc #	Severity	Code	Comments	Accept	Reject			
CS 1	78" ID x 3/4"	W/T/R	CS1	3180-0000	P1	1	Slight	5						
	0 - 15"						Severe		P	✓				
	15 - 30"						Severe		S 28 - 29"		X			
	30 - 45"						Severe		P, S 37 - 42"		X			
	45 - 60"						Severe		S 48 - 50"		X			
	60 - 75"						Severe		S 62 1/2 - 64"		X			
	75 - 90"									✓				
	90 - 105"						Slight		S	✓				
	105 - 120"						Severe		S 113 - 120"		X			
	120 - 135"						Severe		S 120 - 122" & 124 - 128"		X			
	135 - 150"						Severe		S 137 - 150"		X			
	150 - 165"						Severe		S 150 - 152", P		X			
	165 - 180"						Severe		S 174 - 179"		X			
	180 - 195"						Severe		S 180 - 193"		X			
	195 - 210"						Severe		S 198 - 210"		X			
Tech Name: Gordon Thomas		Gordon Thomas		Level: II		☒ CGSB# 6		☒ SNT Level II # 08001		Disc: RT				
Assistant Name: Mark Thomas		☒ C.E.D.O. # 12044		☐ TRAINEE		☐ SNT Level I #								
Assistant Name: David Brown		☒ C.E.D.O. # 12449		☐ TRAINEE		☐ SNT Level I #								

LIMITED LIABILITY POLICY

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Customer Rep. Signature:

Customer Rep. Print:

BUFFALO INSPECTION SERVICES (2005) INC.

8403 Davies Road N.W.

Edmonton, Alberta T6E 4N3

Phone: (780) 486-7344 Fax: (780) 486-4685

Email: reception@buffaloinspection.com

**CLIENT: Pyramid - Nisku****Customer Job #: 3180-0000****DESCRIPTION:****HOURS: REG:****OT:****KMS:****OTHER:****LOCATION: Fab Shop - Nisku****HAZARDS IDENTIFIED:**

LF - Lack of Fusion IP - Incomplete Penetration IC - Internal Concavity		HB - Hollow Bead BT - Burn Through TI - Tungsten Inclusion AB - Arc Burn		LC - Low Cover IUC - Internal Undercut EUC - External Undercut EP - Excessive Penetration		P - Porosity S - Slag PH - Pin Hole		RC - Re Cap C - Crack HL - High Low		1 - ASME B31.3 N/S 2 - ASME B31.3 S/C 3 - CSA Z662 % 4 - CSA Z2662 100%		5 - ASME SEC. VIII DIV I UW51 6 - ASME SEC. VIII DIV I UW52 7 - ASME B31.1		8 - API-620 9 - API-650 10 - Other Customer Spec and Code 1	
Film No.	Size & Thickness Plus Code max. reinforcement	Welder ID	Weld #	DRW #	Material	Proc #	Severity	Code	Comments	Accept	Reject				
CS 2	78" ID x 3/4"	A,F,K	CS2	3180-0000	P1	1		5							
	0 - 15"									✓					
	15 - 30"									✓					
	30 - 45"									✓					
	45 - 60"									✓					
	60 - 75"						Slight		P	✓					
	75 - 90"									✓					
	90 - 105"									✓					
	105 - 120"									✓					
	120 - 135"									✓					
	135 - 150"									✓					
	150 - 165"						Slight		P	✓					
	165 - 180"						Slight		P	✓					
	180 - 195"									✓					
	195 - 225"									✓					
Tech Name: <i>Leo Gastmeier</i>		Brent Thomas		Level: II		CGSB# 7833		SNT Level II # 08018		Disc: RT					
Assistant Name: Todd Rubner		C.E.D.O. # 15012		TRAINEE		SNT Level I #									
Assistant Name: Leo Gastmeier		C.E.D.O. #		TRAINEE		SNT Level I #									

LIMITED LIABILITY POLICY

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Customer Rep. Signature: _____

Customer Rep. Print: _____

Email: reception@buffaloinspection.com

LOCATION: Fab Shop - Nisku

☒ MATERIAL.

Bufalo Inspection Services (2005) Inc. guarantees the film quality produced by its technicians; however, no liability will be accepted for failure of welds or other items radiographed. The interpretation of radiographs is the opinion of the radiograph technician and final acceptance of a weld (for example) is the responsibility of the customer. Liability for film quality is limited to the value of the film only – labour and equipment required to reproduce films will be borne by the customer – unless the customer rejects the film before signing this report, in which case radiographs will be retaken at no cost to the customer.

Robert Green

Signature: _____

BUFFALO INSPECTION SERVICES (2005) INC.

8403 Davies Road N.W.

Edmonton, Alberta T6E 4N3

Phone: (780) 486-7344 Fax: (780) 486-4685

Email: reception@buffaloinspection.com

**CLIENT: Pyramid - Nisku****Customer Job #: 3180-0000 DESCRIPTION :****HOURS: REG: OT: KMS:****HAZARDS IDENTIFIED:**☒ **PEOPLE**☒ **ENVIRONMENT**☒ **EQUIPMENT**☒ **MATERIAL****LOCATION: Fab Shop - Nisku****OTHER:**

Film No.	Size & Thickness Plus Code max. reinforcement	Welder ID	Weld #	DRW #	Material	Proc #	Severity	Code	Comments	Accept	Reject		
CS 3	78" ID x 3/4"	F, W, A	CS3	3180-0000	P1	1	Slight	5	P	✓			
	0 - 15"									✓			
	15 - 30"									✓			
	30 - 45"									✓			
	45 - 60"									✓			
	60 - 75"								film marks	✓			
	75 - 90"									✓			
	90 - 105"									✓			
	105 - 120"									✓			
	120 - 135"									✓			
	135 - 150"									✓			
	150 - 165"									✓			
	165 - 180"									✓			
	180 - 195"									✓			
	195 - 225"									✓			
Tech Name: <i>B. A. 2</i>		Brent Thomas		Level: II		☒ CGSB# 7833		☒ SNT Level II # 08018		Disc: RT			
Assistant Name: Todd Rubner		☒ C.E.D.O. # 15012		☐ TRAINEE		☐ SNT Level I #							
Assistant Name: Leo Gastmeier		☐ C.E.D.O. #		☒ TRAINEE		☐ SNT Level I #							

LIMITED LIABILITY POLICY

Buffalo Inspection Services (2005) Inc. guarantees the film quality produced by its technicians; however, no liability will be accepted for failure of welds or other items radiographed. The interpretation of radiographs is the opinion of the radiograph technician and final acceptance of a weld (for example) is the responsibility of the customer. Liability for film quality is limited to the value of the film only - labour and equipment required to reproduce films will be borne by the customer - unless the customer rejects the film before signing this report, in which case radiographs will be retaken at no cost to the customer.

Customer Rep.

Customer Rep.

Signature:

Print:

LOCATION: Fab Shop - Nisku

OTHER:

☒ MATERIAL:

LIMITED LIABILITY POLICY

Print:

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Edmonton, Alberta T6E 4N3

Phone: (780) 486-7344 Fax: (780) 486-4685

Email: reception@buffaloinspection.com

**CLIENT: Pyramid - Nisku****Customer Job #: 3180-0000****HOURS: REG:****OT:****KMS:****DESCRIPTION:****LOCATION:** Fab Shop - Nisku**OTHER:****HAZARDS IDENTIFIED:**

LF - Lack of Fusion	HB - Hollow Bead	LC - Low Cover	RC - Re Cap	1 - ASME B31.3 N/S	5 - ASME SEC VIII DIV 1 UW51	8 - API-620
IP - Incomplete Penetration	BT - Burn Through	IUC - Internal Undercut	C - Crack	2 - ASME B31.3 S/C	6 - ASME SEC VIII DIV 1 UW52	9 - API-650
IC - Internal Concavity	TI - Tungsten Inclusion	EUC - External Undercut	HL - High Low	3 - CSA Z662 %	7 - ASME B31.1	10 - Other Customer Spec and Code 1
	AB - Arc Burn	EP - Excessive Penetration		4 - CSA Z2662 100%		

Film No.	Size & Thickness Plus Code max. reinforcement	Welder ID	Weld #	DRW #	Material	Proc #	Severity	Code	Comments	Accept	Reject
LS 2	10' x 3/4"	K/T	LS2	3180-0000	P1	2		5			
	0 - 15"									✓	
	15 - 30"									✓	
	30 - 45"									✓	
	45 - 60"									✓	
	60 - 75"									✓	
	75 - 90"									✓	
	90 - 105"									✓	
	105 - END									✓	
M 1	24" XH	S	M1	3180-0000	P1	1	Slight	5	P	✓	
	0 - 15"									✓	
	15 - 30"									✓	
	30 - 45"									✓	
	45 - 60"						Slight		P	✓	
	60 - 0"									✓	

Tech Name: <u>Brent Thomas</u>	Level: II	☒ CGSB# 7833	☒ SNT Level II # 08018	Disc: RT
Assistant Name: <u>Todd Rubner</u>	☒ C.E.D.O. # 15012	☐ TRAINEE	☐ SNT Level I #	
Assistant Name: <u>Leo Gastmeier</u>	☐ C.E.D.O. #	☒ TRAINEE	☐ SNT Level I #	

LIMITED LIABILITY POLICY

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Customer Rep. Signature: Robert GreenCustomer Rep. Print: Robert Green

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Phone: (780) 486-7344 Fax: (780) 486-4685

Email: reception@buffaloinspection.com



CLIENT: Pyramid - Nisku

Customer Job #: 3180-000

HOURS: REG:

OT:

KMS:

LOCATION: Fab Shop - Nisku

OTHER:

HAZARDS IDENTIFIED:

☒ PEOPLE

ENVIRONMENT

☒ EQUIPMENT

☒ MATERIAL.

[illegible]

LIMITED LIABILITY POLICY

Buffalo Inspection Services (2005) Inc. guarantees the film quality produced by its technicians; however, no liability will be accepted for failure of welds or other items radiographed. The interpretation of radiographs is the opinion of the radiograph technician and final acceptance of a weld (for example) is the responsibility of the customer. Liability for film quality is limited to the value of the film only – labour and equipment required to reproduce films will be borne by the customer – unless the customer rejects the film before signing this report, in which case radiographs will be retaken at no cost to the customer.

Customer Rep.

Libby Owen

Customer Rep.

Print:

Robert F. Green

Email: reception@buffaloinspection.com

☒ MATERIAL

Film No.	Size & Thickness Plus Code max. reinforcement	Welder ID	Weld #	DRW #	Material	Proc #	Severity	Code	Comments	Accept	Reject
N3	4" XXH	S	N3	3180-0000-001	P1	4B		5		✓	
N4	3" XXH	S	N4	3180-0000-001	P1	4B		5		✓	
N5A	2" s160	S	N5A	3180-0000-001	P1	4B		5		✓	
N6	4" XXH	S	N6	3180-0000-001	P1	4B		5		✓	
N7	6" XXH	S	N7	3180-0000-001	P1	4B		5		✓	
N8	4" XXH	S	N8	3180-0000-001	P1	4B		5		✓	

Tech Name: <i>Gordon Thomas</i>	Gordon Thomas	Level: II	☒ CGSB# 6	☒ SNT Level II # 08001	Disc: RT
Assistant Name: Dave Brown	☒ C.E.D.O. # 12445		☐ TRAINEE	☐ SNT Level I #	
Assistant Name: Mark Thomas	☒ C.E.D.O. # 12044		☐ TRAINEE	☐ SNT Level I #	

Print:



CUSTOM PIPE SERVICES INC.

No. W 2063

5110-47
8102 43rd STREET, LEDUC, ALBERTA T9E 7E9 649

PHONE: (780) 986-5066 FAX: (780) 986-8520

Page: 1 of 1

Date: Dec 23/08

Time: 8:00 am

Ultrasonic Weld Inspection Report

Customer: Pyramid Job Number: 3180-0000
Location: Nisku Reported to: Robert
Project: Confirm full penetration weld Purchase Order: 614713
Code Procedure: ASME Section V Article 4 and/or _____
Acceptance: ASME Sect. VIII Div. I App. 12 or ASME Sect. VIII Div. II Art. 9.3 and/or _____
Vessel Size: Diameter: 78" I.D. Nominal Thickness: Shell: 3/4" Head: _____
Minimum Thickness Measured: Shell: .748" Head: _____
Material: SA 516 70N Surface Condition: Clean PWHT: Before Hydro: Before
Flaw Detector: KrautKramer Model: USA158L Serial No: 0152R1K Cal. Due Date: Nov/09
Calibration Blocks: To ASME Fig. T434.2.1 T= stepwedge or _____
Test Sensitivity: 3/4 T Hole @ 80% FSH Plus 6dB To Obtain Working Sensitivity. Couplant: Cellulose Paste

Transducer	S/N	Frequency Mhz	Cable	Size (mm)	Range	Transducer	S/N	Frequency Mhz	Cable	Size (mm)	Range
O ^o	55786	5mhz	6'	5mm	2"						

Test Procedure: UT-IB Rev 2 Weld Type: Attachment Nozzle Weld: ☒ Long Seams: _____ Circ. Seams: _____
Surface Inspected From: O.D. Limitations: _____

Weld I.D.		Results	Weld I.D.		Results
Item 41	attachment fullpen	Accept			

If repairs are required, See attached sheets for details.

Comments: _____

Operator: John Van Loest Signature: [Signature] CGSB Level: II 6567 ASNT Level: II
Assistant: _____ CGSB Level: _____ ASNT Level II _____ Man Crew: 1 Hours Reg.: 1/2 min
Client Representative: [Signature] Mileage: _____ Hours O.T.: _____



CUSTOM PIPE SERVICES INC.

No. W 2060

5110-47
8102-43rd STREET, LEDUC, ALBERTA T9E 7E9 649

PHONE: (780) 986-5066 FAX: (780) 986-8520

Page: 1 of 1

Date: Dec 22/08

Time: am pm

Ultrasonic Weld Inspection Report

Customer: Pyramid Job Number: 3180-0000

Location: Nisku Reported to: Robert

Project: UT full pen attachment Purchase Order: 614713

Code Procedure: ASME Section V Article 4 and/or

Acceptance: ASME Sect. VIII Div. I App. 12 or ASME Sect. VIII Div. II Art. 9.3 and/or

Vessel Size: Diameter: 78" I.D. Nominal Thickness: Shell: 1/2" Head:

Minimum Thickness Measured: Shell: 1/2" Head:

Material: SA51670N Surface Condition: PWHT: Hydro:

Flaw Detector: KrautKramer Model: USN58L Serial No: ONLPRK Cal. Due Date: Nov/09

Calibration Blocks: To ASME Fig. T434.2.1 T= 1/2" or

Test Sensitivity: 3/4 T Hole @ 80% FSH Plus 6dB To Obtain Working Sensitivity. Couplant: Cellulose Paste

Transducer	S/N	Frequency Mhz	Cable	Size (mm)	Range	Transducer	S/N	Frequency Mhz	Cable	Size (mm)	Range
0°	51941	5	6	10	1"						
70°	50673	4	6	10	4/c						

Test Procedure: UT-2 Rev 1 Weld Type: Nozzle Weld: Long Seams: Circ. Seams:

Surface Inspected From: I.D. Limitations:

Weld I.D.	Results	Weld I.D.	Results
Item #44	Accept		

If repairs are required, See attached sheets for details.

Comments:

Operator: John VanLerest Signature: CGSB Level: II 6567 ASNT Level: II

Assistant: CGSB Level: ASNT Level II Man Crew: 1 Hours Reg.: 1

Client Representative: Robert Green Mileage: Hours O.T.:



CUSTOM PIPE SERVICES INC.

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No. W 4129

Page: 1 of 1

Date: Dec 18/08

Time: _____ am
pm

Ultrasonic Weld Inspection Report

Customer: Pyramid Job Number: 3180-0000-001
Location: Nisku Reported to: Robert
Project: UT Cat'D Welds Purchase Order: 614713
Code Procedure: ASME Section V Article 4 and/or _____
Acceptance: ASME Sect. VIII Div. I App. 12 or ASME Sect. VIII Div. II Art. 9.3 and/or _____
Vessel Size: Diameter: 78" I.D. Nominal Thickness: Shell: 3/4" Head: _____
Minimum Thickness Measured: Shell: 18.7 mm Head: _____
Material: SASIK 70N Surface Condition: Clean PWHT: Before Hydro: Before
Flaw Detector: Krautkramer Model: USW58L Serial No: 012LRK Cal. Due Date: Nov/09
Calibration Blocks: To ASME Fig. T434.2.1 T= 3/4" or _____
Test Sensitivity: 3/4 T Hole @ 80% FSH Plus 6dB To Obtain Working Sensitivity. Couplant: Cellulose Paste

Transducer	S/N	Frequency Mhz	Cable	Size (mm)	Range	Transducer	S/N	Frequency Mhz	Cable	Size (mm)	Range
0°	50194	5	6'x2	10	50mm						
70°	53744	4	6'	10	Flt						

Test Procedure: UT-3 Rev 2 Weld Type: Nozzle Weld: ☒ Long Seams: ☒ Circ. Seams: _____
Surface Inspected From: O.D. Limitations: _____

Weld I.D.		Results	Weld I.D.		Results
N1	repa'd to nozzle	Accept	N8A		Accept
N1	repa'd long seams		N8B		
N2	repa'd to nozzle		N10A		
N2	repa'd long seams		N10B		
N3			N11		
N4			N12		
N5A			N13		
N5B			M1	repa'd to nozzle	
N6			M1	repa'd long seams	Accept
N7					
N8		Accept			

If repairs are required, See attached sheets for details.

Comments: _____

Operator: Leo (L.D.) Linc Signature: [Signature] CGSB Level: II13325 ASNT Level: II
Assistant: J. VanLeest CGSB Level: _____ ASNT Level II _____ Man Crew: 1 Hours Reg.: min
Client Representative: [Signature] Mileage: _____ Hours O.T.: _____



CUSTOM PIPE SERVICES INC.

5110 - 47 STREET, LEDUC, ALBERTA T9E 6Y9

PHONE: (780) 986-5066 FAX: (780) 986-8520

No. W 3964

Page: 1 of 1

Date: DEC 3/03

Time: AM ^{am} _{pm}

Ultrasonic Weld Inspection Report

Customer: PYRAMID Job Number: 3180-0000

Location: NISKU, AB Reported to: BLAIR HARVEY

Project: UT- REPAD TO MANWAY WELD Purchase Order: 614561

Code Procedure: ASME Section V Article 4 and/or _____

Acceptance: ASME Sect. VIII Div. I App. 12 or ASME Sect. VIII Div. II Art. 9.3 and/or _____

Vessel Size: Diameter: _____ Nominal Thickness: Shell: 0.750" Head: _____

Minimum Thickness Measured: Shell: 0.757" Head: _____

Material: SA 516-70N Surface Condition: CLEAN PWHT: BEFORE Hydro: BEFORE

Flaw Detector: : KRAUTKRAMER Model: USN-58L Serial No: 01DN4X Cal. Due Date: 04/09

Calibration Blocks: To ASME Fig. T434.2.1 T= STD-4-3/4" or _____

Test Sensitivity: 3/4 T Hole @ 80% FSH Plus 6dB To Obtain Working Sensitivity. Couplant: Cellulose Paste

Transducer	S/N	Frequency Mhz	Cable	Size (mm)	Range	Transducer	S/N	Frequency Mhz	Cable	Size (mm)	Range
GBTC10	55602	5	6'	10	2"						
GBSS45°	41873	4	6'	10	H/C						
GBSS60°	60063	4	6'	10	H/C						

Test Procedure: UT-3 REV. 2 Weld Type: Nozzle Weld: ☒ Long Seams: _____ Circ. Seams: _____

Surface Inspected From: OD/ID Limitations: _____

Weld I.D.	Results	Weld I.D.	Results
REPAD TO MANWAY WELD	ACCEPT		

If repairs are required, See attached sheets for details.

Comments: _____

Operator: C. FERGUSON Signature: [Signature] CGSB Level: II #11804 ASNT Level: II

Assistant: T. LEMKE CGSB Level: _____ ASNT Level II _____ Man Crew: 2 Hours Reg.: 1 1/4 MIN

Client Representative: [Signature] Mileage: _____ Hours O.T.: _____



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No. W 4065

Page: 1 of 1

Date: Dec 16/08

Time: 4:11 pm

Ultrasonic Weld Inspection Report

Customer: Pyramid Job Number: 3180-0000

Location: Nisku, AB Reported to: Blain

Project: UT Cat "D" welds Purchase Order: 614663

Code Procedure: ASME Section V Article 4 and/or _____

Acceptance: ASME Sect. VIII Div. I App. 12 or ASME Sect. VIII Div. II Art. 9.3 and/or _____

Vessel Size: Diameter: 78" Nominal Thickness: Shell: 3/4" Head: —

Minimum Thickness Measured: Shell: 18.9 mm Head: —

Material: P1 Surface Condition: Clean PWHT: Before Hydro: _____

Flaw Detector: Krautkramer Model: USA58L Serial No: 01LC26 Cal. Due Date: Nov/09

Calibration Blocks: To ASME Fig. T434.2.1 T= 3/4" or _____

Test Sensitivity: 3/4 T Hole @ 80% FSH Plus 6dB To Obtain Working Sensitivity. Couplant: Cellulose Paste

Transducer	S/N	Frequency Mhz	Cable	Size (mm)	Range	Transducer	S/N	Frequency Mhz	Cable	Size (mm)	Range
GBO	50194	5	6'x2	10	100mm						
GB70	52744	4	6'	10	F/C						

Test Procedure: UT-3 Rev 2 Weld Type: Nozzle Weld: ✓ Long Seams: _____ Circ. Seams: _____

Surface Inspected From: O.D Limitations: N/A

Weld I.D.	Results	Weld I.D.	Results
N1	Accept.		
N2	Accept.		

If repairs are required, See attached sheets for details.

Comments: _____

Operator: Z. D. Liu Signature: [Signature] CGSB Level: II 13325 ASNT Level: II

Assistant: G. Yue CGSB Level: _____ ASNT Level II _____ Man Crew: 1 Hours Reg.: 1

Client Representative: [Signature] Mileage: _____ Hours O.T.: _____



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No. W 4001

Page: 1 of 1

Date: Nov 25/08

Time: 3:00 pm

Ultrasonic Weld Inspection Report

Customer: Pyramid Job Number: 08-5510-0000

Location: Nisku AB Reported to: _____

Project: UT Cat "D" Weld Purchase Order: 614498

Code Procedure: ASME Section V Article 4 and/or _____

Acceptance: ASME Sect. VIII Div. I App. 12 or ASME Sect. VIII Div. II Art. 9.3 and/or _____

Vessel Size: Diameter: 78" I.D. Nominal Thickness: Shell: 3/4" Head: 3/4"

Minimum Thickness Measured: Shell: ✓ Head: 17.85mm

Material: PL Surface Condition: Clean PWHT: Before Hydro: Before

Flaw Detector: Krautkramer Model: DSN58L Serial No: 016026 Cal. Due Date: Nov/09

Calibration Blocks: To ASME Fig. T434.2.1 T= 3/4" or _____

Test Sensitivity: 3/4 T Hole @ 80% FSH Plus 6dB To Obtain Working Sensitivity. Couplant: Cellulose Paste ✓

Transducer	S/N	Frequency Mhz	Cable	Size (mm)	Range	Transducer	S/N	Frequency Mhz	Cable	Size (mm)	Range
GB0°	50194	5	6'x2	10	100mm						
GB70°	53744	4	6'	10	FLC						

Test Procedure: UT-3 Rev 2 Weld Type: Nozzle Weld ✓ Long Seams: _____ Circ. Seams: _____

Surface Inspected From: D.I.D. Limitations: N/A

Weld I.D.	Results	Weld I.D.	Results
<u>M1</u>	<u>Accept</u>		
<u>2</u>			
<u>3</u>			

If repairs are required, See attached sheets for details.

Comments: _____

Operator: Z. D. Liu Signature: [Signature] CGSB Level: II B325 ASNT Level: II

Assistant: S. Robinson CGSB Level: _____ ASNT Level II _____ Man Crew: 1 Hours Reg.: 12

Client Representative: [Signature] Mileage: _____ Hours O.T.: _____



CUSTOM PIPE SERVICES INC.

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No. M 3132

Page: 1 of 1
Date: DEC 17/08
Time: pm ^{am} _{pm}

Ultrasonic Material Inspection Report

Customer: PYRAMID Job Number: 5180-0000
Location: NISKU, AB Reported to: ROBERT
Project: UT - X-RAY REPAIR AREAS Purchase Order: 6214684
Code Procedure: ASME SECT V ART. 4 Acceptance: ASME SECT VIII DIV. 1 APP 12
Test Procedure: UT-2 REV. 1 Surface Inspected From: OD/ID PWHT BEFORE HYDRO BEFORE
Limitations: _____
Material: SA-516-70N as welded ☒ painted _____ machined _____ as cleaned ☒
Flaw Detector: Make: KRAUTKRAMER Model: USN-58L Serial No: 01D04X Cal. Due Date: 04/09
Calibration Blocks: ASME STD-4-3/4" or _____
Test Sensitivity: 3/4T HOLE @ 80% FSN, +6dB TESTING Couplant: UTX

Transducer	S/N	Frequency	Cable	Size	Range
GBTC10	55602	5 MHz	6'	10 mm	2"
GBSS60	60063	4 MHz	6'	10 mm	F/C

Transducer	S/N	Frequency	Cable	Size	Range

DESCRIPTION OF INSPECTION:

AN ULTRASONIC SHEARWAVE EXAMINATION OF CIRC SEAM 1
TO LOCATE AND DETERMINE DEPTH OF X-RAY REPAIRS,
AS PER CLIENT.

RESULTS:

REPORT IS FOR CONFIRMATION OF REPAIR LOCATIONS ONLY.

CONSUMABLES USED:

Operator: C. FERGUSON Signature: C. Ferguson CGSB Level: II#11804 ASNT Level: II
Assistant: _____ CGSB Level: _____ ASNT Level II _____ Man Crew: 1 Hours Reg.: MIN
Client Representative: Robert Green Mileage: _____ Hours O.T.: _____



CUSTOM PIPE SERVICES INC.

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No. N9806

Page: 1 of 1

Date: Dec 29/18

Time: 6:00 am

Non-Destructive Test Report

Customer: PYRAMID Job Number: 3180-0000
Location: NISKLEAB Reported to: Robert
Project: MI Purchase Order: 614713

NDT METHOD

MAGNETIC PARTICLE

Equipment: Parker B300 S/N: CP5007
Calibration Due Date: Dec 109
AC: ☒ DC: ☐ Yoke: ☒ Coil: ☐
Continuous: ☒ Dry: ☐ Wet: ☒
Particles: 7HF Color Contrast: WCP-2
Fluorescent: ☐ Sensitivity: ☐

LIQUID PENETRANT

Penetrant: ☐ D/T: ☐
Developer: ☐ D/T: ☐
Dye: ☐ Fluorescent: ☐
Water Wash: ☐
Temperature: ☐

LIGHT SOURCE: 100W BLACK LIGHT (u/w): ☐ WHITE LIGHT (f/c): 100

PROCEDURE: CODE: ASME SEC II ART 7 CP.S.: MT-2K-REV1 ACCEPTANCE CODE: ASME VIII APP 6

PROCEDURE: CUSTOMER: ☐ ACCEPTANCE: CUSTOMER: ☐

Before PWHT: ☐ After PWHT: ☒ Before Hydro: ☒ After Hydro: ☒

MATERIAL: P1 thickness: ☐ as welded ☒ painted ☐ machined ☐ as cleaned ☒

DESCRIPTION OF INSPECTION: A black on white MPI was carried out 100% all attachment welds, all nozzle cut "D" and repad from external side. As per client request.

RESULTS No indication noted at time of inspection. Acceptable to Code.

CONSUMABLES USED: 2 CAN

Operator: S. ASLAM Signature: [Signature] CGSB Level: II #12786 ASNT Level: II
Assistant: Steve CGSB Level: ☐ ASNT Level II ☒ Man Crew: 2 Hours Reg.: 1
Client Representative: [Signature] Mileage: ☐ Hours O.T.: ☐



CUSTOM PIPE SERVICES INC.

5110 - 47 STREET, LEDUC, ALBERTA T9E 6Y9
PHONE: (780) 986-5066 FAX: (780) 986-8520
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No. N9807

Page: 1 of 1

Date: Dec 29/08

Time: 6:00 am

Non-Destructive Test Report

Customer: PYRAMID Job Number: 3180-0000
Location: Nisku, AB Reported to: Robert
Project: MT Purchase Order: 614713

NDT METHOD

MAGNETIC PARTICLE

Equipment: Parker B300 S/N: CPS007
Calibration Due Date: Dec/09
AC: ☒ DC: ☐ Yoke: ☒ Coil: ☐
Continuous: ☒ Dry: ☐ Wet: ☒
Particles: 20 B Color Contrast: ☐
Fluorescent: ☒ Sensitivity: .25

LIQUID PENETRANT

Penetrant: _____ D/T: _____
Developer: _____ D/T: _____
Dye: _____ Fluorescent: _____
Water Wash: _____
Temperature: _____

LIGHT SOURCE: BIB 150 B BLACK LIGHT (u/w): +1000 WHITE LIGHT (f/c): _____

PROCEDURE: CODE: ASME Sect V Art 1 CPS: MT 2V Rev 1 ACCEPTANCE CODE: ASME Sect VIII APP 6

PROCEDURE: CUSTOMER: _____ ACCEPTANCE: CUSTOMER: _____

Before PWHT: _____ After PWHT: ☒ Before Hydro: ☒ After Hydro: ☒ S.A

MATERIAL: P1 thickness: _____ as welded ☒ painted _____ machined _____ as cleaned ☒

DESCRIPTION OF INSPECTION: Wet fluorescent MPI was carried out on all accessible pressure boundary welds and all attachments welded to pressure boundary. As per client request.

RESULTS: No indication noted at time of inspection. Acceptable to code.

CONSUMABLES USED: _____

Operator: S. ASLAM Signature: [Signature] CGSB Level: II #12786 ASNT Level: II

Assistant: Steve CGSB Level: _____ ASNT Level II ☒ Man Crew: 2 Hours Reg.: 1.5

Client Representative: [Signature] Mileage: _____ Hours O.T.: _____



CUSTOM PIPE SERVICES INC.

5110 - 47 STREET, LEDUC, ALBERTA T9E 6Y9
PHONE: (780) 986-5066 FAX: (780) 986-8520
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No. N9651

Page: 1 of 1

Date: DEC. 16/08

Time: 2:30 ^{am} _{pm}

Non-Destructive Test Report

Customer: PYRAMID Job Number: 3180-0000
Location: NISKU Reported to: RCB
Project: MAGNETIC PARTICLE INSPECTION Purchase Order: 6146-63

NDT METHOD

MAGNETIC PARTICLE

Equipment: PARKER PROBE S/N: 8257
Calibration Due Date: DEC. 09/09
AC: ☒ DC: ☐ Yoke: ☒ Coil: ☐
Continuous: ☒ Dry: ☒ Wet: ☐
Particles: YELLOW Color Contrast: ☐
Fluorescent: ☐ Sensitivity: ☐

LIQUID PENETRANT

Penetrant: ☐ D/T: ☐
Developer: ☐ D/T: ☐
Dye: ☐ Fluorescent: ☐
Water Wash: ☐
Temperature: ☐

LIGHT SOURCE: V-300 YOKELIGHT BLACK LIGHT (u/w): ☐ WHITE LIGHT (f/c): 7100

PROCEDURE: CODE: ASME SECT. V ART. 7 C.P.S.: MT-1 REV. 1 ACCEPTANCE CODE: ASME SECT. VIII APP. 6

PROCEDURE: CUSTOMER: ☐ ACCEPTANCE: CUSTOMER: ☐

Before PWHT: ☒ After PWHT: ☐ Before Hydro: ☒ After Hydro: ☐

MATERIAL: PI thickness: ☐ as welded ☐ painted ☐ machined ☒ as cleaned ☒

DESCRIPTION OF INSPECTION: DRY POWDER MAGNETIC PARTICLE INSPECTION WAS PERFORMED ON THE BEVEL PREP EDGES ON 2 LIFT LUGS

RESULTS: NO INDICATIONS NOTED

THIS MEETS THE REQUIREMENTS OF THE SPEC.

CONSUMABLES USED: ☐

Operator: RICHARD YODER Signature: Richard Yoder CGSB Level: U 5469 ASNT Level: II

Assistant: ☐ CGSB Level: ☐ ASNT Level II: ☐ Man Crew: 1 Hours Reg.: MIN

Client Representative: Richard Yoder Mileage: ☐ Hours O.T.: ☐