

POFF 52741

CLIENTE/Customer/Client

CCTF CORPORATION (EDMONTON)
5407 - 53 AVENUE NW
EDMONTON, AB T6B 3G2
CANADA

CERTIFICADO DE INSPECCION

Works Certificate - Certificat d'Usine

DIN EN 10204 / 3.1
ISO 10474 / 3.1FECHA:
Date:

05/07/2007

N.º
No.

116291

HOLLA:
Page:

N.º: 561 1522164

ULMA

ULMA PCRIA, S.COOP

Bº Zubillaga, 3 - Apdo. 14
20560 OSAKI (Gibautas) SPAIN
Tel: 34 - 943 760552
Fax: 34 - 943 791638
E-mail: ulma@ulmaprj.comPRODUCTO
Article - Produit

FLANGES

SU PEDIDO N.º
Your Order No.
V.º de Cdo. N.º

4384765 (27.06.07)

DE
cl. - de 28/06/2007Certified acc. PED 97/23/EC
by TÜV Rheinland
N.º 01 202 570 02 7473NORMAS APLICABLES
Requirements - Normes Applicables

ASME B16.5-98

MATERIAL CORRESPONDIENTE
Material Correspondent - QualitéASTMA105N-05
ASME SA105N-05

MODO DE FUSION (*)

Steel Making - Elaboration de l'acier
E = Elec Y = Oxígeno MismoNACE MR0175 / ISO 15156-2: 2005
CSA - Z245.12-05
GR248 CAT 1 - SSMARCA DEL FABRICANTE
Mark of factory
Marque du fabricantDEPARTAMENTO QUALITY ASSURANCE
Section
Department

50812

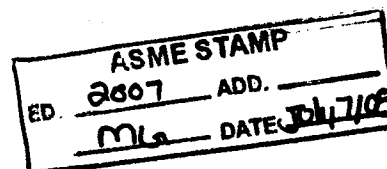
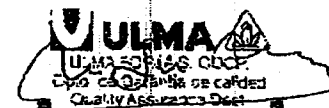
PARTIDA Item Posto	CANTIDAD Quantity Cty/ctm	DESCRIPCION Description Description	OBSERVACIONES Remarks Observations (*)	COLADA N.º Heat No N.º Coque	RESISTENCIA T. Strength Tensile Rupt N/mm²	LONGITUD Y. Strength Yield Bas N/mm²	ALARGUE Elongation Elongation % 4 d	REDUCCION Red Area Reduction %	RESILIENCIA Impact test Resilience Joules	MODAL Average Modulus	DUREZA Hardness Dureza HB
12 7534256	36	WN 10 150LB S40 PF A105N	NE	129A7	513	315	32.00	58.40			147
17 7534884	10	WN 16 300LB XSM40 RF A105N	NE	231A7	519	320	32.40	59.00			150
20 7536330	8	SO 20 300LB RF A105N	NE	70315	537	348	31.38	68.00			170
23 7538137	7	WN 4 600LB S 120 RF A105N	NE	150A7	520	315	32.70	58.00			151
23 7538137	8	WN 4 600LB S 120 RF A105N	NE	488A6	519	320	33.70	55.00			151
25 7530669	4	WN 6 600LB SXXX RF A105N	NE	158A7	514	316	31.30	57.00			147
28 7530843	75	THR 3 600LB RF A105N	NE	208A7	520	315	32.70	64.00			151
30 7531141	4	BLIND 20 600LB RF A105N	NE	1522	519	306	30.60	58.10			149
41 7530478	10	THR 3 500LB RF A105N	NE	129AV	533	330	32.30	57.60			152

COLADA N.º Heat No N.º Coque	COMPOSICION QUIMICA - STEEL MARKER'S LADLE ANALYSIS - ANALYSE CHIMIQUE											
	C %	SI %	Mn %	P %	S %	Cr %	Ni %	Mo %	Nb %	V %	Cu %	CEQ %
129A7	0.180	0.220	0.860	0.007	0.002	0.080	0.070	0.020	0.007	0.001	0.160	0.359
129AV	0.200	0.180	0.850	0.015	0.014	0.090	0.220	0.030	0.000	0.000	0.370	0.405
150A7	0.200	0.230	0.840	0.012	0.005	0.130	0.070	0.030	0.007	0.001	0.290	0.402
158A7	0.180	0.240	0.840	0.013	0.002	0.050	0.070	0.030	0.007	0.001	0.200	0.362
208A7	0.210	0.200	0.880	0.015	0.004	0.080	0.120	0.010	0.000	0.005	0.230	0.398
231A7	0.200	0.280	0.880	0.012	0.004	0.090	0.070	0.030	0.007	0.004	0.200	0.389
488A6	0.190	0.250	0.850	0.018	0.004	0.150	0.080	0.030	0.007	0.001	0.200	0.387
70315	0.150	0.250	1.150	0.012	0.011	0.070	0.090	0.020	0.001	0.010	0.300	0.428
1522	0.200	0.270	0.880	0.021	0.028	0.120	0.050	0.010	0.003	0.003	0.803	0.377

(*) OBSERVACIONES
Remarks
Observations

N NORMALIZED AT 900 C AND ALLOWED TO COOL IN STILL AIR

- Las dimensiones y la condición superficial resultaron satisfactorias
- Dimensions and surface condition were found acceptable
- Les dimensions et état 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

PO # 52741

erne fittings gmbh A-6624 Schlins Hauptstrasse 48 Austria/Europe Telefon +43/5524 501-0 Telefax +43/5524 501-520		 Reg. Nr. 12 100 305		Abnahmeprüfzeugnis Inspection Certificate EN 10204 - 3.1				Zeugnisnummer [certificate no.] 029669/06-BS		Rev.		Datum [date] 28/06/2006																											
Kunde [customer] CCTF 1387 Cornwall Rd CDN-L6J 7T5 OAKVILLE ONT				Ihre Bestellnummer [your order no.] 4020991				Unsere Auftrags.Nr. [our order no.] 85026-PS-0020				Ident Nr. [ident no.] 434557																											
				Ihre Artikelnummer [your item no.] 7515228				Schmelze Nr [heat no.] 434557				Ident Nr. [ident no.]																											
				Menge [quantity] 15				Artikelbezeichnung [designation] elbows LR-90-S-WPB-2 1/2"-XXS				Anforderungen [requirements] ASME B16.9-2001 LR,WPB,ASTM A 234/A 234M-01,ASME SA 234 Sec. II Part A,,NACE MR-01-75,EN 10204/3.1,Manufacturers standard																											
Vormaterial [base material] 30431		Rohrzeugnisnr. [tube work's cert.no.] 30431		Hersteller [manufacturer] Voest Alpine				Dichtheitsprüfung [leakage test] PSI 2800																															
Analyse [analysis] Index		Schmelze Nr. [heat no.] 434557		Erschmelzungsart [melting process] Y 0.571		1 = Schmelzeanalyse [heat analysis]				J-Faktor [J-Factor]: (Si + Mn) * (P + Sn) * 10000 CEQ [CEQ]: C + (Mn / 6) + (Cr + Mo + V) / 5 + (Cu + Ni) / 15																													
Index 1		C 0.1684		Si 0.256		Mn 0.995		P 0.0098		S 0.0037		Cr 0.028		Mo 0.0059		Ni 0.025		Cu 0.0055		V 0.0022		Nb 0.044		Al 0.0301		B 0.0004		Ti 0.0026		N 0.0069		Sn 0.0039		CE 0.35		CEQ 0.35		J-Fact. 171.39	
Mech.-technologische Prüfung [mech. technological test]																																							
Proben Nr. [test no.] M050146-1		Zugversuch [tensile test] Pr.-Lage [pos. of sample] L Temp. +20 °C Dehng. [yield str.] 379 Zugfestigkeit [tensile str.] 492 Dehnung [elongation] 35,6						Kerbschlagbiegeversuch [notched bar impact test] Form: Temp. Querschnitt [cross sec.] Kerbschlagarbeit [impact values] (J)						Härteprüfung [hardness test] 141-146 HB																									
														Wärmebehandlung [heat treatment] formed under normalizing cond. temperature 840 °C - 850 °C Cooling in still air																									
Kennzeichnung [marking] E03 Mat./434557/DN*wall												Zusatzmarkierung [add. mark.]																											
Besichtigung und Ausmessung [visual inspection and dimensional check] o.B./o.K.																																							
Bemerkungen [remarks] hot formed over mandrel Hardness test and stamping acc. to NACE MR-01-75. Stamped with round nosed tools. Hardness test, visual and dimensional test are checked on 10%.												Die gestellten Anforderungen wurden erfüllt [Manufacturing requirements are satisfied] Der Werksachverständige [the Works Inspector] 28/06/06 Bischof Siegfried 322 Dieses Dokument wurde elektronisch erstellt und ist ohne Unterschrift gültig. [The certificate is issued by the computerized system and is valid without signature.]																											

ASME STAMP
 ED. 2007 ADD. **MX** DATE **14/7/06**

INTE / Customer / Client

STF CORPORATION (EDMONTON)
107 - 53 AVENUE NW
EDMONTON, AB T6B 3G2
CANADA

CERTIFICADO DE INSPECCION

Works Certificate - Certificat d'Usine

DIN EN 10204 / 3.1
ISO 10474 / 3.1

FECHA:
Date:

20/03/2007

N.º
No.

112835

HOJA:
Page: 1



ULMA

N.º: SGI 1922164

ULMA FORJA, S.COOP.

DUCTO
- Produit

FLANGES

SU PEDIDO N.º
Your Order No. 4879518-00
Votre Cde. N.º

DE
of. - de 23/02/2007

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

Bº Zubilaga, 3 - Apdo. 14
20560 ONATI (Gipuzkoa) SPAIN
Tel.: 34 - 943 780552
Fax: 34 - 943 781808
E-mail: ulma@ulmapiping.com

NORMAS APLICABLES
Normes - Normes Applicables

ASME B16.5-96

SERIAL CORRESPONDIENTE
Serial Correspondent - Qualité
O DE FUSION (*)
Making - Elaboration de l'acier
Elec. Y = Oxígeno básico

ASTMA105N-05
ASME SA105N-05

NACE MR-01-75/03
CSA - Z245.12-05
GR248 CAT I

MARCA DEL FABRICANTE
Mark of factory
Marque du fabricant



58322

DEPARTAMENTO
Section
Department

QUALITY ASSURANCE

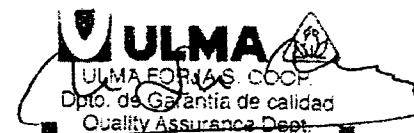
PARTIDA Item Poste	CANTIDAD Quantity Quantité	DESCRIPCION Description Description	OBSERVACIONES Remarks Observations (*)	COLADA N.º Heat No N.º Coulée	RESISTENCIA T.Strength Resist Rupt N/mm2	UNITE ELAST. Y.Strength Limite Elast. N/mm2	ALARGAM. Elongation Lo. 4 d %	ESTRICCION Red. Area Striction %	RESILENCIA Impact test Resilience Joules	MEDIA Average Moyenne	°C	DUREZA Hardness Dureté HB
7530310	10	WN 18 150LB S/STD FF A105N	NE	57A7	518	321	32,50	64,00				150
7530668	5	WN 6 600LB S/XXS RF A105N	NE	66A7	523	317	33,00	66,40				152
7531656	5	WN 6 900LB S/XXS RF A105N	NE	366A6	520	322	33,60	65,00				152
7531729	25	BLIND 3 900LB RF A105N	NE	447A6	517	319	32,80	64,00				149
7532016	120	BLIND 2 1500LB RTJ A105N	NE	31A7	520	319	33,60	67,00				151
7536504	75	THR 2 1500LB RF A105N	NE	495A6	521	316	33,00	65,80				152
7536506	50	THR 2 1500LB RTJ A105N	NE	495A6	521	316	33,00	65,80				152
7533470	2	WN 3 1500LB S/XXS RF A105N	NE	299A6	523	305	31,70	62,00				153
7533470	8	WN 3 1500LB S/XXS RF A105N	NE	495A6	521	316	33,00	65,80				152

ADA N.º Heat No Coulée	COMPOSICION QUIMICA - STEEL MARKER'S LADLE ANALYSIS - ANALYSE CHIMIQUE											
	C %	Si %	Mn %	P %	S %	Cr %	Ni %	Mo %	Nb %	V %	Cu %	CEQ %
39A6	0.200	0.150	0.870	0.022	0.020	0.140	0.160	0.002	0.002	0.002	0.220	0.399
1A7	0.180	0.270	0.860	0.012	0.003	0.110	0.080	0.030	0.007	0.001	0.240	0.373
36A6	0.200	0.210	0.900	0.013	0.005	0.100	0.090	0.020	0.007	0.001	0.240	0.396
47A6	0.180	0.230	0.840	0.011	0.004	0.100	0.090	0.030	0.007	0.001	0.270	0.370
95A6	0.200	0.230	0.870	0.013	0.006	0.080	0.100	0.010	0.000	0.005	0.230	0.386
7A7	0.190	0.210	0.870	0.014	0.006	0.070	0.080	0.020	0.007	0.001	0.200	0.372
6A7	0.160	0.270	1.160	0.007	0.008	0.040	0.110	0.020	0.001	0.002	0.180	0.385

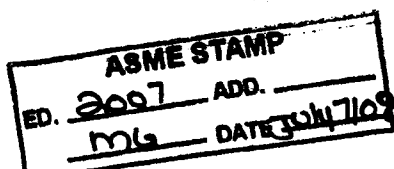
- Las dimensiones y la condición superficial se hallaron satisfactorias
- Dimension and surface condition were found acceptable
- Les dimensions et états de surface sont satisfaisants

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

EL INSPECTOR
Works Inspector - L'inspecteur



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



INSPECTION CERTIFICATE
EN 10204/DIN 50049-3.1B



Gruppe Gengyter
Wilhelm Geldbach
Industrie

Certificate No. G07T03002-6

Page 1 / 1

Original

Article: Hot Forged Flange
Carbon steel forged flanges
Specification: Material: A105N
ASME B16.5-2003

according to:
ASTM A105-2005
ASTM/ASME SA105 Section II
Part A Ed.2004 Addenda 2006

State of delivery Normalized 910°C **Melting Process:** Y

Marking: Material, Size, PN, DN, Heat-No.

Stamp of manufacturer



Content of the Delivery

PO# 52741

Order- No	Item- No	pcs	description	Heat No	Test No
EO5019KD/WGI	31	20	600# WN RF XXS 2 1/2"	7202086	11

1,123

Mechanical tests		Position of specimen:				Tangential	
Test No	Tensile test					Hardness	
	R_m N/mm ²	$R_{0.2}$ N/mm ²	A_5 %	Z %	HB		
11	528	312	38	63	151		

Chemical analysis %										
Heat No	C	Si	Mn	P	S	Cr	Mo	Ni	Al	Nb
	0.20	0.30	1.01	0.013	0.005	0.012	0.005	0.007	CE	
7202086	Ti	Ta	N	V	Cu	Al	Nb	CE		
				0.005	0.020	0.025	0.01	0.37		

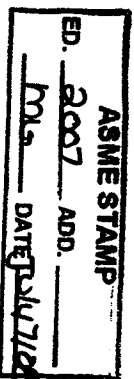
Visual and dimensional inspection: without complaint
Dimension according to ASME B16.5-2003
Hardness to NACE MR01-75 Ed.2003
Chemical and mechanical requirements are fulfilled in acc. To CSA Z245.12-05 Gr.248 Cat I

Place
Geisenkirchen

Date
14.01.2008

Work Inspector

Wilhelm Geldbach Industrie GmbH
Ziegeleistraße 17, D-45886 Geisenkirchen



CERTIFIED MILL TEST REPORT



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LOG NO. 322356 PAGE 1
BONNEY FORGE
P.O. BOX 330 • 14496 CROGHAN PIKE • MOUNT UNION, PA 1
(814) 542-2545 • (800) 345-7548 • FAX (814) 542-4806
www.bonneyforge.com

CUSTOMER: CCTF CORPORATION

Date 06/12/08

CUSTOMER'S Order No. 4883926-00

Bonney Order No. 000034963

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

EDMONTON, ABT6B 3G2 Canada

PO#52741

ITEM QUANTITY LOT NO.

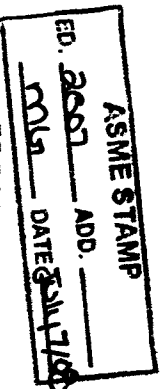
GRADE OR SPECIFICATION NO.
CHEMICAL ANALYSIS, PHYSICAL PROPERTIES, REMARKS

SA/A105N

018 72 57432 7552106 10 -3 X 3/4 6000 A105N THRD T
C .190 MN ✓ 1.010 P ✓ .011 S ✓ .021 SI ✓ .210
NI .040 CU ✓ .160 CD .003 CR ✓ .040 MD ✓ .010
V .000 AL .025 NB .014
CE(LONG FORMULA) = 0.38
T/S 78750 Y/S 541250 EL 33.55 RA 67.00
BRINELL HARDNESS1: 132 HARDNESS2: 135

0534

019 25 36642 7552122 21/2-2 X1 6000 A105N THRD T
C .180 MN 1.050 P .015 S .036 SI .260
NI .090 CU .240 CR .090 MD .025 V .000
NB .018
CE(LONG FORMULA) = 0.40
T/S 80201 Y/S 51378 EL 30.70 RA 62.60
BRINELL HARDNESS1: 150 HARDNESS2: 150
21/2-2 X1 6000 A105N THRD T
C .170 MN .970 P .009 S .019 SI .240
NI .090 CU .240 CR .110 MD .022 V .032
CB .001
CE(LONG FORMULA) = 0.39
T/S 76000 Y/S 52000 EL 34.00 RA 66.00
BRINELL HARDNESS1: 150 HARDNESS2: 150



56345 7552122

21/2-2 X1 6000 A105N THRD T
C .190 MN 1.020 P .008 S .023 SI .250
NI .020 CU .070 CD .002 CR .030 MD .007
V .025 AL .001 NB .001
CE(LONG FORMULA) = 0.38
T/S 78750 Y/S 54000 EL 31.50 RA 67.90
BRINELL HARDNESS1: 144 HARDNESS2: 141

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

We certify that the data on this sheet is a true copy taken from our records of material furnished us by the production mill, or was obtained by additional analytical che

by

Kylee Fick



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5

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BONNEY FORGE
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(814) 542-2545 • (800) 345-7546 • FAX (814) 542-4908
www.bonneyforge.com

CUSTOMER: CCTF CORPORATION

Date 05/07/08

CUSTOMER'S Order No. 4883710-00

Bonney Order R600032634

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

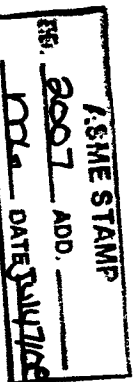
EDMONTON, ABT6B 3G2 Canada

PO#52741

ITEM QUANTITY LOT NO.

GRADE OR SPECIFICATION NO
CHEMICAL ANALYSIS PHYSICAL PROPERTIES, H.D. MARKS

SA/A105N



014	75	57277	7550007	4-31/2X2 3M A105N THRD T	C	.200 MN	1.030 P	.008 S	.023 SI	.22
					NI	.030 CU	.120 CD	.004 CR	.050 MD	.01
					V	.000 AL	.024 NB	.014		
					CE(LONG FORMULA)	= 0.39				
					T/S 76000 Y/S 50500 EL	32.00 RA	67.00			
					BRINELL HARDNESS1:	147	HARDNESS2:	144		
015	250	53769	7552076	6-21/2X1/2 6M A105N THRD T	C	.190 MN	.990 P	.009 S	.022 SI	.24
					NI	.020 CU	.100 CR	.040 MD	.010 V	.02
					NB	.001				
					CE(LONG FORMULA)	= 0.38				
					T/S 76900 Y/S 51200 EL	30.90 RA	65.00			
					BRINELL HARDNESS1:	154	HARDNESS2:	152		
016	100	57150	7552114	36-12X3/4 6M A105N THRD T	C	.200 MN	.050 P	.008 S	.017 SI	.26
					NI	.030 CU	.090 CD	.003 CR	.050 MD	.01
					V	.000 AL	.022 NB	.019		
					CE(LONG FORMULA)	= 0.40				
					T/S 74875 Y/S 50000 EL	32.90 RA	65.40			
					BRINELL HARDNESS1:	132	HARDNESS2:	135		
017	250	57376	7552432	5-3 X 3/4 3000 A105N SOCK S	C	.200 MN	1.150 P	.009 S	.022 SI	.18
					NI	.020 CU	.070 CD	.002 CR	.060 MD	.01
					V	.001 AL	.025 NB	.014		
					CE(LONG FORMULA)	= 0.41				
					T/S 73750 Y/S 49875 EL	32.95 RA	66.10			
					BRINELL HARDNESS1:	127	HARDNESS2:	127		

***** 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 ch

Cris Boozel

CERTIFIED MILL TEST REPORT

2



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www.bonneyforge.com

CUSTOMER: CCTF CORPORATION

Date 05/07/08

CUSTOMER'S Order No. 4883710-00

Bonney Order #000032634

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

EDMONTON, ABT6B 3G2 Canada

PO# 52741

ITEM QUANTITY LOT NO.

GRADE OR SPECIFICATION NO.
CHEMICAL ANALYSIS, PHYSICAL PROPERTIES, RE MARKS

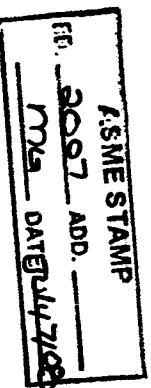
SA/A105N

014 75 57277 7550007 4-31/2X2 3M A105N THRD T
C .200 MN 1.030 P .008 S .023 SI .22
NI .030 CU .120 CD .004 CR .050 MD .01
V .000 AL .024 NB .014
CE(LONG FORMULA) = 0.39
T/S 76000 Y/S 50500 EL 32.00 RA 67.00
BRINELL HARDNESS1: 147 HARDNESS2: 144

015 250 55769 7552076 6-21/2X1/2 6M A105N THRD T
C .190 MN .990 P .009 S .022 SI .24
NI .020 CU .100 CR .040 MD .010 V .02
NB .001
CE(LONG FORMULA) = 0.38
T/S 26500 Y/S 51200 EL 30.90 RA 65.00
BRINELL HARDNESS1: 154 HARDNESS2: 152

016 100 57150 7552114 36-12X3/4 6M A105N THRD T
C .200 MN 1.050 P .008 S .017 SI .26
NI .030 CU .090 CD .003 CR .050 MD .01
V .000 AL .022 NB .019
CE(LONG FORMULA) = 0.40
T/S 74875 Y/S 50000 EL 32.90 RA 65.40
BRINELL HARDNESS1: 132 HARDNESS2: 135

017 250 57376 7552432 5-3 X 3/4 3000 A105N SOCK S
C .200 MN 1.150 P .009 S .022 SI .18
NI .020 CU .070 CD .002 CR .060 MD .01
V .001 AL .025 NB .014
CE(LONG FORMULA) = 0.41
T/S 73750 Y/S 49875 EL 32.95 RA 66.10
BRINELL HARDNESS1: 127 HARDNESS2: 127



***** 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 ct

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Cris Booze

CERTIFIED MILL TEST REPORT

2



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LOG NO. 320110 PAGE 2
BONNEY FORGE
P.O. BOX 330 • 14498 CROGHAN PIKE • MOUNT UNION, PA 1
(814) 542-2545 • (800) 345-7546 • FAX (814) 542-4906
www.bonneyforge.com

CUSTOMER: CCTF CORPORATION

Date 04/09/08

CUSTOMER'S Order No.:4024268-00

Bonney Order #B00030662

SHIPPED TO: CCTF CORPORATION (OAKVILLE)
1387 CORNWALL ROAD

OAKVILLE, ONL6J 7T5 Canada

P#152741

ITEM QUANTITY LOT NO.

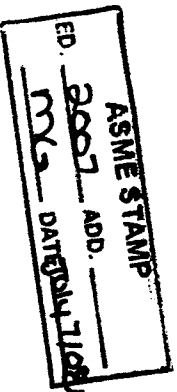
GRADE OR SPECIFICATION NO
CHEMICAL ANALYSIS, PHYSICAL PROPERTIES, REMARKS

SA/A105N

010 50 55658 7552076 6-21/2X1/2 6M A105N THRD T
C .200 MN 1.060 P .010 S .022 SI .27
NI .030 CU .080 CR .050 MO .019 V .02
NB .001
CE(LONG FORMULA) = 0.40
T/S 77910 Y/S 52940 EL 32.00 RA 67.10
BRINELL HARDNESS1: 153 HARDNESS2: 153

011 50 57195 7552157 36-12 X1 6000 A105N THRD T
C .200 MN 1.000 P .009 S .021 SI .20
NI .130 CU .210 CR .120 MO .040 V .00
AL .025 NB .001
CE(LONG FORMULA) = 0.42
T/S 76131 Y/S 571005 EL 31.55 RA 64.52
BRINELL HARDNESS1: 132 HARDNESS2: 132

0.611



***** 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 test

by

Cris Booze

**BOMEY FORGE**

U.S. ROUTE 622 SOUTH
P.O. BOX 330
MOUNT UNION, PA 17066
(814) 542-2545 (800) 345-7546
FAX (814) 542-9877 TELEEX 910-240-9091

CERTIFIED MILL TEST REPORT

CCTF - DIV. OF EMCO LTD.

PO#52741

12/11/03

LOT NO.**CHEMICAL ANALYSIS, PHYSICAL PROPERTIES, REMARKS**

55829

8t06 X 1 1/2" 6M A105N Thredolet Threaded

0.748

C	0.200	MN	0.360	P	0.012	S	0.026	SI	0.260
NI	0.130	CR	0.160	MO	0.034	CU	0.240	V	0.030
CB	0.000	SN	0.014						

CE (LONG FORMULA) = 0.429

T/S 80000 Y/S 54500 EL 30.000 RA 63.000

BRINELL HARDNESS: 162

1. THE MATERIAL SUPPLIED MEETS THE REQUIREMENTS OF NACE MR0175-99
2. CERTIFYING ASTM A105-01 / ASME SA105-01 EDITION
3. THE MATERIAL SUPPLIED IDENTIFIED AS A105N WAS NORMALIZED IN ACCORDANCE WITH ASTM HEAT TREATING REQUIREMENTS.

This document has been electronically submitted.

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ASME STAMP

ED. 2007 ADD.

M06 DATE July 7/03

WUXI DINGYUAN PRECISION COLD-DRAWN STEEL PIPE CO., LTD

H[#]BRD 2 1/2" XXH SA 106B

Y0705071

CONTRACT NO:

1000006

NAME OF CUSTOMER:

WEIFANG STEEL CANADA LTD.

DESCRIPTION:

SEAMLESS STEEL PIPE

TOTAL:

160 pieces,

61 bundles,

50.792 MT

DATE:

10-Jul-07

Add: Qianqiao Industrial Area, Wuxi City, Jiangsu

Province, 214151, P.R.China

Tel: 0086-510-83231334

Fax: 0086-510-83218987

Page: 1 of 1

SPECIFICATION: ASTM/ASME A106 B-2004, NACE MRO-175-2003

CERTIFICATE NO: 07071001A

NO.	BATCH NO.	HEAT NO.	STEEL GRADE	SIZE	QUANTITY										
					BUNDLES	PIECES	FEET	WEIGHT(MT)							
1	44521569-6	0740252	GR.B	8 STD BLK A/SA 106B PIPE SRL	44	89	1,869	24.235							
2	92070508-2	Y704-681		4.5160 BLK A/SA 106B PIPE SRL	7	49	1,029	10.517							
3	92070914-4	Y0705071		2-1/2 XXH BLK A/SA 106B PIPE SRL	1	5	105	0.653							
4	220477565-1	E10703144QX		12 STD BLK A/SA 106B PIPE DRL	8	16	640	14.393							
5	2256332-2	0732485		10 XH BLK A/SA 106B PIPE DRL	1	1	40	0.994							
6															
7															
8															
9															
10															
NO.	DELIVERY CONDITION	CHEMICAL COMPOSITION %												NONDESTRUCTIVE TEST	
		C	Si	Mn	P	S	Cu	Cr	Ni	Mo	Ti	W	V	EDDY CURRENT TEST	ULTRASONIC TEST
1	COLD-DRAWN	0.18	0.21	0.48	0.011	0.008	0.09	0.05	0.03	0.010	/	/	0.001	OK	/
2	COLD-DRAWN	0.20	0.21	0.58	0.020	0.005	0.04	0.03	0.01	0.010	/	/	0.002	OK	/
3	COLD-DRAWN	0.19	0.21	0.52	0.013	0.010	0.11	0.05	0.05	0.015	/	/	0.003	OK	/
4	COLD-DRAWN	0.19	0.27	0.56	0.010	0.010	0.10	0.04	0.03	0.020	/	/	0.001	OK	/
5	COLD-DRAWN	0.19	0.24	0.47	0.015	0.012	0.04	0.05	0.02	0.015	/	/	0.001	OK	/
6															
7															
8															
9															
10															
NO.	YIELD STRENGTH (PSI)	TENSILE STRENGTH (PSI)		ELONGATION GL=50mm %		FLATTEN TEST	CHARPY IMPACT TEST			HARDNESS HRB	HYDROSTATIC TEST (PSI)	HEAT TREATMENT			
							Temp	Dime(mm)	J						
1	50910 / 52360	65450 / 67630		34.0/32.0		OK	/	/	/	/	1570	Normalized 880°C: 20min			
2	47270 / 48730	62540 / 64000		38.0/36.5		OK	/	/	/	/	2800				
3	49450 / 50910	67630 / 68360		35.0/33.0		OK	/	/	/	/	2500				
4	51630 / 53820	69820 / 71270		33.0/32.5		OK	/	/	/	/	1240				
5	48730 / 50910	66180 / 67630		35.5/34.0		OK	/	/	/	/	1950				
6															
7															
8															
9															
10															

REMARKS:

- We hereby certify that this certificate of quality is issued and signed by the manufacturer.
- We hereby certify that the properties described herein meet the requirement of the above spec.
- We hereby certify that this certificate is issued accordance with EN10204 3.1.B.
- Origin: Made in China

ISSUED BY

QUALITY MANAGER

ASME STAMP
2007 ADD. 11.7.08

12" S/80 Pipe

12" SCH.80 PIPE
BJZ
0.783"

PO#52265

0231182

收货单位: 重庆新地公司代江阴长江钢管
CONSIGNEE: 200500001806 (01 05121535)
合同号: 200500001806 (01 05121535)
产品名称: 高强度用埋弧焊管
DESCRIPTION: ASTM A106-1999 MODIFIED
标准: ASTM A106-1999 MODIFIED



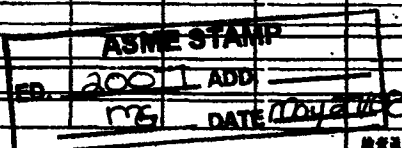
产 证 明 书
MILL CERTIFICATE
江阴市长江钢管有限公司
JIANGYIN CITY CHANGJIANG STEEL PIPE CO., LTD.

地址: 中国 四川 成都 电话: 028-84503981 传真: 028-84503981 邮编: 610009
ADDRESS: CHENGDU SICHUAN CHINA TEL: FAX: P.C.BOX:

证书号: 050231182
CERTIFICATE NO.:
站址: 重庆新地公司代江阴长江钢管
STATION OF ORIGIN: 重庆新地公司代江阴长江钢管
号: 001875
TRANSHIP:
合计: 1 根 11.850 1.825
TOTAL: 11.850 1.825
PCS: METERS: TONS:

包号	钢号	炉号	批号	规格 (mm) SIZE			数量 QUANTITY			熔炼方式	交货状态	水压试验	无损检测	压扁试验	扩口试验	弯曲试验	冲击试验	金相组织
PACKAGE No.	STEEL GRADE	HEAT No.	BATCH No.	外径 O.D.	壁厚 W.T.	长度 LENGTH	数量 PIECES	米数 METERS	重量 TONS	MELTING METHOD	CONDITION OF SUPPLY	HYDRAULIC TEST PRESSURE (MPa)	NOT	FLATTENING TEST	EXPANDING TEST	FLANGING TEST	IMPACT TEST	EXPANDING TEST
2305000014	B	0581722	Y235000478	323.8	17.48	3000-19000	1	11.850	1.825	电炉	热轧	16		合格				合格

试样编号 SAMPLE No.	化 学 成 份 CHEMICAL COMPOSITION (%)											力学性能 MECHANICAL PROPERTIES			金相组织 MICROSCOPIC EXAMINATION
	C	Si	Mn	S	P	Ni	Cr	Mo	Cu	V	N	屈服强度 YIELD (MPa)	抗拉强度 TENSILE (MPa)	延伸率 ELONGATION (%)	
Y235000478A/B	.19	.23	.46	.019	.015	.04	.04	.01	.07	.01		310/310	485/485	33/38	



备注: 1. 理论重量交货。 TO BE DELIVERED IN THEORETICAL WEIGHT.
REMARK: 2. 本证书及产品合格证均由本厂质量管理部门出具, 并符合国家标准。
THIS IS TO CERTIFY THAT THE PRODUCT HAS BEEN INSPECTED AS PER RELEVANT SPECIFICATION AS STIPULATED IN THE ORDER. QUALIFIED WITH ALL THE DATA IN COMPLIANCE WITH THE SPECIFICATION.
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4. 熔炼方式 (MELTING METHOD): 电炉—EAF 电炉—EAF 电炉—EAF
5. 交货状态 (CONDITION OF SUPPLY): 热轧—HR 热轧—HR 热轧—HR
6. 无损检测 (NDT): 射线—RT 射线—RT 射线—RT
7. 取样方向 (ORIENTATION OF SPECIMEN): 纵向—LON 纵向—LON 纵向—LON
8. 金相组织—QUAD

检查员: 2005年06月27日
INSPECTOR: 2005年06月27日
FILLING FORM DATE YEAR MONTH DAY

Seller: JIANGYIN CITY CHANGJIANG STEEL PIPE CO., LTD.

0231034

CONSIGNEE: 重庆新港公司代江阴长江钢管
 CONTRACT NO.: 200600001008 (01 05121526)
 产品名称: 高强度低合金钢无缝管
 DESCRIPTION: ASTM A106-1998 MODIFIED
 标准标准: STANDARD:

地址: 中国 四川 成都
 ADDRESS: CHENGDU SICHUAN CHINA

产品合格证
 MILLS CERTIFICATE
 攀钢集团成都钢铁有限责任公司
 PANGANG GROUP CHENGDU IRON & STEEL CO., LTD.

电话: 028-84503988 028-84503981 邮编: 610009
 TEL: 028-84503988 028-84503981 P.C. BOX:

证书号: 0506211185
 CERTIFICATE NO.:
 站址: 重庆新港(大渡口)
 STATION OF DESTINATION:
 车号: 4004385
 TRAIN NO.:
 合计: 4 根 44.56t 5.87t
 TOTAL: PIECES METERS TONS

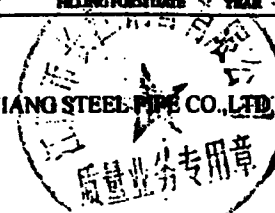
NO	包号 PACKAGE No	钢号 (注) STEEL GRADE	炉号 HEAT No	批号 BATCH No	规格 (mm) SIZE			数量 QUANTITY			交货状态 CONDITION OF SUPPLY	水压试验 HYDRAULIC TEST PRESSURE MPa	无损检测 METHOD	压扁试验 FLATTENING TEST	扩口试验 ORIFT EXPANSION TEST	卷边试验 FLANGING TEST	环拉试验 RMS TENSILE TEST	扩口试验 RMS EXPANSION TEST	表面尺寸 SURFACE & DIMENSION
					外径 O.D	壁厚 W.T	长度 LENGTH	根数 PIECES	米数 METERS	重量 TONS									
1	2305060590	B	0581722	Y235060478	323.8	17.48	3000-12000	1	11.200	1.479	电炉	热轧	16	合格					合格
2	2305060607	B	0581722	Y235060478	323.8	17.48	3000-12000	1	11.350	1.489	电炉	热轧	16	合格					合格
3	2305060608	B	0581722	Y235060478	323.8	17.48	3000-12000	1	11.400	1.505	电炉	热轧	16	合格					合格
4	2305060611	B	0581722	Y235060478	323.8	17.48	3000-12000	1	10.550	1.393	电炉	热轧	16	合格					合格
5																			
6																			
7																			
8																			

NO	试样编号 SAMPLE No	化 学 成 份 CHEMICAL COMPOSITION (%)										力学性能 MECHANICAL PROPERTIES ② 屈服			金相组织 MICROSCOPIC EXAMINATION ③
		C	Si	Mn	S	P	Ni	Cr	Mo	Cu	V	屈服强度 YIELD MPa	抗拉强度 TENSILE MPa	伸长率 ELONGATION %	
1	Y235060478A/B	.19	.23	.46	.019	.015	.04	.04	.01	.07	.01	310/310	465/465	33/38	
2	Y235060478A/B	.19	.23	.46	.019	.015	.04	.04	.01	.07	.01	310/310	465/465	33/38	
3	Y235060478A/B	.19	.23	.46	.019	.015	.04	.04	.01	.07	.01	310/310	465/465	33/38	
4	Y235060478A/B	.19	.23	.46	.019	.015	.04	.04	.01	.07	.01	310/310	465/465	33/38	
5															
6															
7															
8															

REMARK: 1. 理论重量仅供参考, TO BE DELIVERED IN THEORETICAL WEIGHT.
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检验员: 2122 发货员: 2122 制证日期: 2006 年 06 月 26 日
 INSPECTOR: 2122 CONSIGNOR: 2122 FILING DATE: YEAR MONTH DAY

Seller: JIANGYIN CITY CHANGJIANG STEEL PIPE CO., LTD.



重庆新隆公司代江铜长江铜管
CONTRACT NO: 200500001908 (B1 05121529)
CONTRACT NO: 高温作业用聚四氟乙烯管
DESCRIPTION: ASTM A106-1999 MODIFIED
设计标准: 设计标准:
STANDARD:



产品质量证明书

MILL CERTIFICATE
 攀鋼集團礦業有限公司
 PANGANG GROUP CHENOPH IRON & STEEL CO. LTD.

地址: 中国 四川 成都
ADDRESS: CHENGDU SICHUAN CHINA

電話：502-247733

電話: 028-8450390

郵編：610063

原庄号: 0000211162
 CERTIFICATE 地: 宣德号(大渡口)
 到站: STATION OF DESTINATION: 宣德号
 本号: 3 32.500 4.250
 TRAIN 地: 合计: PIECES METERS TONS
 TOTAL:

STANDARD:		ADDRESS: CHENGDU SHICHUAN CHINA		TEL: 86-28-86666666		FAX:		P.C. BOX:		TOTAL:		PIECES:		METERS:		POUNDS:													
No.	编号 PACKAGE No.	钢号 STEEL GRADE	炉罐号 HEAT No.	批号 BATCH No.	规格 (mm) SIZE			重量 QUANTITY			交货状态 CONDITION OF SUPPLY	水压试验 HYDROSTATIC TEST PRESSURE MPa	无损检测 NDT	屈服试验 FLATNESS TEST	扩口试验 EXPANSION TEST	卷边试验 FLANGE TEST	环拉试验 RING TENSILE TEST	环扩试验 RING EXPANSION TEST	表面及尺寸 SURFACE & DIMENSION										
					外径 O.D.	壁厚 W.T.	长度 LENGTH	根数 PIECES	米重 METERS	吨重 TONS	①	②	③	④	⑤	⑥	⑦	⑧	⑨										
1	2305060991	B	0581722	Y235060478	323.8	17.48	3000-13000	1	11.050	1.459	电炉	热轧	16		合格				合格										
2	2305060009	B	0581722	Y235060478	323.8	17.48	3000-13000	1	10.960	1.446	电炉	热轧	16		合格				合格										
3	2305060010	B	0581722	Y235060478	323.8	17.48	3000-13000	1	10.800	1.396	电炉	热轧	16		合格				合格										
4																													
5																													
6																													
7																													
8																													
No.	试样编号 SAMPLE No.	化 学 成 份 CHEMICAL COMPOSITION (%)													力学性能 MECHANICAL PROPERTIES ① ② ③			显微组织 MICROSCOPIC EXAMINATION ④											
		C	Si	Mn	S	P	Ni	Cr	Mo	Cu	V	N			屈服强度 YIELD (MPa)	抗拉强度 TENSILE (MPa)	延伸率 ELONGATION (%)												
1	Y235060478A/B	.19	.23	.46	.010	.015	.04	.04	.01	.07	.01				310/310	405/405	33/38												
2	Y235060478A/B	.19	.23	.46	.010	.015	.04	.04	.01	.07	.01				310/310	405/405	33/38												
3	Y235060478A/B	.19	.23	.46	.010	.015	.04	.04	.01	.07	.01				310/310	405/405	33/38												
4																													
5																													
6																													
7																													
8																													
备注: 1. 按理论重量交货。 TO BE DELIVERED IN THEORETICAL WEIGHT. 2. 本证书不作为产品合格证的替代品。 THIS IS TO CERTIFY THAT THE PRODUCT HAS BEEN INSPECTED AS PER RELEVANT SPECIFICATION AS STIPULATED IN THE ORDER, QUALIFIED WITH ALL THE DATA IN COMPLIANCE WITH THE SPECIFICATION. 3. 质量证明书不作为验收依据, 复印件仅供参考, 不作为验收依据。 THE ORIGINAL QUALITY CERTIFICATE IS THE FOUNDATION OF ACCEPTANCE WHILE THE COPY IS NOT ACCEPTANCE VOUCHER AND ONLY FOR REFERENCE. 4. 熔炼方法: MELTING METHOD: 电炉—BOF 电炉—EAF 电炉—ESR 电炉+VD—EAF+VD 5. 交货状态: CONDITION OF SUPPLY: 热轧—Q+T 热轧—HR 热轧—HE 热轧—Q 热轧—T 正火—N 正火—A 6. 探伤方法: NDT: 超声—UT 磁粉—MT 磁粉—MT 7. 取样方向: ORIENTATION OF SPECIMEN: 纵向—LON 横向—TRA 8. ③合格—GOOD																													
卖方: JIANGYIN CITY CHANGJIANG STEEL PIPE CO., LTD										买方: CONSIGNEE										制证时间: 2006 年 06 月 26 日 FILLING FORM DATE: YEAR MONTH DAY									

0232602

重庆新瑞公司代江市长江钢管
CONTRACT NO: 200500001806 (M 05121536)
CONTRACT NO: 200500001806 (M 05121536)
DESCRIPTION: ASTM A106-1988 MODIFIED
STANDARD:



产 品 质 量 证 明 书
MILITARY CERTIFICATE
PANGANG GROUP CHENGDU IRON & STEEL CO., LTD.

地址: 中国 四川 成都
ADDRESS: CHENGDU SICHUAN CHINA
电话: 028-84583581 028-84583581
TEL: FAX: 邮编: 610040
P.C.BOX:

质量证书号: 0508211054
CERTIFICATE NO:
规格: 重钢专供(大口径)
STATION OF DESTINATION:
重量: 485072
TOTAL: 8 05.005 0.781
TOTAL: 8 05.005 0.781
TOTAL: 8 05.005 0.781

ADDRESS: CHENGDU SICHUAN CHINA TEL: 028-86666666 FAX: 028-86666666 P.C.BOX: 100000 TOTAL: 100000																			
No	包号 PACKAGE No	钢号 (组) STEEL GRADE	炉罐号 HEAT No	批号 BATCH No	规格 (mm) SIZE			重量 QUANTITY			熔炼方法 MELTING METHOD	交货状态 CONDITION OF SUPPLY	水压试验 WATER-PROOF TEST PRESSURE (MPa)	无损检测 NDT	屈服试验 FLATTENING TEST	扩口试验 DRIFT EXPANDING TEST	弯曲试验 BENDING TEST	冲击试验 IMPACT TEST	表面及尺寸 SURFACE & DIMENSION
					外径 O.D	壁厚 W.T	长度 LENGTH	重量 WEIGHT KG	米数 METERS	重量 TONS									
1	230506032	B	0581722	Y235060478	323.8	17.48	3000-12000	1	11.200	1.479	电炉	热轧	16		合格				合格
2	230506034	B	0581722	Y235060478	323.8	17.48	3000-12000	1	11.000	1.452	电炉	热轧	16		合格				合格
3	230506035	B	0581722	Y235060478	323.8	17.48	3000-12000	1	11.100	1.466	电炉	热轧	16		合格				合格
4	230506036	B	0581722	Y235060478	323.8	17.48	3000-12000	1	10.550	1.393	电炉	热轧	16		合格				合格
5	230506037	B	0581722	Y235060478	323.8	17.48	3000-12000	1	11.300	1.492	电炉	热轧	16		合格				合格
6	230506038	B	0581722	Y235060478	323.8	17.48	3000-12000	1	10.750	1.419	电炉	热轧	16		合格				合格
7																			
8																			
No	试样编号 SAMPLE No	化 学 成 份 CHEMICAL COMPOSITION, %													力学性能 MECHANICAL PROPERTIES ② 屈服			显微组织 MICROSCOPIC EXAMINATION ③	
		C	Si	Mn	S	P	Ni	Cr	Mo	Cu	V	N			屈服强度 YIELD (MPa)	抗拉强度 TENSILE (MPa)	延伸率 ELONGATION (%)		
1	Y235060478A/B	.19	.23	.46	.019	.015	.04	.04	.01	.07	.01				310/310	465/465	33/38		
2	Y235060478A/B	.19	.23	.46	.019	.015	.04	.04	.01	.07	.01				310/310	465/465	33/38		
3	Y235060478A/B	.19	.23	.46	.019	.015	.04	.04	.01	.07	.01				310/310	465/465	33/38		
4	Y235060478A/B	.19	.23	.46	.019	.015	.04	.04	.01	.07	.01				310/310	465/465	33/38		
5	Y235060478A/B	.19	.23	.46	.019	.015	.04	.04	.01	.07	.01				310/310	465/465	33/38		
6	Y235060478A/B	.19	.23	.46	.019	.015	.04	.04	.01	.07	.01				310/310	465/465	33/38		
7																			
8																			

备注: 1. 按理论重量交货。 TO BE DELIVERED IN THEORETICAL WEIGHT.
REMARK: 2. 质量证明书不作为验收依据, 且零件仅供参考, 不作为验收依据。
THIS IS TO CERTIFY THAT THE PRODUCT HAS BEEN INSPECTED
AS PER RELEVANT SPECIFICATION AS STIPULATED IN THE ORDER,
QUALIFIED WITH ALL THE DATA IN COMPLIANCE WITH THE SPECIFICATION.
3. 质量证明书不作为验收依据, 且零件仅供参考, 不作为验收依据。
THE ORIGINAL QUALITY CERTIFICATE IS THE FOUNDATION OF ACCEPTANCE WHILE
THIS COPY IS NOT ACCEPTANCE VOUCHER AND ONLY FOR REFERENCE.
4. 熔炼方法(MELTING METHOD): 电炉-BOF 电炉-EAF 电炉-ESR 电炉-VD-EAF+VD
5. 交货状态(CONDITION OF SUPPLY): 热轧-Q+T 热轧-DR 热轧-DR 热轧-Q 热轧-T 正火-N 正火-A
6. 无损检测(NDT): 磁粉检测-MT 磁粉检测-LMT 磁粉检测-MT
7. 取样的方向(DIRECTION OF SPECIMEN): 纵向-LON 纵向-TLA
8. 验收标准-GB 1591-1988

检验: 8024 发货: 8024
INSPECTOR: CONSIGNOR: 8024
日期: 2005 年 05 月 30 日
FILLING FORM DATE: YEAR MONTH DAY

Seller: JIANGYIN CITY CHANGJIANG STEEL PIPE CO., LTD.



0231173

收货单位: 重庆新港公司代江钢长江钢管
 合同号: 200500001000 (04 05121536)
 产品名称: 高强度用热轧无缝钢管
 标准: ASTM A106-1999 MODIFIED

地址: 中国 四川 成都
 ADDRESS: CHENGDU SICHUAN CHINA

质量证明书
 MILL CERTIFICATE
 攀钢集团成都钢铁有限责任公司
 PANQUAN GROUP CHENGDU IRON & STEEL CO., LTD.
 电话: 028-8497093 传真: 028-8456541 邮编: 610049
 TEL: FAX: P.C.BOX:

证书号: 0604211367
 规格: 高强度大口径
 本号: 0871878
 重量: 3 件 32.80kg 4.28kg
 合计: 32.80kg 4.28kg
 TOTAL: 32.80kg 4.28kg
 单位: METERS TONS

No	包号 PACKAGE No	钢号 (注) STEEL GRADE	炉罐号 HEAT No	批号 BATCH No	规格 (mm) SIZE			重量 QUANTITY			熔炼方式 MELTING METHOD	交货状态 CONDITION OF SUPPLY	水压试验 HYDRAULIC TEST PRESSURE	无损检测 NDT	屈服试验 FLATTENING TEST	扩口试验 DWT EXPANDING TEST	卷边试验 FLANGING TEST	环拉试验 RING TENSILE TEST	环扩试验 RING EXPANDING TEST	表面尺寸 SURFACE & DIMENSION
					外径 O.D	壁厚 WT	长度 LENGTH	数量 PIECES	重量 METERS	重量 TONS										
1	2305060012	B	0501722	Y235060478	323.8	17.48	3000-12000	1	10.650	1.406	电炉	热轧	35		合格					合格
2	2305060013	B	0501722	Y235060478	323.8	17.48	3000-12000	1	10.650	1.406	电炉	热轧	35		合格					合格
3	2305060019	B	0501722	Y235060478	323.8	17.48	3000-12000	1	11.200	1.479	电炉	热轧	35		合格					合格
4																				
5																				
6																				
7																				
8																				

No	试样编号 SAMPLE	化 学 成 份 CHEMICAL COMPOSITION (%)											力学性能 MECHANICAL PROPERTIES (%)			金相检验 METALLOGRAPHIC EXAMINATION
		C	Si	Mn	S	P	Ni	Cr	Mo	Cu	V	N	屈服强度 YIELD (MPa)	抗拉强度 TENSILE (MPa)	延伸率 ELONGATION (%)	
1	Y235060478A/B	.19	.23	.46	.019	.015	.04	.04	.01	.07	.01		310/310	445/445	33/38	
2	Y235060478A/B	.19	.23	.46	.019	.015	.04	.04	.01	.07	.01		310/310	445/445	33/38	
3	Y235060478A/B	.19	.23	.46	.019	.015	.04	.04	.01	.07	.01		310/310	445/445	33/38	
4																
5																
6																
7																
8																

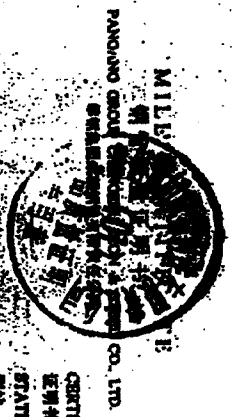
注: 1. 理论重量仅供参考。 TO BE DELIVERED IN THEORETICAL WEIGHT.
 REMARK: 2. 本证书为产品质量证明书, 不作为验收依据。
 THIS IS TO CERTIFY THAT THE PRODUCT HAS BEEN INSPECTED
 AS PER RELEVANT SPECIFICATION AS STIPULATED IN THE ORDER,
 QUALIFIED WITH ALL THE DATA IN COMPLIANCE WITH THE SPECIFICATION.

3. 质量证明书是验收依据, 复印件仅供参考, 不作为验收依据。
 THE ORIGINAL QUALITY CERTIFICATE IS THE FOUNDATION OF ACCEPTANCE WHILE
 THE COPY IS NOT ACCEPTANCE VOUCHER AND ONLY FOR REFERENCE.

4. 交货方式 (DELIVERY METHOD): 热轧—HR 电炉—ESR 电炉+VD—EAF+VD
 5. 交货状态 (CONDITION OF SUPPLY): 热轧—Q+T 热轧—HR 电炉—HR 电炉—Q 电炉—T 电炉—N 电炉—A
 6. 无损检测 (NDT): 超声波—UT 磁粉检测—MT 涡流检测—ET
 7. 取样方向 (ORIENTATION OF SPECIMEN): 纵向—LON 横向—TRA
 8. 公差—TOL

检验员: 王贵良 日期: 2005 年 06 月 27 日
 INSPECTOR: 王贵良 FILLING FORM DATE YEAR MONTH DAY

Seller: JIANGYIN CITY CHANGJIANG STEEL PIPE CO., LTD



PANYO STEEL CO., LTD.
SHANGHAI, CHINA

CONSIGNEE: 上海石化股份有限公司
OBJECT: CARBON STEEL PIPE
STANDARD: ASTM A106-1992
CONTRACT NO: D80110021758

CERTIFICATE NO: 040220001
STATION OF DESTINATION: 上海金山卫钢铁石化有限公司
TOTAL: 2 PCS 66.35 M 8.261 MT

N	PACKAGE GRADE	HEAT 炉号	BATCH 批号	STEEL TUBE SIZE(=规格)				QUANTITY 数量				WORKSHIP TEST 工艺检测				MANUFACTURING PROCESS 交易状态	
				O.D 直径	W.T 壁厚	LENGTH 长度	PCA 支	NETTS 米	TON 吨	FLATTEN TEST 压扁	HYDROSTATIC TEST 水压 (N/mm²)	MAGNETIC PARTICLE 检测					
序号	牌号	炉号	批号														
△	2304041799	B	0481062	Y23400214	323.8	17.48	>6000	1	9.40	1.241	0000 合格	15.7	0000 合格	15.7	0000 合格	热轧—Hot-rolling	
△	2304041798	B	0481062	Y23400214	323.8	17.48	>6000	1	9.40	1.248	0000 合格	15.7	0000 合格	15.7	0000 合格	热轧—Hot-rolling	
△	2304041803	B	0481062	Y23400214	323.8	17.48	>6000	1	9.40	1.281	0000 合格	15.7	0000 合格	15.7	0000 合格	热轧—Hot-rolling	
△	2304041797	B	0481062	Y23400214	323.8	17.48	>6000	1	9.40	1.284	0000 合格	15.7	0000 合格	15.7	0000 合格	热轧—Hot-rolling	
△	2304041801	B	0481062	Y23400214	323.8	17.48	>6000	1	9.40	1.284	0000 合格	15.7	0000 合格	15.7	0000 合格	热轧—Hot-rolling	
△	2304041802	B	0481062	Y23400214	323.8	17.48	>6000	1	9.40	1.287	0000 合格	15.7	0000 合格	15.7	0000 合格	热轧—Hot-rolling	
△	2304041804	B	0481062	Y23400214	323.8	17.48	>6000	1	9.40	1.241	0000 合格	15.7	0000 合格	15.7	0000 合格	热轧—Hot-rolling	
CHEMICAL COMPOSITION 化学成分																力学性能	
N	SAMPLE No 试样编号	C	Si	Mn	S	P	Ni	Cr	Mo	Co	V	Nb	As	Y.S 屈服强度 (MPa)	T.S 抗拉强度 (MPa)		EL 延伸率 (%)
1	Y23400214 A/B	0.20	0.23	0.52	0.018	0.012	0.04	0.03	0.010	0.110	0.01	0.0006	0.0006	300330	519205	36.526.5	0000
2	Y23400214 A/B	0.20	0.23	0.52	0.018	0.012	0.04	0.03	0.010	0.110	0.01	0.0006	0.0006	300330	519205	36.526.5	0000
3	Y23400214 A/B	0.20	0.23	0.52	0.018	0.012	0.04	0.03	0.010	0.110	0.01	0.0006	0.0006	300330	519205	36.526.5	0000
4	Y23400214 A/B	0.20	0.23	0.52	0.018	0.012	0.04	0.03	0.010	0.110	0.01	0.0006	0.0006	300330	519205	36.526.5	0000
5	Y23400214 A/B	0.20	0.23	0.52	0.018	0.012	0.04	0.03	0.010	0.110	0.01	0.0006	0.0006	300330	519205	36.526.5	0000
6	Y23400214 A/B	0.20	0.23	0.52	0.018	0.012	0.04	0.03	0.010	0.110	0.01	0.0006	0.0006	300330	519205	36.526.5	0000
7	Y23400214 A/B	0.20	0.23	0.52	0.018	0.012	0.04	0.03	0.010	0.110	0.01	0.0006	0.0006	300330	519205	36.526.5	0000

CONSIGNEE: 上海石化股份有限公司
OBJECT: CARBON STEEL PIPE
STANDARD: ASTM A106-1992
CONTRACT NO: D80110021758

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CONTRACT NO: D80110021758

PO# 52265



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

INSPECTION CERTIFICATE

TO EN10204 3.1

D M Y Certificate No.
05/03/2008 T- 2008200207

Purchaser: CCTF CORPORATION

E-No. MB-204
Purchase Order No. 4881836
Job No.

No.	MFG. No. (Heat Identification No.)	Specification for Material Made from Seamless Pipe ASTM A234-08/ASME SA234-04 Gr. WPB CSA Z245.11 GR241 CAT I NACE MR0175-2003	Specification for Inspection ASME B16.9-2003	Visual Examination	Dimensional Inspection
		Product & Size (T*1)	Quantity	Heat Treatment (Note 1)	Item No
1	07P30012	C WPB 1 1/2 S80	5/25	*N	7515723
2	08B30015	C WPB 10 S80	10	*N	7518312
3	08B30008	C WPB 12 S80	5	*N	7510533
4					
5					

Specification	Chemical Composition %												Tension Test *2			HARDNESS MAX
	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.		%	197 HB : GOOD
Max.		10	29										240	415	30	
Material Heat No.	23		106	50	58	40	40	40	15	80	20			655		
1	4882	15	21.3	79.7	9	8	1.4	1.3	1.8	0.5	1	<0	28	301	456	43
2	4707	17.5	28	84.7	14	8	2	1.6	2.5	0.7	2	0	32	295	458	49
3	126	15.4	25.2	95.2	13	4	1.3	0.8	2.2	0.6	1	<0	30	293	454	54
4		✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓				
5																

ASME STAMP

ED. 2007 ADD.
 MG DATE 05/03/2008

(Note 1) A : Hot formed with final temperature between 620 °C-980 °C, Air Cooling N : Normalizing 910 °C x 0.5 HR. Air Cooling *N : Normalizing 910 °C x 0.5 HR. Air Cooling (Specification for material made from plate) S : Stress Relieving 675 °C x 0.5 HR. Air Cooling

THE RESULTS OF THE TESTS AND INSPECTIONS 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
that the test results shown herein are correct.

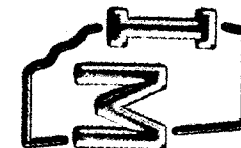
Quality Assurance Manager
Thai Benkan Co., Ltd.



Product Test Certificate

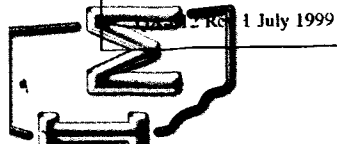
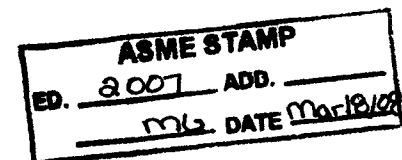
207#

51620



P.O. Box 1670, Regina, Saskatchewan, Canada S4P 3C7

Customer: ALBERTA INDUSTRIAL METALS LTD 4821-78TH STREET RED DEER AB T4P1N5			Customer Order No.: 10168-BS					Mill Order No.: 41-190828-01		Shipping Tally: 429-022						
			Grade Description : CSA G40.21(2004)44W/300W / ASTM A36(05) A709(01A)36/ASME SA36(01ED)					Ship Date: 25 Sep 07 Cert Date: 25 Sep 07		Cert No.: 242028						
			Tensile Tests													
Heat Number	Product ID	Product Description	YS (PSI)	UTS (PSI)	Elong % of 2IN 8IN	Bend Test	Average Hardness									
473813	A-08	0.188 X 60.00 X COIL	66000	74000	42 21											
Heat Chemical Analysis, (%)																
Heat Number	C	Mn	S	P	Si	Cu	Ni	Cr	V	Cb	Mo	Al	N	Ti	B	
473813	.06	.78	.0064	.007	.28	.41	.15	.11	.002	.022	.047	.029	.010	.018	.0001	
MERCURY IS NOT A METALLURGICAL COMPONENT OF THE STEEL AND NO MERCURY WAS INTENTIONALLY ADDED DURING THE MANUFACTURE OF THIS PRODUCT HOT-ROLLED COIL INTENDED FOR CONVERSION TO GRADE. CERTIFIED TO CHEMISTRY ONLY. COIL END PHYSICAL TEST RESULTS, IF REPORTED, ARE FOR INFORMATION ONLY.																
								QUALITY ASSURANCE APPROVAL								
								Jason Wall TECHNICAL SUPERVISOR(S)								



1 July 1999



31399 Test Certificate

PO 50454

63A0006489

Form TC1: Revision 1: Date 31 Oct 2000

Customer: RUSSEL METALS INC - RED DEER 6724 GOLDEN WEST AVENUE RED DEER AB T4PIA8			Customer P.O. No.: M63011894			Mill Order No.: 41-185283-03			Shipping Manifest: CT022992											
			Product Description: CSA G40.21(2004)44W/300W / ASTM A36(05) A709(01A)36/ASME SA36(01ED)						Ship Date: 15 Aug 07 Cert Date: 15 Aug 07			Cert No: 051038031 (Page 1 of 1)								
			Size: 0.375 X 60.00 X 120.0 (IN) 3/8																	
Tested Pieces			Tensiles						Charpy Impact Tests											
Heat Id	Piece Id	Piece Dimensions	YS (PSI)	UTS (PSI)	%RA	Elong % 2in 8in	Bnd Tst	Average Hardness	Abs. Energy(FTLB) 1 2 3 Avg				% Shear 1 2 3 Avg				Tst Temp	Tst Dir	Tst Siz (mm)	BDWTT Temp %Shr
472747	D32	0.500 X 60.00 (CUT)	L 59000 C 61000	73000 74000		32 31														
472747	D33	0.375 X 60.00 (CUT)	L 59000 C 64000	71000 75000		41 19 42 19														
Chemical Analysis																				
Heat Id	C	Mn	P	S	Si	Tot Al	Cu	Ni	Cr	Mo	Cb	V	Ti	B	N	ORGN				
472747	.05	.95	.006	.011	.23	.040	.39	.13	.06	.04	.023	.001	.022	.0001	.0083	CAN				
MERCURY IS NOT A METALLURGICAL COMPONENT OF THE STEEL AND NO MERCURY WAS INTENTIONALLY ADDED DURING THE MANUFACTURE OF THIS PRODUCT MATERIAL MARKED WITH AN ASTERISK IS PRODUCED FROM COIL * 472747 D34 PCES: 30, WGT: 22970																				
										ASME STAMP ED <u>2004</u> ADD. <u>2006</u> <u>ms</u> DATE <u>Dec 10 2007</u>										
										COMPLETE AUG 17 2007										
Cust Part #:										WE HEREBY CERTIFY THAT THIS MATERIAL WAS TESTED IN ACCORDANCE WITH THE APPROPRIATE SPECIFICATION										
										Jason Wall CHECKED BY										

08/15/07 13:44 To: KEVIN FELIX

From: MFAUTO IPSCO Auto-Fax/Email

Page 6/8

ALGOMA STEEL INC.

105 West St., Sault Ste. Marie, Ontario, Canada, P6A 7B4

INC 28157

CUSTOMER PURCHASE ORDER NUMBER 03008706	ENTRY DATE 2005/03/18	SHIP DATE 2005/05/16	TALLY NUMBER 281105	SHIPPERS NUMBER 02-	CARRIER CP	MILL ORDER 65283
CHARGE TO CUSTOMER NAME & ADDRESS RUSSEL METALS RED DEER 6724 GOLDEN WEST AVENUE RED DEER, ALBERTA T4P 1A8		SHIP TO CUSTOMER NAME & ADDRESS RUSSEL METALS INC C/O BATES CALGARY CALGARY, ALBERTA				-316312

MILL TEST REPORTS

ALGOMA STEEL INC. HEREBY CERTIFIES THAT THE MATERIAL HEREIN DESCRIBED WAS MADE AND TESTED IN ACCORDANCE WITH THE RULES OF THE SPECIFICATION SHOWN HEREIN AS CONTAINED IN THE COMPANY RECORDS AND WITHIN THE SCOPE OF ACCREDITATION OF ISO/IEC GUIDE 25:1990 AS CONTAINED IN THE COMPANY RECORDS.

B. Thomson
MANAGING METALLURGIST

THIS MILL TEST REPORT MAY NOT BE REPRODUCED EXCEPT IN FULL WITHOUT WRITTEN APPROVAL OF ALGOMA STEEL INC. IF YOU RECEIVE THIS DOCUMENT AND ARE NOT THE INTENDED RECEIVER, PLEASE CALL (705)945-2624 COLLECT FOR INSTRUCTIONS ON METHOD OF DISPOSAL OF DOCUMENT.

CUSTOMER SPECIFICATION

HR MULTIPLE CERTIFIED PLATE - CARBON - CSA G40.21 44W/ASTM A36 (04) (04) -
FLATNESS TOLERANCE TO 1/2 A-6

SUPPLEMENTARY INSTRUCTIONS

FAX 1 COPT OF S/M & T/R TO 403-346-1966 ATT'N DAVE AND 403-279-3269 ATT'N CAROL SPEERS

TEST REPORTS REQUIRED
RESALE

SETS EN 10204 3.1.B AND DIN 50049 3.1.B
SETS ISO 9001:2000 REGISTERED
ALL HEATS FULLY KILLED
HEATS INDICATED WITH (*) FINE GRAINED

2005/05/16 07:03

***** PRODUCT SHIPPED *****
CUSTOMER ITEM 003 OUR ITEM 003 DIMENSIONS .375 X 48 X 96 "



ATE	HEAT	NO.	WEIGHT	PLATE	HEAT	NO.	WEIGHT
NUMBER		PIECES		NUMBER		PIECES	
281	2001D-53	18	8820	34282	2001D-54	18	8820
331	2285D-55	14	6860				

MECHANICAL PROPERTIES

TENSILE TESTS:

AT	SAMPLE	TEST	YIELD	TENSILE	% ELONG
11D	SRCE GAUGE	COND METH DIR	KSI	KSI	
166"	.5000	AR .2 T	53.0	74.0	26 (8")
166"	.3750	AR .2 T	54.0	75.0	25 (8")
166"	.3750	AR .2 T	54.0	75.5	23 (8")

CHEMICAL PROPERTIES

AT	C	MN	P	S	SI	CR	NI	CU	MO	AL	CB	V	B
1D*	TI	SN	N	AS	ZR	PB	SB						
.001	.15	1.09	.010	.009	.22	.04	.02	.03	.02	.032	.000	.035	

WARNING**

THE TEST RESULTS AND VALUES REPORTED HEREIN INDICATE ONLY THAT (1) THE PARTICULAR STEEL FOR WHICH THIS CERTIFICATE IS ISSUED SPECIFIED YIELD STRENGTH AND (2) THE CHEMICAL ANALYSIS AND PHYSICAL PROPERTIES OF THE SPECIFICATION INDICATED.

PO# 22210 Jan 27/04 2368 6" XXH A106

48354

NATO



VALLOUREC & MANUFACTURES

V & M do BRASIL S.A.

BARREIRO PLANT - Belo Horizonte - MG - Brazil

CEP: 30161-970 - P.O BOX: 2153/2154

Customer: VALLOUREC TUBES CANADA INC

Customer Order: EDT020036

Inspection: V & M do BRASIL S.A.



INSPECTION CERTIFICATE

(According to EN 10204 DIN 50049 3.1.B)

Nº: 0050013017

Sheet: 1 / 2

Country: Canada

Work Order: 85961 / 000010

Material Number: 307746

Customer Material Number:

DIMENSION: 6.5/8" X 0.864" GRADE: GR B

METALLURGICAL STANDARD: ASTM A 106 01.01.1999 # DIMENSIONAL STANDARD: ASTM A 106 01.01.1999

IN ACCORDANCE ALSO TO THE STANDARDS: ASME SA-106 / 1998 #

PRODUCT: SEAMLESS STEEL PIPE, HOT FINISHED, BEVELED ENDS 37.5 DEG. # AS ROLLED # SUPERFICIAL PROTECTION: LACQUER #

TOLERANCES: OUTSIDE DIAMETER: - 0.0311 " + 0.0626 " WALL THICKNESS: - 0.1080 "

CUT LENGTH: RANDOM 18.00 FT - 22.00 FT #

STANDARD MARKING: V & M DO BRASIL - ASTM A/ASME SA-106 - B - 02800 PSI - XXS - ...FT - ...LB - 6.625" X 0.864"

SHIPPING MARKING: MADE IN BRAZIL - VM0702 / P.O 4861595-00 * NEW WESTMINSTER

2520656

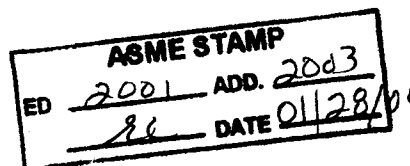
Batch	Heat N.	Inspection Lot	Pieces	Bundle Lengths	Weight(kgf)
0002194596	48352	030000455882	24	521.55 FT	12359 KG
0002195348	48352	030000455933	17	370.41 FT	8787 KG
TOTAL			41	891.96 FT	21146 KG

THE PRODUCT IS SATISFACTORY IN THE FOLLOWING TESTS / INSPECTIONS: DIMENSIONAL # VISUAL # FLATTENING TEST # Hydrostatic Test: 2.800.0 PSI 5 s #

CHEMICAL COMPOSITION(%):															CEq according: 03										DI according:										Unk:				
	C	Mn	P	S	Si	Ni	Cr	Mo	Al	Cu	Se	V	Nb	B	Ti	Pb	As	Zr	Co	W	O	N	H	Ca	Zn	Sb	CEq	FB	DI	Pcm									
Required:	Min	0.20			0.10																																		
	Max	0.22	1.06	0.035	0.035	0.40	0.40	0.15		0.400		0.090																											
Batch:																																							
0002194596	0.18	0.99	0.019	0.010	0.26	0.01	0.03	0.00		0.016	0.001	0.003	0.101		0.002																								
0002195348	0.18	0.99	0.019	0.010	0.26	0.01	0.03	0.00		0.016	0.001	0.003	0.101		0.002																								

MECHANICAL TESTS					S.Direction: Longitudinal		Temperature: Room Temperature		Gage Length: L0- 2"	
Tensile	Area(Sq.In)	Ys(PSI)	Ts(PSI)	E(%)			R.A.(%)		Ys/Ts	
Required:	Min.:	34835	60235	33						
Max.:										

Batch				
0002194596	0.2	47753 ✓	70686 ✓	35 ✓





V&M VALTHER & MANNESMANN TUBES



INSPECTION CERTIFICATE

(According to EN 10204 / DIN 50049 3.1.B)

Nº.: 0050013907

Sheet: 2 - 2

0002195348 0.2 47753 70686 35

Hardness

Required: Min.:
Max.:

HRC

22

Batch

0002194596

0002195348

Remarks:

1. MATERIAL IN ACCORDANCE TO ITEM 3.2 OF NACE MR 0175/2000.
2. ALUMINIUM AND SILICON KILLED STEEL.
3. SKU 2520656

We hereby certify that this product has been manufactured and examined in accordance with all requirements of the standards and specifications and all the results are found to be satisfactory. This testimonial and certificate respectively is recorded by a computer system and is valid without signature. Alteration or use for others products are regarded as falsification of documents and will be subject to criminal jurisdiction.

QUALITY CONTROL DEPARTMENT

FAX:(55-31) 3328-2587

e-mail:cont.qualidade@vmtubes.com.br

[Signature]
TECHNICAL RESPONSIBLE
DR. JULIO MARCELO SILVEIRA E SILVA - CREA/MG 34562/D

DATE

29.05.2002

Eco Tubes: The tubes from V&M do BRASIL are manufactured with steel which uses charcoal as a source of energy in its production. This coal comes from more than 100.000 ha of forest planted by V&M Florestal. With the acquisition of 21,2 ton(s) of steel tubes from V&M do BRASIL, your company contributed to the reduction of the greenhouse effect, avoiding the accumulation of 38,2 ton(s) of Carbon Dioxide.