1171565

SB13

MATERIAL TEST & INSPECTION CERTIFICATE

According to
DIN 50049 3. 1. B / EN 10204 3. 1. B / ISO 10474 3. 1. B

SUNGKWANG BEND CO., LTD.
#1720, SONGJEONG-DONG, GANGSEO-KU, BUSAN, KOREA
http ://www.skbend.com
TEL:82-051-3300-450
FAX:82-051-3300-335

Date of issue: 2004/06/22

Customer ALLIED FITTINGS CANADA

Job No.	Spec. for Material	Spec. for Inspection	Visual & Dimension	P.O. No.	Certificate No.
	ASTM A234WPB-S ASME SA234WPB-S	ASME B16.9	SATISFACTORY	32604ASB	QCL-20040632351

Manufacture No.	Description	Size	Quantity	Heat Treatment
3-30-7	MADE FROM SEAMLESS PIPE TEE STD B.W	2"	600EA	NORMALIZED.

Raw Material Maker	Raw Material Heat No.	Mfg. [illegible]TD No.	Test Pr[illegible]	N.D.E.	900 °C Hol.(30MIN.)
JFE Steel	1-38034	38034	A370 TEST	M.T:GOOD	Heat. "AIR"

STD		Chemical Composition(%) C	Si	Mn	P	S	Ni	Cr	Mo	Cu	V	Nb	Tensile Test T.S ksi	EL. %	R.A. %	Bending Test (°)	Flattening Test	Hardness (HB)	Impact Test	Hydrostatic Test
SIZE	Min		0.10	0.29									60.0	22.4						
	Max	0.25		1.06	0.050	0.058	0.40	0.40		0.40	0.08	0.02	85.0					237		
		0.20	0.22	0.56	0.018	0.009	0.01	0.01		<0.01	<0.002	<0.001	76.4	44.0				165		

ASME STAMP SEC. II

ED. 2010 ADD.

INT. JL DATE 4-5-M

WE CERTIFY THIS MATERIAL HAS BEEN MANUFACTURED AND EXAMINED IN ACCORDANCE WITH ALL REQUIREMENTS OF THE SPECIFICATION AND THE RESULTS OF ALL EXAMINATION ARE ACCEPTABLE

** MANUFACTURED IN ACCOR. TO DIN 50049-3.1.B & MEET NACE MR-01-75/97 STANDARD SPEC.

QUALITY MANAGEMENT DIVISION

K.H SUH / QM MDR

[ ] Reviewed By
[ ] Witnessed By

MANAGING DIRECTOR

SKE-8903

SUNGKWANG BEND CO., LTD.

BONNEY FORGE

MILL TEST REPORTS

Bonney Forge
14496 Croghan Pike
Mt. Union, PA 17066

(96) P.O. 986025 mid
TOL - 3m 2 x 20 - 36
.635

CERTIFIED MILL TEST REPORT

Midfield 03/31/11

LOT NO.	CHEMICAL ANALYSIS, PHYSICAL PROPERTIES, REMARKS
57989	2" 3M A105N Thredolet Threaded

C 0.200 MN 1.010 P 0.008 S 0.022 SI 0.230

NI 0.050 CR 0.050 MO 0.010 CU 0.150 V 0.000

Nb 0.017

CE(LONG FORMULA) = 0.394

T/S 74375 Y/S 51250 EL 32.300 RA 62.550

BRINELL HARDNESS: 130

ASME STAMP SEC. II

ED. 2010 ADD.

NT tc DATE 4-4-11

1. THE MATERIAL SUPPLIED MEETS THE REQUIREMENTS OF NACE MRO175/ISO 15156-2.
2. THE MATERIAL SUPPLIED WAS INSPECTED AND MANUFACTURED IN ACCORDANCE WITH EN DIN 10204:2004 EDITION TYPE 3.1 INSPECTION DOCUMENT.
3. CERTIFYING ASTM A105-09 / ASME SA105-07 EDITION.
4. THE MATERIAL SUPPLIED IDENTIFIED AS A105N WAS NORMALIZED IN ACCORDANCE WITH ASTM A105 HEAT TREATING REQUIREMENTS.

THIS DOCUMENT HAS BEEN ELECTRONICALLY SUBMITTED.

P.O. 984835 ✓
① mid ✓
FLG-150LRWN20 ✓
.718

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@kimo.seed.net.tw

MILL TEST CERTIFICATE

EN10204-3.1.B(DIN50049/3.1.B)

Customer: W.F.F. FITTINGS & FLANGES (CANADA) LTD.

Order No.: D009178

Certificate No.: SE100999

Date: 11/10/2010

PRODUCT	MATERIAL SPECIFICATIONS	DIMENSIONAL SPECIFICATIONS
FORGED CARBON STEEL FLANGES	ASTM A105-09 / ASME SA105-09	ASME B16.5-09 CSA Z245.12

Item No.	CUSTOMER P/N	DESCRIPTION	QUANTITY	CHEMICAL COMPOSITION (%) C	Si	Mn	P	S	Cu	Cr	Ni	Mo	V	Nb	N			CE(*3)
			Min / Max	- / 0.350	0.100 / 0.350	0.600 / 1.050	- / 0.035	- / 0.040	- / 0.400	- / 0.300	- / 0.400	- / 0.120	- / 0.060	- / 0.020	- / -			
11		150 WN RF STD 1" A105N	10 PCE	0.199	0.290	1.050	0.011	0.013	0.008	0.015	0.049	0.002	0.002	0.001	0.007			0.381
12		150 WN RF STD 10" A105N	110 PCE	0.201	0.220	1.000	0.017	0.018	0.017	0.014	0.050	0.005	0.010	0.005	0.006			0.376
13		150 WN RF STD 1 1/2" A105N	5 PCE	0.210	0.160	1.130	0.007	0.010	0.050	0.060	0.050	0.005	0.003	0.005	0.009			0.418
14		150 WN RF STD 2" A105N	604 PCE	0.215	0.310	1.060	0.014	0.008	0.006	0.051	0.043	0.005	0.017	0.005	0.005			0.409
15		150 WN RF STD 2" A105N ✓	1,801 PCE	0.212 ✓	0.250 ✓	1.050 ✓	0.011 ✓	0.013 ✓	0.018 ✓	0.045 ✓	0.046 ✓	0.005 ✓	0.037 ✓	0.005 ✓	0.004 ✓			0.401 ✓
16		150 WN RF STD 2 1/2" A105N	5 PCE	0.210	0.210	1.150	0.007	0.013	0.040	0.060	0.030	0.009	0.003	0.005	0.011			0.420
17		150 WN RF STD 4" A105N	415 PCE	0.214	0.260	1.060	0.014	0.016	0.020	0.050	0.054	0.005	0.032	0.005	0.006			0.407
18		150 WN RF STD 6" A105N	700 PCE	0.210	0.160	1.130	0.007	0.010	0.050	0.060	0.050	0.005	0.003	0.005	0.009			0.418
19		150 WN RF STD 6" A105N	50 PCE	0.205	0.280	1.040	0.011	0.017	0.021	0.057	0.057	0.012	0.033	0.005	0.004			0.400
20		150 SW RF XS 1" A105N	30 PCE	0.209	0.250	1.060	0.013	0.012	0.010	0.044	0.047	0.005	0.036	0.006	0.004			0.399

Item No.	Heat No.	T.S.(*1) (MPA)	Y.S.(*1) (MPA)	E.L.(*1) (%)	Hardness (HB)	R.A.(*1) (%)	Impact Test Temp: Minimum: Joule 1	2	3	Material Supplier	HEAT TREATMENT(*2) N
	Min	485.0	250.0	22.0	-	30.0					REMARKS
	Max	-	-	-	187	-					880 C X 3HRS
11	931202	513.9	372.7	33.2	156	66.0				NTMK	CONFORMS WITH NACE MR0103-07 AND NACE MR0175/ISO15156.2
12	915540	505.0	329.5	35.4	152	68.6				NTMK	CONFORMS WITH Z245.12 CAT I GR.248 SOUR SERVICE-05
13	21530	519.8	335.4	36.0	154	66.8				OEMK	TEST SPECIMEN ORIENTATION: TRANSVERSE
14	10966	529.6	354.0	35.0	162	70.4				NTMK	S759077870
15	21379 ✓	513.9 ✓	354.0 ✓	34.2 ✓	152 ✓	68.6				NTMK	
16	13145	521.7	317.7	34.4	153	67.7				OEMK	
17	10917	523.7	369.7	35.2	156	68.6				NTMK	
18	21530	519.8	335.4	36.0	154	68.8				OEMK	
19	21289	511.9	356.0	33.4	154	69.5				NTMK	
20	21388	521.7	379.5	33.6	154	69.5				NTMK	

*1: T.S. = Tensile Strength, Y.S.=Yield Strength, E.L=Elongation, R.A.=Reduction of Area.

*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.C=Oil Cooled.

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

SAN ENG STEEL FORGING CO., LTD. H.C.J QUALITY ASSURANCE DEP'T

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 Dep't

ASME STAMP SEC. II

ED. 2010 ADD.

① P.O.984837 ✓
CE ✓
WLA 409040 ✓
.247

Purchaser : CCTF CORPORATION

INSPECTION CERTIFICATE

TO EN10204 3.1

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

E-No.	Purchase Order No.	Job No.	D M Y	Certificate No.
MC-266	4889050		18/01/2011	T- 2011200010

No.	MFG. No. (Heat Identification No.)	Product & Size (T:*1)	Quantity	Heat Treatment (Note 1)	Hardness Actual Data	Item No.
		Specification for Material Made from Seamless Pipe: ASTM A234-10/ASME SA234-07 Gr.WPB CSA Z245.11-09 Gr.241 CAT1 NACE MR0175/ISO 15156-2 R3-03 &MR0103-07	Specification for Inspection: ASME B16.9-2007		Visual Examination: Good	Dimensional Inspection: Good
1	10M00001	90 EL WPB 1/2 S40	150	A	HB : 120 - 150	7510233
2	10M00003	90 EL WPB 1 1/4 S40	1,300	A	HB : 115 - 145	7510292
3	10N00002 ✓	90 EL WPB 4 S40 ✓	58/2,750	A	HB : 115 - 145 ✓	7510420
4	10N00003	90 EL WPB 5 S40	30	A	HB : 120 - 150	7510446
5	10P00018	90 EL WPB 6 S40	89/1,360	A	HB : 115 - 145	7510462

Specification	C	Si	Mn	P	S	Cu	Ni	Cr	Mo	V	Nb	C.E.	YS	TS	E	
	Chemical Composition %												Tension Test *2			
	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.		%	HARDNESS MAX
Min.		10	29										240	415	30	197 HB : GOOD
Max.	30		106	50	58	40	40	40	15	80	20			585		
Material Heat No.																
1 81566	14	24	71	9	3	19	9	10	2	1	0	30	307	451	42	
2 J0L2773	19	22	86	15	7	1	2	4	7	0	0	36	360	525	47	
3 J9K6374	18 ✓	16 ✓	84 ✓	12 ✓	4 ✓	2 ✓	2 ✓	4 ✓	1 ✓	0 ✓	0	(33)	313 ✓	485 ✓	40 ✓	
4 J0K5087	19	26	86	14	6	1	2	6	8	0	0	36	343	514	38	
5 J0L4905	19	21	79	11	6	2	2	4	7	0	0	35	318	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 *N : Normalizing 910°Cx0.5 HR. Air Cooling (Specification for material made from plate) S : Stress Relieving 675° Cx0.5 HR. Air Cooling

ASME STAMP SEC. II

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.

ED. 2010 ADD.

INT. [signature] DATE 3-3...

Quality Assurance Manager
Thai Benkan Co., Ltd.

1 : "T" symbolized wall thickness in mm ...

PO# s759081363; Ht# 573T0; 3 150 RF WN STD A105

CLIENTE / Customer / Client

FORGINGS FLANGES&FITTINGS LLC.
8930 RAILWOOD DRIVE,
SUITE B
HOUSTON, TX 77078
USA

CERTIFICADO DE INSPECCION

Inspection Certificate - Certificat de Réception

DIN EN 10204 / 3.1
ISO 10474 / 3.1

FECHA Date: 15/11/2010 — Nº No. 134045 — HOJA Page: 1

ULMA FORJA, S.COOP.

B° Zubillaga, 3 - Apdo. 14
20560 OÑATI (Guipúzcoa) SPAIN
Tel.: 34 - 943 786452
Fax. 34 - 943 781808
E-mail: ulma@ulmapiping.com

PRODUCTO / Article - Produit: FLANGES

SU PEDIDO Nº / Your Order No / Votre Cde. Nº: 171521

DE / of - de: 10/08/2010

Certified acc. PED 97/23/EC+AD2000-W0 by TÜV Rheinland Nº 01 202 EAQ 02 7443

MARCA DEL FABRICANTE / Mark of factory / Marque du fabricant: 79708

NORMAS APLICABLES / Requirements - Normes Applicables: ASME B16.5-09

MATERIAL CORRESPONDIENTE / Material Correspondent - Qualité: ASTM A105N-09 / ASME SA105N-09

NACE MR-01-75/ISO15156-2-05 & MR-01-03/03

MODO DE FUSION (*) / Steel Making - Elaboration de l'acier: E = Elec. Y = Oxigeno básico

DEPARTAMENTO / Section / Département: QUALITY ASSURANCE

PARTIDA / Item / Poste	CANTIDAD / Quantity / Quantité	DESCRIPCION / Description / Description	OBSERVACIONES / Remarks / Observations (*)	COLADA Nº / Heat No / N° Coulée	RESISTENCIA / Strength / Résistance: Rotura Rupt. N/mm²	LIMITE ELASTICO / Yield Strength / Limite élastique: 0.2 % N/mm²	ALARGAM. / Elongation / Allongement: Lo=4d %	ESTRICCION / Red. Area / Striction %	RESILIENCIA / Impact test / Résilience Joules	MEDIA / Average / Moyenne	°C	DUREZA / Hardness / Dureté HB
15 F14YA039	1.800	WN 3 150LB S40 RF A105N	NE	573T0	521	302	29,30	52,70				152 158

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

COLADA Nº / Heat No / N° Coulée	C %	Si %	Mn %	P %	S %	Cr %	Ni %	Mo %	Nb %	V %	Cu %	Al %	Ti %	N %	CEq %
573T0	0,200	0,200	0,940	0,011	0,017	0,060	0,140	0,030	0,000	0,003	0,240	0,000	0,000	0,000	0,401

573T0

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

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

EL INSPECTOR / Marks Inspector - L'Inspecteur

ULMA

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

P.O. 984156 ✓

mid ✓

(1) FLG-1504ORWN 30 ✓

ASME STAMP SEC. II

ED. 2010 ADD. _____

INT. YA DATE 3-29-11

CERTIFIED MILL TEST REPORT

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LOG NO. F00000000011601

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

CUSTOMER: CCTF CORPORATION

CUSTOMER ORDER NO.: 4889408-00

DATE 03/01/2011

BONNEY ORDER NO. B000092219

SHIP TO: CCTF CORPORATION (EDMONTON)
5407 - 53RD AVE.
EDMONTON AB T6B 3G2
Canada

ITEM	QUANTITY	LOT NO.	GRADE OR SPECIFICATION NO CHEMICAL ANALYSIS, PHYSICAL PROPERTIES, REMARKS
40 7552661	81	58181	10-3X1 6M A105N SOCK S SA/A105N Al 0.021 C 0.200 Co 0.004 Cr 0.030 Cu 0.080 Mn 1.040 Mo 0.010 N 0.004 Nb 0.014 Ni 0.020 P 0.008 S 0.019 Si 0.220 V 0.004 CE(Long Formula) = 0.39 T/S(PSI) 78,375 Y/S(PSI) 50,000 EL(%) 34.95 RA(%) 65.85 Brinell 135 BHN 135 BHN
41 7559440	75	58217	36-1 X 3/4 3M A105N LREO T SA/A105N Al 0.025 C 0.200 Cb 0.000 Co 0.004 Cr 0.090 Cu 0.170 Mn 0.990 Mo 0.010 N 0.004 Nb 0.013 Ni 0.040 P 0.014 S 0.017 Si 0.200 V 0.004 CE(Long Formula) = 0.40 T/S(PSI) 73,750 Y/S(PSI) 48,750 EL(%) 35.10 RA(%) 65.85 Brinell 132 BHN 130 BHN
42 7552378	25	57547	36-1 X 3/4 6M A105N LREO T SA/A105N Al 0.027 C 0.200 Co 0.003 Cr 0.050 Cu 0.170 Mn 1.020 Mo 0.010 Nb 0.017 Ni 0.040 P 0.008 S 0.020 Si 0.230 V 0.000 CE(Long Formula) = 0.40 T/S(PSI) 73,441 Y/S(PSI) 48,716 EL(%) 33.60 RA(%) 67.90 Brinell 139 BHN 139 BHN
43 7552386	5	57396	36-2 X 1 6000 A105N LREO T SA/A105N Al 0.026 C 0.200 Co 0.003 Cr 0.060 Cu 0.090 Mn 1.000 Mo 0.010 Nb 0.014 Ni 0.040 P 0.006 S 0.021 Si 0.200 V 0.000 CE(Long Formula) = 0.39 T/S(PSI) 73,500 Y/S(PSI) 50,000 EL(%) 32.30 RA(%) 62.75 Brinell 127 BHN 127 BHN

ASME STAMP SEC. II
ED. 2010 ADD.
INT. JL DATE 3-29-11

mid
(1) EOL-36-1 x 3/4
.524

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 Meloney Specht
Meloney Specht

CMTR: REV2

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

CUSTOMER: CCTF CORPORATION

CUSTOMER ORDER NO.: 4889408-00

DATE 03/01/2011

BONNEY ORDER NO. B000092219

SHIP TO: CCTF CORPORATION (EDMONTON)
5407 - 53RD AVE.
EDMONTON AB T6B 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. THE MATERIAL SUPPLIED AS A105N MEETS THE REQUIREMENTS OF BOTH NACE MR0103-2007 AND NACE MR0175/ISO 15156-2.
4. CERTIFYING ASTM A105-09 / ASME SA105-07 EDITION.
5. THE PRODUCT SUPPLIED WAS INSPECTED IN ACCORDANCE WITH EN 10204:2004 EDITION TYPE 3.1 INSPECTION DOCUMENT. (EUROPEAN STANDARD)
6. THE UNIT OF MEASURE FOR TENSILE AND YIELD (0.2%) STRENGTH ARE IN REPORTED IN PSI.
7. ELONGATION TEST RESULTS ARE OBTAINED USING STANDARD ROUND SPECIMEN, 2 INCH OR 50 MM GAGE LENGTH.

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 Meloney Specht
Meloney Specht

CMTR: REV2

CERTIFIED MILL TEST REPORT

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CUSTOMER: CCTF CORPORATION

CUSTOMER ORDER NO.: 4889408-00

DATE 03/01/2011

BONNEY ORDER NO. B000092219

SHIP TO: CCTF CORPORATION (EDMONTON)
5407 - 53RD AVE.
EDMONTON AB T6B 3G2
Canada

ITEM	QUANTITY	LOT NO.	GRADE OR SPECIFICATION NO CHEMICAL ANALYSIS, PHYSICAL PROPERTIES, REMARKS
40 7552661	81	58181	10-3X1 6M A105N SOCK S SA/A105N Al 0.021 C 0.200 Co 0.004 Cr 0.030 Cu 0.080 Mn 1.040 Mo 0.010 N 0.004 Nb 0.014 Ni 0.020 P 0.008 S 0.019 Si 0.220 V 0.004 CE(Long Formula) = 0.39 T/S(PSI) 78,375 Y/S(PSI) 50,000 EL(%) 34.95 RA(%) 65.85 Brinell 135 BHN 135 BHN
41 7559440	75	58217	36-1 X 3/4 3M A105N LREO T SA/A105N Al 0.025 C 0.200 Cb 0.000 Co 0.004 Cr 0.090 Cu 0.170 Mn 0.990 Mo 0.010 N 0.004 Nb 0.013 Ni 0.040 P 0.014 S 0.017 Si 0.200 V 0.004 CE(Long Formula) = 0.40 T/S(PSI) 73,750 Y/S(PSI) 48,750 EL(%) 35.10 RA(%) 65.85 Brinell 132 BHN 130 BHN
42 7552378	25	57547	36-1 X 3/4 6M A105N LREO T SA/A105N Al 0.027 C 0.200 Co 0.003 Cr 0.050 Cu 0.170 Mn 1.020 Mo 0.010 Nb 0.017 Ni 0.040 P 0.008 S 0.020 Si 0.230 V 0.000 CE(Long Formula) = 0.40 T/S(PSI) 73,441 Y/S(PSI) 48,716 EL(%) 33.60 RA(%) 67.90 Brinell 139 BHN 139 BHN
43 7552386	5	57396	36-2 X 1 6000 A105N LREO T SA/A105N Al 0.026 C 0.200 Co 0.003 Cr 0.060 Cu 0.090 Mn 1.000 Mo 0.010 Nb 0.014 Ni 0.040 P 0.006 S 0.021 Si 0.200 V 0.000 CE(Long Formula) = 0.39 T/S(PSI) 73,500 Y/S(PSI) 50,000 EL(%) 32.30 RA(%) 62.75 Brinell 127 BHN 127 BHN

ASME STAMP SEC. II
ED. 2010 ADD.
INT. JL DATE 3-29-11

mid
(1) EOL-36-1 x 3/4
.524

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 Meloney Specht
Meloney Specht

CMTR: REV2

CERTIFIED MILL TEST REPORT

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

CUSTOMER: CCTF CORPORATION

CUSTOMER ORDER NO.: 4889408-00

DATE 03/01/2011

BONNEY ORDER NO. B000092219

SHIP TO: CCTF CORPORATION (EDMONTON)
5407 - 53RD AVE.
EDMONTON AB T6B 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. THE MATERIAL SUPPLIED AS A105N MEETS THE REQUIREMENTS OF BOTH NACE MR0103-2007 AND NACE MR0175/ISO 15156-2.
4. CERTIFYING ASTM A105-09 / ASME SA105-07 EDITION.
5. THE PRODUCT SUPPLIED WAS INSPECTED IN ACCORDANCE WITH EN 10204:2004 EDITION TYPE 3.1 INSPECTION DOCUMENT. (EUROPEAN STANDARD)
6. THE UNIT OF MEASURE FOR TENSILE AND YIELD (0.2%) STRENGTH ARE IN REPORTED IN PSI.
7. ELONGATION TEST RESULTS ARE OBTAINED USING STANDARD ROUND SPECIMEN, 2 INCH OR 50 MM GAGE LENGTH.

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 Meloney Specht
Meloney Specht

CMTR: REV2

CERTIFIED MILL TEST REPORT

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

CUSTOMER: CCTF CORPORATION

CUSTOMER ORDER NO.: 4889408-00

DATE 03/01/2011

BONNEY ORDER NO. B000092219

SHIP TO: CCTF CORPORATION (EDMONTON)
5407 - 53RD AVE.
EDMONTON AB T6B 3G2
Canada

ITEM	QUANTITY	LOT NO.	GRADE OR SPECIFICATION NO CHEMICAL ANALYSIS, PHYSICAL PROPERTIES, REMARKS
40 7552661	81	58181	10-3X1 6M A105N SOCK S SA/A105N Al 0.021 C 0.200 Co 0.004 Cr 0.030 Cu 0.080 Mn 1.040 Mo 0.010 N 0.004 Nb 0.014 Ni 0.020 P 0.008 S 0.019 Si 0.220 V 0.004 CE(Long Formula) = 0.39 T/S(PSI) 78,375 Y/S(PSI) 50,000 EL(%) 34.95 RA(%) 65.85 Brinell 135 BHN 135 BHN
41 7559440	75	58217	36-1 X 3/4 3M A105N LREO T SA/A105N Al 0.025 C 0.200 Cb 0.000 Co 0.004 Cr 0.090 Cu 0.170 Mn 0.990 Mo 0.010 N 0.004 Nb 0.013 Ni 0.040 P 0.014 S 0.017 Si 0.200 V 0.004 CE(Long Formula) = 0.40 T/S(PSI) 73,750 Y/S(PSI) 48,750 EL(%) 35.10 RA(%) 65.85 Brinell 132 BHN 130 BHN
42 7552378	25	57547	36-1 X 3/4 6M A105N LREO T SA/A105N Al 0.027 C 0.200 Co 0.003 Cr 0.050 Cu 0.170 Mn 1.020 Mo 0.010 Nb 0.017 Ni 0.040 P 0.008 S 0.020 Si 0.230 V 0.000 CE(Long Formula) = 0.40 T/S(PSI) 73,441 Y/S(PSI) 48,716 EL(%) 33.60 RA(%) 67.90 Brinell 139 BHN 139 BHN
43 7552386	5	57396	36-2 X 1 6000 A105N LREO T SA/A105N Al 0.026 C 0.200 Co 0.003 Cr 0.060 Cu 0.090 Mn 1.000 Mo 0.010 Nb 0.014 Ni 0.040 P 0.006 S 0.021 Si 0.200 V 0.000 CE(Long Formula) = 0.39 T/S(PSI) 73,500 Y/S(PSI) 50,000 EL(%) 32.30 RA(%) 62.75 Brinell 127 BHN 127 BHN

ASME STAMP SEC. II
ED. 2010 ADD.
INT. JL DATE 3-29-11

mid
(1) EOL-36-1 x 3/4
.524

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 Meloney Specht
Meloney Specht

CMTR: REV2

CERTIFIED MILL TEST REPORT

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LOG NO. F00000000011601

BONNEY FORGE CORPORATION
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www.bonneyforge.com

CUSTOMER: CCTF CORPORATION

CUSTOMER ORDER NO.: 4889408-00

DATE 03/01/2011

BONNEY ORDER NO. B000092219

SHIP TO: CCTF CORPORATION (EDMONTON)
5407 - 53RD AVE.
EDMONTON AB T6B 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. THE MATERIAL SUPPLIED AS A105N MEETS THE REQUIREMENTS OF BOTH NACE MR0103-2007 AND NACE MR0175/ISO 15156-2.
4. CERTIFYING ASTM A105-09 / ASME SA105-07 EDITION.
5. THE PRODUCT SUPPLIED WAS INSPECTED IN ACCORDANCE WITH EN 10204:2004 EDITION TYPE 3.1 INSPECTION DOCUMENT. (EUROPEAN STANDARD)
6. THE UNIT OF MEASURE FOR TENSILE AND YIELD (0.2%) STRENGTH ARE IN REPORTED IN PSI.
7. ELONGATION TEST RESULTS ARE OBTAINED USING STANDARD ROUND SPECIMEN, 2 INCH OR 50 MM GAGE LENGTH.

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 Meloney Specht
Meloney Specht

CMTR: REV2

C.E. ✓ 4x2 CONC

PO # 981172 / WLD - 40CR4020(1) @ .263" THK

Purchaser : CCTF CORPORATION

INSPECTION CERTIFICATE

TO EN10204 3.1

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

E-No.	Purchase Order No.	Job No.	D M Y	Certificate No.
MC-230	4028202		29/12/2010	T- 2010200772

No.		MFG. No. (Heat Identification No.)	Specification for Material Made from Seamless Pipe ASTM A234-10/ASME SA234-07 Gr.WPB CSA Z245.11-09 Gr.241 CAT1 NACE MR0175/ISO 15156-2 R3-03 &MR0103-07	Specification for Inspection ASME B16.9-2007		Visual Examination	Dimensional Inspection
			Product & Size (T:*1)	Quantity	Heat Treatment (Note 1)	Good	Good
1		10K20016	RC WPB 3 X 2 S40	60	N	Hardness Actual Data HB : 125 - 145	Item No. 7513178
2		10M20013	RC WPB 3 X 1 1/2 S40	35/40	N	HB : 130 - 145	7513194
3		10K20019	RC WPB 4 X 3 S40	66/125	N	HB : 135 - 150	7513330
4		10N20013	RC WPB 4 X 3 S40	30/125	N	HB : 135 - 150	7513330
5		10N20015 ✓	RC WPB 4 X 2 S40 ✓	75	N	HB : 125 - 140 ✓	7513372

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.		%	HARDNESS MAX
Max.			10	29										240	415	30	197 HB : GOOD
Material Heat No.		30		106	50	58	40	40	40	15	80	20			585		
1	15519K	16	21	70	9	5	6	2	4	0.4	<3	<3	29	274	416	41	
2	J8L9445	19	21	81	23	7	3	2	6	1	0	1	34	302	506	36	
3	40739	16	26	85	11	1	7	3	7	1	3	1	33	312	465	36	
4	J8LC423	18	20	73	21	4	2	3	6	1	0	0	32	311	470	38	
5	J8LC423	18 ✓	20 ✓	73 ✓	21 ✓	4 ✓	2 ✓	3 ✓	6 ✓	1 ✓	0 1 ✓	0	32	311 ✓	470 ✓	38 ✓	

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

fittings was manufactured,sampled,tested,and inspected in accordance with the specification,and was found to meet the requirements

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

MAGNETIC PARTICLE EXAMINATION FOR TEE ONLY :

ASME STAMP SEC. II

ED. 2010 ADD.

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

Quality Assurance Manager

CERTIFIED MILL TEST REPORT

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LOG NO. F00000000011391

BONNEY FORGE CORPORATION
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: MRC MIDFIELD

CUSTOMER ORDER NO.: S759094394

DATE 02/23/2011

BONNEY ORDER NO. B000090745

SHIP TO: MRC MIDFIELD
502-25 AVENUE
NISKU AB T9E 0K6
Canada

ITEM	QUANTITY	LOT NO.	GRADE OR SPECIFICATION NO. / CHEMICAL ANALYSIS, PHYSICAL PROPERTIES, REMARKS:
80 18C13063	6	58198	5 -4 X 2 S160 LF2 WELD B SA/A350 LF2 CL1 Al 0.026 C 0.210 Co 0.005 Cr 0.040 Cu 0.120 Mn 1.100 Mo 0.010 N 0.005 Nb 0.016 Ni 0.050 P 0.012 S 0.019 Si 0.170 V 0.004 CE(Long Formula) = 0.42 T/S(PSI) 76,250 Y/S(PSI) 52,500 EL(%) 28.60 RA(%) 56.20 Brinell 132 BHN 135 BHN Charpy -50 F 62/64/51 (Ft-Lbs) Average 59.00
100 18C13330	171	58188	5 -4 X 1 3000 LF2 THRD T SA/A350 LF2 CL1 Al 0.023 C 0.220 Cb 0.000 Co 0.004 Cr 0.040 Cu 0.070 Mn 1.030 Mo 0.000 N 0.004 Nb 0.012 Ni 0.020 P 0.008 S 0.019 Si 0.260 V 0.004 CE(Long Formula) = 0.41 T/S(PSI) 75,000 Y/S(PSI) 49,900 EL(%) 29.00 RA(%) 66.00 Brinell 144 BHN 144 BHN Charpy -50 F 44/107/28 (Ft-Lbs) Average 59.70
108 18C13480	7	58217	10 -3 X 3/4 6000 LF2 SOCK S SA/A350 LF2 CL1 Al 0.025 C 0.200 Cb 0.000 Co 0.004 Cr 0.090 Cu 0.170 Mn 0.990 Mo 0.010 N 0.004 Nb 0.013 Ni 0.040 P 0.014 S 0.017 Si 0.200 V 0.004 CE(Long Formula) = 0.40 T/S(PSI) 73,750 Y/S(PSI) 48,750 EL(%) 35.10 RA(%) 65.85 Brinell 132 BHN 130 BHN Charpy -50 F 49/50/45 (Ft-Lbs) Average 48.00

ASME STAMP SEC. II

MID Pot# 982609

ED. 2010 ADD.

INT. dc DATE 3-25-11

TOL-3M1 X 4-5 LT. (22) @ 0.510" THK

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 Meloney Specht

Meloney Specht
QUALITY PROCESS MANAGER

CMTR: REV2

CERTIFIED MILL TEST REPORT

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LOG NO. F00000000009102

BONNEY FORGE CORPORATION
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: MIDFIELD SUPPLY ULC

DATE 12/16/2010

CUSTOMER ORDER NO.: S759081099

BONNEY ORDER NO. B000085962

SHIP TO: MIDFIELD SUPPLY ULC
502-25 AVENUE
NISKU AB T9E 0K6
Canada

P.O. 940866 ✓
(6) mid ✓
Tol - 3m1 * 4X5
.480

ITEM	QUANTITY	LOT NO.	GRADE OR SPECIFICATION NO CHEMICAL ANALYSIS, PHYSICAL PROPERTIES, REMARKS
95 18C12556	46	58134	4 X 1/2 3M/6M A105N HXBU T SA/A105N Al 0.022 C 0.200 Cb 0.000 Co 0.005 Cr 0.050 Cu 0.170 Mn 1.050 Mo 0.010 N 0.006 Nb 0.013 Ni 0.040 P 0.007 S 0.020 Si 0.190 V 0.004 CE(Long Formula) = 0.40 T/S(PSI) 72,500 Y/S(PSI) 49,375 EL(%) 30.10 RA(%) 64.20 Brinell 130 BHN 130 BHN
96 18C12562	14	58134	4 X2 3M/6M A105N HXBU T SA/A105N Al 0.022 C 0.200 Cb 0.000 Co 0.005 Cr 0.050 Cu 0.170 Mn 1.050 Mo 0.010 N 0.006 Nb 0.013 Ni 0.040 P 0.007 S 0.020 Si 0.190 V 0.004 CE(Long Formula) = 0.40 T/S(PSI) 72,500 Y/S(PSI) 49,375 EL(%) 30.10 RA(%) 64.20 Brinell 130 BHN 130 BHN
98 18C12592	30	4819	2 6M A105N HCP T SA/A105N Al 0.027 C 0.170 Cb 0.001 Co 0.006 Cr 0.090 Cu 0.180 Mn 1.130 Mo 0.020 N 0.008 Ni 0.070 P 0.007 S 0.019 Si 0.270 V 0.036 CE(Long Formula) = 0.40 T/S(PSI) 77,400 Y/S(PSI) 49,300 EL(%) 27.00 RA(%) 56.70 Brinell 161 BHN 150 BHN
128 18C13309	500	58141 ✓	5-4X1 3M A105N THRD T ✓ SA/A105N ✓ Al 0.004 C 0.200 ✓ Cb 0.000 Co 0.000 Cr 0.074 ✓ Cu 0.200 ✓ Mn 1.000 ✓ Mo 0.018 ✓ N 0.009 Nb 0.008 Ni 0.073 ✓ P 0.013 ✓ S 0.020 ✓ Si 0.230 ✓ V 0.026 ✓ CE(Long Formula) = 0.41 ✓ T/S(PSI) 78,750 ✓ Y/S(PSI) 54,000 ✓ EL(%) 31.85 ✓ RA(%) 56.20 Brinell 147 BHN 147 BHN ✓

ASME STAMP SEC. II

ED. 2010 ADD. _____

INT. BF DATE 3-22-11

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 Brenda Garlock
BRENDA GARLOCK
QUALITY PROCESS MANAGER

CMTR: REV2

CERTIFIED MILL TEST REPORT

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LOG NO. F00000000009102

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

CUSTOMER: MIDFIELD SUPPLY ULC

DATE 12/16/2010

CUSTOMER ORDER NO.: S759081099

BONNEY ORDER NO. B000085962

SHIP TO: MIDFIELD SUPPLY ULC
502-25 AVENUE
NISKU AB T9E 0K6
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 PRODUCT SUPPLIED WAS INSPECTED IN ACCORDANCE WITH EN 10204:2004 EDITION TYPE 3.1 INSPECTION DOCUMENT. (EUROPEAN STANDARD)
3. THE UNIT OF MEASURE FOR TENSILE AND YIELD (0.2%) STRENGTH ARE IN REPORTED IN PSI.
4. ELONGATION TEST RESULTS ARE OBTAINED USING STANDARD ROUND SPECIMEN, 2 INCH OR 50 MM GAGE LENGTH.
5. ITEM - 6, 20, 31, 71, 95, 96, 98, 128 -THE MATERIAL SUPPLIED MEETS THE REQUIREMENTS OF NACE MR0175/ISO 15156-2.
6. ITEM - 6, 20, 31, 71, 95, 96, 98, 128 -CERTIFYING ASTM A105-09 / ASME SA105-07 EDITION.
7. ITEM - 83, 122 -CERTIFYING TO ASTM A350 LF2 07 REVISION.
8. ITEM - 83, 122 -THE MATERIAL OF THE FITTINGS SUPPLIED IS ASTM A350-LF2 BUT MEETS THE REQUIREMENTS OF ASME SA350-LF2.
9. ITEM - 83, 122 -THE CHARPY V-NOTCH IMPACT TEST WAS PERFORMED AT -50 DEGREES FAHRENHEIT IN ACCORDANCE WITH A350-LF2.
10. ITEM - 83, 122 -THE MATERIAL SUPPLIED AS A350 LF2 CL1 MEETS THE REQUIREMENTS OF BOTH NACE MR0103-2007 AND NACE MR0175/ISO 15156-2.
11. ITEM - 83, 122 -THE MATERIAL SUPPLIED WAS NORMALIZED IN ACCORDANCE WITH ASTM A350 HEAT TREATING REQUIREMENTS.

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 Brenda Garlock

BRENDA GARLOCK
QUALITY PROCESS MANAGER

CMTR: REV2

MILL TEST REPORTS

P.O. 978891 ✓
MID ✓
(9) 107478
.628

Bonney Forge
14496 Croghan Pike
Mt. Union, PA 17066

CERTIFIED MILL TEST REPORT

Midfield 03/22/11

LOT NO.	CHEMICAL ANALYSIS, PHYSICAL PROPERTIES, REMARKS
58181 ✓	1" 6M A105N Thredolet Threaded ✓

C	0.200 ✓	MN	1.040 ✓	P	0.008 ✓	S	0.019 ✓	SI	0.220 ✓
NI	0.020 ✓	CR	0.030 ✓	MO	0.010 ✓	CU	0.080 ✓	CO	0.004
V	0.004 ✓	AL	0.021	N	0.004	Nb	0.014		
CE(LONG FORMULA) = 0.389 ✓									
T/S 78375 ✓	Y/S 50000 ✓	EL 34.950 ✓	RA 65.850						
BRINELL HARDNESS: 135 ✓									

Click here for Original Steel Mill Certification

1. THE MATERIAL SUPPLIED MEETS THE REQUIREMENTS OF NACE MRO175/ISO ✓ 15156-2.
2. THE MATERIAL SUPPLIED WAS INSPECTED AND MANUFACTURED IN ACCORDANCE WITH EN DIN 10204:2004 EDITION TYPE 3.1 INSPECTION DOCUMENT.
3. CERTIFYING ASTM A105-09 / ASME SA105-07 EDITION.
4. THE MATERIAL SUPPLIED IDENTIFIED AS A105N WAS NORMALIZED IN ACCORDANCE WITH ASTM A105 HEAT TREATING REQUIREMENTS.

THIS DOCUMENT HAS BEEN ELECTRONICALLY SUBMITTED.

ASME STAMP SEC. II

ED. 2010 ADD. _____

INT. RB DATE 3-22-11

(1) P.O. 978891 MID ✓
~~FLG-90080 RWN20~~ FLG- 150040 RWN20
1.530

CLIENTE / Customer / Client

CCTF A DIVISION OF EMCO LTD.
5407 - 53 AVENUE NW
EDMONTON, AB T6B 3G2
CANADA

CERTIFICADO DE INSPECCION
Works Certificate - Certificat d'Usine

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

FECHA: Date-Date: 14/06/2004
N.º No.-N.º 84503
HOJA: Page: 1

N.º: 922164

ULMA FORJA, S COOP.
Bº Zubillaga, 3 • Apdo. 14
20560 OÑATI (Guipuzkoa) SPAIN
Tel.: 34 - 943 780552
Fax: 34 - 943 781808
E-mail: forja@forging.ulma.es

PRODUCTO Article - Produit: FLANGES

SU PEDIDO N.º Your Order No. Votre Cde. N.º: 4868593-00

DE of. - de: 11/12/2003

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

NORMAS APLICABLES Requirements - Normes applicables: ASME B16.5-96

MATERIAL CORRESPONDIENTE Material Correspondent - Qualité: ASTMA105N-02 ASME SA105N

NACE MR-01-75/03 ✓

MODO DE FUSION (*) Steel making - Elaboration de l'acier: E = Elec. Y = Oxigeno básico

MARCA DEL FABRICANTE Mark of factory Marque du fabricant: 40184

DEPARTAMENTO Section Departement: QUALITY ASSURANCE

PARTIDA Item Poste	CANTIDAD Quantity Quantité	DESCRIPCION Description Description	OBSERVACIONES Remarks Observations (*)	COLADA N.º Heat No N.º Coulée	RESISTENCIA T. Strength Resist Rupt N/mm2	LIMITE ELAST. Yield Point Limite élastique N/mm2	ALARGAM. Elongation Allongement Lo= 4 d %	ESTRICCION Reduction A Striction %	RESILIENCIA Impact energy Resilience Joules	PROBETA test bar MEDIA AVERAGE MOYENNE	PROBETA test bar T.º	DUREZA Hardness Durete HB
18 7530828	105	WN 2 1500LB S40 RF A105N ✓	NE	189A4 ✓	523 ✓	327 ✓	32,00 ✓	64,00				152 ✓

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

COLADA Heat Coulée No	C %	Si %	Mn %	P %	S %	Cr %	Ni %	Mo %	Nb %	V %	Cu %	CEQ %
189A4 ✓	0.190 ✓	0.290 ✓	0.850 ✓	0.018 ✓	0.003 ✓	0.090 ✓	0.150 ✓	0.040 ✓	0,001	0.001 ✓	0.400 ✓	0.395 ✓

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

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

EL INSPECTOR
Works Inspector - L'Inspecteur

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

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

ASME STAMP SEC. II

ED. 2010 ADD.

(2) P.O. 978891 ✓
mid ✓
FLG - 150 40 RWN 40 ✓
.942

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@ksts.seed.net.tw

MILL TEST CERTIFICATE

EN10204-3.1.B(DIN50049/3.1.B)

Customer: W.F.F.FITTINGS & FLANGES (CANADA) LTD.

Order No.: D000200/S759086553

Certificate No.: SE100555
Date: 01/17/2011
Page: 1 OF 1

PRODUCT	MATERIAL SPECIFICATIONS	DIMENSIONAL SPECIFICATIONS
FORGED CARBON STEEL FLANGES	ASTM A105-09/ASME SA105-09	ASME B16.5-09 CSA Z245.12

Item No.	CUSTOMER P/N	DESCRIPTION	QUANTITY	CHEMICAL COMPOSITION (%) C	Si	Mn	P	S	Cu	Cr	Ni	Mo	V	Nb	N			CE(*3)
			Min	-	0.100	0.600	-	-	-	-	-	-	-	-	-			
			Max	0.350	0.350	1.050	0.035	0.040	0.400	0.300	0.400	0.120	0.080	0.020	-			
1		300 SWRF XS 1" A105N	40 PCE	0.207	0.250	1.060	0.009	0.009	0.009	0.041	0.044	0.005	0.031	0.005	0.004			0.396
2		150 WNRF STD 4" A105N ✓	1,935 PCE	0.200 ✓	0.210 ✓	1.100 ✓	0.013 ✓	0.010 ✓	0.130 ✓	0.090 ✓	0.050 ✓	0.013 ✓	0.009 ✓	0.001 ✓	0.008			0.416 ✓
3		150 WNRF XS 4" A105N	15 PCE	0.200	0.210	1.100	0.013	0.010	0.130	0.090	0.050	0.013	0.009	0.001	0.008			0.416
4		600 WNRF XS 6" A105N	5 PCE	0.207	0.250	1.070	0.012	0.015	0.012	0.029	0.048	0.005	0.011	0.005	0.004			0.396

Item No.	Heat No.	T.S.(*1) (MPA)	Y.S.(*1) (MPA)	E.L.(*1) (%)	Hardness (HB)	R.A.(*1) (%)	Impact Test Temp: Minimum: Joule 1	2	3	Material Supplier
Min		485.0	250.0	22.0	-	30.0				
Max		-	-	-	187	-				
1	21383 ✓	517.8	379.5	35.6	153	69.5				NTMK
2	80407 ✓	533.5 ✓	395.2 ✓	34.4 ✓	154 ✓	69.5				WEI CHIH STEEL
3	80407	533.5	395.2	34.4	154	69.5				WEI CHIH STEEL
4	40747	503.1	335.4	35.4	149	68.6				NTMK

■ HEAT TREATMENT(*2)
☒ N
■ REMARKS
880°C X3HRS
CONFORMS WITH NACE MR0103-07 AND NACE MR0175/ISO15156.2 ✓
CONFORMS WITH Z245.12 CAT I GR.248 SOUR SERVICE-05
TEST SPECIMEN ORIENTATION: TRANSVERSE

*1: T.S. = Tensile Strength, Y.S.=Yield Strength, E.L.=Elongation, R.A.=Reduction of Area.

*2: N=Normalized, A=Annealed, Q=Quenched, T=Tempered, S.T=Solution Treated, S.R=Stress Relieved, A.C=Air Cooled, F.C=Furance Cooled, W.C=Water Cooled, O.C=Oil Cooled.

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

SAN ENG STEEL FORGING CO., LTD. QUALITY ASSURANCE DEP'T C.O.7

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 Dep't

ASME STAMP SEC. II

ED. 2010 ADD.

(2) P.O. 978891 ✓
M.D ✓
WLD-409020 ✓
.179

INSPECTION CERTIFICATE

AWAJI MATERIA (THAILAND) CO.,LTD.
81,MOO4, PRAKASA ROAD, TAMBOL BANGMUANG, AMPHUR MUANG
SAMUTPRAKARN THAILAND 10270, Tel : (662)701-5226

MADE FROM SEAMLESS STEEL PIPE

Purchaser : THE BROADHEAD GROUP/MCJUNKIN CANADA

Date : DECEMBER 15, 2010

Certificate No. : T10-Z545

Order No.	Job No.	Product	Raw Material Pipe Maker
CS759-074521/WPB/2		CARBON STEEL BUTT WELDING FITTINGS	SUMITOMO METAL INDUSTRIES, LTD.
Inspection Standard	**Material Standard**		
ASME B16.9-07 ASTM A960-08a NACE MR-0175-03, MR-0103-05	ASTM A234-07 WPB ASME SA234-07 WPB except nuclear usage CSA Z245.11-09, GR.241 CAT.I	Appearance: GOOD — Dimension: GOOD	*3 U.T. W.T. INSPECTED

Manufacturing No.	Product code	Material	Article & Size	Quantity	Note.
0Y155 ✓		WPB	STD 90 LONG RADIUS ELBOW 2" ✓	1,000 Pcs.	"ALL FITTING MANUFACTURED BY AWAJI MATERIA (THAILAND) CO.,LTD. ARE PRODUCED FROM A106 GR.B SEAMLESS PIPE"

	Chemical Composition (%)																	*1 Mechanical Test			Hardness
Specification	C	Si	*2Mn	P	S	Cu	Ni	Cr	Mo	V	Nb	Ti	B	Ca	N	Al	C.E.	Y.S.	T.S.	E	
Min.	X100	X100	X100	X1000	X1000	X100	X100	X100	X100	X100	X100	X100	X10000	X10000	X1000	X1000	X100	MPa		%	HB
Max.	-	10	29	-	-	-	-	-	-	-	-	-	-	-	-	-	-				
Pipe Charge No.	30	-	106	50	58	40	40	40	15	8	2	2	5	65	8	-	-	240	415	22.5	-
J0L8137	19 ✓	21 ✓	69 ✓	19 ✓	7 ✓	2 ✓	2 ✓	4 ✓	1 ✓	0 ✓	0	0	1	11	9	10	(32)	344 ✓	492 ✓	55 ✓	140 ✓
																		-	655	-	197

$$C.E. = C + \frac{Mn}{6} + \frac{Cr+Mo+V}{5} + \frac{Ni+Cu}{15}$$

Inspection Certificate : ACCORDING TO EN 10204, 3.1 : 2004

ISO 9001: 2008 Manufacturing Company
Certified by BV, Certificate No. TH10000101

*1 Y.S.= Yield Strength, T.S. = Tensile Strength, E = Elongation,

*3 UT = Ultrasonic thickness inspection,

*2 For each reduction of 0.01% below the specified carbon(C) Maximum, an increase of 0.06% manganese(Mn) above specified maximum will be permitted, up to a maximum of 1.35% as per foot note D of ASTM A234/A234M-07 Table 1.

ELBOW / Forming temperature 780℃— 930℃ and cooled in still air
TEE, REDUCER & CAP / Normalizing : 900℃

"We hereby certify that the material described herein has been duly inspected and conforms to the standard as specified above.

AT-24(2)12

Surveyor to

Chief of Inspection Section S.MAEKAWA

ASME STAMP SEC. II

ED. 2010 ADD.

CERTIFIED MILL TEST REPORT

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

LOG NO. 329294 PAGE 1

BONNEY FORGE
P.O. BOX 330 • 14496 CROGHAN PIKE • MOUNT UNION, PA 170
(814) 542-2545 • (800) 345-7546 • FAX (814) 542-4806
www.bonneyforge.com

CUSTOMER: CCTF CORPORATION

Date 12/04/08

CUSTOMER'S Order No.: 4885092-00

Bonney Order No. B000045401

SHIPPED TO: CCTF CORPORATION (EDMONTON)
5407 - 53RD AVE.

EDMONTON, ABT6B 3G2 Canada

P.O. 978891 ✓
(6) MID ✓
WOL-8020 ✓
.740

ITEM	QUANTITY	LOT NO.	GRADE OR SPECIFICATION NO. CHEMICAL ANALYSIS, PHYSICAL PROPERTIES, REMARKS:
			SA/A105N ✓
003	15	57614 ✓ 7551100	6 X 2 XS A105N WELD B ✓

C .190 MN 1.030 P .007 S .021 SI .190 ✓
NI .040 CU .180 CO .004 CR .050 MO .010 ✓
V .000 AL .022 NB .016
CE(LONG FORMULA) = 0.39 ✓
T/S 73500 Y/S 52375 EL 33.45 RA 68.55
BRINELL HARDNESS1: 130 HARDNESS2: 130 ✓

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 PRODUCT SUPPLIED WAS INSPECTED IN ACCORDANCE WITH EN 10204:2004 EDITION TYPE 3.1 INSPECTION DOCUMENT. (EUROPEAN STANDARD)
6. THE MATERIAL SUPPLIED MEETS THE REQUIREMENTS OF BOTH NACE MR0103-2007 AND NACE MR0175/ISO 15156.

***** 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 che

by

Cris Boozel

QUALITY PROCESS MANAGER

ASME STAMP SEC. II

OMTR: REV 1

ED. 2010 ADD.

INT. TB DATE 3-22-11

(3) P.O. 978891 mD ✓ FLG-150080 RWN20 ✓
~~FLG-150080 RWN20~~
1,543

Approved Quality Management System according ISO 9001 : 2000

BEBITZ

Bebitz Flanges Works Pvt. Ltd. Survey No. 140/2, At/Post-Saravali, Bolsar
Tal-Palghar, Dist.-Thane - 401501, INDIA
Tel. +91 2525 274461-66, Fax +91 2525 274266/67, Email: quality@bebitz.in

Inspection Certificate 3.1

according EN 10204 : 2005 **No.** 09-50028 **Date** 5/5/2009

Manufacturer's brand {B} Stamp of the testing engineer TKO 7

Customer MIDFIELD SUPPLY ULC
502-25 AVENUE,NISKU
ALBERTA T9 E 0K KANADA

P.O. No. 591243
Invoice No. BFW/893
Delivery No. 2530989
Pos-No. 48

Qty.	Product	Heat no./Test no.
170	2 inch Welding Neck Flange 1500 lbs Sch.80 raised Face ✓	08AJ159/2 ✓

Material Grade 248 Cat.II - CSA Standard Z245.12-05 / A 105N ASTM A105M / ASME SA105M
normalized 880-910 °C, still air

Demands ASME B 16.5-1996 / B 16.5a-1998
NACE MR0175 / MR0103 - ISO 15156 ✓
CSA Z245.12-05 / 2007 ASME Boiler & Pressure Vessel Code - Section II Part A

Ladle analysis **Melting process** E

C	Si	Mn	P	S	Cr	Ni	Ti	Mo	Nb	V	N	Cu	Al	CEV
0.190 ✓	0.23 ✓	0.85 ✓	0.017 ✓	0.008 ✓	0.26 ✓	0.010 ✓		0.001 ✓	0.001	0.002 ✓		0.01 ✓	0.029	0.38 ✓

$$CEV = C + \frac{Mn}{6} + \frac{V + Mo + Cr}{5} + \frac{Ni + Cu}{15} \qquad PREN = Cr + 3{,}3 \times Mo + 16 \times N$$

Mechanical tests

Position of Specimen: q/t
Tensile Test - ASTM A 370
$l_0 = 4d_0$

Temp °C	Yield strength 0,2% N/mm²	Yield strength 1,0% N/mm²	Tensile strength N/mm²	Elongation %	Red. of area %	Charpy Impact Test EN 10045-1 / ASTM A 370 Temp. °C	Single values J			Average J	Hardness ISO 6506 A 370 HBW 10/3000
20	min 250 max		485	22.0	30	20	27			27	137 187
20	278 ✓		506 ✓	32.3 ✓	58	20	62	60	60	60.7	155 ✓
20	281		509	30.1	57	20	54	52	50	52.0	151
20	285		504	32.6	60	20	56	58	56	56.7	153
20	276		513	31.4	59	20	58	60	54	57.3	153

ASME STAMP SEC. II

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INT. YB DATE 3-22-11

Results of inspection and dimension without objections.
The product meets the requirements of the order.

Approved manufacturer according AD-Merkblatt W 0
Certified according to PED 97/23/EG, certifying body for pressure equipment TÜV Nord Group, registration-no. 0045

Sanjeev Kumar, Inspection Representative of the Manufacturer

F-QAC-09-01

P.O. 981170 ✓
(1) MID ✓
105392 ✓
.246

Purchaser : CCTF CORPORATION

INSPECTION CERTIFICATE

TO EN10204 3.1

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

E-No.	Purchase Order No.	Job No.	D M Y Certificate No.
MC-230	4028202		29/12/2010 T- 2010200772

No.		MFG. No. (Heat Identification No.)	Specification for Material Made from Seamless Pipe ASTM A234-10/ASME SA234-07 Gr.WPB CSA Z245.11-09 Gr.241 CAT1 NACE MR0175/ISO 15156-2 R3-03 &MR0103-07	Specification for Inspection ASME B16.9-2007		Visual Examination Good	Dimensional Inspection Good
			Product & Size (T:*1)	Quantity	Heat Treatment (Note 1)	Hardness Actual Data	Item No.
1		10K20016	RC WPB 3 X 2 S40	60	N	HB : 125 - 145	7513178
2		10M20013	RC WPB 3 X 1 1/2 S40	35/40	N	HB : 130 - 145	7513194
3		10K20019	RC WPB 4 X 3 S40	66/125	N	HB : 135 - 150	7513330
4		10N20013 ✓	RC WPB 4 X 3 S40 ✓	30/125	N	HB : 135 - 150 ✓	7513330
5		10N20015	RC WPB 4 X 2 S40	75	N	HB : 125 - 140	7513372

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.		%	HARDNESS MAX
Max .			10	29										240	415	30	197 HB : GOOD
Material Heat No.		30		108	50	58	40	40	40	15	80	20			585		
1	15519K	16	21	70	9	5	6	2	4	0.4	<3	<3	29	274	416	41	
2	J8L9445	19	21	81	23	7	3	2	6	1	0	1	34	302	506	36	
3	40739	16	26	85	11	1	7	3	7	1	3	1	33	312	465	36	
4	J8LC423	18 ✓	20 ✓	73 ✓	21 ✓	4 ✓	2 ✓	3 ✓	6 ✓	1 ✓	0 ✓	0	32	311 ✓	470 ✓	38 ✓	
5	J8LC423	18	20	73	21	4	2	3	6	1	0	0	32	311	470	38	

(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

The fittings was manufactured,sampled,tested,and inspected in accordance with the specification,and was found to meet the requirements

C.E. = C+Mn/6+(Cr+Mo+V)/5+(Ni+Cu)/15 MAGNETIC PARTICLE EXAMINATION FOR TEE ONLY : ASME STAMP SEC. II

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.

ED. 2010 ADD.

Quality Assurance Manager
Thai Benkan Co., Ltd.

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

(6) P.O. 978895 CE ✓
FLG-60080 RWN 60 ✓
1,934

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@ksts.seed net.tw

MILL TEST CERTIFICATE

EN10204-3.1.B(DIN50049/3.1.B)
Customer: SEYBOLD INTERNATIONAL CORP
Order No.: 7003373(2)-CEF

Certificate No. SE3373B1
Date: 12/20/2010

PRODUCT	MATERIAL SPECIFICATIONS	DIMENSIONAL SPECIFICATIONS
FORGED CARBON STEEL FLANGES	ASTM A105-09/ASME SA105-09	ASME B16.5-09 CSA Z245.12

Item No	CODE NO	DESCRIPTION	QUANTITY	C	Si	Mn	P	S	Cu	Cr	Ni	Mo	V	Nb	N			CE(*3)
			Min Max	- 0.350	0.100 0.350	0.600 1.050	- 0.035	- 0.040	- 0.400	- 0.300	- 0.400	- 0.120	- 0.080	- 0.020	-			
51	1074714	600 WNRF S160 3" A105N	95 PCE	0.233	0.240	1.100	0.010	0.017	0.018	0.037	0.050	0.005	0.025	0.005	0.006			0.429
52	1074714	600 WNRF S160 3" A105N	5 PCE	0.210	0.160	1.130	0.007	0.010	0.050	0.060	0.050	0.005	0.003	0.005	0.009			0.418
53	1069317	600 WNRF XXS 3" A105N	50 PCE	0.233	0.240	1.100	0.010	0.017	0.018	0.037	0.050	0.005	0.025	0.005	0.006			0.429
54	1442759	600 WNRF XXS 4" A105N	3 PCE	0.197	0.250	1.080	0.012	0.015	0.005	0.017	0.049	0.002	0.006	0.001	0.005			0.384
55	1069798	150 BLRF 20" A105N	12 PCE	0.200	0.190	1.140	0.018	0.011	0.160	0.120	0.060	0.020	0.002	0.002	0.009			0.433
56	1070561	150 WNRF STD 18" A105N	10 PCE	0.200	0.170	1.120	0.018	0.013	0.250	0.110	0.070	0.020	0.010	0.001	0.009			0.434
57	1069384	600 WNRF XS 6" A105N ✓	180 PCE	0.207 ✓	0.250 ✓	1.070 ✓	0.012 ✓	0.015 ✓	0.012	0.029	0.046	0.005	0.011	0.005	0.004			0.396 ✓

Item No.	Heat No.	T.S.(*1) (MPA)	Y.S.(*1) (MPA)	E.L.(*1) (%)	Hardness (HB)	R.A.(*1) (%)	Impact Test Temp Minimum: Joule 1	2	3	Material Supplier
	Min Max	485.0 -	250.0 -	22.0 -	- 187	30.0 -				
51	31244	537.4	379.5	34.0	160	68.6				NTMK
52	21530	519.8	335.4	36.0	154	66.8				OEMK
53	31244	537.4	379.5	34.0	160	68.6				NTMK
54	931198	505.0	335.4	34.0	156	66.0				NTMK
55	278362	525.6	361.9	33.6	152	70.4				SEAH BESTEEL
56	274166	529.6	360.9	34.8	158	70.0				SEAH BESTEEL
57	40747 ✓	503.1 ✓	335.4 ✓	35.4 ✓	149 ✓	68.6				NTMK

■ HEAT TREATMENT(*2)
☒ N
■ REMARKS
880°C X3HRS
CONFORMS WITH N880ACE MR0103-07 AND ✓
NACE MR0175/ISO15156.2
CONFORMS WITH Z245.12 CAT I GR.248 SOUR SERVICE-05
TEST SPECIMEN ORIENTATION: TRANSVERSE

*1 T.S. = Tensile Strength, Y.S.=Yield Strength, E.L.=Elongation, R.A.=Reduction of Area.

*2: N=Normalized, A=Annealed, Q=Quenched, T=Tempered, S.T=Solution Treated, S.R=Stress Relieved, A.C=Air Cooled, F.C=Furance Cooled, W.C=Water Cooled, O.C=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

ASME STAMP SEC. II

ED. 2010 ADD.

INT. YB DATE 3-23-11

CE ✓

1 @ 20'

P.O. 9788895 ✓
CE ✓
94204
.683

EDG ✓

Contract No.: 2210001764-4
L/C NO.: 0FAHD5-00364
P.O. NO.: PO.2481995-OR-2100-D (LOT D)
Name of Customer: CE FRANKLIN
DESCRIPTION: SEAMLESS CARBON STEEL PIPE FOR OIL AND GAS USE.
TOTAL: 285PIECES, 70BUNDLES, 114.303 MT, 6003.93FT

HENGYANG VALIN STEEL TUBE CO., LTD

MILL TEST REPORT

12" sch 80
pip-80120SA333

Date: AUG. 11, 2010
Page: 1/1

Add: 10 Dalixincun, Hengyang City, Hunan, China
Tel and Fax: +86 734 8873739 8872942
Cable: 6993
P.C. 421001

SPEC.: ASTM A333-6-2005, ASME SA333-6-2007, NACE MR-0175-2004/ISO 15156-2(REGION 3)/MR-0103/SS (CSA Z245.1 GRADE 290 CATEGORY II)

CERTIFICATE NO: 2010-02-0538

NO	BATCH NO.	HEAT NO.	STEEL GRADE	SIZE	BUNDLES	PIECES	FEET	QUANTITY (MT)	ACTUAL WEIGHT(MT)
1	K73L22111	1033370V	A333-6	8"*0.322"*20FT	14	66	1320.87	17.121	N/A
	K73L22112	1033370V	A333-6	8"*0.322"*20FT	11	54	1080.70	14.008	N/A
2	K72023052	1033368V	A333-6	8"*0.500"*20FT	30	150	3001.97	59.13	N/A
3	K52L02190	1032416V	A333-6 ✓	12"*0.688"*40FT ✓	15	15	600.39	24.044	N/A

NO.	DELIVERY CONDITION	NONDESTRUCTIVE TEST		CHEMICAL COMPOSITION (%)															
		EMI	UT	TYPE:	C	Si	Mn	P	S	Cu	Ni	Cr	Mo	V	Ti	B	Nb	Mn:C	CE
1	HOT-ROLLED	OK	N/A	P	0.11	0.25	1.01	0.01	0.0011	0.07	0.02	0.03	0.01	0.01	0.02	0.0002	0.029	9.18	0.29
				P	0.11	0.24	1.00	0.009	0.0011	0.07	0.02	0.03	0.01	0.01	0.02	0.0002	0.029	9.09	0.29
				L	0.12	0.28	1.05	0.009	0.0021	0.08	0.03	0.05	0.01	0.01	0.03	0.0001	0.028	8.75	0.32
	HOT-ROLLED	OK	N/A	P	0.11	0.25	1.02	0.005	0.0003	0.07	0.02	0.03	0.01	0.01	0.02	0.0001	0.025	9.27	0.30
				P	0.11	0.24	1.01	0.005	0.0003	0.07	0.02	0.03	0.01	0.01	0.02	0.0001	0.025	9.18	0.29
				L	0.12	0.28	1.05	0.009	0.0021	0.08	0.03	0.05	0.01	0.01	0.03	0.0001	0.028	8.75	0.32
2	HOT-ROLLED	OK	N/A	P	0.11	0.23	1.01	0.007	0.0012	0.07	0.03	0.04	0.01	0.01	0.02	0.0001	0.025	9.18	0.30
				P	0.11	0.24	1.00	0.007	0.0012	0.07	0.03	0.04	0.01	0.01	0.02	0.0001	0.025	9.09	0.30
				L	0.12	0.27	1.07	0.007	0.0018	0.08	0.02	0.05	0.01	0.01	0.026	0.0001	0.024	8.92	0.32
3	HOT-ROLLED	OK	N/A	P	0.12 ✓	0.24 ✓	1.08 ✓	0.010 ✓	0.002 ✓	0.05	0.02	0.04	0.01	0.01	0.028	0.0001	0.001	9.00	0.32 ✓
				P	0.12	0.25	1.08	0.010	0.002	0.05	0.02	0.04	0.01	0.01	0.028	0.0001	0.001	9.00	0.32
				L	0.11	0.23	1.05	0.009	0.002	0.03	0.02	0.03	0.01	0.01	0.03	0.0001	0.026	9.55	0.30

NO	TENSILE STRENGTH σb (Psi)		YIELD STRENGTH σs (Psi)		ELONGATION δ (%)	IMPACT				HARDNESS	HYDROSTATIC TEST (PSI/ 6s)	FLATTEN TEST	SSC TEST	HEAT TREATMENT	HIC TEST
	strip,L, bo=12.5,Lo=50mm					SIZE	AK (J)	SHEAR FRACTURE	Ori/Tem	HRC≤22					
1	69600	70325	57275	58000	41.0/38.5	6.67*10*55	V/149/194/170	85/90/85	T/-45℃	OK	2370	OK	N/A	N/A	N/A
	68150	70325	56550	57275	38.0/34.0	6.67*10*55	V/200/192.0/182	90/85/80	T/-45℃	OK	2370	OK	N/A	N/A	N/A
2	69600	70325	57275	55825	44.5/44.0	10*10*55	V/290/295/293	80/85/85	T/-45℃	OK	3000	OK	N/A	N/A	N/A
	bar ,L,do=12.5,Lo=50mm														
3	63800 ✓	60900	46400 ✓	44950	38.5/39.0 ✓	10*10*55	V/192/204/194	85/86/88	T/-45℃	OK	3000 ✓	OK	N/A	N/A	N/A

REMARKS: 1. We hereby certify that this certificate of quality is issued and signed by the manufacturer.
2. We hereby certify that the properties described herein meet the requirement of the above specification
3. We hereby certify that this certificate is issued accordance with EN10204 3.1/DIN 50049 3.1B
4. Type: P-Product analysis, L-Ladle analysis;
5. Origin: Made in China;
6. Content of chemical composition:Cr+Cu+Mo+V+Ni≤1%.

ASME STAMP SEC. II

ED. 2010 ADD.

INT. BB DATE 3-23-11

QUALITY MANAGER:

(4) P.O. 9788895 CE
FLG – 600 80 RWN 120 LT
2.655

METALFAR
PRODOTTI INDUSTRIALI S.P.A.
STAMPAGGIO A CALDO DI ACCIAI COMUNI - LEGATI E INOSSIDABILI
SALA PROVE E ANALISI MATERIALI / MATERIAL TEST DEPARTMENT

SEDE AMMINISTRATIVA E STABILIMENTO:
23861 CESANA BRIANZA (LC) - Italy
Via G. Parini, 28
Tel. +39 031.655441
Fax +39 031.655149
quality.mff@farmas.com

COMPANY WITH QUALITY MANAGEMENT SYSTEM CERTIFIED BY DNV
= ISO 9001:2008 =

CERTIFICATO DI COLLAUDO SECONDO EN 10204 - 3.1 INSPECTION CERTIFICATE

GLOBAL GAEL SERVICE LTD
Unit 1E, Block 71, The Plaza Nangor Road
DUBLIN 12 IE

Certif. N. 5250 Del/Dated 29.12.2010
Fattura / Invoice N. 3684 Del/Dated 29.12.2010
DDT / Del Note N. 6891 Del/Dated 29.12.2010
Ns.Ord. / Our ref. N. Del/Dated

COD. COL. / HEAT CODE	COLATA / HEAT	POS. / ITEM	VS.ORDINE / YOUR REFERENCE	Q.TA' / Q.TY	DESCRIZIONE / DESCRIPTION
	555730	125	635*FR	6,00	W/N 300 RF 10" STD LF2CL1

DIM.IN ACC. A / DIM. ACCORDANCE TO: ASME/ANSI B16.5
VISIVO E DIMENS. / VIS. & DIMENS.: SATISFACTORY

MATERIALE / MATERIAL: ASTM A350 LF2 CL1/2

C%	Si%	Mn%	S%	P%	Cr%	Ni%	Mo%	Ti%	Cu%	V%	Nb%	N%	Al%	C.E.%	B %
0,190	0,230	1,080	0,005	0,008	0,120	0,050	0,010	0,020	0,050	0,010	0,001	0,000	0,032	0,405	0,000

PROVETTA / TEST SPECIMEN SEZ. mm2 / SECT. mm2	LUNG. mm / LENGHT mm	FORMA / SHAPE 1=O 2=□	SNERVAMENTO / YIELD POINT N/mm2 >=0,2%	ROTTURA / TENSILE STRENGHT N/mm2 >=	ALLUNGAMENTO / ELONGATION %>=	CONTRAZIONE / REDUCTION OF AREA %>=	DUREZZA / HARDNESS HB
126,60	50,80	1	319,0	543,0	31,0	60,0	164,0 - 166,0

RESILIENZA / IMPACT TEST - JOULE/cm2

TIPO / TYPE 10x10mm	°C	1	2	3	SNERVAMENTO / YIELD POINT N/mm2 >=1,0%	Ns.Rif. / OUR REF.
KV	-50	69	63	63	0,0	

MATERIALE IN ACCORDO A / MATERIAL IN ACC. TO: ASTM/ASME A 350/SA 350 M - 07 CSA CAN3 Z-245.12-05 GRADE 290 CAT.II
TRATTAMENTO TERMICO / HEAT TREATMENT: NORMALIZED AT 930 C - COOLED IN STILL AIR
FORNO / FURNACE: ELECTRIC FURNACE
ORIGINE / ORIGIN: EUROPE

COD. COL. / HEAT CODE	COLATA / HEAT	POS. / ITEM	VS.ORDINE / YOUR REFERENCE	Q.TA' / Q.TY	DESCRIZIONE / DESCRIPTION
	09/35381	131	635*FR	10,00	W/N 600 RF 8" STD LF2CL1

DIM.IN ACC. A / DIM. ACCORDANCE TO: ASME/ANSI B16.5
VISIVO E DIMENS. / VIS. & DIMENS.: SATISFACTORY

MATERIALE / MATERIAL: ASTM A350 LF2 CL1/2

C%	Si%	Mn%	S%	P%	Cr%	Ni%	Mo%	Ti%	Cu%	V%	Nb%	N%	Al%	C.E.%	B %
0,190	0,240	1,190	0,013	0,010	0,080	0,050	0,010	0,015	0,120	0,021	0,001	0,000	0,025	0,420	0,000

PROVETTA / TEST SPECIMEN SEZ. mm2 / SECT. mm2	LUNG. mm / LENGHT mm	FORMA / SHAPE 1=O 2=□	SNERVAMENTO / YIELD POINT N/mm2 >=0,2%	ROTTURA / TENSILE STRENGHT N/mm2 >=	ALLUNGAMENTO / ELONGATION %>=	CONTRAZIONE / REDUCTION OF AREA %>=	DUREZZA / HARDNESS HB
126,60	50,80	1	330,0	534,0	33,0	61,0	163,0 - 165,0

RESILIENZA / IMPACT TEST - JOULE/cm2

TIPO / TYPE 10x10mm	°C	1	2	3	SNERVAMENTO / YIELD POINT N/mm2 >=1,0%	Ns.Rif. / OUR REF.
KV	-50	67	65	70	0,0	

MATERIALE IN ACCORDO A / MATERIAL IN ACC. TO: ASTM/ASME A 350/SA 350 M - 07 CSA CAN3 Z-245.12-05 GRADE 290 CAT.II
TRATTAMENTO TERMICO / HEAT TREATMENT: NORMALIZED AT 930 C - COOLED IN STILL AIR
FORNO / FURNACE: ELECTRIC FURNACE
ORIGINE / ORIGIN: EUROPE

COD. COL. / HEAT CODE	COLATA / HEAT	POS. / ITEM	VS.ORDINE / YOUR REFERENCE	Q.TA' / Q.TY	DESCRIZIONE / DESCRIPTION
	548720	139	635*FR	24,00	W/N 600 RF 12" 80 LF2CL1

DIM.IN ACC. A / DIM. ACCORDANCE TO: ASME/ANSI B16.5
VISIVO E DIMENS. / VIS. & DIMENS.: SATISFACTORY

MATERIALE / MATERIAL: ASTM A350 LF2 CL1/2

C%	Si%	Mn%	S%	P%	Cr%	Ni%	Mo%	Ti%	Cu%	V%	Nb%	N%	Al%	C.E.%	B %
0,180	0,200	1,030	0,006	0,013	0,150	0,100	0,030	0,002	0,150	0,003	0,001	0,000	0,036	0,404	0,000

PROVETTA / TEST SPECIMEN SEZ. mm2 / SECT. mm2	LUNG. mm / LENGHT mm	FORMA / SHAPE 1=O 2=□	SNERVAMENTO / YIELD POINT N/mm2 >=0,2%	ROTTURA / TENSILE STRENGHT N/mm2 >=	ALLUNGAMENTO / ELONGATION %>=	CONTRAZIONE / REDUCTION OF AREA %>=	DUREZZA / HARDNESS HB
126,60	50,80	1	341,0	563,0	31,0	56,0	170,0 - 174,0

RESILIENZA / IMPACT TEST - JOULE/cm2

TIPO / TYPE 10x10mm	°C	1	2	3	SNERVAMENTO / YIELD POINT N/mm2 >=1,0%	Ns.Rif. / OUR REF.
KV	-50	67	60	60	0,0	

MATERIALE IN ACCORDO A / MATERIAL IN ACC. TO: ASTM/ASME A 350/SA 350 M - 07 CSA CAN3 Z-245.12-05 GRADE 290 CAT.II
TRATTAMENTO TERMICO / HEAT TREATMENT: NORMALIZED AT 930 C - COOLED IN STILL AIR
FORNO / FURNACE: ELECTRIC FURNACE
ORIGINE / ORIGIN: EUROPE

ASME STAMP SEC II

ED. 2010 ADD.
INT. L DATE 3-22-11

NOTE MANUFACTURING IN ACCORDANCE WITH ORDER AND SPECIFICATION
NOTES MATERIAL IN ACCORDANCE WITH NACE MR-0175/2003 ISO 15156 - SOUR SERVICE
MATERIAL IN ACCORDANCE WITH NACE MR-0103/2007 - SOUR SERVICE

UFFICIO CONTROLLO QUALITA' / QUALITY CONTROL DEPARTEMENT	ENTE UFFICIALE DI COLLAUDO / INSPECTION AUTHORITY	MARCHIO PRODUZIONE / MANUFACTURER'S SYMBOL
S. Corti		MFF

Line 6

FLG-90080RWN60 ✓
2.226

6" CL 900 W/N FLANGE RF XH
BORE A105N

HEAT NUMBER : 462A8
TRANS AM PIPING PRODUCTS - REV'D BY:
Shipment/Seq #: S 9 - 1194 7

P.O.# 978892 Item# 3

CLIENTE / Customer / Client

TRANS AM PIPING PRODUCTS LTD.
9335 ENDEAVOR DRIVE S.E.
CALGARY, ALBERTA T3S 0A1
CANADA

CERTIFICADO DE INSPECCION

Inspection Certificate - Certificat de Réception

DIN EN 10204 / 3.1
ISO 10474 / 3.1

FECHA / Date: 02/04/2009
N.º / No.: 127022
HOJA / Page: 1

SGI 1922164 SGI 6000236

ULMA FORJA, S.COOP.
Bª Zubillaga, 3 - Apdo. 14
20560 OÑATI (Gipuzkoa) SPAIN
Tel.: 34 - 943 780552
Fax: 34 - 943 781808
E-mail: ulma@ulmapiping.com
72681

PRODUCTO / Article - Produit: FLANGES

SU PEDIDO N.º / Your Order No. / Votre Cde. N.º: PO# CI-08-616

DE / of. - de: 07/12/2008

NORMAS APLICABLES / Requirements - Normes Applicables: ASME B16.5-03

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

MODO DE FUSION (*) / Steel Making - Elaboration de l'acier: NACE MR-01-75/05 & MR-01-03/03
E = Elec. Y = Oxigeno básico

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

MARCA DEL FABRICANTE / Mark of factory / Marque du fabricant

DEPARTAMENTO / Section / Département: QUALITY ASSURANCE

PARTIDA / Item / Poste	CANTIDAD / Quantity / Quantité	DESCRIPCION / Description / Description	OBSERVACIONES / Remarks / Observations (*)	COLADA N.º / Heat No / N.ºCoulée	RESISTENCIA / T.Strength / Resist Rupt N/mm2	LIMITE ELAST. / Y.Strength / Limite Elast. N/mm2	ALARGAM / Elongation / Allongement Lo: 4 d %	ESTRICCION / Red. Area / Striction %	RESILIENCIA / Impact test / Résilience / Joules	PROBETA - SPECIMEN MEDIA / Average / Moyenne	°C	DUREZA / Hardness / Dureté HB
13		WN 8 900LB S80 RF A105N	NE	462A8 ✓	517 ✓	312 ✓	29,70 ✓	54,00				149 155 ✓
17		WN 8 900LB XXS RF A105N	NE	497A8	515	317	30,20	56,50				149 154
22		SO 12 150LB RF A105N	NE	74A9	518	321	30,60	57,00				150 154

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

COLADA N.º / Heat No / N.ºCoulée	C %	Si %	Mn %	P %	S %	Cr %	Ni %	Mo %	Nb %	V %	Cu %	Al %	Ti %	N %	CEq %
462A8 ✓	0,190 ✓	0,230 ✓	0,850 ✓	0,013 ✓	0,005 ✓	0,080 ✓	0,008 ✓	0,020 ✓	0,007	0,001 ✓	0,240 ✓	0,028	0,000	0,000	0,368 ✓
497A8	0,190	0,240	0,850	0,010	0,001	0,070	0,090	0,020	0,007	0,001	0,240	0,033	0,000	0,000	0,372
74A9	0,180	0,280	0,830	0,009	0,002	0,150	0,120	0,060	0,006	0,002	0,310	0,039	0,000	0,000	0,389

- 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

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

(*) OBSERVACIONES: Remarks / Observations: N_NORMALIZED AT 900 C AND ALLOWED TO COOL IN STILL AIR

ASME STAMP SEC. II

ED. 2010 ADD.

INT. [illegible] DATE 3-21-11

FLG-90080RWN60 ✓
2.226

6" CL 900 W/N FLANGE RF XH
BORE A105N

HEAT NUMBER : 462A8
TRANS AM PIPING PRODUCTS - REV'D BY:
Shipment/Seq #: S 9 - 1194 7

P.O.# 978892 Item# 3

CLIENTE / Customer / Client

TRANS AM PIPING PRODUCTS LTD.
9335 ENDEAVOR DRIVE S.E.
CALGARY, ALBERTA T3S 0A1
CANADA

CERTIFICADO DE INSPECCION

Inspection Certificate - Certificat de Réception

DIN EN 10204 / 3.1
ISO 10474 / 3.1

FECHA / Date: 02/04/2009
N.º / No.: 127022
HOJA / Page: 1

SGI 1922164 SGI 6000236

ULMA FORJA, S.COOP.
Bª Zubillaga, 3 - Apdo. 14
20560 OÑATI (Gipuzkoa) SPAIN
Tel.: 34 - 943 780552
Fax: 34 - 943 781808
E-mail: ulma@ulmapiping.com
72681

PRODUCTO / Article - Produit: FLANGES

SU PEDIDO N.º / Your Order No. / Votre Cde. N.º: PO# CI-08-616

DE / of. - de: 07/12/2008

NORMAS APLICABLES / Requirements - Normes Applicables: ASME B16.5-03

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

MODO DE FUSION (*) / Steel Making - Elaboration de l'acier: NACE MR-01-75/05 & MR-01-03/03
E = Elec. Y = Oxigeno básico

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

MARCA DEL FABRICANTE / Mark of factory / Marque du fabricant

DEPARTAMENTO / Section / Département: QUALITY ASSURANCE

PARTIDA / Item / Poste	CANTIDAD / Quantity / Quantité	DESCRIPCION / Description / Description	OBSERVACIONES / Remarks / Observations (*)	COLADA N.º / Heat No / N.ºCoulée	RESISTENCIA / T.Strength / Resist Rupt N/mm2	LIMITE ELAST. / Y.Strength / Limite Elast. N/mm2	ALARGAM / Elongation / Allongement Lo: 4 d %	ESTRICCION / Red. Area / Striction %	RESILIENCIA / Impact test / Résilience / Joules	PROBETA - SPECIMEN MEDIA / Average / Moyenne	°C	DUREZA / Hardness / Dureté HB
13		WN 8 900LB S80 RF A105N	NE	462A8 ✓	517 ✓	312 ✓	29,70 ✓	54,00				149 155 ✓
17		WN 8 900LB XXS RF A105N	NE	497A8	515	317	30,20	56,50				149 154
22		SO 12 150LB RF A105N	NE	74A9	518	321	30,60	57,00				150 154

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

COLADA N.º / Heat No / N.ºCoulée	C %	Si %	Mn %	P %	S %	Cr %	Ni %	Mo %	Nb %	V %	Cu %	Al %	Ti %	N %	CEq %
462A8 ✓	0,190 ✓	0,230 ✓	0,850 ✓	0,013 ✓	0,005 ✓	0,080 ✓	0,008 ✓	0,020 ✓	0,007	0,001 ✓	0,240 ✓	0,028	0,000	0,000	0,368 ✓
497A8	0,190	0,240	0,850	0,010	0,001	0,070	0,090	0,020	0,007	0,001	0,240	0,033	0,000	0,000	0,372
74A9	0,180	0,280	0,830	0,009	0,002	0,150	0,120	0,060	0,006	0,002	0,310	0,039	0,000	0,000	0,389

- 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

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

(*) OBSERVACIONES: Remarks / Observations: N_NORMALIZED AT 900 C AND ALLOWED TO COOL IN STILL AIR

ASME STAMP SEC. II

ED. 2010 ADD.

INT. [illegible] DATE 3-21-11

(2) P.O. 978575 ✓ CE ✓
WOL-8020 ✓ .657

M.E.G.A.

CERTIFICATO DI COLLAUDO
TEST CERTIFICATE
CERTIFICAT DE CONTROLE

COMPANY WITH QUALITY SYSTEM CERTIFIED BY DNV ISO 9001

CLIENTE Customer Client: CE FRANKLIN LTD.
1900 - 300 - 5th AVENUE S.W.
CALGARY, ALBERTA, CANADA T2P 3C4

ORDINE Purchase order Commande: 2078074-OR-2100

CERTIFICATO N. Certificate N. Certificat N.: 555793 FOGLIO Sheet Feuille
DATA / Date: 22/01/
COMMESSA Job N. Confirmation de commande: 867

PROVA Test Epreuve	MATERIALE Steel quality / Matière	COLATA Heat / Coulée	C %	Si %	Mn %	S %	P %	Cr %	Ni %	Mo %	Ti %	Cu %	V %	Al %	C
KNDL	ASTM A105/05	08/72388	0.185	0.180	0.930	0.010	0.008	00.08	00.05	0.010	0.021	0.120	0.017	0.022	0.3
			--->	Nb%=	0.000	Sn%=	0.007			B %=	0.000				
KTCS ✓	ASTM A105/05	08/72763	0.185 ✓	0.190 ✓	0.930 ✓	0.007 ✓	0.015 ✓	00.10 ✓	00.05 ✓	0.010 ✓	0.019	0.170 ✓	0.018 ✓	0.023	0.3
			--->	Nb%=	0.000	Sn%=	0.009			B %=	0.000			CEs=	0.3
KFLX	ASTM A105/05	08/72388	0.185	0.180	0.930	0.010	0.008	00.08	00.05	0.010	0.021	0.120	0.017	0.022	0.3
			--->	Nb%=	0.000	N %=	0.000	Sn%=	0.007	B %=	0.000			CEs=	0.3
KANS	ASTM A105/05	0746490/07	0.185	0.255	1.050	0.007	0.015	00.11	00.04	0.007	0.000	0.040	0.003	0.028	0.3
			--->	Nb%=	0.0023	N %=	0.000	B %=	0.0004					CEs=	0.3
RXTX	ASTM A105/05	273120	0.190	0.250	1.310	0.004	0.023	00.11	00.10	0.010	0.002	0.180	0.010	0.042	0.4
			--->	Nb%=	0.004	N %=	0.005								
KBAN	ASTM A105/05	07/75770	0.180	0.230	0.870	0.005	0.013	00.12	00.05	0.010	0.000	0.150	0.000	0.025	0.3
			--->	Nb%=	0.000	B %=	0.000							CEs=	0.3

PROVA Test Epreuve	PROVETTA Test specimen / Epreouvette ·	SEZIONE Section / Sect.	LUNGHEZZA Length / Longeur	SNERVAMENTO N/mm² ≥ Yield point Limite d'elasticité	ROTTURA N/mm² ≥ Tensile strenght Rupture	ALLUNGAMENTO % ≥ Elongation Allongement	CONTRAZIONE % ≥ Reduction of area Striction	DUREZZA HB Hardness Dureté	PIEGA Bend test Pliage	SCHIACC. Flatt. test Aplatiss.	RESILIENZA Impact test / Résilience UNITÀ MIS. Unit system	TIPO Type	T. °C Test tmp	VALORE / Value / Données
KNDL	1	30.6	25.0	338.4	544.6	28.8	63.2	160-166			J	KV	0	48-50-56
KTCS ✓	1	60.1	35.0	304.0 ✓	513.0 ✓	32.1 ✓	68.8	140-149 ✓			J	KV	0	38-42-44
KFLX	1	30.6	25.0	302.0	524.2	31.8	68.2	142-149			J	KV	0	58-60-54
KANS	1	60.1	35.0	298.0	511.0	24.2	66.0	143-148			J	KV	0	106-92-98
RXTX	1	122.9	50.0	349.2	528.7	33.4	71.2	152-156		OK	J	KV	0	214-216-226
KBAN	1	30.6	25.0	302.0	512.4	30.3	68.0	143-156			J	KV	-10	48-50-54

PROVA Test Epreuve	NOTE / Remarks / Notes
	EN10204/3.1
KNDL	ELECT.FURNACE-NORMALIZED AT 900 C COOLED IN STILL AIR. /CERT.208.EVASI*551050MEGA*
KTCS ✓	ELECT.FURNACE-NORMALIZED AT 900 C COOLED IN STILL AIR. /CERT.271.EVASI*551906 MEGA* ✓
KFLX	ELECT.FURNACE-NORMALIZED AT 900 C COOLED IN STILL AIR. /CERT.126.EVASI*548932MEGA*
KANS	ELECT.FURNACE-NORMALIZED AT 900 C COOLED IN STILL AIR. /CERT.9802.MEGA/I*548939MEGA*
RXTX	ELECT.FURNACE-NORMALIZED AT 900 C COOLED IN STILL AIR. /CERT.12113.MILL*544874MEGA*HT:1014PSI*
KBAN	ELECT.FURNACE-NORMALIZED AT 920 C COOLED IN STILL AIR. /CERT.01.EVASI*547165MEGA*

· FORMA Shape / Forme : 1 = ø 2 = □

PROVA Test Epreuve	POS. Item Pos.	QUANTITÀ Quantity Quantité	CODICE CLIENTE Customer code Code client	DESCRIZIONE / Description / Description	VISUAL AND DIMENSIONAL
KNDL	127	80	1553029	MEGALET Sch. XS A/SA105N 2x5-6	OK
KTCS ✓	128	80	1551162	MEGALET Sch. XS A/SA105N 2x8-12 ✓	OK
KFLX	129	40	1551171	MEGALET Sch. XS A/SA105N 2x14-36	OK
KANS	130	10	1127783	MEGALET Sch. XS A/SA105N 4 X10-12	OK
RXTX	131	10	1127185	MEGALET Sch. XS A/SA105N 6X12	OK
KBAN	132	320	1552878	MEGALET S. 3000 NPT A/SA105N 1/2x1.1/4-2.1/2	OK

ASME STAMP SEC. II

ED. 2010 ADD.

INT. 788 DATE 3-18-11

NOTE / Remarks / Notes	ENTE UFFICIALE DI COLLAUDO Inspection Authority Service Inspection Officiel	CAPO COLLAUDO Chief Inspection Dept. Responsable assurance qualité
MATERIAL ACCORDING TO NACE MR0175/ 2003.		DOC. CERT. M.E.G.A. Luca Marcaccini

Purchaser : CE Franklin Ltd.

INSPECTION CERTIFICATE

TO EN10204 3.1

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

E-No.	Purchase Order No.	Job No.	D M Y	Certificate No.
MC-120	P/O 2573891-OR-2100		18/12/2010	T- 2010200695

No.		MFG. No. (Heat Identification No.)	Specification for Material Made from Seamless Pipe: ASTM A234-10/ASME SA234-07 Gr.WPB CSA Z245.11-09 Gr.241 CAT1 SS NACE MR0175/ISO 15156-2 R3-03&MR0103-07 — Product & Size (T:*1)	Quantity	Specification for Inspection: ASME B16.9-2007 — Heat Treatment (Note 1)	Visual Examination: Good — Item No.	Dimensional Inspection: Good — Boron(%)
1	1171637	53H00115 ✓	90 EL WPB 3 STD ✓	1,000	A	7510381	0.0001
2	1175671	53H00123-1	90 EL WPB 6 XS	14/100	A	7511035	0.0000
3	1175671	53H00123	90 EL WPB 6 XS	2/100	A	7511035	0.0001
4	1174954	53H00121	90 EL WPB 2 XS	640/2,000	A	7510900	<0.0001
5	1175671	53H00123-2	90 EL WPB 6 XS	4/100	A	7511035	0.0000

Specification / Material Heat No.		Chemical Composition % C	Si	Mn	P	S	Cu	Ni	Cr	Mo	V	Nb	C.E.	Tension Test *2 YS	TS	E	HARDNESS MAX
		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.														240	415	30	197 HB : GOOD
Max.		30	10	29	106	50	58	40	40	40	15	80	20		585		
1	J8LC423	18 ✓	20 ✓	73 ✓	21 ✓	4 ✓	2 ✓	3 ✓	6 ✓	1 ✓	TR ✓	TR	32	314 ✓	497 ✓	65 ✓	
2	J8KA484	19	19	78	13	5	3	3	6	2	TR	TR	34	298	467	45	
3	J7L6296	19	18	75	14	7	2	2	4	TR	TR	TR	33	280	464	43	
4	964861	15	17	74	16	6	16	10	14	5	TR	TR	33	326	505	35	
5	J8KA484	19	19	78	13	5	3	3	6	2	TR	TR	34	298	467	45	

(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

The fittings was manufactured,sampled,tested,and inspected in accordance with the specification, and was found to meet the requirements.

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/2

Quality Assurance Manager
Thai Benkan Co., Ltd.

ASME STAMP SEC. II

ED. 2010 ADD.

INT. DATE 3-11-11

(2) P.O. 973943 ✓ CE ✓ .265

MILL TEST REPORTS

P.O. 970946 ✓
mid ✓
107481
.487

(3)

Bonney Forge
14496 Croghan Pike
Mt. Union, PA 17066

CERTIFIED MILL TEST REPORT

Midfield 03/09/11

LOT NO.	CHEMICAL ANALYSIS, PHYSICAL PROPERTIES, REMARKS
55769 ✓	1/2" 6M A105N Thredolet Threaded ✓

C	0.190 ✓	MN	0.990 ✓	P	0.009 ✓	S	0.022 ✓	SI	0.240 ✓
NI	0.020 ✓	CR	0.040 ✓	MO	0.010 ✓	CU	0.100 ✓	V	0.025 ✓
Nb	0.001								
CE(LONG FORMULA) = 0.378 ✓									
T/S 76900 ✓	Y/S 51200 ✓	EL 30.900 ✓	RA 65.000						
BRINELL HARDNESS: 154 ✓									

1. THE MATERIAL SUPPLIED MEETS THE REQUIREMENTS OF NACE MRO175/ISO 15156-2.
2. THE MATERIAL SUPPLIED WAS INSPECTED AND MANUFACTURED IN ACCORDANCE WITH EN DIN 10204:2004 EDITION TYPE 3.1 INSPECTION DOCUMENT.
3. CERTIFYING ASTM A105-09 / ASME SA105-07 EDITION.
4. THE MATERIAL SUPPLIED IDENTIFIED AS A105N WAS NORMALIZED IN ACCORDANCE WITH ASTM A105 HEAT TREATING REQUIREMENTS.

THIS DOCUMENT HAS BEEN ELECTRONICALLY SUBMITTED.

ASME STAMP SEC. II

ED. 2010 ADD. _____

INT. TB DATE 9-3-11

(4) P.O. 970435 ✓ CE ✓
WLD-809060 ✓
.510

INSPECTION CERTIFICATE

TO EN10204 3.1

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

Purchaser : CCTE CORPORATION

E-No. MC-266 | Purchase Order No. 4889050 | Job No.

D M Y Certificate No. 23/12/2010 T 2010200707

No.		MFG. No. (Heat Identification No.)	Specification for Material Made from Seamless Pipe: ASTM A234-10/ASME SA234-07 Gr.WPB CSA Z245.11-09 Gr.241 CAT1 NACE MR0175/ISO 15156-2 R3-03 &MR0103-07 — Product & Size (T:*1)	Quantity	Heat Treatment (Note 1)	Specification for Inspection: ASME B16.9-2007 — Visual Examination: Good — Hardness Actual Data	Dimensional Inspection: Good — Item No.
1		10K00020	90 EL WPB 4 S80	124/1,500	A	HB : 130 - 150	7510985
2		10N00052	90 EL WPB 6 S80	344/560	A	HB : 120 - 150	7511035
3		10P00006	90 EL WPB 4 S80	1,376/1,500	A	HB : 130 - 150	7510985
4		10P00024	90 EL WPB 5 S80	15	A	HB : 120 - 150	7511015
5		10N00013 ✓	90 EL WPB 6 S80 ✓	202/560	A	HB : 120 - 150 ✓	7511035

		Chemical Composition %												Tension Test *2			
		C	Si	Mn	P	S	Cu	Ni	Cr	Mo	V	Nb	C.E.	YS	TS	E	
Specification 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.		%	HARDNESS MAX
Max.			10	29										240	415	30	197 HB : GOOD
Material Heat No.		30		106	50	58	40	40	40	15	80	20			585		
1	J9LC039	19	28	89	12	9	1	2	4	8	0	0	36	338	514	39	
2	40658	16	22	84	13	1	6	4	8	3	3	1	33	286	455	37	
3	78M5164	16.6	26	75	9	9	14	8	10	1.8	25	2	33	344	531	34	
4	J8L3650	19	21	82	12	6	2	2	5	1	0	1	34	295	483	40	
5	40656	17 ✓	23 ✓	85 ✓	7 ✓	1 ✓	5 ✓	3 ✓	7 ✓	3 ✓	4 ✓	1	(34)	282 ✓	459 ✓	39 ✓	

(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

ASME STAMP SEC. II

ED. 2010 ADD.

Quality Assurance Manager
Thai Benkan Co., Ltd.

MILL TEST REPORTS

P.O. 968261
mid
TOL-6m07x3-10
.416

Bonney Forge
14496 Croghan Pike
Mt. Union, PA 17066

(29)

CERTIFIED MILL TEST REPORT

Midfield 03/02/11

LOT NO.	CHEMICAL ANALYSIS, PHYSICAL PROPERTIES, REMARKS
58217	3/4" 6M A105N Thredolet Threaded

C	0.200	MN	0.990	P	0.014	S	0.017	SI	0.200
NI	0.040	CR	0.090	MO	0.010	CU	0.170	CO	0.004
V	0.004	AL	0.025	N	0.004	Nb	0.013		
CE(LONG FORMULA) = 0.400									
T/S 73750 / Y/S 48750 / EL 35.100 / RA 65.850									
BRINELL HARDNESS: 132									

ASME STAMP SEC. II

ED. 2010 ADD.

INT. tc DATE 3-2-11

1. THE MATERIAL SUPPLIED MEETS THE REQUIREMENTS OF NACE MRO175/ISO 15156-2.
2. THE MATERIAL SUPPLIED WAS INSPECTED AND MANUFACTURED IN ACCORDANCE WITH EN DIN 10204:2004 EDITION TYPE 3.1 INSPECTION DOCUMENT.
3. CERTIFYING ASTM A105-09 / ASME SA105-07 EDITION.
4. THE MATERIAL SUPPLIED IDENTIFIED AS A105N WAS NORMALIZED IN ACCORDANCE WITH ASTM A105 HEAT TREATING REQUIREMENTS.

THIS DOCUMENT HAS BEEN ELECTRONICALLY SUBMITTED.

(150) FLG-60080RWN20 ✓

1.029

Feb. 25. 2011 12:56PM Trans Am Piping Products Ltd. No. 1678 P. 2

Heat Number: 10/70198 - 10/65 - 10 Rev'd By: SB
Trans Am Piping Products Ltd.
Shipment/Seq #: S11

2" CL 600 W/N FLANGE RF XH
BORE A105N

METALFAR
PRODOTTI INDUSTRIALI S.P.A.
STAMPAGGIO A CALDO DI ACCIAI COMUNI - LEGATI E INOSSIDABILI
SALA PROVE E ANALISI MATERIALI / MATERIAL TEST DEPARTMENT

SEDE AMMINISTRATIVA E STABILIMENTO:
23861 CESANA BRIANZA (LC) - Italy
Via G. Pariri, 28
Tel. +39 031.555441
Fax +39 031.555149
quality.mff@fermas.com

COMPANY WITH QUALITY MANAGEMENT SYSTEM CERTIFIED BY DNV = ISO 9001:2008 =

CERTIFICATO DI COLLAUDO SECONDO EN 10204 - 3.1 INSPECTION CERTIFICATE

TRANS AM PIPING PRODUCTS LTD
9335 ENDEAVOR DRIVE S.E.
T3S 0A1 CALGARY, ALBERTA CA

Certif. N. 101 Del/Dated 17.01.2011
Fattura / Invoice N. 115 Del/Dated 17.01.2011
DDT / Del Note N. 143 Del/Dated 17.01.2011
Ns.Ord. / Our ref. N. Del/Dated

Pag. 5 - 6

COD. COL. COLATA / HEAT CODE HEAT: 09/78065 | POS. ITEM: 010 | VS.ORDINE / YOUR REFERENCE: 679/TRANS AM

MATERIALE / MATERIAL: ASTM A105

DESCRIZIONE / DESCRIPTION: W/N 150 RF 2" 160 A105

DIM.IN ACC. A / DIM. ACCORDANCE TO: ASME/ANSI B16.5

VISIVO E DIMENS. / VIS. & DIMENS.: SATISFACTORY

C%	Si%	Mn%	S%	P%	Cr%	Ni%	Mo%	Ti%	Cu%	V%	Nb%	N%	Al%	C.E.%
0,195	0,240	1,060	0,012	0,010	0,080	0,050	0,010	0,009	0,150	0,001	0,003	0,000	0,027	0,403

PROVETTA / TEST SPECIMEN SEZ. mm2 / SECT. mm2	LUNG. mm / LENGHT mm	FORMA / SHAPE 1=○ 2=□	SNERVAMENTO / YIELD POINT N/mm2 >=0,2%	ROTTURA / TENSILE STRENGHT N/mm2 >=	ALLUNGAMENTO / ELONGATION %>=	CONTRAZIONE / REDUCTION OF AREA %>=	DUREZZA / HARDNESS HB
126,60	50,80	1	340,0	549,0	32,0	58,0	165,0 - 170,0

RESILIENZA / IMPACT TEST - JOULE/cm2

TIPO / TYPE 10x10mm	°C	1	2	3	SNERVAMENTO / YIELD POINT N/mm2 >=1,0%
KV	20	85	81	86	0,0

MATERIALE IN ACCORDO A / MATERIAL IN ACC. TO: ASTM/ASME A 105/SA 105 M - 09 CSA Z245.12 GRADE 248 CAT.I

TRATTAMENTO TERMICO / HEAT TREATMENT: NORMALIZED AT 920 C - COOLED IN STILL AIR

FORNO / FURNACE: ELECTRIC FURNACE

ORIGINE / ORIGIN: EUROPE

Ns.Rif. / OUR REF.

COD. COL. COLATA / HEAT CODE HEAT: 10/70198 | POS. ITEM: 030 | VS.ORDINE / YOUR REFERENCE: 679/TRANS AM

MATERIALE / MATERIAL: ASTM A105

DESCRIZIONE / DESCRIPTION: W/N 600 RF 2" XS A105

DIM.IN ACC. A / DIM. ACCORDANCE TO: ASME/ANSI B16.5

VISIVO E DIMENS. / VIS. & DIMENS.: SATISFACTORY

C%	Si%	Mn%	S%	P%	Cr%	Ni%	Mo%	Ti%	Cu%	V%	Nb%	N%	Al%	C.E.%
0,210	0,220	1,000	0,010	0,011	0,090	0,050	0,010	0,009	0,150	0,001	0,002	0,000	0,020	0,410

PROVETTA / TEST SPECIMEN SEZ. mm2 / SECT. mm2	LUNG. mm / LENGHT mm	FORMA / SHAPE 1=○ 2=□	SNERVAMENTO / YIELD POINT N/mm2 >=0,2%	ROTTURA / TENSILE STRENGHT N/mm2 >=	ALLUNGAMENTO / ELONGATION %>=	CONTRAZIONE / REDUCTION OF AREA %>=	DUREZZA / HARDNESS HB
126,60	50,80	1	342,0	552,0	32,0	57,0	166,0 - 170,0

RESILIENZA / IMPACT TEST - JOULE/cm2

TIPO / TYPE 10x10mm	°C	1	2	3	SNERVAMENTO / YIELD POINT N/mm2 >=1,0%
KV	20	90	89	90	0,0

MATERIALE IN ACCORDO A / MATERIAL IN ACC. TO: ASTM/ASME A 105/SA 105 M - 09 CSA Z245.12 GRADE 248 CAT.I

TRATTAMENTO TERMICO / HEAT TREATMENT: NORMALIZED AT 920 C - COOLED IN STILL AIR

FORNO / FURNACE: ELECTRIC FURNACE

ORIGINE / ORIGIN: ELSTAL

Ns.Rif. / OUR REF.

COD. COL. COLATA / HEAT CODE HEAT: 10/70198 | POS. ITEM: 030 | VS.ORDINE / YOUR REFERENCE: 679/TRANS AM

MATERIALE / MATERIAL: ASTM A105

DESCRIZIONE / DESCRIPTION: W/N 600 RF 2" XS A105

DIM.IN ACC. A / DIM. ACCORDANCE TO: ASME/ANSI B16.5

VISIVO E DIMENS. / VIS. & DIMENS.: SATISFACTORY

C%	Si%	Mn%	S%	P%	Cr%	Ni%	Mo%	Ti%	Cu%	V%	Nb%	N%	Al%	C.E.%
0,210	0,220	1,000	0,010	0,011	0,090	0,050	0,010	0,009	0,150	0,001	0,002	0,000	0,020	0,410

PROVETTA / TEST SPECIMEN SEZ. mm2 / SECT. mm2	LUNG. mm / LENGHT mm	FORMA / SHAPE 1=○ 2=□	SNERVAMENTO / YIELD POINT N/mm2 >=0,2%	ROTTURA / TENSILE STRENGHT N/mm2 >=	ALLUNGAMENTO / ELONGATION %>=	CONTRAZIONE / REDUCTION OF AREA %>=	DUREZZA / HARDNESS HB
126,60	50,80	1	342,0	552,0	32,0	57,0	168,0 - 170,0

RESILIENZA / IMPACT TEST - JOULE/cm2

TIPO / TYPE 10x10mm	°C	1	2	3	SNERVAMENTO / YIELD POINT N/mm2 >=1,0%
KV	20	90	89	90	0,0

MATERIALE IN ACCORDO A / MATERIAL IN ACC. TO: ASTM/ASME A 105/SA 105 M - 09 CSA Z245.12 GRADE 248 CAT.I

TRATTAMENTO TERMICO / HEAT TREATMENT: NORMALIZED AT 920 C - COOLED IN STILL AIR

FORNO / FURNACE: ELECTRIC FURNACE

ORIGINE / ORIGIN: ELSTAL

Ns.Rif. / OUR REF.

NOTE MANUFACTURING IN ACCORDANCE WITH ORDER AND SPECIFICATION
NOTES MATERIAL IN ACCORDANCE WITH NACE MR-0175/2003 ISO 15156
MATERIAL IN ACCORDANCE WITH NACE MR-0103/2007

ASME STAMP SEC. II

UFFICIO CONTROLLO QUALITA' / QUALITY CONTROL DEPARTEMENT	ENTE UFFICIALE DI COLLAUDO / INSPECTION AUTHORITY	MARCHIO PRODUZIONE / MANUFACTURER'S SYMBOL
S. Forti		MFF

ED. 2010 ADD.

INT. RR DATE 2-28-11

(74) P.O. 966741
CE
WLN-809020
.212

1174854

2" XH LR 90 BW ELLS A234-WPB

P.O.# 2707760-09-6400 Item# 1
Heat# Number: A288
Trans Am Piping Products Ltd. Rev'd By: SB
Shipment / Seq #: 10 . 1619 47

INSPECTION CERTIFICATE

(MILL TEST)

CHUP HSIN ENTERPRISE CO., LTD.

Customer: TRANS AM PIPING PRODUCTS LTD.
Product : SEAMLESS CARBON STEEL BUTT WELD FITTINGS
Spec : ASME SA/ASTM A234 WPB-05a
CSA Z245.11-96 Gr241 CAT.1, NACE MR 0175-03

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

Certificate No : 09900065-0106
Order No : CI-10-325
Date : 2010/11/25

Specification for Raw Material	Specification for Inspection	Visual Examination	Dimensional Inspection
ASTM A106 GR.B	ASME B16.9-2003	GOOD	GOOD

Item	Description	Quantity	Heat ID.	Heat No.	Raw Material Mfg	Raw Certificate NO.
97	90 E L/R XS SEAMLESS 2		933A	J9L1933	SUMITOMO	BYYM2040
97	90 E L/R XS SEAMLESS 2		A288	J9L3288	SUMITOMO	BYYM2014

A288

Specification	Chemical Composition %												Tension Test			HARDNESS TEST	Heat Treatment	Magnetic Particle Exam.	Remark
	C	Si	Mn	P	S	Cu	Ni	Cr	Mo	V	Nb	C.E.	Y.S	T.S	E				
	×100	×100	×100	×1000	×1000	×100	×100	×100	×100	×1000	×1000	×100	P.S.I	P.S.I	%	HB			
MIN		10	29										35000	69000	30				
MAX	30		106	50	58	40	40	40	15	80	20	50		95000		197			
97	17	25	45	20	15	3	2	6	1	0	0	25	37800	65900	40	136	620°C TO 980°C		[DIN 50049/3.1B]
97	20	22	52	15	9	1	1	2	1	0	0	28	45700	66000	40	146	HOT FORMED		EN10204 3.1
	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓			✓	✓	✓				

ASME STAMP SEC. II

ED. 2010 ADD.

INT. lc DATE 2-25-11

C.E.=C+MN/6+(CR+MO+V)/5+(NI+CU)/15

We hereby certify that the material herein described has been manufactured, sampled, tested and inspected in accordance with the requirements of above specifications and purchaser's order.

L. S. Tsai

Chief of Quality Assurance Section

P.O. 964105 ✓
CE ✓
P.P ~~820A333~~ 8020A333
.204
ECP ✓

1 @ 20'

Contract No.: 2110001593-2
L/C NO.: 0FAHD5-00550
P.O.NO.: PO.2549433-OR-2100-B (LOT A)
Name of Customer: CE FRANKLIN
DESCRIPTION: SEAMLESS CARBON STEEL PIPE FOR OIL AND GAS USE.
Date: OCT. 20, 2010
TOTAL: 415PIECES, 30BUNDLES, 37.467MT, 11367.41FT

HENGYANG VALIN STEEL TUBE CO., LTD

MILL TEST REPORT

Add: 10 Dalixincun, Hengyang City, Hunan, China
Tel and Fax: +86 734 8873739 8872942
Cable: 6993
P.C. 421001

SPEC.: ASTM A333-6-2005, ASME SA333-6-2007, NACE MR-0175-2005 (FOR HARDNESS ONLY)

CERTIFICATE NO: 2010-02-0915

NO.	BATCH NO.	HEAT NO.	STEEL GRADE	SIZE	BUNDLES	PIECES	FEET	QUANTITY (MT)	
1	909402603	1014159V	A333-6	2"*0.218"*20FT	5	173	3462.29	7.902	
	909402604	1025610V	A333-6	2"*0.218"*20FT ✓	3	89	1781.18	4.065	
2	909102624	1014159V	A333-6	3"*0.216"*40FT	11	77	3081.98	10.593	
3	909202505	1014159V	A333-6	4"*0.237"*40FT	11	76	3041.96	14.907	

NO.	DELIVERY CONDITION	NONDESTRUCTIVE TEST ET	UT	TYPE:	CHEMICAL COMPOSITION (%) C	Si	Mn	P	S	Cu	Ni	Cr	Mo	V	Ti	B	Nb	Mn/C	CE(IIW)
1	HOT-ROLLED	OK		P	0.09 ✓	0.27	1.06 ✓	0.015 ✓	0.003 ✓	0.05	0.02	0.04	0.01	0.003	0.002	0.0001	0.001	11.78	0.28
				P	0.08	0.26	1.07	0.015	0.003	0.05	0.02	0.04	0.01	0.003	0.002	0.0001	0.001	13.38	0.27
				L	0.08	0.26	1.07	0.015	0.003	0.05	0.02	0.04	0.01	0.003	0.002	0.0001	0.001	13.38	0.27
	HOT-ROLLED	OK		P	0.09	0.26	1.07	0.015	0.003	0.05	0.02	0.04	0.01	0.003	0.002	0.0001	0.001	11.89	0.28
				P	0.09	0.25	1.07	0.015	0.003	0.05	0.02	0.04	0.01	0.002	0.002	0.0001	0.001	13.75	0.28
				L	0.08	0.3	1.10	0.011	0.003	0.05	0.02	0.04	0.01	0.003	0.002	0.0001	0.001	11.89	0.28
2	HOT-ROLLED	OK		P	0.09	0.27	1.07	0.015	0.003	0.05	0.02	0.04	0.01	0.003	0.002	0.0001	0.001	13.25	0.27
				P	0.08	0.26	1.06	0.015	0.003	0.05	0.02	0.04	0.01	0.003	0.002	0.0001	0.001	13.38	0.27
				L	0.08	0.26	1.07	0.015	0.003	0.05	0.02	0.04	0.01	0.003	0.002	0.0001	0.001	11.67	0.28
3	HOT-ROLLED	OK		P	0.09	0.27	1.05	0.015	0.004	0.06	0.03	0.05	0.01	0.0036	0.002	0.0001	0.001	11.78	0.29
				P	0.09	0.26	1.06	0.015	0.004	0.06	0.03	0.05	0.01	0.0036	0.002	0.0001	0.001	11.78	0.29
				L	0.08	0.26	1.07	0.015	0.003	0.05	0.02	0.04	0.01	0.003	0.002	0.0001	0.001	13.38	0.27

NO	TENSILE STRENGTH		YIELD STRENGTH σs (PSI)		ELONGATION δ (%)	IMPACT SIZE	AK (J)	SHEAR FRACTURE	Ori/Tem	HARDNESS (HRC ≤22)	HYDROSTATIC TEST (Psi/5s)	FLATTEN TEST	BEND TEST
	strip ,L,bo=12.5mm,Lo=50mm												
1	65975	66700 ✓	51475 ✓	49300	32.0/38.0 ✓	3*10*55	V8/50/60/48	80/85/85	L/-45℃	OK	2500 ✓	OK	N/A
	65975	71050	49300	54375	34.0/34.0	3*10*55	V8/50/48/48	85/90/90	L/-45℃	OK	2500	OK	N/A
2	65250	65975	47850	48575	34.5/34.0	3*10*55	V8/64/60/62	78/80/85	L/-45℃	OK	2500	OK	N/A
3	65250	65975	45675	46400	37.0/36.0	3*10*55	V2/30/32/29	85/90/85	L/-45℃	OK	2200	OK	N/A

REMARKS: 1. We hereby certify that this certificate of quality is issued and signed by the manufacturer.
2. We hereby certify that the properties described herein meet the requirement of the above spec.
3. We hereby certify that this certificate is issued accordance with EN10204 3.1.
4. hardness to NACE MR-0175.
5. TYPE:P-Product analysis L-Ladle analysis.
6. Content of chemical composition:Cr+Cu+Mo+V+Ni≤1%.

QUALITY MANAGER:

ASME STAMP SEC. II

ED. 2010 ADD.

INT. 788 DATE Feb 22/11

CERTIFIED MILL TEST REPORT

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

LOG NO. F00000000010237 Page 4 of 5

BONNEY FORGE CORPORATION
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 01/21/2011

CUSTOMER ORDER NO.: 4889183-00

BONNEY ORDER NO. B000089637

SHIP TO: CCTF CORPORATION (EDMONTON)
5407 - 53RD AVE.
EDMONTON AB T6B 3G2
Canada

P.O. 961007 ✓
MID ✓
107478 ✓
.669

(6)

ITEM	QUANTITY	LOT NO.	GRADE OR SPECIFICATION NO CHEMICAL ANALYSIS, PHYSICAL PROPERTIES, REMARKS
14	50	55769	36-8X1/2 6M A105N THRD T SA/A105N
7550032			C 0.190 Cr 0.040 Cu 0.100 Mn 0.990 Mo 0.010 Nb 0.001 Ni 0.020 P 0.009 S 0.022 Si 0.240 V 0.025 CE(Long Formula) = 0.38 T/S(PSI) 76,900 Y/S(PSI) 51,200 EL(%) 30.90 RA(%) 65.00 Brinell 154 BHN 152 BHN
15	150	58146 ✓	10 -3 X 1 6000 A105N THRD T ✓ SA/A105N
7552147			Al 0.004 C 0.200 ✓ Cb 0.000 Co 0.000 Cr 0.074 ✓ Cu 0.200 ✓ Mn 1.000 ✓ Mo 0.018 ✓ N 0.009 Nb 0.008 Ni 0.073 ✓ P 0.013 ✓ S 0.020 ✓ Si 0.230 ✓ V 0.026 ✓ CE(Long Formula) = 0.41 ✓ T/S(PSI) 78,750 ✓ Y/S(PSI) 54,000 ✓ EL(%) 31.85 ✓ RA(%) 56.20 Brinell 147 BHN 147 BHN ✓
16	50	58040	36-12 X1 6000 A105N THRD T SA/A105N
7552157			Al 0.001 C 0.200 Cb 0.000 Co 0.000 Cr 0.115 Cu 0.250 Mn 0.960 Mo 0.024 N 0.011 Nb 0.006 Ni 0.102 P 0.011 S 0.025 Si 0.200 V 0.024 CE(Long Formula) = 0.42 T/S(PSI) 78,750 Y/S(PSI) 52,500 EL(%) 30.45 RA(%) 61.05 Brinell 153 BHN 150 BHN
17	25	57537	8-6 X11/2 6000 A105N SOCK S SA/A105N
7552697			Al 0.028 C 0.200 Co 0.003 Cr 0.050 Cu 0.120 Mn 0.990 Mo 0.010 Nb 0.014 Ni 0.040 P 0.007 S 0.018 Si 0.210 V 0.000 CE(Long Formula) = 0.39 T/S(PSI) 74,534 Y/S(PSI) 49,689 EL(%) 34.00 RA(%) 66.60 Brinell 139 BHN 139 BHN

ASME STAMP SEC. II

ED. 2010 ADD.

INT. RB DATE Feb 14/11

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 Ruiz

Kylee Ruiz
QUALITY PROCESS MANAGER

CMTR: REV2

CERTIFIED MILL TEST REPORT

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

LOG NO. F00000000010237 Page 5 of 5

BONNEY FORGE CORPORATION
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 01/21/2011

CUSTOMER ORDER NO.: 4889183-00

BONNEY ORDER NO. B000089637

SHIP TO: CCTF CORPORATION (EDMONTON)
5407 - 53RD AVE.
EDMONTON AB T6B 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. THE MATERIAL SUPPLIED AS A105N MEETS THE REQUIREMENTS OF BOTH NACE MRO103-2007 AND NACE MRO175/ISO 15156-2.
4. CERTIFYING ASTM A105-09 / ASME SA105-07 EDITION.
5. THE PRODUCT SUPPLIED WAS INSPECTED IN ACCORDANCE WITH EN 10204:2004 EDITION TYPE 3.1 INSPECTION DOCUMENT. (EUROPEAN STANDARD)
6. THE UNIT OF MEASURE FOR TENSILE AND YIELD (0.2%) STRENGTH ARE IN REPORTED IN PSI.
7. ELONGATION TEST RESULTS ARE OBTAINED USING STANDARD ROUND SPECIMEN, 2 INCH OR 50 MM GAGE LENGTH.

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 Ruiz

Kylee Ruiz
QUALITY PROCESS MANAGER

CMTR: REV2

FLG-1504ORWN SOV

.897

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@ksts.seed.net.tw

MILL TEST CERTIFICATE

EN10204-3.1.B(DIN50049/3.1.B)

Customer: W.F.F FITTINGS & FLANGES (CANADA) LTD.

Order No.: EO0015KQMID

Certificate No.: SE090555

Date: 12/23/2009

PRODUCT	MATERIAL SPECIFICATIONS	DIMENSIONAL SPECIFICATIONS
FORGED CARBON STEEL FLANGES	ASTM A105-05/ASME SA105-07	ASME B16.5-03 CSA Z245.12

Item No.	CUSTOMER P/N	DESCRIPTION	QUANTITY	CHEMICAL COMPOSITION (%) C	Si	Mn	P	S	Cu	Cr	Ni	Mo	V	Nb	N			CE(*3)
			Min / Max	- / 0.360	0.100 / 0.350	0.600 / 1.050	- / 0.035	- / 0.040	- / 0.400	- / 0.300	- / 0.400	- / 0.120	- / 0.080	- / 0.020	- / -			
1		1500 WNRTJ S160 3" A105N	25 PCE	0.200	0.170	1.100	0.007	0.011	0.060	0.090	0.040	0.005	0.003	0.005	0.009			0.409
2		1500 WNRTJ S160 3" A105N	5 PCE	0.212	0.280	0.980	0.015	0.021	0.009	0.023	0.050	0.002	0.006	0.005	0.003			0.384
3		150 WNRF S160 2" A105N	17 PCE	0.211	0.240	1.000	0.013	0.014	0.006	0.019	0.054	0.002	0.007	0.005	0.004			0.386
4		150 WNRF S160 2" A105N	3 PCE	0.209	0.220	1.020	0.014	0.008	0.008	0.012	0.054	0.002	0.005	0.005	0.006			0.386
5		150 WNRF S160 3" A105N	20 PCE	0.212	0.260	1.030	0.016	0.009	0.007	0.021	0.054	0.002	0.010	0.005	0.003			0.392
6		150 WNRF STD 10" A105N	40 PCE	0.200	0.240	0.960	0.016	0.017	0.011	0.018	0.052	0.002	0.007	0.001	0.003			0.372
7		150 WNRF STD 2 1/2" A105N	10 PCE	0.210	0.210	1.150	0.007	0.013	0.040	0.060	0.030	0.009	0.003	0.005	0.011			0.420
8		150 WNRF STD 3" A105N	300 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
9		150 WNRF STD 3" A105N	225 PCE	0.190	0.170	1.130	0.017	0.015	0.090	0.100	0.080	0.005	0.003	0.005	0.009			0.409
10		150 WNRF STD 3" A105N ✓	300 PCE	0.217 ✓	0.240 ✓	1.040 ✓	0.014 ✓	0.009 ✓	0.007	0.011	0.055	0.002	0.006	0.005	0.008			0.397 ✓

Item No.	Heat No.	T.S.(*1) (MPA)	Y.S.(*1) (MPA)	E.L.(*1) (%)	Hardness (HB)	R.A.(*1) (%)	Impact Test Temp: Minimum: Joule 1	2	3	Material Supplier
Min		485.0	250.0	22.0	-	30.0				
Max		-	-	-	187	-				
1	21532	515.8	331.5	34.2	155	66.8				OEMK
2	840700	508.0	300.1	33.0	157	67.0				NTMK
3	931272	509.9	319.7	35.2	154	66.0				NTMK
4	921027	511.9	343.2	32.6	155	66.0				NTMK
5	931275	509.9	323.6	34.2	155	66.0				NTMK
6	815993	505.0	306.0	33.0	157	67.0				NTMK
7	13145	521.7	317.7	34.4	153	67.7				OEMK
8	13144	519.8	311.9	33.2	150	65.9				OEMK
9	10828	501.1	302.0	35.0	150	68.6				OEMK
10	921026 ✓	509.9 ✓	321.7 ✓	32.8 ✓	157 ✓	64.0				NTMK

■ HEAT TREATMENT(*2)
■ N

■ REMARKS
880°CX3HRS
CONFORMS WITH NACE MR0103-07 AND NACE MR0175/ISO15156.2 ✓
CONFORMS WITH Z245.12 CAT I GR.248 SOUR SERVICE-05
TEST SPECIMEN ORIENTATION: TRANSVERSE
SO#E122743/PO#S759027524 ✓

*1: T.S. = Tensile Strength, Y.S.=Yield Strength, E.L.=Elongation, R.A.=Reduction of Area.

*2: N=Normalized, A=Annealed, Q=Quenched, T=Tempered, S.T=Solution Treated, S.R=Stress Relieved, A.C=Air Cooled, F.C=Furance Cooled, W.C=Water Cooled, O.C=Oil Cooled.

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

SAN ENG STEEL FORGING CO., LTD. ★ S.E.C.J ★ QUALITY ASSURANCE DEP'T

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 Dep't

ASME STAMP SEC. II

ED. 2010 ADD.

INT. YBB DATE Feb 14/11

DGN .361
Sch 80
4"

Contract No.: 06HGC06326
L/C NO. 6FAHD5-00413
P.O. NO.: PO.1521137-OS-4900-A
Name of Customer: CE FRANKLIN
Description: Seamless Carbon Steel Pipe For Oil And Gas Use
TOTAL: 1052PIECES, 39BUNDLES, 78.249MT, 21040FT

HUNAN HENGYANG STEEL TUBE (GROUP) CO., LTD

MILL TEST REPORT

Date: JUL. 11, 2006
Page: 1/1

Add: 10 Dalixincun, Hengyang City, Hunan, China
Tel and Fax: +86 734 8873739 8872942
Cable: 6993
P.C. 421001

SPEC: ASTM A53B-2002/A106B-2002a, ASME SA53B/SA106B-2004, API 5LB/X42, PSL1-2004, NACE MR-0175-1999

CERTIFICATE NO: 0602014

NO.	BATCH NO.	HEAT NO.	STEEL GRADE	SIZE	BUNDLES	PIECES	FEET	QUANTITY (MT)	ACTUAL WEIGHT(MT)
1	967200404	0612441	X42	2"*0.154"*20FT	3	137	2740	4.549	N/A
2	966403024	0623518	X42	2"*0.218"*20FT	6	258	5160	11.772	N/A
3	967400104	0623856	X42	3"*0.216"*20FT	6	220	4400	15.148	N/A
4	966203008	0612432	X42	3"*0.300"*20FT	7	163	3260	15.172	N/A
5	966403003	0623562	X42	4"*0.237"*20FT	8	149	2980	14.598	N/A
6	966102904	0623809	X42	4"*0.337"*20FT	9	125	2500	17.01	N/A

NO.	DELIVERY CONDITION	NONDESTRUCTIVE TEST		CHEMICAL COMPOSITION %												
		EDDY CURRENT TEST	ULTRASONIC TEST	C	Si	Mn	P	S	Cu	Ni	Cr	Mo	V	AL	CE	Mn/C
1	HOT-ROLLED	OK	N/A	0.17	0.47	0.85	0.010	0.005	0.06	0.04	0.02	0.02	0.002	0.00	0.327	5.0
2	HOT-ROLLED	OK	N/A	0.16	0.44	0.86	0.016	0.010	0.10	0.04	0.04	0.02	0.01	0.00	0.327	5.4
3	HOT-ROLLED	OK	N/A	0.17	0.41	0.84	0.011	0.006	0.08	0.04	0.06	0.01	0.001	0.00	0.332	4.9
4	HOT-ROLLED	OK	N/A	0.17	0.45	0.85	0.011	0.005	0.04	0.04	0.02	0.02	0.004	0.00	0.326	5.0
5	HOT-ROLLED	OK	N/A	0.18	0.43	0.85	0.019	0.006	0.10	0.03	0.03	0.02	0.01	0.00	0.342	4.7
6	HOT-ROLLED	OK	N/A	0.17 ✓	0.35 ✓	0.80 ✓	0.015 ✓	0.006 ✓	0.09 ✓	0.04 ✓	0.03 ✓	0.03 ✓	0.006 ✓	0.00	0.325	4.7

NO.	σb (PSI) TENSILE STRENGTH	σs (PSI) YIELD STRENGTH	δ (%) ELONGATION	Ak (J) IMPACT	HARDNESS	HYDROSTATIC TEST	FLATTEN TEST	BEND TEST
1	82650	53650	30.0	N/A	HRC 5.0	3000PSI	N/A	OK
2	83375	53650	29.0	N/A	HRC 7	3000PSI	N/A	OK
3	79750	52200	34.0	N/A	HRC 6.0	3000PSI	OK	N/A
4	77575	50025	36.0	N/A	HRC 7.5	3000PSI	OK	N/A
5	76850	50025	36.0	N/A	HRC 6.0	2650PSI	OK	N/A
6	79750 ✓	51475 ✓	32.5 ✓	N/A	HRC 6.5	3000PSI	OK	N/A

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/UNI EN 10204 3.1B.
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. MATERIALS CONFIRM TO ANSI B36.10.
6. Origin: Made in China.

ASME STAMP SEC. II
ED. 2010 ADD.
INT. L DATE 1-19-11

QUALITY MANAGER

HUNAN HENGYANG STEEL TUBE GROUP CO. LTD

1068 CE FRANKLIN
20' 2" XH Pipe EBM
,241

Contract No.: 2110001594-1
L/C NO.: 0FAHD5-00549
P.O.NO.: PO.2549539-OR-2100-A (LOT A)
Name of Customer: CE FRANKLIN
DESCRIPTION: SEAMLESS CARBON STEEL PIPE FOR OIL AND GAS USE.
TOTAL: 1722PIECES, 44BUNDLES, 85.038MT, 34462.60FT

HENGYANG VALIN STEEL TUBE CO.,LTD

MILL TEST REPORT

Date: AUG. 11, 2010
Page: 1/2

Add: 10 Dalixincun, Hengyang City, Hunan, China
Tel and Fax: +86 734 8873739 8872942
Cable: 6993
P.C. 421001

SPEC: ASTM A53B-2007/A106B-2006, ASME SA53B/SA106B-2007, API 5LB/X42, PSL-2-2006, NACE MR-0175-2004/ ISO 15156-2(REGION 3)/MR-0103/3S (CSA Z245.1 GRADE 290 CATEGORY I)

CERTIFICATE NO: 2010-01-0814

NO.	BATCH NO.	HEAT NO.	STEEL GRADE	SIZE	BUNDLES	PIECES	FEET	QUANTITY (MT)	ACTUAL WEIGHT(MT)
1	907402410	1024614V	B/X42/GR. 290	2"*0.154"*20FT	8	442	8845.8	14.658	
2	907202312	1013164V	B/X42/GR. 290	2"*0.218"*20FT	21	765	15310.04	34.901	
3	907402512	1024623V	B/X42/GR. 290	3"*0.216"*20FT	6	205	4102.69	14.123	
	907402513	1013166V	B/X42/GR. 290	3"*0.216"*20FT	7	254	5083.33	17.498	
	907402514	1024625V	B/X42/GR. 290	3"*0.216"*20FT	2	56	1120.74	3.858	

NO.	DELIVERY CONDITION	NONDESTRUCTIVE TEST	
		PIPE BODY ET	PIPE END UT
1	NORMALIZED	OK	OK
2	NORMALIZED	OK	OK
3	NORMALIZED	OK	OK
	NORMALIZED	OK	OK
	NORMALIZED	OK	OK

CHEMICAL COMPOSITION %

TYPE	C	SI	Mn	P	S	Cu	Ni	Cr	Mo	V	Ti	B	Nb	*1	CE
P	0.12	0.24	1.04	0.011	0.0014	0.06	0.03	0.04	0.01	0.01	0.026	0.0002	0.029	8.67	0.311
P	0.12	0.23	1.03	0.011	0.0014	0.06	0.03	0.04	0.01	0.01	0.026	0.0002	0.029	8.58	0.310
L	0.12	0.27	1.05	0.009	0.0008	0.05	0.02	0.04	0.01	0.004	0.021	0.0002	0.029	8.75	0.310
P	0.12	0.26	1.10	0.0087	0.00107	0.05	0.02	0.04	0.01	0.01	0.020	0.0001	0.027	9.17	0.320
P	0.12	0.27	1.10	0.008	0.0010	0.05	0.02	0.04	0.01	0.01	0.020	0.0001	0.027	9.17	0.320
L	0.12	0.24	1.03	0.012	0.0011	0.05	0.02	0.04	0.01	0.01	0.026	0.0002	0.030	8.58	0.308
P	0.12	0.24	1.05	0.010	0.0012	0.05	0.02	0.04	0.01	0.01	0.023	0.0002	0.030	8.75	0.312
P	0.12	0.23	1.05	0.010	0.0012	0.05	0.02	0.04	0.01	0.01	0.023	0.0002	0.030	8.75	0.312
L	0.12	0.24	1.05	0.010	0.0012	0.05	0.02	0.04	0.01	0.01	0.023	0.0002	0.030	8.75	0.312
P	0.11	0.23	1.04	0.010	0.0010	0.05	0.02	0.04	0.01	0.01	0.025	0.0002	0.030	9.45	0.300
P	0.12	0.24	1.04	0.010	0.0010	0.05	0.02	0.04	0.01	0.01	0.025	0.0002	0.030	8.67	0.310
L	0.11	0.24	1.04	0.009	0.0010	0.05	0.02	0.04	0.01	0.01	0.026	0.0002	0.030	9.45	0.300
P	0.14	0.27	1.04	0.011	0.0010	0.05	0.02	0.04	0.01	0.01	0.025	0.0002	0.029	7.43	0.330
P	0.13	0.28	1.04	0.011	0.0010	0.05	0.02	0.04	0.01	0.01	0.025	0.0002	0.029	8	0.320
L	0.14	0.29	1.04	0.011	0.0006	0.05	0.02	0.05	0.01	0.01	0.026	0.0002	0.029	7.43	0.332

NO	TENSILE STRENGTH σb (PSI)	YIELD STRENGTH σs (PSI)	δ (%) ELONGATION	IMPACT TEST Temp (℃)	Dime(mm)	AKV (J)	Orientation	HARDNESS HRC≤22	HYDROSTATIC TEST(PSI/6S)	FLATTEN TEST	BEND TEST	SSC EST	HIC TEST	SHEAR	FRACTURE
	strip,L,bo=19mm,Lo=50mm														
1	72500	55825	30.5	N/A	N/A	N/A	N/A	OK	3010	N/A	OK	N/A	N/A	N/A	N/A
2	66700	50750	37.5	N/A	N/A	N/A	N/A	OK	3010	N/A	OK	N/A	N/A	N/A	N/A
3	70325	52200	39	N/A	N/A	N/A	N/A	OK	3010	OK	N/A	N/A	N/A	N/A	N/A
	70325	55825	38.5	N/A	N/A	N/A	N/A	OK	3010	OK	N/A	N/A	N/A	N/A	N/A
	strip,L,bo=12.5mm,Lo=50mm														
	68150	54375	36	N/A	N/A	N/A	N/A	OK	3010	OK	N/A	N/A	N/A	N/A	N/A

REMARKS: 1. We hereby certify that this certificate of quality is issued and signed by the manufacturer.
2. We hereby certify that the properties described herein meet the requirement of the above spec. ASME STAMP SEC. II
3. We hereby certify that this certificate is issued accordance with EN 10204.3.1 AND NACE MR-0175/MR-0103
4. TYPE:P-Product analysis L-Ladle analysis;
5. ORIGIN: MADE IN CHINA
6. Normalizing at 900±10℃, 40 Minutes
7 *1 =Mn/C

QUALITY MANAGER:

ED. 2010 ADD.
INT. le DATE 1-10-11

HENGYANG VALIN STEEL TUBE CO., LTD. INSPECTION DEPARTMENT

(4) P.O. 61335
midfield
107478
1640

CERTIFIED MILL TEST REPORT

(2)

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

LOG NO. 317011 PAGE 1

BONNEY FORGE
P.O. BOX 330 • 14496 CROGHAN PIKE • MOUNT UNION, PA 17066-0330
(814) 542-2546 • (800) 345-7548 • FAX (814) 542-4906
www.bonneyforge.com

CUSTOMER: CCTF CORPORATION

Date 12/29/07

CUSTOMER'S Order No.: 4882398--00

Bonney Order No. B000023147

SHIPPED TO: CCTF CORPORATION (EDMONTON)
5407 - 53RD AVE.

EDMONTON, AB T6B 3G2 Canada

ITEM	QUANTITY	LOT NO.	GRADE OR SPECIFICATION NO. CHEMICAL ANALYSIS PHYSICAL PROPERTIES REMARKS
			SA/A105N
002	6	56932	7550685 20-16X3 STD A105N WELD B
			C .210 MN 1.030 P .007 S .023 SI .200
			NI .030 CU .110 CR .040 MO .100 V .000
			AL .020 NB .013
			CE(LONG FORMULA) = 0.42
			T/S 77625 Y/S 53000 EL 31.80 RA 64.45
			BRINELL HARDNESS1: 139 HARDNESS2: 137
010	854	57259	7550001 8 -3 X 1/2 3000 A105N THRD T
			C .200 MN 1.030 P .008 S .019 SI .220
			NI .030 CU .100 CO .003 CR .040 MO .020
			V .000 AL .020 NB .015
			CE(LONG FORMULA) = 0.39
			T/S 71500 Y/S 46800 EL 35.00 RA 66.00
			BRINELL HARDNESS1: 139 HARDNESS2: 139
022	98	57195	7552147 10 -3 X 1 6000 A105N THRD TOL
			C .200 MN 1.000 P .009 S .021 SI .200
			NI .130 CU .210 CR .120 MO .040 V .003
			AL .025 NB .001
			CE(LONG FORMULA) = 0.42
			T/S 76131 Y/S 51005 EL 31.55 RA 64.52
			BRINELL HARDNESS1: 132 HARDNESS2: 132

ASME STAMP SEC. II

ED. 2007 ADD. 2009

INT. L DATE 12-22-10

TOL-6M10

CCTF
701536

1" 6M TOL A105

***** 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

CMTR: REV 1

QUALITY PROCESS MANAGER

708057

(6) 1550872

CERTIFIED MILL TEST REPORT

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

LOG NO. F00000000003094 Page 3 of 5

BONNEY FORGE CORPORATION
P.O. BOX 330 • 14496 CROGHAN PIKE • MOUNT UNION, PA 17066-0
(814) 542-2545 • (800) 345-7546 • FAX (814) 542-4906
www.bonneyforge.com

CUSTOMER: CCTF CORPORATION

DATE 06/10/2010

CUSTOMER ORDER NO.: 4888174-00

BONNEY ORDER NO. B000076170

P.O. 61242 CE FRANKL
107478
0.481"

SHIP TO: CCTF CORPORATION (EDMONTON)
5407 - 53RD AVE.
EDMONTON AB T6B 3G2
Canada

Need MO // see pg 2/

ITEM	QUANTITY	LOT NO	GRADE OR SPECIFICATION NO CHEMICAL ANALYSIS, PHYSICAL PROPERTIES, REMARKS
9	250	57991 ✓	10 -3 X 1 6000 A105N THRD T SA/A105N
7552147			Al 0.019 C 0.200 ✓ Co 0.003 Cr 0.040 ✓ Cu 0.070 ✓ Mn 1.000 ✓ Nb 0.013 Ni 0.020 ✓ P 0.007 ✓ S 0.022 ✓ Si 0.220 ✓ Sn 0.010 V 0.003 ✓ T/S 70,000 ✓ Y/S 48,750 ✓ EL 32.30 ✓ RA 63.75 Brinell 130 BHN 132 BHN ✓
10	25	57610	11/2-11/4X3/4 3M A105N SOCK S SA/A105N
7550019			Al 0.018 C 0.200 Co 0.004 Cr 0.030 Cu 0.080 Mn 1.030 Mo 0.010 Nb 0.016 Ni 0.030 P 0.006 S 0.023 Si 0.240 V 0.000 CE(Long Formula) = 0.39 T/S 75,500 Y/S 52,500 EL 33.00 RA 67.00 Brinell 147 BHN 147 BHN
11	100	57894	5-4X1 3M A105N SOCK S SA/A105N
7552483			C 0.200 Co 0.003 Cr 0.030 Cu 0.080 Mn 1.110 Mo 0.010 Nb 0.013 Ni 0.030 P 0.009 S 0.022 Si 0.190 V 0.004 CE(Long Formula) = 0.40 T/S 73,375 Y/S 51,250 EL 31.65 RA 54.90 Brinell 130 BHN 130 BHN
12	50	57415	24-14 X11/2 3000 A105N SOCK S SA/A105N
7556066			Al 0.023 C 0.190 Co 0.003 Cr 0.040 Cu 0.100 Mn 1.040 Mo 0.020 Nb 0.016 Ni 0.030 P 0.010 S 0.019 Si 0.210 V 0.000 CE(Long Formula) = 0.38 T/S 74,375 Y/S 52,250 EL 33.25 RA 67.90 Brinell 137 BHN 139 BHN

ASME STAMP SEC. II

ED. 2007 ADD. 2009

INT. YBB DATE 12-14-10

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 Billie Jo Clemens

Billie Jo Clemens
QUALITY PROCESS MANAGER

CMTR: REV2

Bonney Forge Lot Number Assignment 57491

Certificat d'essai/Test Certificate

ArcelorMittal

Usine de Longueuil / Longueuil Works

Vendue à - Sold to	Expédié à - Shipped to
BONNEY FORGE CORP. 14496 Croghan Pike MOUNT UNION PA 17066-0330 ETATS-UNIS	BONNEY FORGE CORP. 14496 Croghan Pike MOUNT UNION PA 17066-0330 ETATS-UNIS

No de com. Sale order	No de bon de comm. Customer Order	Connaissement Bill of lading	Date expé. Date shipped	Date du cert Certificate Date	No de Certifical Certificate no
55503	2261984	80170861	2010/03/01	2010/03/01	0000055241

Article Item	Description	No Matériel Material No	No pièce Part No	Poids expédié Weight	Coulée Heat
000002	SBQ Bars, Rounds, Cut to Lenght 1.75" BF-MS-25 18'00" 0	20015625	302937	43,780LB	C79495__01

ANALYSE CHIMIQUE-CHEMICAL ANALYSIS (%)

Coulée/Heat:	C	Mn	P	S	Si	Cu	Ni	Cr	Mo	V	Nb	ALt	ALs
C79495__01	0.200 ✓	1.00 ✓	0.007 ✓	0.022 ✓	0.22 ✓	0.07 ✓	0.02 ✓	0.04 ✓	0.000 ✓	0.003 ✓	0.013	0.019	0.017

Coulée/Heat:	N	Sn	Tit	Bt	Ca	Pb	As	Co	Sb	DI.	C.E.
C79495__01	0.0039	0.010	0.001	0.0003	0.0015	0.000	0.001	0.003	0.001	0.60	0.38

ESSAI JOMINY - JOMINY TEST(hRc)

Coulée/Heat:	JH	J1	J2	J3	J4	J5	J6	J8	J10	J12	J14	J16	J20	J24	J28	J32
C79495__01																

PROPRIÉTÉS MÉCANIQUES - MECHANICAL PROPERTIES

Coulée : Heat :	Yield L Elas. (KSI)	Tensile L.Ultime (KSI)	Elong 2" All 50mm (%)	RoA Striction (%)	Hard. Dureté (BHN)	Reduc. ratio
C79495__01	49.1 ✓	75.7 ✓	34.5 ✓	59.9	161 ✓ 156	12.6

ASME STAMP SEC. II

ED. 2007 ADD. 2009

INT. MB DATE 12-14-10

APPROVED
QUALITY CONTROL DEPT.

BY M Spurbo

DATE 3/16/10

Remarques/Remarks:

This steel was made in Canada
MATERIAL WAS NOT EXPOSED TO MERCURY OR ANY METAL ALLOY THAT IS LIQUID AT AMBIENT TEMPERATURES DURING PROCESSING OR WHILE IN OUR POSSESSION. THE MATERIAL IS LEAD FREE AND THIS MATERIAL IS NOT REPAIRED BY WELDING. MATERIAL MANUFACTURED IN ACCORDANCE WITH QUALITY SYSTEM DATED: 09/06/29 REV.#1

Signature:

Métallurgie (A/Q)
Metallurgy (Q/A)

David Bonneau

SUMITOMO METAL INDUSTRIES, LTD.
WAKAYAMA STEEL WORKS (KAINAN)
260-100, FUNOO, KAINAN, JAPAN

住友金属 SUMITOMO METALS

INSPECTION CERTIFICATE

CERTIFICATE NO. :BYYF0725-01 PAGE : 1/1 DATE : 2010-09-16

CUSTOMER :CE FRANKLIN LTD.
ORDER NO. :2512305-OR-2100 ITEM NO. 1
SHIPPER :SUMITOMO CORPORATION 057 KEF 2067/1 0P15S091101
COMMODITY :SEAMLESS STEEL PIPE WITH BEVELLED ENDS 30 DEG.
STANDARD :CSA Z245.1-07 CAT.I GR.290 ASTM A106-08 / ASME 2007(A09) SA-106 GR.B NDE
API 5L 43EDITION PSL-1 GRADE B/ X42

EAG

SPECIFICATION :
MILL WORK NO. :BYYF0725 O.D. :88.9mm W.T. :5.5mm LENGTH:6.1m QUANTITY:473pcs. MASS:32632kg

HEAT NO. :J0K8881
PRODUCTS PCS. :473

CE PO 61319

HEAT TREATMENT :AS ROLLED
DEOXIDATION :KILLED

PIP - 4030 Qty 80ft @ 0.215

CHEMICAL COMPOSITION (%)

		*1	C	Si	Mn	P *2	S *2	Cu	Cr	Ni	Mo	Ti	V	Nb	B *2	*U4	*VN	*V1	*CEQ
SPEC. MIN.		R	-	10	29	-	-	-	-	-	-	-	-	-	-	-	-	-	-
MAX.		R	26	50	106	30	30	40	40	40	15	4	8	11	1	100	3	15	40
HEAT NO. J0K8881		L	20	23	92	15	3	1	5	2	1	0	0	0	0	9	0	0	37
		P	20	23	94	16	3	2	5	2	1	0	0	0	0	10	0	0	38
		P	20	23	95	15	3	2	5	2	1	0	0	0	0	10	0	0	38
		P	20	22	95	15	3	2	5	2	1	0	0	0	0	10	0	0	38
		P	21	23	95	16	3	2	5	2	1	0	0	0	0	10	0	0	39

*1 R:LADLE & PRODUCT ANALYSIS L:LADLE ANALYSIS P:PRODUCT ANALYSIS *2:X1000 OTHER:X100 *U4:Cu+Ni+Cr+Mo+V
*VN:Nb+V *V1:Nb+V+Ti *CEQ:C+F(Mn/6+Si/24+Cu/15+Ni/20+(Cr+Mo+V+Nb)/5+5B) F=COEFFICIENT BY CSA STANDARD

TENSILE TEST

		*1 *2	YS *3		TS *3		EL %
SPEC. MIN.		L B	M	290	M	414	22
MAX.		L B	M	-	M	-	-
HEAT NO. J0K8881		L B	M	322	M	510	35
		L B	M	348	M	509	33

TYPE OF SPECIMEN:STRIP 19mm WIDTH *1 SAMPLING DIRECTION L:LONGITUDINAL *2 SAMPLING POSITION B:BASE METAL
*3 UNIT M:MPa GAUGE LENGTH:50.0mm KIND OF YS:0.5% EXTENSION UNDER LOAD

FLATTENING TEST: ACCEPTABLE
VISUAL & DIMENSIONS: ACCEPTABLE
HYDROSTATIC TEST 20.7MPa: ACCEPTABLE
ULTRASONIC EXAMINATION: ACCEPTABLE
NACE MR0103-2007/MR0175/ISO15156-2/2003:SATISFACTORY

ASME STAMP SEC. II
ED. 2007 ADD. 2009
INT. L DATE 12-14-10

No PO to sign off

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.

T. Kondo
MANAGER, QUALITY ASSURANCE SECTION

NO. 063456K10

<An Important Message To Our Customers>
This certification is intended only for products listed. Modification to or unauthorized use of this certification is strictly prohibited. Offences may be regarded as forgery of documents and be subject to criminal prosecution.
If you have any questions on this certification, you can contact us by facsimile or e-mail as shown below;
Fax. No. : +81-3-4416-6789 E-mail:pipe-ipp@sumitomometals.co.jp

CE

P/O 61216

2 STD PIPE

Tenaris

INSPECTION CERTIFICATE

(BS EN 10204 3.1: 2004 - ISO 10474 3.1B: 1991)

2" sch 40

SIDERCA S.A.I.C.
Dr Jorge A. Simini 250
(B2804MHA) Campana
Buenos Aires, Argentina

(54) 3489 433100 tel.
(54) 3489 433405 fax

Cliente / Customer: VAN LEEUWEN PIPE & TUBE (CANADA) IN	Expediente/ Manufacturing Order: 5/4232.02	Número / Number: 551800	Fecha / Date: 16/10/2010	Pág./Page: 1 / 5
Producto / Product: CARBON STEEL PIPE-HIGH TEMPERATURE SERV.	Orden de Compra/ Purchase Order: 45001342	Item: 00905	Referencia del Cliente / Customer Reference	
Norma / Standard: ASTM/ASME A/SA 106 + CSA Z245.1-07 + PSP00373/0+NACE MR0175/0103+IPRO LP-006	Grado / Grade: B/290 CAT I SS		Extremos / Ends: BEVELLED AT 30 DEG. ASTM	

Dimensiones / Dimensions	Schedule	Peso Nominal / Nominal Weight	Longitud / Length	Superficie / Surface	Cantidades / Quantities
60.30 x 3.91 mm 2 3/8 x 0.154 inches	40	5.44 KG/MT 3.65 LB/FT	S.R. (SP)	INT BARE /EXT VARNISHED	296 Pz 1930.61 m 10749 Kg 296 Pcs 6334.02 Ft 23697 Lb

ENSAYOS DE TRACCION / TENSILE TEST

Colada / Heat	Nº de Ensayo / Test Nº	Zona / Zone	Estado	Ext.	Nº P/T	Tipo / Type	Ori	Temp de Ens / Test Temp °C	Dimensiones / Size mm	Sección / Area mm2	Offset Method Req. Min 0.2% Mpa	Offset Method V. obt. Mpa	EUL %	EUL Method Req. Min Mpa	EUL Method V. obt. Mpa	EUL Method Req. Max Mpa	Rotura/U.T.S Req. Min Mpa	Rotura/U.T.S V. obt. Mpa	Rotura/U.T.S Req. Max Mpa	Relación F/R YS/UTS Ratio Req. Max	Relación F/R YS/UTS Ratio Obt.	Alargamiento / Elongation Lo 2" mm	Alargamiento / Elongation Req. Min %	Alargamiento / Elongation V. obt %	Red. de area / Area Red. Req. Min	Red. de area / Area Red. %	Dureza / Hardness Req. Min	Dureza / Hardness V. Obt.	Dureza / Hardness Req. Max
40538	755344	C/B	PRO	M		ST	L	TA/RT	19,01 X 3,85	74,66			0.5	290	440.3 ✓		415	567.3 ✓	625	0.93	0.78	50.8	21.0	31.6 ✓					

CE ✓ PO# 61216 ✓

109901 20 ft @ 0.154"

DJW

TEST TECNOLOGICO / TECHNOLOGICAL TEST					
Aplastamiento / Flattening Test	Curvado / Bend test	Abocardado / Flaring Test	Pestañado / Flange Test	Ens. De anillo expandido / Ringexpanding Test	Ens. De Tracción de anillo / Ring tensile Test
N.A	Satisfact.	N.A	N.A	N.A	N.A

NOTA / NOTE:

Pro = Proceso/ Process PWHT = Post Weld Heat Treatment
N = Normalizado/ Normalized
DIST = Distensionado / Stress Relief
Q & T = Templado y Revenido/ Quenched & Tempered
TA/RT = Temp. Ambiente/ Room Temperature

RE = Rectangular/ Rectangular
CI = Cilíndrica/ Cylindrical
ST = Segmento Tubular / Tubular segment
TU = Transversal

C/B = Cuerpo/ Body
R/U = Recalque/ Upset
P / A = Promedio / Average
Min = Mínimo / minimum
Max = Máximo / Maximum

L = Longitudinal
T = Transversal
P/T = Tubo/ Pipe
EXT = Extremo/ End
M = Medio/ Middle

V.Obt. = Valor Obtenido / Obtained value
E = Comienzo de marcación/ Stenciling starting
O = Extremo opuesto al E/ Opposite extreme to E
C/H = Ensayo Caliente/ Hot Testing

CALI 17/04

ASME STAMP SEC. II

ED. 2007 ADD. 2009

INT. 486 DATE 12-08-16

PIP-4020 ✓

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INSPECTION CERTIFICATE

(BS EN 10204 3.1: 2004 - ISO 10474 3.1B: 1991)

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Cliente / Customer	Expediente/ Manufacturing Order	Número / Number	Fecha / Date	Pág./Page
VAN LEEUWEN PIPE & TUBE (CANADA) IN	5/4232.02	551800	16/10/2010	2 / 5

Producto / Product	Orden de Compra/ Purchase Order	Item	Referencia del Cliente / Customer Reference
CARBON STEEL PIPE-HIGH TEMPERATURE SERV.	45001342	00905	

Norma / Standard	Grado / Grade	Extremos / Ends
ASTM/ASME A/SA 106 + CSA Z245.1-07 + PSP00373/0+NACE MR0175/0103+IPRO LP-006	B/290 CAT I SS	BEVELLED AT 30 DEG. ASTM

Dimensiones / Dimensions	Schedule	Peso Nominal / Nominal Weight	Longitud / Length	Superficie / Surface	Cantidades / Quantities
60.30 x 3.91 mm 2 3/8 x 0.154 inches	40	5.44 KG/MT 3.65 LB/FT	S.R. (SP)	INT BARE /EXT VARNISHED	296 Pz 1930.61 m 10749 Kg 296 Pcs 6334.02 Ft 23697 Lb

ENSAYOS QUIMICOS / CHEMICAL ANALYSES

			% C	% Si	% Mn	% Cr	% Mo	% W	% Cd	% P	% S	% Ni	% V	% Al	% Sn	% Cu	% As	% Nb	% Ti	% Pb	% Sb	% Co	% Zr	% Bi	% Ca	% B	% N	% O	% Mg	% H	% C.e 1	% C.e 2	% Pcm	% Sum 1	% Sum 2	% Sum 3	R 1	R 2	R 3
			x 100							x 1000													x 10000							*	x 100			x 1000					
Colada Heat	Heat	Max	25	50	135	40	15			30	35	400	80			400		110	110							10					40			990					
		Min		10	29																																		
Ensayo Test	Prod	Max	25	50	135	40	15			30	35	400	80			400		110	110							10					40			990					
		Min		10	29																																		
40538	Heat		15	24	110	4	2	0		12	1	31	28	19	8	72	3	2	2	1	1	7	20	22	14	2	74		3		34			191					
(755344)	Prod		15	23	109	5	2	0		11	1	33	26	20	8	73	3	3	1	1	2	7	20	22	12	2	72		2		34			202					
	Prod		15	23	110	5	2	0		10	1	33	26	20	9	75	4	3	1	1	2	7	30	22	12	2	72		2		34			204					

NOTAS / NOTES: H = Análisis de colada / Heat Analysis. P = Análisis de producto / Product Analysis. C.e = Carbono Equivalente/Equivalent Carbon. R = Ratio. * = PPM / Part per million

CEQ 1 = C+F((MN/6)+(SI/24)+(CU/15)+(NI/20)+(CR+MO+V+NB)/5+(5*B))

Sum 1 = CR+CU+MO+NI+V

R 1 =

CEQ 2 =

SUM 2 =

R 2 =

PCM =

SUM 3 =

R 3 =

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INT. YB DATE 12-08-10

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Cliente / Customer	Expediente/ Manufacturing Order	Número / Number	Fecha / Date	Pág./Page
VAN LEEUWEN PIPE & TUBE (CANADA) IN	5/4232.02	551800	16/10/2010	3 / 5

Producto / Product	Orden de Compra/ Purchase Order	Item	Referencia del Cliente / Customer Reference
CARBON STEEL PIPE-HIGH TEMPERATURE SERV.	45001342	00905	

Norma / Standard	Grado / Grade	Extremo / Ends
ASTM/ASME A/SA 106 + CSA Z245.1-07 + PSP00373/0+NACE MR0175/0103+IPRO LP-006	B/290 CAT I SS	BEVELLED AT 30 DEG. ASTM

Dimensiones / Dimensions	Schedule	Peso Nominal / Nominal Weight	Longitud / Length	Superficie / Surface	Cantidades / Quantities
60.30 x 3.91 mm 2 3/8 x 0.154 inches	40	5.44 KG/MT 3.65 LB/FT	S.R. (SP)	INT BARE /EXT VARNISHED	296 Pz 1930.61 m 10749 Kg 296 Pcs 6334.02 Ft 23697 Lb

Marcas / Marking

& = Monograma / Monogram SIDERCA NNNNN = Número de tubo / Nbr of pipe LLL = Longitud / length PPP = Peso / Weight @ = Monograma / Monogram API
MM.YY = Mes / Año Month / Year Y/T = Año / Trimestre Year / Quarter HNXXXXX = Colada / Heat

Prueba Hidráulica / Hydrostatic Test			
Presión / Pressure		Tiempo / Time	Resultado / Results
Unidad / Unit	Valor / Value	Segundos / Seconds	Satisfactorio / Satisfactory
PSI	3000 ✓	5,00 ✓	

Estarcido (Tubo) / Stencilling (Pipe)

TENARIS SD MM.YY ASTM/ASME A/SA106 60,3 3,91 5,43 2 SCH40 STD B/290 CAT I SS SEAMLESS 207KPAX100 NDE CSA Z245.1-07 PO 45001342 MADE IN ARGENTINA HNXXXXX NNNNN LLLL PPPPP

FABRICADO POR TENARIS SIDERCA	*MANUFACTURED BY TENARIS SIDERCA*
PROCESO DE ACERACIÓN FABRICACIÓN DE ACERO: FUNDICIÓN POR ARCO ELECTRICO Y COLADO CONTINUO - ACERO CALMADO AL ALUMINIO. -LA PRACTICA DE AFINO EN EL HORNO - CUCHARA INCLUYE AGITACIÓN POR ARGON Y UNA INYECCIÓN FINAL DE UNA VARILLA DE SILICIURO DE CALCIO PARA OBTENER UNA FORMA GLOBULAR DE EVENTUALES MICROINCLUSIONES. -MATERIAL LIBRE DE CONTAMINACIÓN DE MERCURIO.	*ACIERAGE PROCESS* STEEL MAKING PROCESS: E.A.F./L.F. AND CONTINUOUS CASTING - FULL ALUMINIUM KILLED AND FINE GRAIN PRACTICE. -THE LF PRACTICE INCLUDES ARGON RINSE AND A FINAL INJECTION OF CALCIUM SILICIDE WIRE FOR MICROINCLUSION SHAPE CONTROL. -MATERIAL FREE FROM MERCURY CONTAMINATION.
PROCESO DE LAMINACIÓN -FABRICACIÓN DE TUBO: LAMINADO EN CALIENTE Y SIN COSTURA. *CONTROLES* -CONTROL VISUAL Y DIMENSIONAL: SATISFACTORIO.	*ROLLING PROCESS* -MANUFACTURING PROCESS : SEAMLESS HOT ROLLED. *CONTROLS* -VISUAL AND DIMENSIONAL INSPECTION : SATISFACTORY.
CONDICIONES DEL MATERIAL -NO REPARADO POR SOLDADURA. - EL MATERIAL CUMPLE CON LOS REQUERIMIENTOS NACE MR 0103. -LA DUREZA CUMPLE CON LA NACE MR-01-75/ISO-15156-2	*MATERIAL CONDITIONS* -NOT REPAIRED BY WELDING. -MATERIAL COMPLIES WITH NACE MR-0103. -HARDNESS ACCORDING TO NACE MR-01-75/ ISO-15156-2.

CALIDAD

ASME STAMP S...

ED. 2007 ADD. 2009

INT. TM DATE 12-08-10

Tenaris

INSPECTION CERTIFICATE

(BS EN 10204 3.1: 2004 - ISO 10474 3.1B: 1991)

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Cliente / Customer	Expediente/ Manufacturing Order	Número / Number	Fecha / Date	Pág./Page
VAN LEEUWEN PIPE & TUBE (CANADA) IN	5/4232.02	551800	16/10/2010	4 / 5

Producto / Product	Orden de Compra/ Purchase Order	Item	Referencia del Cliente / Customer Reference
CARBON STEEL PIPE-HIGH TEMPERATURE SERV.	45001342	00905	

Norma / Standard	Grado / Grade	Extremo / Ends
ASTM/ASME A/SA 106 + CSA Z245.1-07 + PSP00373/0+NACE MR0175/0103+IPRO LP-006	B/290 CAT I SS	BEVELLED AT 30 DEG. ASTM

Dimensiones / Dimensions	Schedule	Peso Nominal / Nominal Weight	Longitud / Length	Superficie / Surface	Cantidades / Quantities
60.30 x 3.91 mm 2 3/8 x 0.154 inches	40	5.44 KG/MT 3.65 LB/FT	S.R. (SP)	INT BARE /EXT VARNISHED	296 Pz 1930.61 m 10749 Kg 296 Pcs 6334.02 Ft 23697 Lb

NORMAS	*STANDARDS*
-EDICIÓN DE LA NORMA: ASTM A 106/A 106M-2008	-EDITION OF REGULATION: ASTM A 106/A 106M-2008
-EDICIÓN DE LA NORMA: ASME SA 106/ 2007	-EDITION REGULATION: ASME SA 106/ 2007
-EDICIÓN DE LA NORMA: NACE MR 01-75 - ISO 15156-2 : 2003	-EDITION OF REGULATION: NACE MR 01-75 - ISO 15156-2 : 2003
- EDICIÓN DE LA NORMA: NACE MR-01-03 EDICION 2007	-EDITION OF REGULATION: NACE MR-01-03 EDITION 2007
EDICIÓN DE LA NORMA : CSAZ245: 2007	-EDITION OF REGULATION : CSA Z245 : 2007

Observaciones / Remarks

HEAT TREATMENT: AS ROLLED.

NON DESTRUCTIVE TEST: SATISFACTORY.

INSPECTION METHODS: U.T. LONG./ TRANSV. (EXT./ INT.) NOTCH 12.5 % + M.P.I. LONG./TRANSV. (EXT./INT.) ON ENDS + W.M.P.I. ON BEVELS.

UT 100% LAMINATIONS CONTROL: SATISFACTORY.

ONE BLUE BAND (RAL 5003) ON EACH END.

SEE ATTACHED VICKERS HARDNESS TEST.

Magnetismo remanente/Residual magnetism (max). : 30 GAUSS

Protectores / End Protectors:
NON LIFTABLE CLOSED PLASTIC PROTECTOR FOR FLAT / BEVELED PIPE. SUPPLIER METALCENTRO.

ANULA Y SUSTITUYE AL ANTERIOR CERTIFICADO DE FECHA 31/08/2010 // NULLIFIES AND SUPERSEDES THE PREVIOUS CERTIFICATE DATED 31/08/2010

Tenaris

Tenaris

INSPECTION CERTIFICATE

(BS EN 10204 3.1: 2004 - ISO 10474 3.1B: 1991)

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Cliente / Customer	Expediente/ Manufacturing Order	Número / Number	Fecha / Date	Pág./Page
VAN LEEUWEN PIPE & TUBE (CANADA) IN	5/4232.02	551800	16/10/2010	5 / 5

Producto / Product	Orden de Compra/ Purchase Order	Item	Referencia del Cliente / Customer Reference
CARBON STEEL PIPE-HIGH TEMPERATURE SERV.	45001342	00905	

Norma / Standard	Grado / Grade	Extremo / Ends
ASTM/ASME A/SA 106 + CSA Z245.1-07 + PSP00373/0+NACE MR0175/0103+IPRO LP-006	B/290 CAT I SS	BEVELLED AT 30 DEG. ASTM

Dimensiones / Dimensions	Schedule	Peso Nominal / Nominal Weight	Longitud / Length	Superficie / Surface	Cantidades / Quantities
60.30 x 3.91 mm 2 3/8 x 0.154 inches	40	5.44 KG/MT 3.65 LB/FT	S.R. (SP)	INT BARE /EXT VARNISHED	296 Pz 1930.61 m 10749 Kg 296 Pcs 6334.02 Ft 23697 Lb

Por la presente certificamos que el material aqui descripto ha sido fabricado de acuerdo con las normas y especificaciones solicitadas en vuestra orden y satisfacen los correspondientes requerimientos.	We hereby certify that material herein described has been manufactured in accordance with the standard and specifications required in your order and satisfies the corresponding requirements.
Este certificado es emitido mediante un sistema computarizado y es valido sin firma electrónica. El certificado original presenta el logo Tenaris (verde claro) impreso en la parte inferior de la hoja. En caso que el poseedor del certificado entregue una copia del mismo, deberá garantizar la conformidad con el original, haciéndose responsable por cualquier uso ilegal o indebido.	This certificate is issued by a computerized system and is valid with electronic signature. On the original certificate the trade-mark Tenaris (light green coloured at the bottom of the page is stamped). In case the owner of the certificate should release a copy of it, he must attest its conformity to the original one taking upon himself the responsibility for any unlawful or not allowed use.
Cualquier alteración y / o falsificación estará sujeta a la ley. Si necesita asegurar la autenticidad de este certificado, contactarse con Siderca SAIC, e-mail: aye@siderca.com	Any alteration and / or falsification will be subject to the law. If you need to assure the authenticity of this certificate, please do not hesitate to contact Siderca SAIC through this e-address: aye@siderca.com

QUALITY CERTIFICATION DEPT.
DTO CERTIFICACION DE CALIDAD
EDUARDO A. AYERBE

CE PO#61145 107478 (4) @ 0.68" THK

P.O.# 2552383OP2100 Item# 1

TRANS AM P.O. 2552383

HEAT NUMBER : 56160
TRANS AM PIPING PRODUCTS - REV'D BY: SA
Shipment/Seq #: S 4 - 1390 4

1X3-36 6000# FS THREADED PIPET
A105N

1127450

INTERNATIONAL WFI NUCLEAR PRODUCTS
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

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.B. Material grade verified on alloy material using a PMI analyzer.

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

MTR #: 81608
PO #: CI-04-380
SALES ORDER #: C405421 DATE: 07/16/2004

CERTIFIED MATERIAL TEST REPORT

HEAT CODE: 56160 ✓

MATERIAL: A/SA105N 01

ITEM	Quantity	Description
26		36 - 3 X 1 6000 THP A/SA105N

CHEMICAL COMPOSITION:

	C	MN	P	S	SI	CU	NI	CR	MO	V	NB
LADLE	0.190 ✓	0.970 ✓	0.033 ✓	0.020 ✓	0.250 ✓	0.180 ✓	0.060 ✓	0.080 ✓	0.012 ✓	0.024 ✓	0.001

CARBON EQUIVALENCY: LADLE 0.391

MECHANICAL PROPERTIES:

	TENSILE PSI	YIELD PSI	ELONG %	RA %	HARDNESS
PRODUCT	79,500 ✓	54,000 ✓	31.65% ✓	66.35%	144 BHN 159 BHN ✓

Normalized

Marie Dehmer
Quality Assurance Representative

ASME STAMP SEC. II

ED. 2007 ADD. 2009

INT. YB DATE 12-03-10

DJ'2 0.211 PIP-8060 ✓ 61120 ✓ 1127994

MANUFACTURER: SINARSKY PIPE WORKS OGSC 623401, 1 ZAVODSKOY PROYEZD, KAMENSK – URALSKIY, SVERDLOV REGION, RUSSIA	**MILL TEST CERTIFICATE** **SPEC 1252/72/ PO 2022128-OR, TMK PO #: 08-0413** DESCRIPTION OF GOODS: **CARBON STEEL SEAMLESS PIPES ACCORDING TO API 5L GR. B AND Gr.X42 (PSL2) (44TH EDITION/ YEAR 2007) ASTM A53/A53 M, Gr. B (2007)/ ASME SA 106, Gr. B (2004)/ NACE MR-01-75/ISO 15156-2 AND MR-0103/ ASME B36.10/ ASTM A530/A530M (2004) CSA Z245.1 GR. 290 CATEGORY 2 (EXCEPT MARKING),** **BEVELLED ENDS. HARDENESS TECT MAX.22 HRC AS PER NASE MR-01-75/ ISO 15156-2 AND MR-0103** **6 SCH80 (0.432") (168.3x10.97 mm), SRL**	Document number: 27 / Page/pages: 1/2 Date of issue: 06.03.2009 **"CE FRANKLIN LTD" ✓** **1900-300 5TH AVENUE S.W.** **CALGARY, ALBERTA, CANADA** **T2P 3C4**

No.	Identtification of the product		Length (ft)	Quantity of pipes	Total length (ft)	Actual mass (lb)	Gross (lb)	No of bundle	No Pipe
	Batch No	Heat No							
1	315	285079	16.4-22.3	21	448.9	13206	13388	3209072396-3209072399	107-118, 125-130, 178-180
2	319	285079	16.4-22.3	122	2650.1	77118	78153	3209072253, 3209072257, 3209072260, 3209072273, 3209072392, 3209072408, 3209072410, 3209072274, 3209072254-3209072256, 3209072261-3209072266, 3209072268-3209072271	1-106, 119-124, 131-140
			Total:	**143**	**3099.0**	**90324**	**91541**		

No		Probe No	Tensile test					Impact test (t 32 °F) (min 10 ft·lb)			Hardenability HRC<20 HRB →HB
			Shape of the test piece	Yield or proof strength, lb/sg.ih	Tensile strength lb/sg.ih	Elongation after fracture (%)	Yield strength to tensile strength ratio	Shape of the test piece	Width of sample, inch	Energy, absorbed by the specimen, ft·lb	
1	Batch	72	Strip	54000	68000	44.0	0.79	with chirpy notch, V-notch, sub-sized, transversal	0.264	115 121 111 av.116	76
2	Batch	78	Strip	54000 ✓	68000 ✓	40.0 ✓	0.78	with chirpy notch, V-notch, sub-sized, transversal	0.264	100 109 99 av.103	76

ASME STAMP SEC. II

ED. 2007 ADD. 2009

INT. [illegible] DATE 12-01-10

MANUFACTURER: SINARSKY PIPE WORKS OGSC 623401, 1 ZAVODSKOY PROYEZD, KAMENSK – URALSKIY, SVERDLOV REGION, RUSSIA	**MILL TEST CERTIFICATE**	Document number: 27	Page/pages: 2/2
	SPEC 1252/72/ PO 2022128-OR, TMK PO #: 08-0413 DESCRIPTION OF GOODS: **CARBON STEEL SEAMLESS PIPES ACCORDING TO API 5L GR. B AND Gr.X42 (PSL2) (44TH EDITION/ YEAR 2007) ASTM A53/A53 M, Gr. B (2007)/ ASME SA 106, Gr. B (2004)/ NACE MR-01-75/ISO 15156-2 AND MR-0103/ ASME B36.10/ ASTM A530/A530M (2004) CSA Z245.1 GR. 290 CATEGORY 2 (EXCEPT MARKING),** **BEVELLED ENDS. HARDENESS TECT MAX.22 HRC AS PER NASE MR-01-75/ ISO 15156-2 AND MR-0103** **6 SCH80 (0.432") (168.3x10.97 mm), SRL**	Date of issue: 06.03.2009	
		"CE FRANKLIN LTD" 1900-300 5TH AVENUE S.W. CALGARY, ALBERTA, CANADA T2P 3C4	

Chemical composition (%)																
Heat No		C	Mn	P	S	Si	Cu	Ni	Cr	Mo	V	Ti	Nb	B	CE Pcm ≤0.25	CE <0.40
285079		0.12	0.77	0.006	0.001	0.31	0.26	0.18	0.08	0.02	0.003	0.005	0.03	0.0003		
Analysis of made product	1	0.12	0.75	0.008	0.004	0.31	0.32	0.17	0.07	0.02	≤0.005	≤0.005	0.03	0.0004	0.20	0.26
	2	0.12 ✓	0.75 ✓	0.008 ✓	0.004 ✓	0.30 ✓	0.31 ✓	0.17 ✓	0.07 ✓	0.02 ✓	≤0.005 ✓	≤0.005 ✓	0.03	0.0005	0.20	0.26 ✓
%Cr + %Cu +%Mo + %Ni + %V < 1% %Nb+ %V< 0.06% Mn: C ≥ 3:1																

Marking of the product: By paint: Ⓣ Spec 5L0330, API monogram, production date, ASTM A 53, ASME SA 106, ASME B 36.10 CSA Z245/1 6.625 0.432 BN X42N PSL2 SMLS Pipe No, Length (ft), Heat No, Lot No, CE FRANKLIN LTD, PO# 20221280R, TMK PO # : 08-0413, SINARSKY, RUSSIA

Tensile test:
Direction of the test piece: L
Specimen for tensile test, width in working area : 1 inch
Test temperatura: t $68._{50}^{+59}$ °F

Production:
Heat treatment: Normalizing + tempering

Product test:
Flattening test : Without defects
Shape of the test piece: ring 2 1/2 inch
Surfase inspection: Without defects.
Parameters inspection: Without defects.
Test for mixture of steel grades: Passed
Hydrostatic test during 5 seconds: passed 3290 lb/sg.ih ✓
Nondestructive Ultrasonic test of pipe body; reference indicator: seamless(PSL2), longitudinal, transversal notch, external, internal, notch length 1.968 inch, notch width 0.039 inch, notch depth 12.5% : acc. to ASTM E-213, passed
Pipes are supplied with standard mill's external coating : Water based primer «Unicor-K»
The pipes are supplied with plastic end protectors
Packing: Bundles up to 1.8 tons

WE CONFIRM THAT PIPES HAS NO CONTAMINATION BY MERCURY AND NO REPAIR BY WELDING HAS BEEN CARRIED OUT.

ASME STAMP SEC. II

ED. 2007 ADD. 2009

INT. YB DATE 12-01-10

Authorized to sign Certificate: Zemerova

Stamp of the inspection

(1) @ 21'-0"

DJB ✓ PIP-8060 ✓ P/O 61076 ✓

0.443

Contract No.: 2210001763-3
L/C NO.: 0FAHD5-00366
P.O.NO.: PO.2481995-OR-2100-B (LOT C)
Name of Customer: CE FRANKLIN

HENGYANG VALIN STEEL TUBE CO., LTD

MILL TEST REPORT

Add: 10 Dalixincun, Hengyang City, Hunan, China
Tel and Fax: +86 734 8873739 8872942
Cable: 6993
P.C. 421001

DESCRIPTION: SEAMLESS CARBON STEEL PIPE FOR OIL AND GAS USE. Date: JUL. 26, 2010
TOTAL: 311PIECES, 48BUNDLES, 80.727MT, 6224.08FT Page: 1/1

SPEC.: ASTM A53B-2007/A106B-2008, ASME SA53B/SA106B-2007, API 5LB/X42, PSL-2-2008, NACE MR-0175-2004/ ISO 15156-2(REGION 3) / MR-0103/SS (CSA Z245.1 GRADE 290 CATEGORY I)

CERTIFICATE NO: 2010-02-0537

NO.	BATCH NO.	HEAT NO.	STEEL GRADE	SIZE	BUNDLES	PIECES	FEET	QUANTITY (MT)	ACTUAL WEIGHT(MT)
	K73L05121	1032450V	B/290/X42	6"*0.432"*20FT	9	58	1160.76	15.055	N/A
	K73L05122	1032450V	B/290/X42	6"*0.432"*20FT	9	55	1100.72	14.277	N/A
	K73L05131	1032450V	B/290/X42	6"*0.432"*20FT	9	60	1200.79	15.574	N/A
	K73L05132	1032450V	B/290/X42	6"*0.432"*20FT	8	50	1000.66	12.979	N/A
	K73L05140	1032451V	B/290/X42	6"*0.432"*20FT ✓	13	88	1761.15	22.842	N/A

NO.	DELIVERY CONDITION	NONDESTRUCTIVE TEST FLT	UT	TYPE:	CHEMICAL COMPOSITION (%) C	Si	Mn	P	S	Cu	Ni	Cr	Mo	V	Ti	B	Nb	Mn/C	CE(IIW)
1	HOT-ROLLED	OK		P	0.12	0.24	1.06	0.010	0.0014	0.06	0.02	0.03	0.01	0.01	0.002	0.0001	0.026	8.83	0.31
				P	0.11	0.25	1.05	0.010	0.0014	0.06	0.02	0.03	0.01	0.01	0.002	0.0001	0.026	9.55	0.30
				L	0.11	0.26	1.05	0.009	0.0020	0.07	0.03	0.05	0.01	0.01	0.028	0.0002	0.030	9.55	0.31
	HOT-ROLLED	OK		P	0.12	0.26	1.08	0.010	0.0014	0.06	0.02	0.03	0.01	0.01	0.002	0.0001	0.025	9.00	0.32
				P	0.11	0.25	1.07	0.010	0.0014	0.06	0.02	0.03	0.01	0.01	0.002	0.0001	0.025	9.73	0.30
				L	0.11	0.26	1.05	0.009	0.0020	0.07	0.03	0.05	0.01	0.01	0.028	0.0002	0.030	9.55	0.31
	HOT-ROLLED	OK		P	0.12	0.26	1.07	0.010	0.0014	0.06	0.02	0.03	0.01	0.01	0.002	0.0001	0.025	8.92	0.31
				P	0.11	0.25	1.07	0.010	0.0014	0.06	0.02	0.03	0.01	0.01	0.002	0.0001	0.025	9.73	0.30
				L	0.11	0.26	1.05	0.009	0.0020	0.07	0.03	0.05	0.01	0.01	0.028	0.0002	0.030	9.55	0.31
	HOT-ROLLED	OK		P	0.12	0.28	1.05	0.010	0.0014	0.06	0.02	0.03	0.01	0.01	0.002	0.0001	0.025	8.75	0.31
				P	0.11	0.25	1.06	0.010	0.0014	0.06	0.02	0.03	0.01	0.01	0.002	0.0001	0.025	9.64	0.30
				L	0.11	0.26	1.05	0.009	0.0020	0.07	0.03	0.05	0.01	0.01	0.028	0.0002	0.030	9.55	0.31
	HOT-ROLLED	OK		P	0.12 ✓	0.25 ✓	1.05 ✓	0.010 ✓	0.0014 ✓	0.06 ✓	0.02 ✓	0.03 ✓	0.01 ✓	0.01 ✓	0.002 ✓	0.0001 ✓	0.025 ✓	8.75 ✓	0.31 ✓
				P	0.11	0.24	1.05	0.010	0.0014	0.06	0.02	0.03	0.01	0.01	0.002	0.0001	0.025	9.55	0.30
				L	0.11	0.30	1.06	0.013	0.0020	0.07	0.03	0.05	0.01	0.01	0.03	0.0002	0.032	9.64	0.31

NO	TENSILE STRENGTH σb (PSI)	YIELD STRENGTH σs (PSI)	ELONGATION δ (%)	IMPACT SIZE	AK (J)	Ori/Tem	HARDNESS (HRC ≤22)	HYDROSTATIC TEST (Psi)	FLATTEN TEST	BEND TEST
	strip ,L,bo=25mm,Lo=50mm									
1	68875	55100	46	7.5*10*55	V/212/214/200	T/0℃	OK	3000	OK	N/A
	68875	55100	44	7.5*10*55	V/202/196/190	T/0℃	OK	3000	OK	N/A
	65975	50025	43	7.5*10*55	V/170/190/196	T/0℃	OK	3000	OK	N/A
	68150	53650	44.5	7.5*10*55	V/214/200/214	T/0℃	OK	3000	OK	N/A
	68875 ✓	53650 ✓	45 ✓	7.5*10*55	V/186/204/190	T/0℃	OK	3000 ✓	OK	N/A

REMARKS: 1. We hereby certify that this certificate of quality is issued and signed by the manufacturer.
2. We hereby certify that the properties described herein meet the requirement of the above spec.
3. We hereby certify that this certificate is issued accordance with EN10204 3.1/DIN 50049 3.1B.
4. hardness to NACE MR-0175/ISO 15156-2(Region 3)/MR0103.
5. TYPE: P-Product analysis L-Ladle analysis.
6. Content of chemical composition: Cr+Cu+Mo+V+Ni≤1%.

ASME STAMP SEC. II
ED. 2007 ADD. 2009

QUALITY MANAGER:

HENGYANG VALIN STEEL TUBE CO., LTD. HUNAN CHINA

CE [illegible] 60[illegible] 112777

MANUFACTURER: SINARSKY PIPE WORKS OGSC 623401, 1 ZAVODSKOY PROYEZD, KAMENSK – URALSKIY, SVERDLOV REGION, RUSSIA	**MILL TEST CERTIFICATE**	Document number: 27	Page/pages: 1/2
	SPEC 1252/72/ PO 2022128-OR, TMK PO #: 08-0413 DESCRIPTION OF GOODS: **CARBON STEEL SEAMLESS PIPES ACCORDING TO API 5L GR. B AND Gr.X42 (PSL2) (44TH EDITION/ YEAR 2007) ASTM A53/A53 M, Gr. B (2007)/ ASME SA 106, Gr. B (2004)/ NACE MR-01-75/ISO 15156-2 AND MR-0103/ ASME B36.10/ ASTM A530/A530M (2004) CSA Z245.1 GR. 290 CATEGORY 2 (EXCEPT MARKING),** **BEVELLED ENDS. HARDENESS TECT MAX.22 HRC AS PER NASE MR-01-75/ ISO 15156-2 AND MR-0103** **6 SCH80 (0.432") (168.3x10.97 mm), SRL**	Date of issue: 06.03.2009	
DFL ✓		**"CE FRANKLIN LTD" 1900-300 5TH AVENUE S.W. CALGARY, ALBERTA, CANADA T2P 3C4**	

0.428

No.	Identification of the product		Length (ft)	Quantity of pipes	Total length (ft)	Actual mass (lb)	Gross (lb)	No of bundle	No Pipe
	Batch No	Heat No							
1	315	285079	16.4-22.3	21	448.9	13206	13388	3209072396-3209072399	107-118, 125-130, 178-180
2	319	285079	16.4-22.3	122	2650.1	77118	78153	3209072253, 3209072257, 3209072260, 3209072273, 3209072392, 3209072408, 3209072410, 3209072274, 3209072254-3209072256, 3209072261-3209072266, 3209072268-3209072271	1-106, 119-124, 131-140
			Total:	**143**	**3099.0**	**90324**	**91541**		

No		Probe No	Tensile test					Impact test (t 32 °F) (min 10 ft·lb)			Hardenability HRC<20 HRB→HB
			Shape of the test piece	Yield or proof strength, lb/sg.in	Tensile strength lb/sg.in	Elongation after fracture (%)	Yield strength to tensile strength ratio	Shape of the test piece	Width of sample, inch	Energy, absorbed by the specimen, ft·lb	
1	Batch	72	Strip	54000 ✓	68000 ✓	44.0 ✓	0.79	with chirpy notch, V-notch, sub-sized, transversal	0.264	115 121 111 av.116	76
2	Batch	78	Strip	54000	68000	40.0	0.78	with chirpy notch, V-notch, sub-sized, transversal	0.264	100 109 99 av.103	76

ASME STAMP SEC. II

ED. 2007 ADD. 2009

INT. [illegible] DATE 9-27-10

PIP-8060

MANUFACTURER:	MILL TEST CERTIFICATE	Document number: 27	Page/pages: 2/2
SINARSKY PIPE WORKS OGSC 623401, 1 ZAVODSKOY PROYEZD, KAMENSK – URALSKIY, SVERDLOV REGION, RUSSIA	**SPEC 1252/72/ PO 2022128-OR, TMK PO #: 08-0413** DESCRIPTION OF GOODS: **CARBON STEEL SEAMLESS PIPES ACCORDING TO API 5L GR. B AND Gr.X42 (PSL2) (44TH EDITION/ YEAR 2007) ASTM A53/A53 M, Gr. B (2007)/ ASME SA 106, Gr. B (2004)/ NACE MR-01-75/ISO 15156-2 AND MR-0103/ ASME B36.10/ ASTM A530/A530M (2004) CSA Z245.1 GR. 290 CATEGORY 2 (EXCEPT MARKING),** **BEVELLED ENDS. HARDENESS TECT MAX.22 HRC AS PER NASE MR-01-75/ ISO 15156-2 AND MR-0103** **6 SCH80 (0.432") (168.3x10.97 mm), SRL**	Date of issue: 06.03.2009 **"CE FRANKLIN LTD"** **1900-300 5TH AVENUE S.W.** **CALGARY, ALBERTA, CANADA** **T2P 3C4**	

Chemical composition (%)

Heat No		C	Mn	P	S	Si	Cu	Ni	Cr	Mo	V	Ti	Nb	B	CE Pcm ≤ 0.25	CE <0.40
285079		0.12	0.77	0.006	0.001	0.31	0.26	0.18	0.08	0.02	0.003	0.005	0.03	0.0003		
Analysis of made product	1	0.12	0.75	0.008	0.004	0.31	0.32	0.17	0.07	0.02	≤0.005	≤0.005	0.03	0.0004	0.20	0.26
	2	0.12	0.75	0.008	0.004	0.30	0.31	0.17	0.07	0.02	≤0.005	≤0.005	0.03	0.0005	0.20	0.26

%Cr + %Cu +%Mo + %Ni + %V < 1%
%Nb+ %V< 0.06%
Mn: C ≥ 3:1

Marking of the product: By paint: Ⓣ Spec 5L0330, API monogram, production date, ASTM A 53, ASME SA 106, ASME B 36.10 CSA Z245/1 6.625 0.432 BN X42N PSL2 SMLS Pipe No, Length (ft), Heat No, Lot No, CE FRANKLIN LTD, PO# 20221280R, TMK PO # : 08-0413, SINARSKY, RUSSIA

Tensile test:
Direction of the test piece: L
Specimen for tensile test, width in working area: 1 inch
Test temperatura: t 68_{-50}^{+59} °F

Production:
Heat treatment: Normalizing + tempering

Product test:
Flattening test: Without defects
Shape of the test piece: ring 2 ½ inch
Surface inspection: Without defects.
Parameters inspection: Without defects.
Test for mixture of steel grades: Passed
Hydrostatic test during 5 seconds: passed 3290 lb/sq.in ✓
Nondestructive Ultrasonic test of pipe body; reference indicator: seamless(PSL2), longitudinal, transversal notch, external, internal, notch length 1.968 inch, notch width 0.039 inch, notch depth 12.5% : acc. to ASTM E-213, passed
Pipes are supplied with standard mill's external coating: Water based primer «Unicor-K»
The pipes are supplied with plastic end protectors
Packing: Bundles up to 1.8 tons

WE CONFIRM THAT PIPES HAS NO CONTAMINATION BY MERCURY AND NO REPAIR BY WELDING HAS BEEN CARRIED OUT.

ASME STAMP SEC. II

ED. 2007 ADD. 2009

INT. ___ DATE 9-27-11

Authorized to sign Certificate: Zemerova Stamp of the inspection

112051

SUMITOMO METAL INDUSTRIES, LTD.
WAKAYAMA STEEL WORKS (KAINAN)
260-100, FUNOO, KAINAN, JAPAN

住友金属 SUMITOMO METALS

INSPECTION CERTIFICATE

CERTIFICATE NO. :BYYF8304 PAGE : 1/1 DATE :2010-05-20

CUSTOMER :CE FRANKLIN LTD.
ORDER NO. :2465005-OR-2100 ITEM NO. 3
SHIPPER :SUMITOMO CORPORATION 057 KEF 2027/2 0P12S390401
COMMODITY :SEAMLESS STEEL PIPE WITH BEVELLED ENDS 30 DEG.
STANDARD :CSA Z245.1-07 CAT.I GR.290 ASTM A106-08 / ASME 2007(A09) SA-106 GR.B NDE
API 5L 43EDITION PSL-1 GRADE B/ X42

SPECIFICATION :
MILL WORK NO. :BYYF8304 O.D. :60.3mm W.T. :3.9mm LENGTH:12.2m QUANTITY:257pcs. MASS:16993kg

HEAT NO. :J0K3390 J0L4B20
PRODUCTS PCS. :217 40

HEAT TREATMENT :AS ROLLED
DEOXIDATION :KILLED

CHEMICAL COMPOSITION (%)

		*1	C	Si	Mn	P *2	S *2	Cu	Cr	Ni	Mo	Ti	V	Nb	B *2	*U4	*VN	*V1	*CEQ
SPEC. MIN.		R	-	10	29	-	-	-	-	-	-	-	-	-	-	-	-	-	-
MAX.		R	26	50	106	30	30	40	40	40	15	4	8	11	1	100	3	15	40
HEAT NO.																			
J0K3390 ✓		L	20 ✓	21 ✓	91 ✓	9 ✓	6 ✓	2 ✓	4 ✓	2 ✓	1 ✓	0	0 ✓	1	0	9	1	1	37 ✓
		P	20	22	93	9	6	2	4	2	1	0	0	1	0	9	1	1	38
		P	20	22	93	9	6	2	4	2	1	0	0	1	0	9	1	1	38
J0L4B20		L	18	21	80	12	4	2	5	2	1	0	0	0	0	10	0	0	33
		P	18	23	79	12	4	2	5	2	1	0	0	0	0	10	0	0	33
		P	18	23	78	12	4	2	5	2	1	0	0	0	0	10	0	0	33

*1 R:LADLE & PRODUCT ANALYSIS L:LADLE ANALYSIS P:PRODUCT ANALYSIS *2:X1000 OTHER:X100 *U4:Cu+Ni+Cr+Mo+V
*VN:Nb+V *V1:Nb+V+Ti *CEQ:C+F+Mn/6+Si/24+Cu/15+Ni/20+(Cr+Mo+V+Nb)/5+5B F=COEFFICIENT BY CSA STANDARD

TENSILE TEST

		*1 *2	YS *3		TS *3		EL %
SPEC. MIN.		L B	M	290	M	414	30
MAX.		L B	M	-	M	-	-
HEAT NO. ✓							
J0K3390 ✓		L B	M	389 ✓	M	535 ✓	54 ✓
J0L4B20		L B	M	354	M	509	57

TYPE OF SPECIMEN:FULL SECTION *1 SAMPLING DIRECTION L:LONGITUDINAL *2 SAMPLING POSITION B:BASE METAL
*3 UNIT M:MPa GAUGE LENGTH:50.0mm KIND OF YS:0.5% EXTENSION UNDER LOAD

BENDING TEST: ACCEPTABLE
VISUAL & DIMENSIONS: ACCEPTABLE
HYDROSTATIC TEST 20.7MPa: ACCEPTABLE
ULTRASONIC EXAMINATION: ACCEPTABLE
NACE MR0103-2007/MR0175/ISO15156-2/2003:SATISFACTORY

ASME STAMP SEC. II
ED. 2007 ADD. 2009
INT. TBB DATE 9-24-10

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.

T. Kondo
MANAGER, QUALITY ASSURANCE SECTION

NO. 040932K10

<An Important Message To Our Customers>
This certification is intended only for products listed. Modification to or unauthorized use of this certification is strictly prohibited. Offenders may be regarded as forgery of documents and be subject to criminal prosecution.
If you have any questions on this certification, you can contact us by facsimile or e-mail as shown below:
Fax. No. : +81-3-4416-6789 E-mail:pipe-ipp@sumitomometals.co.jp

PIP-4020

1/0 60305 ✓

MANUFACTURER:	MILL TEST CERTIFICATE	Document number	Page/pages
		27	2/2
	SPEC 1252/72/ PO 2022128-OR, TMK PO #: 08-0413	Date of issue: 06.03.2009	
SINARSKY PIPE WORKS OGSC 623401, 1 ZAVODSKOY PROYEZD, KAMENSK – URALSKIY, SVERDLOV REGION, RUSSIA	DESCRIPTION OF GOODS: CARBON STEEL SEAMLESS PIPES ACCORDING TO API 5L GR. B AND Gr.X42 (PSL2) (44TH EDITION/ YEAR 2007) ASTM A53/A53 M, Gr. B (2007)/ ASME SA 106, Gr. B (2004)/ NACE MR-01-75/ISO 15156-2 AND MR-0103/ ASME B36.10/ ASTM A530/A530M (2004) CSA Z245.1 GR. 290 CATEGORY 2 (EXCEPT MARKING), BEVELLED ENDS. HARDENESS TECT MAX.22 HRC AS PER NASE MR-01-75/ ISO 15156-2 AND MR-0103 6 SCH80 (0.432") (168.3x10.97 mm), SRL ✓	"CE FRANKLIN LTD" ✓ 1900-300 5TH AVENUE S.W. CALGARY, ALBERTA, CANADA T2P 3C4	

Chemical composition (%)

Heat No		C	Mn	P	S	Si	Cu	Ni	Cr	Mo	V	Ti	Nb	B	CE Pcm ≤0.25	CE <0.40
2870 ✓		0.12 ✓	0.77 ✓	0.006 ✓	0.001 ✓	0.31 ✓	0.26 ✓	0.18 ✓	0.08 ✓	0.02 ✓	0.003 ✓	0.005	0.03	0.0003		
Analysis of made product	1	0.12	0.75	0.008	0.004	0.31	0.32	0.17	0.07	0.02	≤0.005	≤0.005	0.03	0.0004	0.20	0.26
	2	0.12	0.75	0.008	0.004	0.30	0.31	0.17	0.07	0.02	≤0.005	≤0.005	0.03	0.0005	0.20	0.26

%Ct + %Cu +%Mo + %Ni + %V < 1%
%Nb+ %V< 0.06%
Mn: C ≥ 3:1

DFD ✓

For USSPIAC that PIPES HAS NO CONTAMINATION BY MERCURY AND NO REPAIR BY WELDING HAS BEEN CARRIED OUT

1 @ 20'-0"

0.439

Marking of the product: By paint: T Spec 5L0330, API monogram, production date, ASTM A 53, ASME SA 106, ASME B 36.10 CSA Z245/1 6.625 0.432 BN X42N PSL2 SMLS Pipe No, Length (ft), Heat No, Lot No, CE FRANKLIN LTD, PO# 20221280R, TMK PO # : 08-0413, SINARSKY, RUSSIA

Tensile test:
Direction of the test piece: L
Specimen for tensile test, width in working area: 1 inch
Test temperature: 68 °F

Production:
Heat treatment: Normalizing + tempering

Product test:
Flattening test: Without defects
Shape of the test piece: ring 2 ½ inch
Surface inspection: Without defects.
Parameters inspection: Without defects.
Test for mixture of steel grades: Passed
Hydrostatic test during 5 seconds: ✓ passed 3290 lb/sq.in ✓
Nondestructive Ultrasonic test at pipe body; reference indicator: seamless(PSL2), longitudinal, transversal notch, external, internal, notch length 1.968 inch, notch width 0.039 inch, notch depth 12.5% : acc. to ASTM E-213, passed
Pipes are supplied with standard mill's external coating : Water based primer «Unicor-K»
The pipes are supplied with plastic end protectors
Packing: Bundles up to 1.8 tons

Authorized to sign Certificate: Zemerova

Stamp of the inspection

ASME STAMP SEC. II
ED. 2007 ADD. 2009
INT. RR DATE 9-22-10

PIP-8060

1127994

MANUFACTURER: SINARSKY PIPE WORKS OGSC 623401, 1 ZAVODSKOY PROYEZD, KAMENSK – URALSKIY, SVERDLOV REGION, RUSSIA	**MILL TEST CERTIFICATE**	**Document number** 27	**Page/pages** 1/2
	SPEC 1252/72/ PO 2022128-OR, TMK PO #: 08-0413 DESCRIPTION OF GOODS: **CARBON STEEL SEAMLESS PIPES ACCORDING TO API 5L GR. B AND Gr.X42 (PSL2) (44TH EDITION/ YEAR 2007) ASTM A53/A53 M, Gr. B (2007)/ ASME SA 106, Gr. B (2004)/ NACE MR-01-75/ISO 15156-2 AND MR-0103/ ASME B36.10/ ASTM A530/A530M (2004) CSA Z245.1 GR. 290 CATEGORY 2 (EXCEPT MARKING),** **BEVELLED ENDS. HARDENESS TECT MAX.22 HRC AS PER NASE MR-01-75/ ISO 15156-2 AND MR-0103** **6 SCH80 (0.432") (168.3x10.97 mm), SRL**	Date of issue: 06.03.2009 **"CE FRANKLIN LTD" 1900-300 5TH AVENUE S.W. CALGARY, ALBERTA, CANADA T2P 3C4**	

No.	Identification of the product		Length (ft)	Quantity of pipes	Total length (ft)	Actual mass (lb)	Gross (lb)	No of bundle	No Pipe
	Batch No	Heat No							
1	318	253079	16.4-22.3	21	448.9	13206	13388	3209072396-3209072399	167-188, 125-130, 178-180
2	319	253079	16.4-22.3	122	2650.1	77118	78153	3209072253, 3209072257, 3209072260, 3209072273, 3209072397, 3209072408, 3209072410, 3209072778, 3209072254-3209072256, 3209072261-3209072266, 3209072268-3209072271	1-166, 119-124, 131-140
			Total:	143	3099.0	90324	91541		

No		Probe No	Tensile test					Impact test (132 °F) (min 10 ft-lb)			Hardenability HRC=20 HRB --HB
			Shape of the test piece	Yield or proof strength, lb/sq.in	Tensile strength lb/sq.in	Elongation after fracture (%)	Yield strength to tensile strength ratio	Shape of the test piece	Width of sample, inch	Energy, absorbed by the specimen, ft-lb	
1	Batch	72	Strip	54000 ✓	68000 ✓	44.0 ✓	0.79	with chirpy notch, V-notch, sub-sized, transversal	0.264	115 121 111 av.116	76
2	Batch	78	Strip	54000	68000	40.0	0.78	with chirpy notch, V-notch, sub-sized, transversal	0.264	100 109 99 av.103	76

ASME STAMP SEC. II

ED. 2007 ADD. 2009

INT. RR DATE 9-22-10

(28) CE ✓ code - WLD- 809020 ✓

60136 ✓

(0.244)

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

STANDARD : ASTM A234 WPB-07
ASME SA234 WPB-04
CSA Z245.11-05 Gr.241 Cat I Sour Service

MATERIALS : ASTM A106 Gr.B (SEAMLESS PIPE)

INSP. SPEC. : ASME B16.9 - 03

DATE: 2010 - 04 - 06

ORDER NO: 7001997/2406804OR210

P.I. NO: 9L01-2

CERTIFI. NO: 127

ACCORDING TO EN10204/DIN50049/3.1

ITEM NO.	PRODUCT & SIZE		QUANTITY PCS	MFG NO.	VISUAL & DIMENTIONAL INSPECTION	HARDNESS MAX. 197 HB	HEAT TREATMENT (NOTE)	MAGNETIC PARTICLE EXAMINATION	IMPACT TEST (J)
1	ELL 45 LR 6"	STD	100	0A4872	GOOD	136 - 146	A		
2	ELL 45 LR 8"	STD	75	9I52104	GOOD	138 - 141	A		
3	ELL 45 LR 16"	STD	24	8G5129	GOOD	141 - 142	A		
4	ELL 45 LR 16"	STD	19	9L3424	GOOD	145 - 154	A		
5	ELL 45 LR 16"	STD	2	9J11167	GOOD	158 - 164	A		
6	ELL 45 LR 16"	STD	2	9I36124	GOOD	143 - 160	A		
7	ELL 45 LR 16"	STD	16	9G22124	GOOD	139 - 140	A		
8	ELL 90 LR 1"	STD	100	8K0234 (8K)	GOOD	137 - 140	A		
→ 9	ELL 90 LR 2" ✓	XH	2000	9K1624 ✓	GOOD	136 - 138 ✓	A		
10	CON-RED 3X2"	STD	150	9I1640	GOOD	141 - 162	N		

ITEM NO.	MATERIAL CHARGE NO.		CHEMICAL COMPOSITION % C x100	Si x100	Mn x100	P x1000	S x1000	Cu x100	Ni x100	Cr x100	Mo x100	V x100	Nb x1000	PHYSICAL TEST YS KSI	TS KSI	E %	C.E. X100
	STANDARD	MIN.		10	29									35.0	60.0		
		MAX.	30		135	50	58	40	40	40	15	8	20		95.0		50
1	305672		13	18	78	8	4	9	3	3	1	<1	1	42.1	63.4	40.9	27
2	302604		18	24	55	11	3	9	4	4	1	<1	2	39.0	67.9	40.5	29
3	J8K4029		12	27	126	13	4	3	3	11	<1	<1	<1	47.7	69.2	48.5	35
4	0935524		19	18	38	10	4	8	2	3	1	1	1	44.9	69.6	51.5	27
5	0882467		20	22	58	12	8	8	6	11	1	1	1	47.2	74.0	40.0	33
6	0881424		20	24	57	12	2	6	3	4	2	1	1	46.4	74.0	40.5	31
7	0881424		20	24	57	12	2	6	3	4	2	1	1	46.4	74.0	40.5	31
8	J8K7334		11	25	134	10	3	3	2	11	1	<1	<1	56.3	74.0	51.0	36
→ 9	908124		20 ✓	23 ✓	54 ✓	16 ✓	3 ✓	2 ✓	1 ✓	2 ✓	1 ✓	1 ✓	<1	47.2 ✓	66.7 ✓	36.0 ✓	30 ✓
10	329040		12	19	77	11	2	6	3	3	1	<1	1	44.7	64.0	40.0	26

(NOTE): A: HOT FORMED WITH FINAL TEMPERATURE BETWEEN 620℃-980℃,AIR COOLING.
N: NORMALIZING AT TEMPERATURE 880℃X0.5HR,AIR COOLING.
NACE MR-01-75-03/ISO15156.2 & NACE MR 0103-03 : 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 C Lan

ASME STAMP SEC. | MANAGER OF Q.A. DEPT.

ED 2007 ADD. 2009

CERTIFIED MILL TEST REPORT

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LOG NO. 324885 PAGE 3

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CUSTOMER: CCTF CORPORATION

Date 08/22/08

CUSTOMER'S Order No.: 4884365-00

Bonney Order No. PO0039171

SHIPPED TO: CCTF CORPORATION (EDMONTON)
5407 - 53RD AVE.
EDMONTON, ABT6B 3G2 Canada

MIDFIELD ✓

P/O 56935

ITEM	QUANTITY	LOT NO.		GRADE OR SPECIFICATION NO. CHEMICAL ANALYSIS, PHYSICAL PROPERTIES, REMARKS
				SA/A105N ✓
008	261	57261 ✓	7551584	36 -14 X 3/4 3000 A105N THRD T
				C .200 MN 1.010 P .016 S .021 SI .180
		0.398		NI .050 CU .170 CO .005 CR .110 MO .020
				V .000 AL .024 NB .014
				CE(LONG FORMULA) = 0.41
				T/S 75250 Y/S 53375 EL 32.05 RA 66.55
				BRINELL HARDNESS1: 135 HARDNESS2: 135
		57440	7551584	36 -14 X 3/4 3000 A105N THRD T
				C .200 MN .990 P .012 S .020 SI .170
				NI .030 CU .120 CO .003 CR .160 MO .010
				V .000 AL .021 NB .013
				CE(LONG FORMULA) = 0.41
				T/S 75255 Y/S 51786 EL 28.65 RA 64.18
				BRINELL HARDNESS1: 127 HARDNESS2: 127
009	579	57548	7551622	2X1 3M A105N THRD T
				C .200 MN 1.020 P .006 S .020 SI .220
				NI .040 CU .150 CO .003 CR .040 MO .010
				V .000 AL .028 NB .015
				CE(LONG FORMULA) = 0.39
				T/S 74684 Y/S 48711 EL 34.00 RA 66.00
				BRINELL HARDNESS1: 144 HARDNESS2: 144
011	92	57345	7551681	36-12X1 3M A105N THRD T
				C .200 MN 1.020 P .006 S .022 SI .210
				NI .020 CU .090 CO .003 CR .060 MO .010
				V .000 AL .022 NB .012
				CE(LONG FORMULA) = 0.39
				T/S 75000 Y/S 50250 EL 32.75 RA 66.75
				BRINELL HARDNESS1: 130 HARDNESS2: 130

***** 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.

ASME STAMP
ED. 2007 ADD. 2008
DATE Oct 28/09

by
Cris Boozel

CMTR: REV 1

OCT 28 2009

QUALITY PROCESS MANAGER