Travel Sheet

Authorized Inspector to be given travel sheet prior to construction so that he can indicate hold points and Inspection Points.

"A"-Hold Point, "I"- Inspection Point, "R"-Revision, "W"- Witness Point

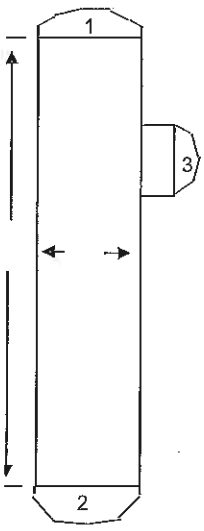
Hold Points established - Sign & Date _____

(Authorized Inspector)

Vessel Serial # **12319** DWG # **V85-05** (A) #

Vessel Title: **8" Fuel Gas Scrubber** CRN # **F6388.231**

ITEM	COMMENTS	AUTH Insp.,Hold Rev.,Witness POINTS	DATE FUNCTION COMPLETE & INSPECTORS INITIALS	
			QC INSPECTOR	AUTHORIZED INSPECTOR
APPROVED DRAWING			Sept 12,2011	
CALCULATIONS ON FILE			Sept 12,2011	
MATERIAL CHECKED AGAINST DRAWING,MATERIAL LIST			Sept 12,2011	
MTR'S CHECKED			Sept 12,2011	
VESSEL LAYOUT			Sept 14,2011	
NOZZLES ORIENTATION			Sept 14,2011	
& FITTINGS RATINGS			Sept 14,2011	
FIT NOZZLES&FITTINGS			Sept 16,2011	
UP SHELL & HEAD			Sept 17,2011	
INTERNALS (tray,baffles,etc)				
INTERNAL INSPECTION				
WELD SIZES			Aug 30,2011	
WELDERS I.D.			Aug 30,2011	
EXTERNAL AFTER COMPLETION OF ALL WELDING			Aug 30,2011	
RADIOGRAPHS				
OTHER N.D.E.				
IMPACT TESTS				
POST WELD HEAT TREATMENT	YES: NO: √			
EXTERNAL BEFORE PWHT				
PWHT CHART CHECKED				
NAMEPLATE			Sept 30,2011	
HYDROSTATIC TEST			Sept 30,2011	
DATA REPORT			Sept 30,2011	
NONCONFORMANCES				



		SPECIFICATIONS	HEAT NUMBER	VERIFIED THICKNESS
SHELL	C1	SA-106-B	**D08-2-8014**	8.1mm
	C2			
HEADS	1	SA-234-WPB	**11296**	7.16mm
	2	SA-516-70	**SB56276-PB25630603**	19.05mm
	3			
REPADS	1			
	2			
	3			
	4			

	SPECIFICATIONS	SIZE	SCHEDULE
NOZZLES			
FITTINGS	SA-105	1", 2",3/4"	#3000 cplg.
TUBES			

RECEIVED
DEC 2 1 2010

8" STD Pipe.

D08-2-8014

08204768

江阴市无缝钢管总厂
JST JIANGYIN CITY SEAMLESS STEEL TUBE FACTORY

江苏省江阴市夏港镇振港路375号
No. 375, Zhencheng Rd. Xiagang Town Jiangyin City
Jiangsu Province, China (214442) http://www.cjgg.cn
Tel:86-510-86160723 Fax:86-510-86160732

产品质量证明书 (EN10204.3.1)
MILL TEST CERTIFICATE

总件数Total Bundles	111	总支数Total Pieces	555	总重量(t)Total Weight	151.071	日期Date: 2008年10 月23 日	No: 00045670 5
收货单位 PURCHASER						合同编号 Contract No.	
产品名称 Product	CARBON STEEL SEAMLESS PIPE			技术标准 Spec.	ASTM A106-04/ASME SA106-04/API 5L,NACE MR0175-02	许可证号 License No.	0503
规格Size O.D*W.T*L (mm)	NPS 8"*0.322*6400		钢级Grade	B	钢号 Steel Type	交货状态 Delivery Status	HOT-ROLLING

序号 NO.	炉号 Heat No	批号 Batch No	件数 BDL	支数 PCS	重量 (t) WT	拉伸试验 Tensile Test				冲击试验Impact Test		硬度试验 Hardness Value
						尺寸 Dimension	标距长度 Gauge Length (mm)	屈服强度 Y.S PSI	伸长率 E.L (%)	抗拉强度 T.S PSI	冲击值(J)Impact Value		
											横向冲击 Ak__ Transverse	纵向冲击 Ak__ Longitudinal	硬度值 Hardness Value(HRC)
1	08204768	Y20808-716	37	185	50.357	*1-A2	50	46410/45685	36/35	71790/71065			20.5
2	D08-2-8012	Y10808-192	36	180	48.996	*1-A2	50	47135/44235	39/31	73965/69615			19
3	D08-2-8014	Y10808-188	38	190	51.718	*1-A2	50	47135/46410	33/31	73965/73240			19.5
4													

序号 NO.	类别 Type *5	化学成分(%)Chemical Composition													低倍组织(级) M.S			金相分析 Metallogical Analysis						
		C	Si	Mn	P	S	Cr	Ni	Cu	Mo	V	CE	Mn/C	Cr+Cu+Mo+Ni+V	一般疏松 Ordinary Porosity	中心疏松 Central Porosity	偏析 Segregation	显微组织*6 Microstucture	晶粒度(级) Grain size	夹杂物 Inclusion A	B	C	D	带状组织(级) B.S	脱碳层(mm) D. L
1	R	.180	.230	.560	.021	.009	.032	.014	.007	.001	.004	0.28	3.11	0.06											
2	R	.200	.240	.580	.013	.008	.020	.010	.020	.001	.004	0.30	2.90	0.06											
3	R	.180	.230	.550	.014	.010	.020	.010	.020	.001	.004	0.28	3.06	0.06											
4	R																							

压扁 Flattening	冷弯 Cold Bending	扩口 Flaring	超声检验 U.T	涡流检验 E.T	磁粉检验 M.P.I	漏磁检验 L.M.T	通径 N.D	表面&尺寸 S&D	水压 Hydro Test 奈Ss			
OK				OK				OK		1	1600	PSI
										2	1600	PSI
										3	1600	PSI
										4		PSI

注释 Notes	*1:纵向条状Longitudinal Strip: A1-12.7mm, A2-19.05mm A3-25.4mm A4-38.1mm,F-全截面Full-section *2棒状Clubbed:B1=12.7mm,B2=8.9mm,B3=8mm,B4=10mm *3:横向条状 TansverseStrip:C1-12.7mm, C2-19.05mm C3-25.4mm C4-38.1mm, *4:D1=10×10×55mm D2=10×7.5×55mm D3=10×5×55mm *5:C-成品成分Product composition R-熔炼成分 Melting composition *6:F-铁素体Ferrite B-贝氏体Bainite P-珠光体Pearlite S-回火索氏体 Tempered Sorbite M-马氏体Martensite
备注 Remark	1.NO WELD REPAIRS WERE PERFORMED; 2.PIPES ARE FREE OF MERCURY AND SILICONE; 3.CE=C+Mn/6+(Cr+Mo+V)/5+(Ni+Cu)/15; 4.API 5L Gr.B -43rd Edition.ASTM A53-04a ASME SA53B 2004 Edition ;ASTM A106-04b ASME SA106 2004 Edition(NACE MR0175-2002). 5.ON THEORETICAL WEIGHT BASIS.

质量管理部负责人: Quality Manager:

审核人: Auditor:

制证人: Certification-maker

INSPECTION CERTIFICATE

AWAJI MATERIA (THAILAND) CO.,LTD.
81,MOO4, PRAKASA ROAD, TAMBOL BANGMUANG, AMPHUR MUANG
SAMUTPRAKARN THAILAND 10270, Tel : (662)701-5225

Date : FEBRUARY 28, 2011

Purchaser : THE BROADHEAD GROUP/MCJUNKIN CANADA

MADE FROM SEAMLESS STEEL PIPE

Certificate No. : T11-2927

Order No.	Job No.	Product	Raw Material Pipe Maker
CS759-074521/WPB/18	--	CARBON STEEL BUTT WELDING FITTINGS	SUMITOMO METAL INDUSTRIES, LTD.

Inspection Standard	Material Standard					*3
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 Z245.11-05, GR.241 CAT.I	Appearance	GOOD	Dimension	GOOD	

Manufacturing No.	Product code	Material	Article & Size	Quantity	Note.
11296		WPB	STD CAP 8"	19 Pcs.	"ALL FITTING MANUFACTURED BY AWAJI MATERIA (THAILAND) CO.,LTD. ARE PRODUCED FROM A106 GR.B SEAMLESS PIPE"

Specification	Chemical Composition (%)																	*1 Mechanical Test			Hardness
	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	-	-	-	-	-	-	-	-	-	-	-	-	-	-	240	415	30	-
Pipe Charge No.	30	-	106	50	58	40	40	40	15	8	2	2	5	65	8	-	-	-	655	-	197
J0L9678	19	20	65	22	6	2	2	6	1	0	0	0	1	9	8	16	32	317	478	45.5	135

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

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°C~ 930°C and cooled in still air

TEE, REDUCER & CAP / Normalizing : 900°C

AT-24(2)12

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

Surveyor to

Chief of Inspection Section S.MAEKAWA

CERTIFICATE OF COMPLIANCE

edmonton exchanger
& manufacturing ltd.

5545-89 Street Edmonton, Alberta Canada T6E 5W9 www.edmontonexchanger.com tel 780.468.6722 • QC fax 780.466.4668 • sales fax 780.466.5155

Customer RJV GASFIELD LTD. PO 2725 Work Order C89772 Date 2011/05/31 CofC# 25156 Page 1 of 1

Item#	Description	Qty	Heat#
P89772-1	DISC(S) - 0.7500" NOM X 12" OD (Material Spec: SA 516-70 Normalized)	9	328250-62313
		3	G0641-873030610
		3	SB13585-PC43393002
		4	296831-86513
		6	SB56276-PB25630603
		6	SB64460-PB30263501
		4	G7992-Y71221304
		7	350403-13308
		4	418443-8B04100200
		4	SB13585-PC43392102

Material being supplied conforms to the latest ASME Code Section II, Part A, 2010 Edition. All welders and procedures are qualified to ASME Code Section IX.

Supplementary Examination - Items

JUN 17 2011

POSCO Mill Test Certificate/검사증명서

Certificate No./증명서번호:061110-PPSA-002-015
Date of Issue/발행일자:Nov., 17, 2006

12863

Order No./계약번호:0002574516
PO No./주문번호:E10568 (ASME2004EDITION)
Supplier/주문자:DAE WOO INTERNATIONAL CORP.
Commodity/품명:HR STEEL PLATE (ISO10474/3.1B)
Customer/고객사:EDMONTON EXCHANGER
Spec & Type/규격:ASTM SA516-70 (VACUUM DEGASSED)

Size/치수	Product No. 제품번호	Quantity 수량	Weight 중량 (kg) (LBS)	Heat No. 제강번호	POSITION	Tensile/인장시험 YP (KSI)	TS	EL (%)	Impact/ 충격시험 V Notch -50°F Energy (FT-LBS)	SF (%)	DIVISION	Chemical Composition/화학성분(%) C -4	Si -3	Mn -3	P -4	S -4	Cr -2	Ni -2	Cu -3	Mo -2	Nb -3	Ti -3	V -3	Sol-Al -3
0.75"x96.5"x480"	PC21414101-4102	2	8,934 19,696	SB56276	T	51.9	78.0	28	A:112 1:89 2:89 3:96		L	1878	353	1142	102	16	3	22	111	Tr	1	1	17	28
0.75"x96.5"x480"	PC21414201-4202	2	8,934 19,696	SB56276	T	52.2	78.3	28	A:91 1:114 2:122 3:117		L	1878	353	1142	102	16	3	22	111	Tr	1	1	17	28
*** Sub Total (030) ***			15				67,005 (kg)		A:118 147,719 (LBS)															
*** HEAT TREATMENT ===> Normalized : 890°C 30min. ***																								
0.75"x120.5"x480"	PB25630001-0003	3	16,737 36,897	SB56272	T	50.9	76.1	27	1:110 2:117 3:117		L	1922	368	1131	91	19	2	21	93	Tr	Tr	1	17	30
0.75"x120.5"x480"	PB25630101-0103	3	16,737 36,897	SB56272	T	51.9	77.0	28	A:115 1:115 2:95 3:116 A:108		L	1922	368	1131	91	19	2	21	93	Tr	Tr	1	17	30

* Position - T : Top, M : Middle, B : Bottom
* Tensile Test. Direction : Transversal, Gauge Length : 200㎜(Rectangular), YP Method : 0.2% off-set
* Impact Test. Direction : Longitudinal, T.L.R(Trans Longitude Ratio)
* Division - L:Ladle Analysis
* Chemical Composition Unit: -2:x1/100, -3:x1/1000, -4:x1/10000, -5:x1/100000
* Tr : It is within the standard range(<0.008%) and include trace element.
* Supply Condition : As-Rolled unless otherwise Heat Treated.

A) This material was producted under a quality system manual Rev.5 dated JUL.01,2006 and POG01 Rev.0 dated JUL.01.2006 audited and approved by customer as conforming to the requirements of ASME Sec. III NCA-3800 and(or) KEPIC MNA/ SNA4300.
B) No repair welding was performed to the products.
C) The product numbers listed on this test report identifies the material
- We hereby certify that the material herein has been made and tested in accordance with the above specification and also with the requirements called for by the above order.

* This Mill Test Certificate cannot be copied for any purpose.

KOLAS KT-181, to MAR.01.2005

Surveyor To:

Na, Chai Bong

Chief of material testing section Na, C.B

POSCO Pohang Works, 5 Dongchon-dong, Nam-gu, Pohang-si, Gyeongsangbuk-do, 790-785, Korea

POSCO Mill Test Certificate/검사증명서

Certificate No./증명서번호:061110-PPSA-002-016
Date of Issue/발행일자:Nov., 17, 2006

Order No./계약번호:0002574516
PO No./주문번호:E10568
Supplier/주문자:DAE WOO INTERNATIONAL CORP.
Commodity/품명:HR STEEL PLATE (ISO10474/3.1B) (ASME2004EDITION)
Customer/고객사:EDMONTON EXCHANGER
Spec & Type/규격:ASTM SA516-70 (VACUUM DEGASSED)

Size/치수	Product No. 제품번호	Quantity 수량	Weight 중량 (kg) (LBS)	Heat No. 제강번호	POSITION	Tensile/인장시험 YP (KSI)	TS	EL (%)	Impact/ 충격시험 V Notch -50°F Energy (FT-LBS)	SF (%)	DIVISION	Chemical Composition/화학성분(%) C -4	Si -3	Mn -3	P -4	S -4	Cr -2	Ni -2	Cu -3	Mo -2	Nb -3	Ti -3	V -3	Sol-Al -3
0.75"x120.5"x480"	PB25630201-0203	3	16,737 36,897	SB56272	T	52.6	77.3	28	1:85 2:108 3:111 A:102		L	1922	368	1131	91	19	2	21	93	Tr	Tr	1	17	30
0.75"x120.5"x480"	PB25630701-0703	3	16,737 36,897	SB56272	T	53.2	77.5	28	1:73 2:122 3:99 A:98		L	1922	368	1131	91	19	2	21	93	Tr	Tr	1	17	30
0.75"x120.5"x480"	PB25642801-2803	3	16,737 36,897	SB56272	T	52.4	77.9	33	1:98 2:116 3:106 A:107		L	1922	368	1131	91	19	2	21	93	Tr	Tr	1	17	30
0.75"x120.5"x480"	PB25960601-0603	3	16,737 36,897	SB56272	T	52.5	77.9	30	1:83 2:97 3:77 A:86		L	1922	368	1131	91	19	2	21	93	Tr	Tr	1	17	30
0.75"x120.5"x480"	PB25960701-0703	3	16,737 36,897	SB56272	T	53.1	77.7	28	1:103 2:115 3:131		L	1922	368	1131	91	19	2	21	93	Tr	Tr	1	17	30

* Position - T : Top, M : Middle, B : Bottom
* Tensile Test. Direction : Transversal, Gauge Length : 200mm(Rectangular), YP Method : 0.2% off-set
* Impact Test. Direction : Longitudinal, T:LR(Trans Longitude Ratio)
* Division - L:Ladle Analysis
* Chemical Composition Unit: -2:x1/100, -3:x1/1000, -4:x1/10000, -5:x1/100000
* Tr : It is within the standard range(<0.008%) and include trace element.
* Supply Condition : As-Rolled unless otherwise Heat Treated.

A) This material was producted under a quality system manual Rev.5 dated JUL.01.2006 and PQG01 Rev.0 dated JUL.01.2006 audited and approved by customer as conforming to the requirements of ASME Sec. III NCA-3800 and(or) KEPIC MNA/ SNA4300.
B) No repair welding was performed to the products.
C) The product numbers listed on this test report identifies the material
- We hereby certify that the material herein has been made and tested in accordance with the above specification and also with the requirements called for by the above order.

* This Mill Test Certificate cannot be copied for any purpose.

KT-491, to MAR.03.2005

Surveyor To:

Na, Chai Bong

Chief of material testing section Na, C.B

POSCO Pohang Works, 5 Dongchon-dong, Nam-gu, Pohang-si, Gyeongsangbuk-do, 790-785, Korea

POSCO Mill Test Certificate/검사증명서

Certificate No./증명서번호:061110-PPSA-002-017
Date of Issue/발행일자:Nov., 17, 2006

Order No./계약번호:0002574516
PO No./주문번호:E10568
(ASME2004EDITION)
Supplier/주문자:DAE WOO INTERNATIONAL CORP.
Commodity/품명:HR STEEL PLATE (ISO10474/3.1B)
Customer/고객사:EDMONTON EXCHANGER
Spec & Type/규격:ASTM SA516-70 (VACUUM DEGASSED)

Size/치수	Product No. 제품번호	Quantity 수량	Weight 중량 (kg) (LBS)	Heat No. 제강번호	POSITION	Tensile/인장시험 YP (KSI)	TS	EL (%)	Impact/ 충격시험 V Notch -50°F Energy (FT-LBS)	SF (%)	DIVISION	Chemical Composition/화학성분(%) C -4	Si -3	Mn -3	P -4	S -4	Cr -2	Ni -2	Cu -3	Mo -2	Nb -3	Ti -3	V -3	Sol-Al -3
0.75"x120.5"x480"	PB25629901-9902	2	11,158 24,598	SB56276	T	51.9	77.2	27	A:117 1:126 2:100 3:96		L	1878	353	1142	102	16	3	22	111	Tr	1	1	17	28
0.75"x120.5"x480"	PB25630301-0303	3	16,737 36,897	SB56276	T	52.1	76.9	27	A:107 1:121 2:101 3:98		L	1878	353	1142	102	16	3	22	111	Tr	1	1	17	28
0.75"x120.5"x480"	PB25630401-0403	3	16,737 36,897	SB56276	T	51.3	77.3	28	A:107 1:195 2:214 3:193		L	1878	353	1142	102	16	3	22	111	Tr	1	1	17	28
0.75"x120.5"x480"	PB25630501-0503	3	16,737 36,897	SB56276	T	52.2	77.7	30	A:201 1:207 2:207 3:196		L	1878	353	1142	102	16	3	22	111	Tr	1	1	17	28
0.75"x120.5"x480"	PB25630601-0603	3	16,737	SB56276	T	52.4	77.6	28	A:204 1:129		L	1878	353	1142	102	16	3	22	111	Tr	1	1	17	28

* Position - T : Top, M : Middle, B : Bottom
* Tensile Test. Direction : Transversal, Gauge Length : 200㎜(Rectangular),
YP Method : 0.2% off-set
* Impact Test. Direction : Longitudinal,
T.L.R(Trans Longitude Ratio)
* Division - L:Ladle Analysis
* Chemical Composition Unit: -2:x1/100, -3:x1/1000, -4:x1/10000, -5:x1/100000
* Tr : It is within the standard range(<0.008%) and include trace element.
* Supply Condition : As-Rolled unless otherwise Heat Treated.

A) This material was producted under a quality system manual Rev.5 dated JUL.01.2006 and PQG01 Rev.0 dated JUL.01.2006 audited and approved by customer as conforming to the requirements of ASME Sec. III NCA-3800 and(or) KEPIC MNA/ SNA4300.
B) No repair welding was performed to the products.
C) The product numbers listed on this test report identifies the material
- We hereby certify that the material herein has been made and tested in accordance with the above specification and also with the requirements called for by the above order.

* This Mill Test Certificate cannot be copied for any purpose.

KT-181, to MAR.01.2005

Surveyor To:

Na, Chai Bong

Chief of material testing section Na, C.B

POSCO Pohang Works, 5 Dongchon-dong, Nam-gu, Pohang-si, Gyeongsangbuk-do, 790-785, Korea

POSCO Mill Test Certificate/검사증명서

Certificate No./증명서번호:061110-PPSA-002-018
Date of Issue/발행일자:Nov., 17, 2006

Order No./계약번호:0002574516
PO No./주문번호:E10568 (ASME2004EDITION)
Supplier/주문자:DAE WOO INTERNATIONAL CORP.
Commodity/품명:HR STEEL PLATE (ISO10474/3.1B)
Customer/고객사:EDMONTON EXCHANGER
Spec & Type/규격:ASTM SA516-70 (VACUUM DEGASSED)

Size/치수	Product No. 제품번호	Quantity 수량	Weight 중량 (kg) (LBS)	Heat No. 제강번호	POSITION	Tensile/인장시험 YP (KSI)	TS	EL (%)	Impact/ 충격시험 V Notch -50°F Energy (FT-LBS)	SF (%)		DIVISION	Chemical Composition/화학성분(%) C -4	Si -3	Mn -3	P -4	S -4	Cr -2	Ni -2	Cu -3	Mo -2	Nb -3	Ti -3	V -3	Sol-Al -3
			36,897						2:94 3:131 A:118																
0.75"x120.5"x480"	PB25842701-2703	3	16,737 36,897	SB56278	T	51.3	78.7	27	1:104 2:96 3:85 A:95			L	1878	353	1142	102	16	3	22	111	Tr	1	1	17	28
0.75"x120.5"x480"	PB25875301-5303	3	16,737 36,897	SB56276	T	50.6	76.9	28	1:92 2:72 3:100 A:88			L	1878	353	1142	102	16	3	22	111	Tr	1	1	17	28
0.75"x120.5"x480"	PB25885301-5303	3	16,737 36,897	SB56276	T	51.2	76.9	30	1:128 2:142 3:120 A:130			L	1878	353	1142	102	16	3	22	111	Tr	1	1	17	28
0.75"x120.5"x480"	PB26020201-0203	3	16,737 36,897	SB56919	T	51.8	77.6	28	1:97 2:117 3:129 A:114			L	1842	339	1168	81	20	2	24	105	Tr	Tr	1	18	34

* Position - T : Top, M : Middle, B : Bottom
* Tensile Test. Direction : Transversal, Gauge Length : 200mm(Rectangular), YP Method : 0.2% off-set
* Impact Test. Direction : Longitudinal, T.L.R(Trans Longitude Ratio)
* Division - L:Ladle Analysis
* Chemical Composition Unit: -2:x1/100, -3:x1/1000, -4:x1/10000, -5:x1/100000
* Tr : It is within the standard range(<0.008%) and include trace element.
* Supply Condition : As-Rolled unless otherwise Heat Treated.

A) This material was producted under a quality system manual Rev.5 dated JUL.01.2006 and PQG01 Rev.0 dated JUL.01.2006 audited and approved by customer as conforming to the requirements of ASME Sec. III NCA-3800 and(or) KEPIC MNA/ SNA4300.
B) No repair welding was performed to the products.
C) The product numbers listed on this test report identifies the material
- We hereby certify that the material herein has been made and tested in accordance with the above specification and also with the requirements called for by the above order.

* This Mill Test Certificate cannot be copied for any purpose.

KOLAS KT-101, to MAR.01.2005

Surveyor To:

Na, Chai Bong

Chief of material testing section Na, C.B

POSCO Pohang Works, 5 Dongchon-dong, Nam-gu, Pohang-si, Gyeongsangbuk-do, 790-785, Korea

POSCO Mill Test Certificate/검사증명서

Certificate No./증명서번호:061110-PPSA-002-019
Date of Issue/발행일자:Nov., 17, 2006

Order No./계약번호:0002574516
PO No./주문번호:E10568 (ASME2004EDITION)
Supplier/주문자:DAE WOO INTERNATIONAL CORP.
Commodity/품명:HR STEEL PLATE (ISO10474/3.1B)
Customer/고객사:EDMONTON EXCHANGER
Spec & Type/규격:ASTM SA516-70 (VACUUM DEGASSED)

Size/치수	Product No. 제품번호	Quantity 수량	Weight 중량 (kg) (LBS)	Heat No. 제강번호	POSITION	Tensile/인장시험 YP (KSI)	TS	EL (%)	Impact/ 충격시험 V Notch -50°F Energy (FT-LBS)	SF (%)	DIVISION	Chemical Composition/화학성분(%) C -4	Si -3	Mn -3	P -4	S -4	Cr -2	Ni -2	Cu -3	Mo -2	Nb -3	Ti -3	V -3	Sol-Al -3
0.75"x120.5"x480"	PB26020301-0303	3	16,737 36,897	SB56919	T	51.5	77.3	30	1:90 2:83 3:78 A:83		L	1842	339	1168	81	20	2	24	105	Tr	Tr	1	18	34
*** Sub Total (040) ***			50			278,950 (kg)			614,970 (LBS)															
*** HEAT TREATMENT ===> Normalized : 890°C 35min. ***																								
1"x96.5"x480"	PB25641401-1403	3	17,874 39,405	SB55272	T	51.3	77.7	32	1:94 2:89 3:74 A:86		L	1922	368	1131	91	19	2	21	93	Tr	Tr	1	17	30
1"x96.5"x480"	PB25685101-5103	3	17,874 39,405	SB56276	T	50.3	76.9	28	1:130 2:162 3:125 A:139		L	1878	353	1142	102	16	3	22	111	Tr	1	1	17	28
1"x96.5"x480"	PB25687101-7103	3	17,874 39,405	SB56276	T	50.3	75.9	31	1:124 2:105 3:108 A:112		L	1878	353	1142	102	16	3	22	111	Tr	1	1	17	28
1"x96.5"x480"	PC21563801	1	5,958	SB56919	T	52.2	76.7	31	1:89		L	1842	339	1168	81	20	2	24	105	Tr	Tr	1	18	34

* Position - T : Top, M : Middle, B : Bottom
* Tensile Test. Direction : Transversal, Gauge Length : 200㎜(Rectangular), YP Method : 0.2% off-set
* Impact Test. Direction : Longitudinal, T.L.R(Trans Longitude Ratio)
* Division - L:Ladle Analysis
* Chemical Composition Unit: -2:x1/100, -3:x1/1000, -4:x1/10000, -5:x1/100000
* Tr : It is within the standard range(<0.006%) and include trace element.
* Supply Condition : As-Rolled unless otherwise Heat Treated.

MTR APPROVED EDMONTON EXCHANGER

A) This material was producted under a quality system manual Rev.5 dated JUL.01,2006 and PQG01 Rev.0 dated JUL.01.2006 audited and approved by customer as conforming to the requirements of ASME Sec. III NCA-3800 and(or) KEPIC MNA/ SNA4300.
B) No repair welding was performed to the products.
C) The product numbers listed on this test report identifies the material
- We hereby certify that the material herein has been made and tested in accordance with the above specification and also with the requirements called for by the above order.

* This Mill Test Certificate cannot be copied for any purpose.

KT-101, to MAR.01.2005

Surveyor To:

Na, Chai Bong

Chief of material testing section Na, C.B

POSCO Pohang Works, 5 Dongchon-dong, Nam-gu, Pohang-si, Gyeongsangbuk-do, 790-785, Korea

POSCO Mill Test Certificate/검사증명서

Certificate No./증명서번호:070213-PPSA-002-021
Date of Issue/발행일자:Feb., 22, 2007

Order No./계약번호:0002675602
PO No./주문번호:E10577 (ASME2004EDITION)
Supplier/주문자:DAE WOO INTERNATIONAL CORP.
Commodity/품명:HR STEEL PLATE (ISO10474/3.1B)
Customer/고객사:EDMONTON EXCHANGER
Spec & Type/규격:ASME SA516-70

13204

Size/치수	Product No. 제품번호	Quantity 수량	Weight 중량 (kg) (LBS)	Heat No. 제강번호	POSITION	Tensile/인장시험 YP (KSI)	TS	EL (%)	Impact/ 충격시험 V Notch -50°F Energy (FT-LBS)	SF (%)	DIVISION	Chemical Composition/화학성분(%) C -4	Si -3	Mn -3	P -4	S -4	Cr -2	Ni -2	B -4	Cu -3	Mo -2	Nb -3	Ti -3	V -3	Sol-Al -3
0.625"x120.5"x480"	PB30301401-1402	2	9,300 20,502	SB64460	T	51.5	76.7	29	1:139 2:127 3:145 A:137		L	1800	343	1147	97	19	2	22	Tr	90	Tr	Tr	1	19	29
0.625"x120.5"x480"	PB30301301-1302	2	9,300 20,502	SB64460	T	51.6	77.0	27	1:92 2:117 3:125 A:111		L	1800	343	1147	97	19	2	22	Tr	90	Tr	Tr	1	19	29
*** Sub Total (050) ***			34			158,100 (kg)			348,546 (LBS)																
*** HEAT TREATMENT ===> Normalized : 890°C 30min. ***																									
0.75"x96.5"x480"	PA24489301	1	4,467 9,848	SA55523	T	50.8	78.5	30	1:111 2:128 3:115 A:118		L	1844	357	1170	66	25	2	25	Tr	98	Tr	1	2	21	40
0.75"x96.5"x480"	PA23976401	1	4,467 9,848	SA55523	T	49.5	76.3	29	1:115 2:128 3:138 A:127		L	1844	357	1170	66	26	2	25	Tr	98	Tr	1	2	21	40

* Position - T : Top, M : Middle, B : Bottom
* Tensile Test. Direction : Transversal, Gauge Length : 200㎜(Rectangular), YP Method : 0.2% off-set
* Impact Test. Direction : Longitudinal, T.L.R(Trans Longitude Ratio)
* Division - L:Ladle Analysis
* Chemical Composition Unit: -2:x1/100, -3:x1/1000, -4:x1/10000, -5:x1/100000
* Tr : It is within the standard range(<0.008%) and include trace element.
* Supply Condition : As-Rolled unless otherwise Heat Treated.

A) This material was producted under a quality system manual Rev.5 dated JUL.01.2006 and PQG01 Rev.0 dated JUL.01.2006 audited and approved by customer as conforming to the requirements of ASME Sec. III NCA-3800 and(or) KEPIC MNA/ SNA4300.
B) No repair welding was performed to the products.
C) The product numbers listed on this test report identifies the material
- We hereby certify that the material herein has been made and tested in accordance with the above specification and also with the requirements called for by the above order.

* This Mill Test Certificate cannot be copied for any purpose.

KT-101, to MAR.01.2008

Surveyor To:

Na, Chai Bong

Chief of material testing section Na, C.B

POSCO Pohang Works, 5 Dongchon-dong, Nam-gu, Pohang-si, Gyeongsangbuk-do, 790-785, Korea

POSCO Mill Test Certificate/검사증명서

Certificate No./증명서번호:070213-PPSA-002-022
Date of Issue/발행일자:Feb., 22, 2007

Order No./계약번호:0002675602
PO No./주문번호:E10577.
(ASME2004EDITION)
Supplier/주문자:DAE WOO INTERNATIONAL CORP.
Commodity/품명:HR STEEL PLATE (ISO10474/3.1B)
Customer/고객사:EDMONTON EXCHANGER
Spec & Type/규격:ASME SA516-70

Size/치수	Product No. 제품번호	Quantity 수량	Weight 중량 (kg) (LBS)	Heat No. 제강번호	POSITION	Tensile/인장시험 YP (KSI)	TS	EL (%)	Impact/ 충격시험 V Notch -50°F Energy (FT-LBS)	SF (%)	DIVISION	Chemical Composition/화학성분(%) C -4	Si -3	Mn -3	P -4	S -4	Cr -2	Ni -2	B -4	Cu -3	Mo -2	Nb -3	Ti -3	V -3	Sol-Al -3
0.75"x96.5"x480"	PA23973801	1	4,467 9,848	SA55525	T	50.9	77.3	29	1:101 2:83 3:72 A:85		L	1830	349	1171	68	19	2	24	Tr	106	Tr	Tr	2	20	39
0.75"x96.5"x480"	PA24489401	1	4,467 9,848	SA55525	T	50.5	76.9	30	1:120 2:141 3:131 A:131		L	1830	349	1171	68	19	2	24	Tr	106	Tr	Tr	2	20	39
0.75"x96.5"x480"	PA24870401	1	4,467 9,848	SA57299	T	51.1	76.0	28	1:132 2:123 3:128 A:128		L	1748	375	1159	98	19	3	23	Tr	107	Tr	2	2	20	38
0.75"x96.5"x480"	PA24870501	1	4,467 9,848	SA57299	T	50.9	75.9	28	1:107 2:117 3:118 A:114		L	1748	375	1159	98	19	3	23	Tr	107	Tr	2	2	20	38
0.75"x96.5"x480"	PA24870701	1	4,467 9,848	SA57299	T	50.3	76.0	29	1:113 2:132 3:139		L	1748	375	1159	98	19	3	23	Tr	107	Tr	2	2	20	38

* Position - T : Top, M : Middle, B : Bottom
* Tensile Test. Direction : Transversal, Gauge Length : 200㎜(Rectangular), YP Method : 0.2% off-set
* Impact Test. Direction : Longitudinal, T.L.R(Trans Longitude Ratio)
* Division - L:Ladle Analysis
* Chemical Composition Unit: -2:x1/100, -3:x1/1000, -4:x1/10000, -5:x1/100000
* Tr : It is within the standard range(<0.008%) and include trace element.
* Supply Condition : As-Rolled unless otherwise Heat Treated.

A) This material was producted under a quality system manual Rev.5 dated JUL.01.2006 and POG01 Rev.0 dated JUL.01.2006 audited and approved by customer as conforming to the requirements of ASME Sec. III NCA-3800 and(or) KEPIC MNA/ SNA4300.
B) No repair welding was performed to the products.
C) The product numbers listed on this test report identifies the material
- We hereby certify that the material herein has been made and tested in accordance with the above specification and also with the requirements called for by the above order.

* This Mill Test Certificate cannot be copied for any purpose.

KP-101, to MAR.01.2005

Surveyor To:

Na, Chai Bong

Chief of material testing section Na, C.B

POSCO Pohang Works, 5 Dongchon-dong, Nam-gu, Pohang-si, Gyeongsangbuk-do, 790-785, Korea

POSCO Mill Test Certificate/검사증명서

Certificate No./증명서번호:070213-PPSA-002-023
Date of Issue/발행일자:Feb., 22, 2007

Order No./계약번호:0002675602
PO No./주문번호:E10577
(ASME2004EDITION)
Supplier/주문자:DAE WOO INTERNATIONAL CORP.
Commodity/품명:HR STEEL PLATE (ISO10474/3.1B)
Customer/고객사:EDMONTON EXCHANGER
Spec & Type/규격:ASME SA516-70

Size/치수	Product No. 제품번호	Quantity 수량	Weight 중량 (kg) (LBS)	Heat No. 제강번호	POSITION	Tensile/인장시험 YP (KSI)	TS	EL (%)	Impact/ 충격시험 V Notch -50°F Energy (FT-LBS)	SF (%)	DIVISION	Chemical Composition/화학성분(%) C -4	Si -3	Mn -3	P -4	S -4	Cr -2	Ni -2	B -4	Cu -3	Mo -2	Nb -3	Ti -3	V -3	Sol-Al -3
0.75"x96.5"x480"	PC23953401-3402	2	8,934 19,696	SB64080	T	53.2	78.6	28	A:128 1:114 2:95 3:96		L	1692	356	1167	117	16	2	21	Tr	93	Tr	Tr	1	17	32
0.75"x96.5"x480"	PC23953501-3502	2	8,934 19,696	SB64080	T	52.8	77.9	31	A:102 1:137 2:148 3:134		L	1692	356	1167	117	16	2	21	Tr	93	Tr	Tr	1	17	32
0.75"x96.5"x480"	PC23953601-3602	2	8,934 19,696	SB64080	T	51.9	77.0	28	A:140 1:147 2:148 3:136		L	1692	356	1167	117	16	2	21	Tr	93	Tr	Tr	1	17	32
0.75"x96.5"x480"	PB30263501-3503	3	13,401 29,544	SB64460	T	50.2	75.3	27	A:144 1:63 2:49 3:80		L	1600	343	1147	97	19	2	22	Tr	90	Tr	Tr	1	19	29
0.75"x96.5"x480"	PB30267101-7103	3	13,401 29,544	SB64460	T	51.2	76.3	28	A:64 1:117 2:119		L	1600	343	1147	97	19	2	22	Tr	90	Tr	Tr	1	19	29

* Position - T : Top, M : Middle, B : Bottom
* Tensile Test. Direction : Transversal, Gauge Length : 200㎜(Rectangular), YP Method : 0.2% off-set
* Impact Test. Direction : Longitudinal, T.L.R(Trans Longitude Ratio)
* Division - L:Ladle Analysis
* Chemical Composition Unit: -2:x1/100, -3:x1/1000, -4:x1/10000, -5:x1/100000
* Tr : It is within the standard range(<0.008%) and include trace element.
* Supply Condition : As-Rolled unless otherwise Heat Treated.

A) This material was producted under a quality system manual Rev.5 dated JUL.01.2006 and PQG01 Rev.0 dated JUL.01.2006 audited and approved by customer as conforming to the requirements of ASME Sec. III NCA-3800 and(or) KEPIC MNA/ SNA4300.
B) No repair welding was performed to the products.
C) The product numbers listed on this test report identifies the material
- We hereby certify that the material herein has been made and tested in accordance with the above specification and also with the requirements called for by the above order.

* This Mill Test Certificate cannot be copied for any purpose.

KT-191, to MAR.01.2005

Surveyor To:

Na, Cha; Bong

Chief of material testing section Na, C.B

POSCO Pohang Works, 5 Dongchon-dong, Nam-gu, Pohang-si, Gyeongsangbuk-do, 790-785, Korea

POSCO Mill Test Certificate/검사증명서

Certificate No./증명서번호:070213-PPSA-002-024
Date of Issue/발행일자:Feb., 22, 2007

Order No./계약번호:0002675602
PO No./주문번호:E10577 (ASME2004EDITION)
Supplier/주문자:DAE WOO INTERNATIONAL CORP.
Commodity/품명:HR STEEL PLATE (ISO10474/3.1B)
Customer/고객사:EDMONTON EXCHANGER
Spec & Type/규격:ASME SA516-70

Size/치수	Product No. 제품번호	Quantity 수량	Weight 중량 (kg) (LBS)	Heat No. 제강번호	POSITION	Tensile/인장시험 YP (KSI)	TS	EL (%)	Impact/ 충격시험 V Notch -50°F Energy (FT-LBS)	SF (%)	DIVISION	Chemical Composition/화학성분(%) C -4	Si -3	Mn -3	P -4	S -4	Cr -2	Ni -2	B -4	Cu -3	Mo -2	Nb -3	Ti -3	V -3	Sol-Al -3
0.75"x96.5"x480"	PB30309601-9602	2	8,934 19,696	SB64460	T	51.8	76.3	27	3:117 A:118 1:103 2:131 3:133 A:122		L	1800	343	1147	97	19	2	22	Tr	90	Tr	Tr	1	19	29
0.75"x96.5"x480"	PB30309701-9702	2	8,934 19,696	SB64460	T	51.5	76.6	28	1:136 2:139 3:132 A:136		L	1800	343	1147	97	19	2	22	Tr	90	Tr	Tr	1	19	29
0.75"x96.5"x480"	PB30309801-9802	2	8,934 19,696	SB64460	T	51.5	76.6	29	1:150 2:136 3:146 A:144		L	1800	343	1147	97	19	2	22	Tr	90	Tr	Tr	1	19	29
0.75"x96.5"x480"	PB30309901-9902	2	8,934 19,696	SB64460	T	52.1	76.6	30	1:140 2:139 3:149 A:143		L	1800	343	1147	97	19	2	22	Tr	90	Tr	Tr	1	19	29
0.75"x96.5"x480"	PB30310001	1	4,467	SB64460	T	51.9	76.6	29	1:153		L	1800	343	1147	97	19	2	22	Tr	90	Tr	Tr	1	19	29

* Position - T : Top, M : Middle, B : Bottom
* Tensile Test. Direction : Transversal, Gauge Length : 200㎜(Rectangular).
YP Method : 0.2% off-set
* Impact Test. Direction : Longitudinal.
T.L.R(Trans Longitude Ratio)
* Division - L:Ladle Analysis
* Chemical Composition Unit: -2:x1/100, -3:x1/1000, -4:x1/10000, -5:x1/100000
* Tr : It is within the standard range(<0.008%) and include trace element.
* Supply Condition : As-Rolled unless otherwise Heat Treated.

A) This material was producted under a quality system manual Rev.5 dated JUL.01.2006 and PQG01 Rev.0 dated JUL.01.2006 audited and approved by customer as conforming to the requirements of ASME Sec. III NCA-3800 and(or) KEPIC MNA/ SNA4300.
B) No repair welding was performed to the products.
C) The product numbers listed on this test report identifies the material
- We hereby certify that the material herein has been made and tested in accordance with the above specification and also with the requirements called for by the above order.

* This Mill Test Certificate cannot be copied for any purpose.

Surveyor To:

Na, Cha; Bong

ISO/IEC 17025 KT-101, to KAN.01.2005

Chief of material testing section Na, C.B

POSCO Pohang Works, 5 Dongchon-dong, Nam-gu, Pohang-si, Gyeongsangbuk-do, 790-785, Korea

POSCO Mill Test Certificate/검사증명서

Certificate No./증명서번호:070213-PPSA-002-025
Date of Issue/발행일자:Feb., 22, 2007

Order No./계약번호:0002675602
PO No./주문번호:E10577
(ASME2004EDITION)
Supplier/주문자:DAE WOO INTERNATIONAL CORP.
Commodity/품명:HR STEEL PLATE (ISO10474/3.1B)
Customer/고객사:EDMONTON EXCHANGER
Spec & Type/규격:ASME SA516-70

Size/치수	Product No. 제품번호	Quantity 수량	Weight 중량 (kg) (LBS)	Heat No. 제강번호	POSITION	Tensile/인장시험 YP (KSI)	TS	EL (%)	Impact/ 충격시험 V Notch -50°F Energy (FT-LBS)	SF (%)	DIVISION	Chemical Composition/화학성분(%) C -4	Si -3	Mn -3	P -4	S -4	Cr -2	Ni -2	B -4	Cu -3	Mo -2	Nb -3	Ti -3	V -3	Sol-Al -3
			9,848						2:144																
									3:136																
									A:145																
*** Sub Total (060) ***			28			125,076 (kg)			275,741 (LBS)																
*** HEAT TREATMENT ===> Normalized : 890 C 30min. ***																									
0.75"x120.5"x480"	PB30062601-2603	3	16,737	SB64078	T	53.4	78.5	28	1:105		L	1793	378	1183	97	15	2	24	Tr	99	Tr	Tr	1	20	33
			36,897						2:126																
									3:123																
									A:118																
0.75"x120.5"x480"	PB30062801-2803	3	16,737	SB64078	T	54.0	80.4	29	1:143		L	1793	378	1183	97	15	2	24	Tr	99	Tr	Tr	1	20	33
			36,897						2:117																
									3:122																
									A:128																
0.75"x120.5"x480"	PB30062901-2903	3	16,737	SB64078	T	54.2	80.8	29	1:120		L	1793	378	1183	97	15	2	24	Tr	99	Tr	Tr	1	20	33
			36,897						2:125																
									3:131																
									A:125																
0.75"x120.5"x480"	PB30063401-3403	3	16,737	SB64078	T	53.7	78.8	27	1:139		L	1793	378	1183	97	15	2	24	Tr	99	Tr	Tr	1	20	33

* Position - T : Top, M : Middle, B : Bottom
* Tensile Test. Direction : Transversal, Gauge Length : 200㎜(Rectangular), YP Method : 0.2% off-set
* Impact Test. Direction : Longitudinal, T.L.R(Trans Longitude Ratio)
* Division - L:Ladle Analysis
* Chemical Composition Unit: -2:x1/100, -3:x1/1000, -4:x1/10000, -5:x1/100000
* Tr : It is within the standard range(<0.008%) and include trace element.
* Supply Condition : As-Rolled unless otherwise Heat Treated.

A) This material was producted under a quality system manual Rev.5 dated JUL.01.2006 and PQG01 Rev.0 dated JUL.01.2005 audited and approved by customer as conforming to the requirements of ASME Sec. III NCA-3800 and(or) KEPIC MNAI SNA4300.
B) No repair welding was performed to the products.
C) The product numbers listed on this test report identifies the material
- We hereby certify that the material herein has been made and tested in accordance with the above specification and also with the requirements called for by the above order.

* This Mill Test Certificate cannot be copied for any purpose.

KE-101, to MAR.01.2005

Surveyor To:

Na, Cha; Bong

Chief of material testing section Na, C.B

POSCO Pohang Works, 5 Dongchon-dong, Nam-gu, Pohang-si, Gyeongsangbuk-do, 790-785, Korea

POSCO Mill Test Certificate/검사증명서

Certificate No./증명서번호:070213-PPSA-002-031
Date of Issue/발행일자:Feb., 22, 2007

Order No./계약번호:0002675602
PO No./주문번호:E10577 (ASME2004EDITION)
Supplier/주문자:DAE WOO INTERNATIONAL CORP.
Commodity/품명:HR STEEL PLATE (ISO10474/3.1B)
Customer/고객사:EDMONTON EXCHANGER
Spec & Type/규격:ASME SA516-70

Size/치수	Product No. 제품번호	Quantity 수량	Weight 중량 (kg) (LBS)	Heat No. 제강번호	POSITION	Tensile/인장시험 YP (KSI)	TS	EL (%)	Impact/ 충격시험 V Notch -50°F Energy (FT-LBS)	SF (%)	DIVISION	Chemical Composition/화학성분(%) C	Si	Mn	P	S	Cr	Ni	B	Cu	Mo	Nb	Ti	V	Sol-Al
												-4	-3	-3	-4	-4	-2	-2	-4	-3	-2	-3	-3	-3	-3
*** HEAT TREATMENT ===> Normalized : 890 C 43min. ***																									
*** Lot Total ***			257			1,085,963 (kg)			2,394,103 (LBS)																
*** Grade Total ***			257			1,085,963 (kg)			2,394,103 (LBS)																
*** Grand Total ***			257			1,085,963 (kg)			2,394,103 (LBS)																
									=== Last Item ===																

* LOT NO ==> VACUUM DEGASSED

MTR APPROVED EDMONTON EXCHANGER

* Position - T : Top, M : Middle, B : Bottom
* Tensile Test: Direction : Transversal, Gauge Length : 200㎜(Rectangular), YP Method : 0.2% off-set
* Impact Test. Direction : Longitudinal, T.L.R(Trans Longitude Ratio)
* Division - L:Ladle Analysis
* Chemical Composition Unit: -2:x1/100, -3:x1/1000, -4:x1/10000, -5:x1/100000
* Tr : It is within the standard range(<0.008%) and include trace element.
* Supply Condition : As-Rolled unless otherwise Heat Treated.

A) This material was producted under a quality system manual Rev.5 dated JUL.01.2006 and POG01 Rev.0 dated JUL.01.2006 audited and approved by customer as conforming to the requirements of ASME Sec. III NCA-3800 and(or) KEPIC MNA/ SNA4300.
B) No repair welding was performed to the products.
C) The product numbers listed on this test report identifies the material
- We hereby certify that the material herein has been made and tested in accordance with the above specification and also with the requirements called for by the above order.

* This Mill Test Certificate cannot be copied for any purpose.

KT-101, to MKR.01.2003

Surveyor To:

Na, Cha; Bong

Chief of material testing section Na, C.B

POSCO Pohang Works, 5 Dongchon-dong, Nam-gu, Pohang-si, Gyeongsangbuk-do, 790-785, Korea

DILLINGER HÜTTE

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

A02 INSPECTION CERTIFICATE 3.1 AS PER EN 10204:2004
INSPECTION CERTIFICATE 3.1.B AS PER EN 10204:1991+A1:1995 + AS PER ISO 10474:1991
MATERIAL TEST REPORT (MTR)

A10 Advice of dispatch No./ Date of dispatch: 264362-11.07.07

A08/ A03 Manufacturer's order/ Certificate No.: 321445-001

Sheet: 1/...

A05 Established inspecting body: DH

A06 Purchaser: ARCELOR CANADA,BURLI A07.1 No. 70073

Final receiver: EDMONTON STEEL,EDMON A07.2 No. E10436-J1010-LG

B01 Product: HOT ROLLED PLATES

13720

B02/ Steel design: SA516-70

B03 Any suppl. requirements: ASME-2A:04+A05
DIL-HUE-2:R21-2006-04-27

A01-A99 Further commercial information - Concession requests

B14 Item No.	B07.2 Heat No.	B07.1 Rolplate / Test No.	B16 Concession request no.	Date
01	296831	86487-03	TO/W753/2007	11.06.07

B01-B99 Description of the product

B14 Item No.	B08 Number of pieces	B09 Thickness	B10 Width	B11 Length	B12 Theoretical mass KG	B04 Product delivery condition	B07.2 Heat No.	B07.1 Rolled plate No./ Test No.	A09 Purchaser article number
			INCH						
01	1	0,6250 x	120,50000 x	480,00000	4650	N	296618	99635-01	ITEM 1
01	1	0,6250 x	120,50000 x	480,00000	4650	N	296618	99635-02	ITEM 1
01	1	0,6250 x	120,50000 x	480,00000	4650	N	296825	15025-01	ITEM 1
01	1	0,6250 x	120,50000 x	480,00000	4650	N	296825	15025-02	ITEM 1
01	1	0,6250 x	120,50000 x	480,00000	4650	N	296825	15025-03	ITEM 1
01	1	0,6250 x	120,50000 x	480,00000	4650	N	296829	86026-01	ITEM 1
01	1	0,6250 x	120,50000 x	480,00000	4650	N	296829	86026-02	ITEM 1
01	1	0,6250 x	120,50000 x	480,00000	4650	N	296829	86026-03	ITEM 1
01	1	0,6250 x	120,50000 x	480,00000	4650	N	296829	86027-01	ITEM 1
01	1	0,6250 x	120,50000 x	480,00000	4650	N	296829	86027-02	ITEM 1
01	1	0,6250 x	120,50000 x	480,00000	4650	N	296829	86027-03	ITEM 1
01	1	0,6250 x	120,50000 x	480,00000	4650	N	296829	86028-01	ITEM 1
01	1	0,6250 x	120,50000 x	480,00000	4650	N	296829	86028-02	ITEM 1
01	1	0,6250 x	120,50000 x	480,00000	4650	N	296829	86028-03	ITEM 1
01	1	0,6250 x	120,50000 x	480,00000	4650	N	296829	86029-01	ITEM 1
01	1	0,6250 x	120,50000 x	480,00000	4650	N	296829	86029-02	ITEM 1
01	1	0,6250 x	120,50000 x	480,00000	4650	N	296829	86029-03	ITEM 1
01	1	0,6250 x	120,50000 x	480,00000	4650	N	296829	86451-01	ITEM 1
01	1	0,6250 x	120,50000 x	480,00000	4650	N	296829	86451-02	ITEM 1

A04 Manufacturer's mark: DH

Z01/Z02/Z03 We hereby certify, that the above mentioned materials have been delivered in accordance with the terms of order.

QM-System: Certification as per ISO 9001

B. MUELLER
Test House Manager

AHB Inspector's stamp

Date 12.07.07 KW 1

A01
AG der Dillinger Hüttenwerke
Postfach 1580, D-66748 Dillingen/Saar
Inspection department

RECEIVED JUL 16 2007

DILLINGER HÜTTE

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

A02 INSPECTION CERTIFICATE 3.1 AS PER EN 10204:2004
INSPECTION CERTIFICATE 3.1.B AS PER EN 10204:1991+A1:1995 + AS PER ISO 10474:1991
MATERIAL TEST REPORT (MTR)

A10 Advice of dispatch No./ Date of dispatch: 264362-11.07.07

A08/ Manufacturer's order/ A03 Certificate No.: 321445-001 Sheet: 2/...

A05 Established inspecting body: DH

A06 Purchaser: ARCELOR CANADA,BURLI A07.1 No. 70073

Final receiver: EDMONTON STEEL,EDMON A07.2 No. E10436-J1010-LG

B01 Product: HOT ROLLED PLATES

B02/ Steel design.: SA516-70

B03- Any suppl. requirements: ASME-2A:04+A05
DIL-HUE-2:R21-2006-04-27

B01-B99 Description of the product

B14 Item No.	B08 Number of pieces	B09 Thickness	B10 Width	B11 Length	B12 Theoretical mass KG	B04 Product delivery condition	B07.2 Heat No.	B07.1 Rolled plate No./ Test No.	A09 Purchaser article number
			INCH						
01	1	0,6250 x	120,50000 x	480,00000	4650	N	296829	86451-03	ITEM 1
01	1	0,6250 x	120,50000 x	480,00000	4650	N	296829	86458-01	ITEM 1
01	1	0,6250 x	120,50000 x	480,00000	4650	N	296829	86458-02	ITEM 1
01	1	0,6250 x	120,50000 x	480,00000	4650	N	296829	86458-03	ITEM 1
01	1	0,6250 x	120,50000 x	480,00000	4650	N	296829	86460-01	ITEM 1
01	1	0,6250 x	120,50000 x	480,00000	4650	N	296829	86460-02	ITEM 1
01	1	0,6250 x	120,50000 x	480,00000	4650	N	296829	86460-03	ITEM 1
01	1	0,6250 x	120,50000 x	480,00000	4650	N	296829	86461-01	ITEM 1
01	1	0,6250 x	120,50000 x	480,00000	4650	N	296829	86461-02	ITEM 1
01	1	0,6250 x	120,50000 x	480,00000	4650	N	296829	86461-03	ITEM 1
01	1	0,6250 x	120,50000 x	480,00000	4650	N	296829	86463-01	ITEM 1
01	1	0,6250 x	120,50000 x	480,00000	4650	N	296829	86463-02	ITEM 1
01	1	0,6250 x	120,50000 x	480,00000	4650	N	296829	86463-03	ITEM 1
01	1	0,6250 x	120,50000 x	480,00000	4650	N	296829	86465-01	ITEM 1
01	1	0,6250 x	120,50000 x	480,00000	4650	N	296829	86465-02	ITEM 1
01	1	0,6250 x	120,50000 x	480,00000	4650	N	296829	86465-03	ITEM 1
01	1	0,6250 x	120,50000 x	480,00000	4650	N	296831	86487-01	ITEM 1
01	1	0,6250 x	120,50000 x	480,00000	4650	N	296831	86487-02	ITEM 1
01	1	0,6250 x	120,50000 x	480,00000	4650	N	296831	86487-03	ITEM 1
01	1	0,6250 x	120,50000 x	480,00000	4650	N	296831	86488-01	ITEM 1
01	1	0,6250 x	120,50000 x	480,00000	4650	N	296831	86488-02	ITEM 1
01	1	0,6250 x	120,50000 x	480,00000	4650	N	296831	86488-03	ITEM 1
01	1	0,6250 x	120,50000 x	480,00000	4650	N	296831	86501-01	ITEM 1

A04 Manufacturer's mark: D H

Z01/Z02/Z03 We hereby certify, that the above mentioned materials have been delivered in accordance with the terms of order.

QM-System: Certification as per ISO 9001

B. MUELLER
Test House Manager

Inspector's stamp: A H B

A01 AG der Dillinger Hüttenwerke
Postfach 1580, D-66748 Dillingen/Saar
Inspection department

Date 12.07.07 KW 1

DILLINGER HÜTTE

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A02 INSPECTION CERTIFICATE 3.1 AS PER EN 10204:2004
INSPECTION CERTIFICATE 3.1.B AS PER EN 10204:1991+A1:1995 + AS PER ISO 10474:1991
MATERIAL TEST REPORT (MTR)

A10 Advice of dispatch No./ Date of dispatch: 264362-11.07.07

A08/ Manufacturer's order/ A03 Certificate No.: 321445-001 Sheet: 3/...

A05 Established inspecting body: DH

A08 Purchaser: ARCELOR CANADA,BURLI A07.1 No. 70073

Final receiver: EDMONTON STEEL,EDMON A07.2 No. E10436-J1010-LG

B01 Product: HOT ROLLED PLATES

B02/ Steel design.: SA516-70

B03 Any suppl. requirements: ASME-2A:04+A05
DIL-HUE-2:R21-2006-04-27

B01-B99 Description of the product

B14 Item No.	B08 Number of pieces	B09 Thickness	B10 Width	B11 Length	B12 Theoretical mass KG	B04 Product delivery condition	B07.2 Heat No.	B07.1 Rolled plate No./ Test No.	A08 Purchaser article number
			INCH						
01	1	0,6250 x	120,50000 x	480,00000	4650	N	296831	86501-02	ITEM 1
01	1	0,6250 x	120,50000 x	480,00000	4650	N	296831	86501-03	ITEM 1
**	44				204600				
02	1	0,7500 x	96,50000 x	480,00000	4469	N	296831	86513-02	ITEM 2
02	1	0,7500 x	96,50000 x	480,00000	4469	N	296831	86513-03	ITEM 2
02	1	0,7500 x	96,50000 x	480,00000	4469	N	296831	86515-01	ITEM 2
02	1	0,7500 x	96,50000 x	480,00000	4469	N	296831	86515-02	ITEM 2
02	1	0,7500 x	96,50000 x	480,00000	4469	N	296831	86515-03	ITEM 2
02	1	0,7500 x	96,50000 x	480,00000	4469	N	296831	86548-01	ITEM 2
02	1	0,7500 x	96,50000 x	480,00000	4469	N	296831	86562-01	ITEM 2
02	1	0,7500 x	96,50000 x	480,00000	4469	N	296831	86562-02	ITEM 2
02	1	0,7500 x	96,50000 x	480,00000	4469	N	297060	14435-01	ITEM 2
**	9				40221				
03	1	0,7500 x	120,50000 x	480,00000	5580	N	296831	86559-01	ITEM 3
03	1	0,7500 x	120,50000 x	480,00000	5580	N	296831	86559-02	ITEM 3
03	1	0,7500 x	120,50000 x	480,00000	5580	N	296831	86559-03	ITEM 3
03	1	0,7500 x	120,50000 x	480,00000	5580	N	296831	86560-01	ITEM 3
03	1	0,7500 x	120,50000 x	480,00000	5580	N	296831	86560-02	ITEM 3
03	1	0,7500 x	120,50000 x	480,00000	5580	N	296831	86560-03	ITEM 3
03	1	0,7500 x	120,50000 x	480,00000	5580	N	296831	86599-01	ITEM 3
03	1	0,7500 x	120,50000 x	480,00000	5580	N	296831	86599-02	ITEM 3
03	1	0,7500 x	120,50000 x	480,00000	5580	N	296831	86599-03	ITEM 3
03	1	0,7500 x	120,50000 x	480,00000	5580	N	296831	86605-01	ITEM 3

A04 Manufacturer's mark: D H

Z01/Z02/Z03 We hereby certify, that the above mentioned materials have been delivered in accordance with the terms of order.

QM-System: Certification as per ISO 9001

B. MUELLER
Test House Manager

A H B
Inspector's stamp

Date 12.07.07 KW 1

A01
AG der Dillinger Hüttenwerke
Postfach 1580, D-66748 Dillingen/Saar
Inspection department

DILLINGER HÜTTE

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

A02 INSPECTION CERTIFICATE 3.1 AS PER EN 10204:2004
INSPECTION CERTIFICATE 3.1.B AS PER EN 10204:1991+A1:1995 + AS PER ISO 10474:1991
MATERIAL TEST REPORT (MTR)

A10 Advice of dispatch No./ Date of dispatch: 264362-11.07.07

A08/ A03 Manufacturer's order/ Certificate No.: 321445-001 Sheet: 4/...

A05 Established inspecting body: DH

A06 Purchaser: ARCELOR CANADA,BURLI A07.1 No. 70073

Final receiver: EDMONTON STEEL,EDMON A07.2 No. E10436-J1010-LG

B01 Product: HOT ROLLED PLATES

B02/ Steel design.: SA516-70

B03 Any suppl. requirements: ASME-2A:04+A05
DIL-HUE-2:R21-2006-04-27

B01-B99 Description of the product

B14 Item No.	B08 Number of pieces	B09 Thickness	B10 Width	B11 Length	B12 Theoretical mass KG	B04 Product delivery condition	B07.2 Heat No.	B07.1 Rolled plate No./ Test No.	A09 Purchaser article number
			INCH						
03	1	0,7500 x	120,50000 x	480,00000	5580	N	296831	86605-02	ITEM 3
03	1	0,7500 x	120,50000 x	480,00000	5580	N	296831	86605-03	ITEM 3
**	12				66960				
***	65				311781				

B04 Product delivery condition

ITEM NO.: 01-03
N: HT: 1670 GR.F +36 -27 GR.F
SOAKING TIME TO ATTAIN THE TARGET TEMPERATURE OVER THE WHOLE SECTION: 1-1,75 MIN/MM (25-45 MIN/INCH)
COOLING IN STILL AIR

B06 Marking of the product

ITEM NO.: 01-03
STEEL DESIGNATION SA516 70 MTLTV SA516 60 MTLTV
HEAT NO. / TRADEMARK / ROLLED PLATE NO.-TEST NO. / INSPECTOR'S STAMP

C10-C29 Tensile test

B14 Item No.	B07.2 Heat No.	B07.1 Rol.plate/ Test No.	B05 Reference (heat) treatment	C01	C02/ C01	C03 Temp. GR.F	C10 KSI RP02	C11 RM	C12	C13	C14-C15 A % L0=8IN	C14-C15 A % L0=2IN
01	296618	99635		K1	Q	RT	47,6	71,5			29,9	
01	296825	15025		K1	Q	RT	52,1	76,4			28,0	
01	296829	86026		K1	Q	RT	50,0	73,5			28,0	
01	296829	86027		K1	Q	RT	49,2	73,4			27,5	
01	296829	86028		K1	Q	RT	49,0	73,2			27,0	

A04 DH Manufacturer's mark

Z01/Z02/Z03 We hereby certify, that the above mentioned materials have been delivered in accordance with the terms of order.

QM-System: Certification as per ISO 9001

B. MUELLER
Test House Manager

AHB Inspector's stamp

A01 AG der Dillinger Hüttenwerke
Postfach 1580, D-66748 Dillingen/Saar
Inspection department

Date 12.07.07 KW 1

DILLINGER HÜTTE

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A02 INSPECTION CERTIFICATE 3.1 AS PER EN 10204:2004
INSPECTION CERTIFICATE 3.1.B AS PER EN 10204:1991+A1:1995 + AS PER ISO 10474:1991
MATERIAL TEST REPORT (MTR)

A10 Advice of dispatch No./ Date of dispatch: 264362-11.07.07

A02/ A03 Manufacturer's order/ Certificate No.: 321445-001 Sheet: 5/...

A05 Established inspecting body: DH

A06 Purchaser: ARCELOR CANADA,BURLI A07.1 No. 70073

Final receiver: EDMONTON STEEL,EDMON A07.2 No. E10436-J1010-LG

B01 Product: HOT ROLLED PLATES

B02/ Steel design.: SA516-70

B03 Any suppl. requirements: ASME-2A:04+A05
DIL-HUE-2:R21-2006-04-27

C10-C29 Tensile test

B14 Item No.	B07.2 Heat No.	B07.1 Rol.plate/ Test No.	B05 Reference (heat) treatment	C01	C02/ C01	C03 Temp. GR.F	C10 C11 KSI RP02	C12 RM	C13	C14-C15 A % LO=8IN	A % LO=2IN
01	296829	86029		K1	Q	RT	49,9	73,7		27,5	
01	296829	86451		K1	Q	RT	48,4	73,2		27,0	
01	296829	86458		K1	Q	RT	50,2	74,4		28,9	
01	296829	86460		K1	Q	RT	49,6	74,8			41,9
01	296829	86461		K1	Q	RT	50,8	74,2		29,9	
01	296829	86463		K1	Q	RT	50,9	75,0		29,9	
01	296829	86465		K1	Q	RT	50,8	75,7		27,0	
01	296831	86487		K1	Q	RT	50,2	74,0		28,0	
01	296831	86488		K1	Q	RT	50,5	74,5		28,9	
01	296831	86501		K1	Q	RT	49,9	73,7		30,4	
02	296831	86513		K1	Q	RT	49,2	73,1		28,0	
02	296831	86515		K1	Q	RT	49,9	73,7		29,4	
02	296831	86548		K1	Q	RT	50,0	73,5		28,0	
02	296831	86562		K1	Q	RT	49,6	73,4		28,4	
02	297060	14435		K1	Q	RT	50,6	75,8		31,9	
03	296831	86559		K1	Q	RT	49,9	73,5		28,0	
03	296831	86560		K1	Q	RT	48,9	73,5		28,0	
03	296831	86599		K1	Q	RT	49,6	73,5		28,9	
03	296831	86605		K1	Q	RT	48,1	72,9		28,0	

A04 Manufacturer's mark: D H

Z01/Z02/Z03 We hereby certify, that the above mentioned materials have been delivered in accordance with the terms of order.

QM-System: Certification as per ISO 9001

B. MUELLER
Test House Manager

Inspector's stamp: A H B

A01 AG der Dillinger Hüttenwerke
Postfach 1580, D-66748 Dillingen/Saar
Inspection department

Date 12.07.07 KW 1

DILLINGER HÜTTE

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

A02 INSPECTION CERTIFICATE 3.1 AS PER EN 10204:2004
INSPECTION CERTIFICATE 3.1.B AS PER EN 10204:1991+A1:1995 + AS PER ISO 10474:1991
MATERIAL TEST REPORT (MTR)

A10 Advice of dispatch No./ Date of dispatch: 264362-I1.07.07

A08/ A03 Manufacturer's order/ Certificate No.: 321445-001

Sheet: 6/...

A05 Established inspecting body: DH

A06 Purchaser: ARCELOR CANADA,BURLI — A07.1 No. 70073

Final receiver: EDMONTON STEEL,EDMON — A07.2 No. E10436-J1010-LG

B01 Product: HOT ROLLED PLATES

B02/ Steel design.: SA516-70

B03 Any suppl. requirements: ASME-2A:04+A05
DIL-HUE-2:R21-2006-04-27

C30-C39 Hardness test

B14 Item. No.	B07.2 Heat No.	B07.1 Rol.plate/ Test No.	B05 Reference (heat) treatment	C01	C02/C01	C03 Temp. GR.F	C33 Testing method	C35	C31 Individual values			C32 Mean value
01	296618	99635		K1	O	RT	HBW 10/3000	HB	144	143	140	142
01	296825	15025		K1	O	RT	HBW 10/3000	HB	145	146	145	145
01	296829	86026		K1	O	RT	HBW 10/3000	HB	146	147	146	146
01	296829	86027		K1	O	RT	HBW 10/3000	HB	143	143	144	143
01	296829	86028		K1	O	RT	HBW 10/3000	HB	145	144	144	144
01	296829	86029		K1	O	RT	HBW 10/3000	HB	141	142	139	141
01	296829	86451		K1	O	RT	HBW 10/3000	HB	145	146	143	145
01	296829	86458		K1	O	RT	HBW 10/3000	HB	147	148	151	149
01	296829	86460		K1	O	RT	HBW 10/3000	HB	145	149	146	147
01	296829	86461		K1	O	RT	HBW 10/3000	HB	145	147	146	146
01	296829	86463		K1	O	RT	HBW 10/3000	HB	145	145	142	144
01	296829	86465		K1	O	RT	HBW 10/3000	HB	148	149	149	149
01	296831	86487		K1	O	RT	HBW 10/3000	HB	146	146	144	145
01	296831	86488		K1	O	RT	HBW 10/3000	HB	149	151	143	148
01	296831	86501		K1	O	RT	HBW 10/3000	HB	147	146	149	147
02	296831	86513		K1	O	RT	HBW 10/3000	HB	144	143	142	143
02	296831	86515		K1	O	RT	HBW 10/3000	HB	143	143	143	143
02	296831	86548		K1	O	RT	HBW 10/3000	HB	145	146	143	145
02	296831	86562		K1	O	RT	HBW 10/3000	HB	145	144	142	144
02	297060	14435		K1	O	RT	HBW 10/3000	HB	149	148	150	149
03	296831	86559		K1	O	RT	HBW 10/3000	HB	144	145	144	144
03	296831	86560		K1	O	RT	HBW 10/3000	HB	145	145	142	144
03	296831	86599		K1	O	RT	HBW 10/3000	HB	143	145	144	144
03	296831	86605		K1	O	RT	HBW 10/3000	HB	143	141	142	142

A04 Manufacturer's mark

Z01/Z02/Z03 We hereby certify, that the above mentioned materials have been delivered in accordance with the terms of order.

QM-System: Certification as per ISO 9001

B. MUELLER
Test House Manager

Inspector's stamp

Date 12.07.07 KW 1

A01 AG der Dillinger Hüttenwerke
Postfach 1580, D-66748 Dillingen/Saar
Inspection department

DILLINGER HÜTTE

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

A02 INSPECTION CERTIFICATE 3.1 AS PER EN 10204:2004
INSPECTION CERTIFICATE 3.1.B AS PER EN 10204:1991+A1:1995 + AS PER ISO 10474:1991
MATERIAL TEST REPORT (MTR)

A10 Advice of dispatch No./ Date of dispatch: 264362-11.07.07

A08/ Manufacturer's order/ A03 Certificate No.: 321445-001

Sheet: 7/...

A05 Established inspecting body: DH

A06 Purchaser: ARCELOR CANADA,BURLI A07.1 No. 70073

Final receiver: EDMONTON STEEL,EDMON A07.2 No. E10436-J1010-LG

B01 Product: HOT ROLLED PLATES

B02/ Steel design. SA516-70

B03 Any suppl. requirements: ASME-2A:04+A05
DIL-HUE-2:R21-2006-04-27

C40-C49 Impact test

B14 Item No.	B07.2 Heat No.	B07.1 Rol.plate/ Test No.	B05 Reference (heat) treatment	C01	C02/ C01	C03 Temp. GR.F	C41 Width of test piece	C40 Type of test piece	C44 Testing method	C46 Energy	C45	C42 Individual values AV=FT.LBF			C43 Mean value
01	296618	99635		K1	LV	-51		CHP-V			AV	146	197	195	179
01	296825	15025		K1	LV	-51		CHP-V			AV	184	124	111	140
01	296829	86026		K1	LV	-51		CHP-V			AV	185	136	189	170
01	296829	86027		K1	LV	-51		CHP-V			AV	183	109	139	144
01	296829	86028		K1	LV	-51		CHP-V			AV	119	200	215	178
01	296829	86029		K1	LV	-51		CHP-V			AV	207	217	197	207
01	296829	86451		K1	LV	-51		CHP-V			AV	139	192	148	160
01	296829	86458		K1	LV	-51		CHP-V			AV	140	159	135	145
01	296829	86460		K1	LV	-51		CHP-V			AV	202	189	180	190
01	296829	86461		K1	LV	-51		CHP-V			AV	152	125	121	133
01	296829	86463		K1	LV	-51		CHP-V			AV	117	215	207	180
01	296829	86465		K1	LV	-51		CHP-V			AV	105	117	152	125
01	296831	86487		K1	LV	-51		CHP-V			AV	153	201	189	181
01	296831	86488		K1	LV	-51		CHP-V			AV	212	183	192	196
01	296831	86501		K1	LV	-51		CHP-V			AV	193	190	156	180
02	296831	86513		K1	LV	-51		CHP-V			AV	198	110	153	154
02	296831	86515		K1	LV	-51		CHP-V			AV	195	178	161	178
02	296831	86548		K1	LV	-51		CHP-V			AV	206	194	146	182
02	296831	86562		K1	LV	-51		CHP-V			AV	203	155	192	183
02	297060	14435		K1	LV	-51		CHP-V			AV	187	123	122	144
03	296831	86559		K1	LV	-51		CHP-V			AV	116	195	197	169
03	296831	86560		K1	LV	-51		CHP-V			AV	204	194	151	183
03	296831	86599		K1	LV	-51		CHP-V			AV	198	80	207	162
03	296831	86605		K1	LV	-51		CHP-V			AV	122	193	108	141

A04 Manufacturer's mark: DH

Z01/Z02/Z03 We hereby certify, that the above mentioned materials have been delivered in accordance with the terms of order.

QM-System: Certification as per ISO 9001

B. MUELLER
Test House Manager

Inspector's stamp: AHB

A01
AG der Dillinger Hüttenwerke
Postfach 1580, D-66748 Dillingen/Saar
Inspection department

Date 12.07.07 KW 1

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

DILLINGER HÜTTE

A02 INSPECTION CERTIFICATE 3.1 AS PER EN 10204:2004
INSPECTION CERTIFICATE 3.1.B AS PER EN 10204:1991+A1:1995 + AS PER ISO 10474:1991
MATERIAL TEST REPORT (MTR)

A10 Advice of dispatch No./ Date of dispatch: 264362-11.07.07

A08/ Manufacturer's order/ A03 Certificate No.: 321445-001

Sheet: 8/...

A05 Established Inspecting body: DH

A06 Purchaser: ARCELOR CANADA,BURLI A07.1 No. 70073

Final receiver: EDMONTON STEEL,EDMON A07.2 No. E10436-J1010-LG

B01 Product: HOT ROLLED PLATES

B02/ Steel design.: SA516-70

B03 Any suppl. requirements: ASME-2A:04+A05
DIL-HUE-2:R21-2006-04-27

C70-C99 Chemical composition % - Heat analysis

B07.2 Heat	C70	C	SI	MN	P	S	N	AL	CU	MO	NI	CR	V	NB	SN
296618	Y	0,174	0,330	1,13	0,012	0,0010	0,0039	0,035	0,038	0,010	0,047	0,045	0,001	0,000	0,002
296825	Y	0,185	0,362	1,17	0,008	0,0006	0,0058	0,042	0,020	0,008	0,044	0,023	0,001	0,000	0,000
296829	Y	0,175	0,337	1,14	0,010	0,0009	0,0047	0,035	0,019	0,008	0,037	0,029	0,000	0,000	0,001
296831	Y	0,168	0,340	1,13	0,010	0,0010	0,0059	0,033	0,031	0,011	0,045	0,030	0,000	0,000	0,001
297060	Y	0,183	0,367	1,18	0,010	0,0007	0,0065	0,035	0,020	0,013	0,027	0,035	0,000	0,000	0,000

B07.2 Heat	C70	TI	B	CA
296618	Y	0,003	0,0001	0,0013
296825	Y	0,002	0,0000	0,0021
296829	Y	0,002	0,0001	0,0023
296831	Y	0,002	0,0001	0,0035
297060	Y	0,003	0,0001	0,0016

C94 Heat analysis Carbon equivalent / Alloying restrictions

B07.2 Heat								
296618	FO-02=	0,38	FO-55=	0,14	FO-78=	0,06	FO-91=	6,5
296825	FO-02=	0,39	FO-55=	0,10	FO-78=	0,03	FO-91=	6,3
296829	FO-02=	0,38	FO-55=	0,09	FO-78=	0,04	FO-91=	6,5
296831	FO-02=	0,37	FO-55=	0,12	FO-78=	0,04	FO-91=	6,7
297060	FO-02=	0,39	FO-55=	0,10	FO-78=	0,05	FO-91=	6,4

C95 Ladle treatment

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

A04 D H Manufacturer's mark

Z01/Z02/Z03 We hereby certify, that the above mentioned materials have been delivered in accordance with the terms of order.

QM-System: Certification as per ISO 9001

B. MUELLER
Test House Manager

A H B Inspector's stamp

A01 AG der Dillinger Hüttenwerke
Postfach 1580, D-66748 Dillingen/Saar
Inspection department

Date 12.07.07 KW 1

DILLINGER HÜTTE

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

A02 INSPECTION CERTIFICATE 3.1 AS PER EN 10204:2004
INSPECTION CERTIFICATE 3.1.B AS PER EN 10204:1991+A1:1995 + AS PER ISO 10474:1991
MATERIAL TEST REPORT (MTR)

A10 Advice of dispatch No./ Date of dispatch: 264362-11.07.07

A08/ Manufacturer's order/ A03 Certificate No.: 321445-001 Sheet: 9/...

A05 Established inspecting body: DH

A06 Purchaser: ARCELOR CANADA,BURLI A07.1 No. 70073

Final receiver: EDMONTON STEEL,EDMON A07.2 No. E10436-J1010-LG

B01 Product: HOT ROLLED PLATES

B02/ Steel design. SA516-70

B03 Any suppl. requirements ASME-2A:04+A05
DIL-HUE-2:R21-2006-04-27

C70-C99 Chemical composition % - Product analysis

B07.2 Heat	B07.1 Test No.	C01	C	SI	MN	P	S	N	AL	CU	MO	NI	CR	V	NB	SN
296618	99635	K1	0,169	0,321	1,11	0,012	0,0024	0,0035	0,037	0,038	0,009	0,044	0,048	0,002	0,000	0,001
296825	15025	K1	0,186	0,358	1,15	0,008	0,0008	0,0060	0,041	0,020	0,007	0,040	0,022	0,001	0,000	0,000
296829	86460	K1	0,178	0,356	1,15	0,010	0,0007	0,0047	0,026	0,023	0,010	0,048	0,032	0,001	0,000	0,002
296831	86488	K1	0,165	0,333	1,12	0,010	0,0011	0,0058	0,032	0,033	0,012	0,047	0,030	0,000	0,000	0,001
296831	86515	K1	0,164	0,335	1,11	0,009	0,0010	0,0056	0,033	0,031	0,010	0,046	0,029	0,000	0,000	0,000
297060	14435	K1	0,185	0,356	1,16	0,009	0,0013	0,0050	0,029	0,021	0,011	0,033	0,035	0,000	0,000	0,001

B07.2 Heat	B07.1 Test No.	C01	TI	B
296618	99635	K1	0,003	0,0000
296825	15025	K1	0,002	0,0001
296829	86460	K1	0,003	0,0002
296831	86488	K1	0,002	0,0000
296831	86515	K1	0,002	0,0000
297060	14435	K1	0,003	0,0002

C94 Product analysis Carbon equivalent / Alloying restrictions

B07.2 Heat	B07.1 Test No.	C01				
296618	99635	K1	FO-02=	0,37	FO-55=	0,14
296825	15025	K1	FO-02=	0,39	FO-55=	0,09
296829	86460	K1	FO-02=	0,38	FO-55=	0,11
296831	86488	K1	FO-02=	0,37	FO-55=	0,12
296831	86515	K1	FO-02=	0,36	FO-55=	0,12
297060	14435	K1	FO-02=	0,39	FO-55=	0,10

A04 Manufacturer's mark: D H

Z01/Z02/Z03 We hereby certify, that the above mentioned materials have been delivered in accordance with the terms of order.

QM-System: Certification as per ISO 9001

B. MUELLER
Test House Manager

Inspector's stamp: A H B

Date 12.07.07 KW 1

A01 AG der Dillinger Hüttenwerke
Postfach 1580, D-66748 Dillingen/Saar
Inspection department

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

DILLINGER HÜTTE

A02	A10 Advice of dispatch No./ Date of dispatch	A08/ Manufacturer's order/ A03 Certificate No.	Sheet
INSPECTION CERTIFICATE 3.1 AS PER EN 10204:2004 INSPECTION CERTIFICATE 3.1.B AS PER EN 10204:1991+A1:1995 + AS PER ISO 10474:1991 MATERIAL TEST REPORT (MTR)	264362-11.07.07	321445-001	10

A05 Established inspecting body	A06 Purchaser	A07.1 No.	B01 Product
DH	ARCELOR CANADA,BURLI	70073	HOT ROLLED PLATES
	Final receiver EDMONTON STEEL,EDMON	A07.2 No. E10436-J1010-LG	

B02/ Steel design. SA516-70

B03 Any suppl. requirements ASME-2A:04+A05
DIL-HUE-2:R21-2006-04-27

C94 Carbon equivalent formula / Alloying restrictions

FO-02 = C+(MN/6)+(CR+MO+V)/5+(NI+CU)/15
FO-55 = CU+MO+NI+CR
FO-78 = CR+MO
FO-91 = MN/C

D01 Marking and identification, surface appearance, shape and dimensional properties

ITEM NO.: 01-03
RESULT OF MARKING, SURFACE, SHAPE AND DIMENSIONS: NO REMARKS

SURFACE	AS PER ASME-SA20
THICKNESS	AS PER ASME-SA20
LENGTH AND WIDTH	AS PER ASME-SA20
FLATNESS	AS PER 1/2-ASME-SA20

MTR APPROVED EDMONTON EXCHANGER

A04 Manufacturer's mark

Z01/Z02/Z03 We hereby certify, that the above mentioned materials have been delivered in accordance with the terms of order.

QM-System: Certification as per ISO 9001

B. MUELLER
Test House Manager

Inspector's stamp

AG der Dillinger Hüttenwerke
Postfach 1580, D-66748 Dillingen/Saar
Inspection department

A01

Date 12.07.07 KW 1

B

新日本製鐵株式會社
Nippon Steel Corporation

鋼材検査証明書
INSPECTION CERTIFICATE

本社 HEAD OFFICE : 〒100-8071 東京都千代田区大手町二丁目6番3号 2-6-3, OTEMACHI, CHIYODA-KU, TOKYO 100-8071, JAPAN
君津製鐵所 KIMITSU WORKS : 〒299-1141 千葉県君津市君津1番地 1, KIMITSU, KIMITSU-CITY, CHIBA-PREF, 299-1141 JAPAN

注文者 SHIPPER : HANWA CO., LTD.
注文者照合番号 REFERENCE No. : 228-38571050
契約番号 CONTRACT No. : 8-831-H1-5-1-AT01
商品名 COMMODITY : HOT ROLLED STEEL PLATES
規格 SPECIFICATION : ASME SA-516 GRADE 70-E07
文書番号 DOCUMENT No. :

(AS PER EN 10204 CERTIFICATE ON MATERIAL TESTS 3.1)

需要家 CUSTOMER : EDMONTON EXCHANGER GROUP OF C- OMPANIES
需要家管理番号 CUSTOMER'S CONTROL No. : E3001P05Q0 E07

証明書番号 CERTIFICATE No. : P-93181 頁 PAGE 34
発行年月日 DATE OF ISSUE : 2008-02-25
1001 2**DM***** *****CEW**

寸法 DIMENSION MM	員数 QUANTITY	質量 MASS KG	製鋼番号 CAST No. / 試験番号 TEST No.	製品番号 PLATE No.	LOCATION ORIENTATION GL ※1 ※2	引張試験 TENSILE TEST 耐力降伏点 YS 0.2% KSI	引張強さ TS KSI	伸び EL % ※3	%	BEND TEST BUTT ※4	衝撃試験 IMPACT TEST LOCATION ORIENTATION NOTCH ※1 ※5 2V-50F FT.LB 平均値 AVG	個々値 EACH	HBW	化学成分 CHEMICAL COMPOSITION % C ×100	Si ×100	Mn ×100	P ×1000	S ×1000	Cu ×100	Ni ×100	Cr ×100	Mo ×100	Nb ×100	V ×100	TAl ×100	Ceq.1 ×100	HEAT TREATMENT CODE
															N ×1000	TE3 ×1000	TE1 ×100		SN ×100	CA ×10000	B ×10000	Ti ×100		Pcm ×100	Sol.Al ×100	Ceq.2 ×100	※7
11			G7992	TESTED-PL																						
0.625"X172"X344"	1	4761	52606	Y71221101	TC	56	77	28			TL	F 291	291	AVG	15	37	144	7	2	2	2	2	0	1	0	31	40	
													282	157		36	2	6		0	15	0	0					
													299															
														P	14	37	145	7	2	2	2	2	0	1	0		39	
																34		6		18	1	0					
11			G7992																								
0.625"X172"X344"	1	4761	52606	Y71221102	TC	56	77	28			TL	F 291	291	AVG	15	37	144	7	2	2	2	2	0	1	0	31	40	
													282	157		36	2	6		0	15	0	0					
													299															
														P	14	37	145	7	2	2	2	2	0	1	0		39	
																34		6		18	1	0					
12			G7992	TESTED-PL																							
0.75"X150"X480"	1	6944	52602	Y71221203	TC	55	76	29			TL	F 258	271	AVG	15	37	144	7	2	2	2	2	0	1	0	31	40	
													257	153		36	2	6		0	15	0	0					
													246															
														P	15	38	146	8	2	2	2	2	0	1	0		40	
																32		6		19	0	0					

注 釈 NOTES ※1 Location Orientation 位置・方向, T:頂部 Top, B:底部 Bottom, L:圧延方向 Longitudinal, C:直角方向 Transverse, Z:板厚方向 Through Thickness, R:45° 方向 45Deg. to the Longitudinal Axis
※2 GL 標点距離 Gage Length, A:50mm 平形試験片 Rectangular, B:50mm 丸形試験片 Round, C:70mm 平形試験片 Rectangular, D:70mm 丸形試験片 Round, E:80mm 平形試験片 Rectangular, F:80mm 丸形試験片 Round, G:200mm, H:2", I:8", J:5.65$\sqrt{So}$, K:4.$\sqrt{So}$
※3 RA :絞り Reduction of Area, YR:降伏比 Yield Ratio, ※4 A:合格 Acceptable, ※5 F:標準寸法 FULL SIZE, 2:2.5mm, 3:3.3mm, 4:3.33mm, 5:5.0mm, 6:6.67mm, 7:7.5mm, 8:8.7mm, 9:製品板厚 PlateThickness, ※6 P:製品分析 Product Analysis, 温度 Temperature C: °C F: °F
※7 N:焼準 Normalized, Q:焼入れ Quenched, T:焼戻し Tempered, CR:Controlled Rolled, NIC:NIC Process/TMC Process, CLC:CLC Process/TMC Process, AR:As Rolled, TMR:TMR Process/TMC Process, NR:Normalizing Rolled
SH:剪性破面率 Shear Fracture, CF:脆性破面率 Crystallinity Fracture, LE:横膨出 Lateral Expansion, AGS:オーステナイト粒度 Austenite Grain Size, FGS:フェライト粒度 Ferrite Grain Size, SR:Stress Relieved/Post Weld Heat Treatment

上記注文品は御指定の規格または仕様に従って製造され、その要求事項を満足していることを証明します。

WE HEREBY CERTIFY THAT THE MATERIAL DESCRIBED HEREIN HAS BEEN MADE IN ACCORDANCE WITH THE RULES OF THE CONTRACT.

14152

J. Adachi
君津製鐵所厚板管理グループリーダー
GROUP MANAGER
PLATE QUALITY CONTROL DEPT.
KIMITSU WORKS

AX4041208612

B

注文者 SHIPPER : HANWA CO., LTD.
注文者照合番号 REFERENCE No. : 228-38571050
契約番号 CONTRACT No. : 8-831-H1-5-1-AT01
商品名 COMMODITY : HOT ROLLED STEEL PLATES
規格 SPECIFICATION : ASME SA-516 GRADE 70-E07
文書番号 DOCUMENT No. :

新日本製鐵株式會社
Nippon Steel Corporation
鋼材検査証明書
INSPECTION CERTIFICATE

(AS PER EN 10204 CERTIFICATE ON MATERIAL TESTS 3.1)

需要家 CUSTOMER : EDMONTON EXCHANGER GROUP OF COMPANIES

需要家管理番号 CUSTOMER'S CONTROL No. : E3001P05Q0 E07

本社 HEAD OFFICE : 〒100-8071 東京都千代田区大手町二丁目6番3号 2-6-3, OTEMACHI, CHIYODA-KU, TOKYO 100-8071, JAPAN
君津製鐵所 KIMITSU WORKS : 〒299-1141 千葉県君津市君津1番地 1, KIMITSU, KIMITSU-CITY, CHIBA-PREF. 299-1141 JAPAN

証明書番号 CERTIFICATE No. : P-93181 PAGE : 35
発行年月日 DATE OF ISSUE : 2008-02-25
1001 2**DM***** *****CEW** E3001P05Q0 E07

寸法 DIMENSION MM	員数 QUANTITY	質量 MASS KG	製鋼番号 CAST No. / 試験番号 TEST No.	製品番号 PLATE No.	LOCATION ORIENTATION ※1	GL ※2	引張試験 TENSILE TEST 耐力 0.2% YS KSI	引張強さ TS KSI	伸び EL %	% ※3	BEND TEST ※4	LOCATION ORIENTATION ※1	SIZE ※5	衝撃試験 IMPACT TEST 2V-50F FT.LB 平均値 AVG	個々値 EACH	HBW		C ×100	Si ×100	Mn ×100	P ×1000	S ×1000	Cu ×100	Ni ×100	Cr ×100	Mo ×100	Nb ×100	V ×100	TiAl ×100	Ceq.1 ×100	CONDITION OF SUPPLY ※7
																			N ×1000	TE3 ×1000	TE1 ×100		SN ×100	CA ×10000	B ×10000	TI ×100	Pcm ×100	Sol.Al ×100	Ceq.2 ×100	
0.75"X150"X480"	12	1	6944	G7992 52602	Y71221204	TC	1	55	76	29		TL	F	258	257	246	AVG	15	37 36	144 2	7 6	2	2 0	2 15	2 0	0 0	1	0	31	40	
																	P	15	38 32	146	8 6	2	2	2 19	2 0	0 0	1	0		40	
0.75"X150"X480"	12	1	6944	G7992 52615	TESTED-PL Y71221201	TC	1	54	76	31		TL	F	275	284 265 277		AVG	15	37 36	144 2	7 6	2	2 0	2 15	2 0	0 0	1	0	31	40	
																	P	15	38 32	146	8 6	2	2	2 19	2 0	0 0	1	0		40	
0.75"X150"X480"	12	1	6944	G7992 52615	Y71221202	TC	1	54	76	31		TL	F	275	284 265 277		AVG	15	37 36	144 2	7 6	2	2 0	2 15	2 0	0 0	1	0	31	40	
																	P	15	38 32	146	8 6	2	2	2 19	2 0	0 0	1	0		40	

注釈 NOTES
※1 Location Orientation 位置・方向. T:頂部 Top, B:底部 Bottom, L:圧延方向 Longitudinal, C:直角方向 Transverse, Z:板厚方向 Through Thickness, R:45° 方向 45Deg. to the Longitudinal Axis
※2 GL 標点距離 Gage Length, A:50mm 平形試験片 Rectangular, B:50mm 丸形試験片 Round, C:70mm 平形試験片 Rectangular, D:70mm 丸形試験片 Round, E:80mm 平形試験片 Rectangular, F:80mm 丸形試験片 Round, G:200mm, H:2", I:8", J:5.65$\sqrt{So}$, K:4.$\sqrt{So}$
※3 RA:絞り Reduction of Area, YR:降伏比 Yield Ratio, ※4 A:合格 Acceptable, ※5 F:試験寸法 FULL SIZE, 2:2.5mm, 3:3.3mm, 4:3.33mm, 5:5.0mm, 6:6.67mm, 7:7.5mm, 8:8.7mm, 9:製品板厚 PlateThickness, ※6 P:製品分析 Product Analysis,
※7 N:焼準 Normalized, Q:焼入れ Quenched, T:焼戻し Tempered, CR:Controlled Rolled, NIC:NIC Process/TMC Process, CLC:CLC Process/TMC Process, AR:As Rolled, TMR:TMR Process/TMC Process, NR:Normalizing Rolled
SH:延性破面率 Shear Fracture, CF:脆性破面率 Crystallinity Fracture, LE:横膨出 Lateral Expansion, AGS:オーステナイト粒度 Austenite Grain Size, FGS:フェライト粒度 Ferrite Grain Size, SR:Stress Relieved/Post Weld Heat Treatment
温度 Temperature C: °C F: °F

上記注文品は御指定の規格または仕様に従って製造され、その要求事項を満足していることを証明します。

WE HEREBY CERTIFY THAT THE MATERIAL DESCRIBED HEREIN HAS BEEN MADE IN ACCORDANCE WITH THE RULES OF THE CONTRACT.

T. Adachi
君津製鐵所厚板管理グループリーダー
GROUP MANAGER
PLATE QUALITY CONTROL DEPT.
KIMITSU WORKS

A2404130561Z

B

新日本製鐵株式會社
Nippon Steel Corporation

鋼材検査証明書
INSPECTION CERTIFICATE

(AS PER EN 10204 CERTIFICATE ON MATERIAL TESTS 3.1)

本社 HEAD OFFICE：〒100-8071 東京都千代田区大手町二丁目6番3号 2-6-3, OTEMACHI, CHIYODA-KU, TOKYO 100-8071, JAPAN
君津製鐵所 KIMITSU WORKS：〒299-1141 千葉県君津市君津1番地 1, KIMITSU, KIMITSU-CITY, CHIBA-PREF. 299-1141 JAPAN

注文者 SHIPPER：HANWA CO., LTD.
注文者照合番号 REFERENCE No.：228-38571050
契約番号 CONTRACT No.：8-831-H1-5-1-AT01
商品名 COMMODITY：HOT ROLLED STEEL PLATES
規格 SPECIFICATION：ASME SA-516 GRADE 70-E07
文書番号 DOCUMENT No.：
需要家 CUSTOMER：EDMONTON EXCHANGER GROUP OF COMPANIES
需要家管理番号 CUSTOMER'S CONTROL No.：E3001P05Q0 E07

証明書番号 CERTIFICATE No.：P-93181　頁 PAGE：36
発行年月日 DATE OF ISSUE：2008-02-25
1001　2**DM*****
*****CEW**

寸法 DIMENSION MM	員数 QUANTITY	質量 MASS KG	製鋼番号 CAST No. / 試験番号 TEST No.	製品番号 PLATE No.	引張試験 TENSILE TEST: 採取位置 LOCATION ORIENTATION ※1	採取方向 GL. ※2	降伏点 YS 0.2% KSI	引張強さ TS KSI	伸び EL % ※2	% ※3	衝撃試験 IMPACT TEST: 採取位置 LOCATION ORIENTATION ※1	サイズ SIZE ※4	2V-50F FT.LB 平均値 AVG	個々値 EACH	HBW	化学成分 CHEMICAL COMPOSITION %	熱処理 HEAT TREATMENT ※7	製品分析 PRODUCT ANALYSIS ※5	材質 CONDITION OF SUPPLY
13			G7992	TESTED-PL										259	AVG	C ×100			
0.75"X172"X344"	1	5708	52605	Y71221305	TC	L	56	77	28		TL	F	274	283	156	15			
														280		36			
																Si ×100			
																37			
																36			
																Mn ×100			
																144			
																2			
																P ×1000			
																7			
																6			
																S ×1000			
																2			
																Cu ×100			
																2			
																Ni ×100			
																2			
																15			
																Cr ×100			
																2			
																0			
																Mo ×100			
																2			
																0			
																Nb ×100 ×1000 ×1000			
																1			
																V ×100 ×1000 ×1000			
																0			
																Tal ×1000			
																31			
																Cop. ×100			
																40			
13			G7992											259	AVG	C ×100			
0.75"X172"X344"	1	5708	52605	Y71221306	TC	L	56	77	28		TL	F	274	283	156	15			
														280		36			
																Si ×100			
																37			
																36			
																Mn ×100			
																144			
																2			
																P ×1000			
																7			
																6			
																S ×1000			
																2			
																Cu ×100			
																2			
																Ni ×100			
																2			
																15			
																Cr ×100			
																2			
																0			
																Mo ×100			
																2			
																0			
																Nb ×100 ×1000 ×1000			
																1			
																V ×100 ×1000 ×1000			
																0			
																Tal ×1000			
																31			
																Cop. ×100			
																40			
13			G7992	TESTED-PL										259	AVG	C ×100			
0.75"X172"X344"	1	5708	52612	Y71221303	TC	L	54	76	28		TL	F	268	283	155	15			
														262		36			
																Si ×100			
																37			
																36			
																Mn ×100			
																144			
																2			
																P ×1000			
																7			
																6			
																S ×1000			
																2			
																Cu ×100			
																2			
																Ni ×100			
																2			
																15			
																Cr ×100			
																2			
																0			
																Mo ×100			
																2			
																0			
																Nb ×100 ×1000 ×1000			
																1			
																V ×100 ×1000 ×1000			
																0			
																Tal ×1000			
																31			
																Cop. ×100			
																40			

注釈 NOTES
※1 Location Orientation 位置・方向, T:頂部 Top, B:底部 Bottom, L:圧延方向 Longitudinal, C:直角方向 Transverse, Z:板厚方向 Through Thickness, R:45° 方向 45Deg. to the Longitudinal Axis
※2 GL 標点距離 Gage Length, A:50mm平形試験片 Rectangular, B:50mm丸形試験片 Round, C:70mm平形試験片 Rectangular, D:70mm丸形試験片 Round, E:80mm平形試験片 Rectangular, F:80mm丸形試験片 Round, G:200mm, H:2", I:8", J:5.65$\sqrt{So}$, K:4.$\sqrt{So}$
※3 RA:絞り Reduction of Area, YR:降伏比 Yield Ratio, ※4 A:合格 Acceptable, ※5 F:規格寸法 FULL SIZE, 2:2.5mm, 3:3.3mm, 4:3.33mm, 5:5.0mm, 6:6.67mm, 7:7.5mm, 8:8.7mm, 9:製品板厚 PlateThickness, ※6 P:製品分析 Product Analysis,
※7 N:焼準 Normalized, Q:焼入れ Quenched, T:焼戻し Temperd, CR:Controlled Rolled, NIC:NIC Process/TMC Process, CLC:CLC Process/TMC Process, AR:As Rolled, TMR:TMR Process/TMC Process, NR:Normalizing Rolled
SH:延性破面率 Shear Fracture, CF:脆性破面率 Crystallinity Fracture, LE:横膨出 Lateral Expansion, AGS:オーステナイト粒度 Austenite Grain Size, FGS:フェライト粒度 Ferrite Grain Size, SR:Stress Relieved/Post Weld Heat Treatment
温度 Temperature C: °C F: °F

上記注文品は御指定の規格または仕様に従って製造され、その要求事項を満足していることを証明します。

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T. Adachi
岩津製鐵所厚板管理グループリーダー
GROUP MANAGER
PLATE QUALITY CONTROL DEPT.
KIMITSU WORKS

AX4041405612

B

新日本製鐵株式會社
Nippon Steel Corporation

鋼材検査証明書
INSPECTION CERTIFICATE

本　　社：〒100-8071　東京都千代田区大手町二丁目６番３号
HEAD OFFICE　2-6-3, OTEMACHI, CHIYODA-KU, TOKYO 100-8071, JAPAN
君津製鐵所：〒299-1141　千葉県君津市君津１番地
KIMITSU WORKS　1, KIMITSU, KIMITSU-CITY, CHIBA-PREF. 299-1141 JAPAN

注文者 SHIPPER：HANWA CO., LTD.
注文者照合番号 REFERENCE No.：228-38571050
契約番号 CONTRACT No.：8-831-H1-5-1-AT01
商品名 COMMODITY：HOT ROLLED STEEL PLATES
規格 SPECIFICATION：ASME SA-516 GRADE 70-E07
文書番号 DOCUMENT No.：
需要家 CUSTOMER：EDMONTON EXCHANGER GROUP OF COMPANIES

(AS PER EN 10204 CERTIFICATE ON MATERIAL TESTS 3.1)

証明書番号 CERTIFICATE No.：P-93181　頁 PAGE：37
発行年月日 DATE OF ISSUE：2008-02-25
需要家管理番号 CUSTOMER'S CONTROL No.：1001　2**DM*****　*****CEW**　E3001P05Q0 E07

寸法 DIMENSION MM	員数 QUANTITY	質量 MASS KG	製鋼番号 CAST No. / 試験番号 TEST No.	製品番号 PLATE No.	引張試験 TENSILE TEST: LOCATION ORIENTATION ※1	方向	耐力 YS 0.2% KSI	引張強さ TS KSI	伸び EL %	% ※3	衝撃試験 IMPACT TEST: ANGLE OF BLOW	LOCATION ※1	SIZE ※2	2V-50F FT.LB 平均値 AVG	個々値 EACH	HBW	化学成分 CHEMICAL COMPOSITION %	C	Si	Mn	P	S	Cu	Ni	Cr	Mo	Nb	V	tAl	Ceq.1	HEAT NO. OF SUPPLY ※7
13			G7992												259	AVG		15	37	144	7	2	2	2	2	0	1	03	140	
0.75"X172"X344"	1	5708	52612	Y71221304	TC	L	54	76	28		TL	F	268	283	155				36	2	6		0	15	0	0					
														262																	
																P	15	38	146	8	2	2	2	2	0	1	0		40	
																		32		6			19	0	0					
14			G7992	TESTED-PL										264		AVG	15	37	144	7	2	2	2	2	0	1	03	140	
0.875"X150"X480"	1	8101	52611	Y71221401	TC	L	54	76	29		TL	F	257	239	152				36	2	6		0	15	0	0					
														267																	
																P	15	37	144	7	2	2	2	2	0	1	0		40	
																		33		6			18	0	0					
14			G7992											264		AVG	15	37	144	7	2	2	2	2	0	1	03	140	
0.875"X150"X480"	1	8101	52611	Y71221402	TC	L	54	76	29		TL	F	257	239	152				36	2	6		0	15	0	0					
														267																	
																P	15	37	144	7	2	2	2	2	0	1	0		40	
																		33		6			18	0	0					

注 釈 NOTES
※1 Location Orientation 位置・方向, T:頂部 Top, B:底部 Bottom, L:圧延方向 Longitudinal, C:直角方向 Transverse, Z:板厚方向 Through Thickness, R:45° 方向 45Deg. to the Longitudinal Axis
※2 GL 標点距離 Gage Length, A:50mm 平形試験片 Rectangular, B:50mm 丸形試験片 Round, C:70mm 平形試験片 Rectangular, D:70mm 丸形試験片 Round, E:80mm 平形試験片 Rectangular, F:80mm 丸形試験片 Round, G:200mm, H:2", I:8", J:5.65√So, K:4.√So
※3 RA:絞り Reduction of Area, YR:降伏比 Yield Ratio, ※4 A:合格 Acceptable, ※5 F:指標寸法 FULL SIZE, 2:2.5mm, 3:3.3mm, 4:3.93mm, 5:5.0mm, 6:6.67mm, 7:7.5mm, 8:6.7mm, 9:製品板厚 PlateThickness, ※6 P:製品分析 Product Analysis, 温度 Temperature
※7 N:焼準 Normalized, Q:焼入れ Quenched, T:焼戻し Tempered, CR:Controlled Rolled, NIC:NIC Process/TMC Process, CLC:CLC Process/TMC Process, AR:As Rolled, TMR:TMR Process/TMC Process, NR:Normalizing Rolled
SH:延性破面率 Shear Fracture, CF:脆性破面率 Crystallinity Fracture, LE:横膨出 Lateral Expansion, AGS:オーステナイト粒度 Austenite Grain Size, FGS:フェライト粒度 Ferrite Grain Size, SR:Stress Relieved/Post Weld Heat Treatment

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J. Adachi

君津製鐵所厚板管理グループリーダー
GROUP MANAGER
PLATE QUALITY CONTROL DEPT.
KIMITSU WORKS

AY4041505612

B

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文書番号 DOCUMENT No.:
需要家 CUSTOMER: EDMONTON EXCHANGER GROUP OF COMPANIES

新日本製鐵株式會社
Nippon Steel Corporation

鋼材検査証明書
INSPECTION CERTIFICATE

(AS PER EN 10204 CERTIFICATE ON MATERIAL TESTS 3.1)

本社 HEAD OFFICE: 〒100-8071 東京都千代田区大手町二丁目6番3号 2-6-3, OTEMACHI, CHIYODA-KU, TOKYO 100-8071, JAPAN
君津製鐵所 KIMITSU WORKS: 〒299-1141 千葉県君津市君津1番地 1, KIMITSU, KIMITSU-CITY, CHIBA-PREF. 299-1141 JAPAN

証明書番号 CERTIFICATE No.: P-93181　頁 PAGE: 63E
発行年月日 DATE OF ISSUE: 2008-02-25
1001　2**DM*****
需要家管理番号 CUSTOMER'S CONTROL No.: *****CEW**
E3001P05Q0 E07

寸法 DIMENSION MM	員数 QUANTITY	質量 MASS KG	製鋼番号 CAST No. / 試験番号 TEST No.	製品番号 PLATE No.	LOCATION ORIENTATION ※1	引張試験 TENSILE TEST YS 0.2% KSI	TS KSI	伸び EL %	% ※3	LOCATION ORIENTATION ※1	衝撃試験 IMPACT TEST 2V - 50F FT. LB 平均値 AVG	個々値 EACH	HBW
24			G7660	TESTED-PL								253	AVG
2.5"X97"X480"	1	14975	54717	Y71222408	TCH	51	75	37		TLF	265	277	146
												264	
TOTAL	268	1624392											

化学成分 CHEMICAL COMPOSITION %

※6	C ×100 / ×1000	Si ×100 / N ×10000	Mn ×100 / TE3 ×1000	P ×1000 / TE1 ×100	S ×1000 / ×100	Cu ×100 / SN ×1000	Ni ×100 / CA ×10000	Cr ×100 / B ×10000	Mo ×100 / TI ×100	Nb ×1000	V ×1000 / Pcm ×100	TAl ×1000 / Sol.Al ×1000	Ceq. 1 ×100 / Ceq. 2 ×100	条件 CONDITION OF SUPPLY ※7
	15	38	146	8	2	2	2	2	0	1	0	35	40	
		33	2	6		1	13	0	0					
P	15	38	147	6	2	2	2	2	0	1	0		40	
		34		6			14	2	0					

HEAT TREATMENT.
PLATE & TEST SPECIMEN NORMALIZING : 910CX 10MIN.
CHARPY IMPACT TEST TEMPERATURE(SI) : -46C
LADLE CEQ1 = C+MN/6+(NI+CU)/15+(CR+MO+V)/5
PRODUCT CEQ1 = C+MN/6+(NI+CU)/15+(CR+MO+V)/5
LADLE TE1 = CU+NI+CR+MO
LADLE TE3 = CR+MO
PRODUCT TE1 = CU+NI+CR+MO
CHEMICAL COMPOSITION % : "N" X10000
CHEMICAL COMPOSITION % : "SN" X1000
CHEMICAL COMPOSITION % : "TE3" X100
LADLE TREATMENT : VACUUM DEGASSED
SULPHIDE SHAPE CONTROL

EDMONTON EXCHANGER MTR APPROVED

注釈 NOTES ※1 Location Orientation 位置・方向, T:頭部 Top, B:底部 Bottom, L:圧延方向 Longitudinal, C:直角方向 Transverse, Z:板厚方向 Through Thickness, R:45° 方向 45Deg. to the Longitudinal Axis
※2 GL 標点距離 Gage Length, A: 50mm 平形試験片 Rectangular, B: 50mm 丸形試験片 Round, C: 70mm 平形試験片 Rectangular, D: 70mm 丸形試験片 Round, E: 80mm 平形試験片 Rectangular, F: 80mm 丸形試験片 Round, G: 200mm, H: 2", I: 8", J: 5.65√So, K: 4√So
※3 RA: 絞り Reduction of Area, YR: 降伏比 Yield Ratio, ※4 A: 合格 Acceptable, ※5 F: 標準寸法 FULL SIZE, 2: 2.5mm, 3: 3.3mm, 4: 3.33mm, 5: 5.0mm, 6: 6.67mm, 7: 7.5mm, 8: 6.7mm, 9: 製品板厚 PlateThickness, ※6 P: 製品分析 Product Analysis,
※7 N: 焼準 Normalized, Q: 焼入れ Quenched, T: 焼戻し Tempered, CR: Controlled Rolled, NIC: NIC Process/TMC Process, CLC: CLC Process/TMC Process, AR: As Rolled, TMR: TMR Process/TMC Process, NR: Normalizing Rolled
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温度 Temperature °C °F

上記注文品は御指定の規格または仕様に従って製造され、その要求事項を満足していることを証明します。

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GROUP MANAGER
PLATE QUALITY CONTROL DEPT.
KIMITSU WORKS

AX40441056I2

POSCO Mill Test Certificate/검사증명서

Certificate No./증명서번호:080909-PPSA-004-013
Date of Issue/발행일자:Sep., 16, 2008

Order No./계약번호:0003339728
PO No./주문번호:E10660
Supplier/주문자:DAE WOO INTERNATIONAL CORP.
Commodity/품명:HR STEEL PLATE (EN10204 3.1B)
Customer/고객사:EDMONTON EXCHANGER
Spec & Type/규격:ASME SA516-70 AND SA 20(ASME2004EDITION) (ASME2004EDITION)

14670

Size/치수	Product No. 제품번호	Quantity 수량	Weight 중량 (kg) (LBS)	Heat No. 제강번호	POSITION	Tensile/인장시험 YP (KSI)	TS	EL (%)	Impact/ 충격시험 V Notch -50°F Energy (FT-LBS)	SF (%)	DIVISION	Chemical Composition/화학성분(%) C -4	Si -3	Mn -3	P -4	S -4	Cr -2	Ni -2	B -4	Cu -3	Mo -2	Nb -3	Ti -3	V -3	Sol-Al -3
*** Sub Total (060) ***			12			53,604 (kg)			118,175 (LBS)																
*** HEAT TREATMENT ===> Normalized : 890°C 30min. ***																									
0.75"x120.5"x480"	PC43392701-2702	2	11,158 24,598	SB13583	T	50.2	75.3	28	1:159 2:138 3:136 A:145		L	1755	353	1180	113	26	2	22	Tr	101	Tr	1	1	18	34
0.75"x120.5"x480"	PC43392601-2602	2	11,158 24,598	SB13583	T	51.1	75.0	30	1:140 2:112 3:136 A:129		L	1755	353	1180	113	26	2	22	Tr	101	Tr	1	1	18	34
0.75"x120.5"x480"	PC43392501-2502	2	11,158 24,598	SB13583	T	50.9	75.0	27	1:124 2:148 3:185 A:152		L	1755	353	1180	113	26	2	22	Tr	101	Tr	1	1	18	34
0.75"x120.5"x480"	PC43392401-2402	2	11,158 24,598	SB13583	T	50.2	74.3	27	1:142 2:128 3:69 A:113		L	1755	353	1180	113	26	2	22	Tr	101	Tr	1	1	18	34

* Position - T : Top, M : Middle, B : Bottom
* Tensile Test. Direction : Transversal, Gauge Length : 200㎜(Rectangular), YP Method : 0.2% off-set
* Impact Test. Direction : Longitudinal, T.L.R(Trans Longitude Ratio)
* Division - L:Ladle Analysis
* Chemical Composition Unit: -2:x1/100, -3:x1/1000, -4:x1/10000, -5:x1/100000
* Tr : It is within the standard range(<0.008%) and include trace element.
* Supply Condition : As-Rolled unless otherwise Heat Treated.

A) This material was producted under a quality system manual Rev.5 dated JUL.01.2006 and PQG01 Rev.0 dated JUL.01.2006 audited and approved by customer as conforming to the requirements of ASME Sec. III NCA-3800 and(or) KEPIC MNA/ SNA4300.
B) No repair welding was performed to the products.
C) The product numbers listed on this test report identifies the material
- We hereby certify that the material herein has been made and tested in accordance with the above specification and also with the requirements called for by the above order.
This material is fine grained steel.
* This Mill Test Certificate cannot be copied for any purpose.

Surveyor To:

W. G. Jo

Chief of material testing section Jo, Won Goc

POSCO Pohang Works, 5 Dongchon-dong, Nam-gu, Pohang-si, Gyeongsangbuk-do, 790-785, Korea

POSCO Mill Test Certificate/검사증명서

Certificate No./증명서번호:080909-PPSA-004-014
Date of Issue/발행일자:Sep., 16, 2008

Order No./계약번호:0003339728
PO No./주문번호:E10660
Supplier/주문자:DAE WOO INTERNATIONAL CORP.
Commodity/품명:HR STEEL PLATE (EN10204 3.1B)
Customer/고객사:EDMONTON EXCHANGER
Spec & Type/규격:ASME SA516-70 AND SA 20(ASME2004EDITION)
(ASME2004EDITION)

Size/치수	Product No. 제품번호	Quantity 수량	Weight 중량 (kg) (LBS)	Heat No. 제강번호	POSITION	Tensile/인장시험 YP (KSI)	TS	EL (%)	Impact/충격시험 V Notch -50°F Energy (FT-LBS)	SF (%)	DIVISION	Chemical Composition/화학성분(%) C -4	Si -3	Mn -3	P -4	S -4	Cr -2	Ni -2	B -4	Cu -3	Mo -2	Nb -3	Ti -3	V -3	Sol-Al -3
0.75"x120.5"x480"	PC43393501-3502	2	11,158 24,598	SB13583	T	49.7	74.4	31	1:145 2:136 3:138 A:139		L	1755	353	1180	113	26	2	22	Tr	101	Tr	1	1	18	34
0.75"x120.5"x480"	PC43393401-3402	2	11,158 24,598	SB13583	T	50.3	74.7	28	1:117 2:114 3:126 A:119		L	1755	353	1180	113	26	2	22	Tr	101	Tr.	1	1	18	34
0.75"x120.5"x480"	PC43392301-2302	2	11,158 24,598	SB13583	T	49.9	74.7	29	1:150 2:136 3:133 A:139		L	1755	353	1180	113	26	2	22	Tr	101	Tr	1	1	18	34
0.75"x120.5"x480"	PC43392801-2802	2	11,158 24,598	SB13583	T	50.2	74.7	30	1:156 2:149 3:139 A:148		L	1755	353	1180	113	26	2	22	Tr	101	Tr	1	1	18	34
0.75"x120.5"x480"	PC43417401-7402	2	11,158 24,598	SB13583	T	49.7	75.3	32	1:136 2:148 3:145		L	1755	353	1180	113	26	2	22	Tr	101	Tr	1	1	18	34

* Position - T : Top, M : Middle, B : Bottom
* Tensile Test. Direction : Transversal, Gauge Length : 200㎜(Rectangular),
YP Method : 0.2% off-set
* Impact Test. Direction : Longitudinal,
T.L.R(Trans Longitude Ratio)
* Division - L:Ladle Analysis
* Chemical Composition Unit: -2:x1/100, -3:x1/1000, -4:x1/10000, -5:x1/100000
* Tr : It is within the standard range(<0.008%) and include trace element.
* Supply Condition : As-Rolled unless otherwise Heat Treated.

A) This material was producted under a quality system manual Rev.5 dated JUL.01,2006 and PQG01 Rev.0 dated JUL.01.2006 audited and approved by customer as conforming to the requirements of ASME Sec. III NCA-3800 and(or) KEPIC MNA/ SNA4300.
B) No repair welding was performed to the products.
C) The product numbers listed on this test report identifies the material
- We hereby certify that the material herein has been made and tested in accordance with the above specification and also with the requirements called for by the above order.
This material is fine grained steel.
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Surveyor To:

W. G. Jo

Chief of material testing section Jo, Won Goc

POSCO Pohang Works, 5 Dongchon-dong, Nam-gu, Pohang-si, Gyeongsangbuk-do, 790-785, Korea

POSCO Mill Test Certificate/검사증명서

Certificate No./증명서번호:080909-PPSA-004-015
Date of Issue/발행일자:Sep., 16, 2008

Order No./계약번호:0003339728
PO No./주문번호:E10660
Supplier/주문자:DAE WOO INTERNATIONAL CORP.
Commodity/품명:HR STEEL PLATE (EN10204 3.1B)
Customer/고객사:EDMONTON EXCHANGER
Spec & Type/규격:ASME SA516-70 AND SA 20(ASME2004EDITION)

Size/치수	Product No. 제품번호	Quantity 수량	Weight 중량 (kg) (LBS)	Heat No. 제강번호	POSITION	Tensile/인장시험 YP (KSI)	TS	EL (%)	Impact/충격시험 V Notch -50°F Energy (FT-LBS)	SF (%)	DIVISION	Chemical Composition/화학성분(%) C -4	Si -3	Mn -3	P -4	S -4	Cr -2	Ni -2	B -4	Cu -3	Mo -2	Nb -3	Ti -3	V -3	Sol-Al -3
0.75"x120.5"x480"	PC43417301-7302	2	11,158 24,598	SB13583	T	50.6	75.7	29	A:143 1:150 2:148 3:134		L	1755	353	1180	113	26	2	22	Tr	101	Tr	1	1	18	34
0.75"x120.5"x480"	PC43393201-3202	2	11,158 24,598	SB13583	T	50.5	76.0	27	A:144 1:139 2:115 3:130		L	1755	353	1180	113	26	2	22	Tr	101	Tr	1	1	18	34
0.75"x120.5"x480"	PC43393101-3102	2	11,158 24,598	SB13583	T	50.6	76.7	28	A:128 1:138 2:138 3:126		L	1755	353	1180	113	26	2	22	Tr	101	Tr	1	1	18	34
0.75"x120.5"x480"	PC43392201-2202	2	11,158 24,598	SB13585	T	51.1	75.4	30	A:134 1:142 2:146 3:133		L	1804	348	1198	99	20	2	22	Tr	98	Tr	1	1	18	33
0.75"x120.5"x480"	PC43392101-2102	2	11,158 24,598	SB13585	T	50.9	75.6	29	A:140 1:118 2:128		L	1804	348	1198	99	20	2	22	Tr	98	Tr	1	1	18	33

* Position - T : Top, M : Middle, B : Bottom
* Tensile Test. Direction : Transversal, Gauge Length : 200㎜(Rectangular), YP Method : 0.2% off-set
* Impact Test. Direction : Longitudinal, T.L.R(Trans Longitude Ratio)
* Division - L:Ladle Analysis
* Chemical Composition Unit: -2:x1/100, -3:x1/1000, -4:x1/10000, -5:x1/100000
* Tr : It is within the standard range(<0.008%) and include trace element.
* Supply Condition : As-Rolled unless otherwise Heat Treated.

A) This material was producted under a quality system manual Rev.5 dated JUL.01.2006 and PQG01 Rev.0 dated JUL.01.2006 audited and approved by customer as conforming to the requirements of ASME Sec. III NCA-3800 and(or) KEPIC MNA/ SNA4300.
B) No repair welding was performed to the products.
C) The product numbers listed on this test report identifies the material
- We hereby certify that the material herein has been made and tested in accordance with the above specification and also with the requirements called for by the above order.
This material is fine grained steel.
* This Mill Test Certificate cannot be copied for any purpose.

Surveyor To:

W. G. Jo

Chief of material testing section Jo, Won Go

POSCO Pohang Works, 5 Dongchon-dong, Nam-gu, Pohang-si, Gyeongsangbuk-do, 790-785, Korea

POSCO Mill Test Certificate/검사증명서

Certificate No./증명서번호:080909-PPSA-004-016
Date of Issue/발행일자:Sep., 16, 2008

Order No./계약번호:0003339728
PO No./주문번호:E10660
Supplier/주문자:DAE WOO INTERNATIONAL CORP.
Commodity/품명:HR STEEL PLATE (EN10204 3.1B)
Customer/고객사:EDMONTON EXCHANGER
Spec & Type/규격:ASME SA516-70 AND SA 20(ASME2004EDITION)

Size/치수	Product No. 제품번호	Quantity 수량	Weight 중량 (kg) (LBS)	Heat No. 제강번호	POSITION	Tensile/인장시험 YP (KSI)	TS	EL (%)	Impact/ 충격시험 V Notch -50°F Energy (FT-LBS)	SF (%)	DIVISION	Chemical Composition/화학성분(%) C -4	Si -3	Mn -3	P -4	S -4	Cr -2	Ni -2	B -4	Cu -3	Mo -2	Nb -3	Ti -3	V -3	Sol-Al -3
0.75"x120.5"x480"	PC43393001-3002	2	11,158 24,598	SB13585	T	51.3	76.1	27	3:126 A:124 1:128 2:121 3:120 A:123		L	1804	348	1198	99	20	2	22	Tr	98	Tr	1	1	18	33
0.75"x120.5"x480"	PC43392901-2902	2	11,158 24,598	SB13585	T	50.8	75.9	27	1:118 2:69 3:136 A:108		L	1804	348	1198	99	20	2	22	Tr	98	Tr	1	1	18	33
0.75"x120.5"x480"	PC43417201-7202	2	11,158 24,598	SB13585	T	50.0	76.1	28	1:91 2:143 3:131 A:122		L	1804	348	1198	99	20	2	22	Tr	98	Tr	1	1	18	33
0.75"x120.5"x480"	PC43417101-7102	2	11,158 24,598	SB13585	T	50.0	75.7	30	1:125 2:145 3:82 A:117		L	1804	348	1198	99	20	2	22	Tr	98	Tr	1	1	18	33
0.75"x120.5"x480"	PC43417001-7002	2	11,158	SB13585	T	50.2	76.1	27	1:139		L	1804	348	1198	99	20	2	22	Tr	98	Tr	1	1	18	33

* Position - T : Top, M : Middle, B : Bottom
* Tensile Test. Direction : Transversal, Gauge Length : 200㎜(Rectangular), YP Method : 0.2% off-set
* Impact Test. Direction : Longitudinal, T.L.R(Trans Longitude Ratio)
* Division - L:Ladle Analysis
* Chemical Composition Unit: -2:x1/100, -3:x1/1000, -4:x1/10000, -5:x1/100000
* Tr : It is within the standard range(<0.008%) and include trace element.
* Supply Condition : As-Rolled unless otherwise Heat Treated.

A) This material was producted under a quality system manual Rev.5 dated JUL.01,2006 and PQG01 Rev.0 dated JUL.01.2006 audited and approved by customer as conforming to the requirements of ASME Sec. III NCA-3800 and(or) KEPIC MNA/ SNA4300.
B) No repair welding was performed to the products.
C) The product numbers listed on this test report identifies the material
- We hereby certify that the material herein has been made and tested in accordance with the above specification and also with the requirements called for by the above order.
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Surveyor To:

W. G. Jo

Chief of material testing section Jo, Won Go

POSCO Mill Test Certificate/검사증명서

Certificate No./증명서번호:080909-PPSA-004-017
Date of Issue/발행일자:Sep., 16, 2008

Order No./계약번호:0003339728
PO No./주문번호:E10660 (ASME2004EDITION)
Supplier/주문자:DAE WOO INTERNATIONAL CORP.
Commodity/품명:HR STEEL PLATE (EN10204 3.1B)
Customer/고객사:EDMONTON EXCHANGER
Spec & Type/규격:ASME SA516-70 AND SA 20(ASME2004EDITION)

Size/치수	Product No. 제품번호	Quantity 수량	Weight 중량 (kg) (LBS)	Heat No. 제강번호	POSITION	Tensile/인장시험 YP (KSI)	TS	EL (%)	Impact/ 충격시험 V Notch -50°F Energy (FT-LBS)	SF (%)	DIVISION	Chemical Composition/화학성분(%) C -4	Si -3	Mn -3	P -4	S -4	Cr -2	Ni -2	B -4	Cu -3	Mo -2	Nb -3	Ti -3	V -3	Sol-Al -3
			24,598						2:117																
									3:134																
									A:130																
0.75"x120.5"x480"	PC43415901-6902	2	11,158	SB13585	T	49.9	76.0	27	1:136		L	1804	348	1198	99	20	2	22	Tr	98	Tr	1	1	18	33
			24,596						2:136																
									3:141																
									A:137																
*** Sub Total (070) ***			40			223,160 (kg)			491,976 (LBS)																
*** HEAT TREATMENT ===> Normalized : 890°C 35min. ***																									
0.875"x96.5"x480"	PC43859301-9303	3	15,642	SB14463	T	51.6	76.3	28	1:126		L	1807	321	1127	106	24	2	22	1	96	Tr	1	1	18	28
			34,485						2:96																
									3:122																
									A:115																
0.875"x96.5"x480"	PC43859201-9203	3	15,642	SB14463	T	50.9	75.9	30	1:135		L	1807	321	1127	106	24	2	22	1	96	Tr	1	1	18	28
			34,485						2:122																
									3:114																
									A:124																
*** Sub Total (080) ***			6			31,284 (kg)			68,968 (LBS)																

* Position - T : Top, M : Middle, B : Bottom
* Tensile Test. Direction : Transversal, Gauge Length : 200mm(Rectangular), YP Method : 0.2% off-set
* Impact Test. Direction : Longitudinal, T.L.R(Trans Longitude Ratio)
* Division - L:Ladle Analysis
* Chemical Composition Unit: -2:x1/100, -3:x1/1000, -4:x1/10000, -5:x1/100000
* Tr : It is within the standard range(<0.008%) and include trace element
* Supply Condition : As-Rolled unless otherwise Heat Treated.

A) This material was producted under a quality system manual Rev.5 dated JUL.01,2006 and PQG01 Rev.0 dated JUL.01.2006 audited and approved by customer as conforming to the requirements of ASME Sec. III NCA-3800 and(or) KEPIC MNA/ SNA4300.
B) No repair welding was performed to the products.
C) The product numbers listed on this test report identifies the material
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Surveyor To:

W.G. Jo

POSCO Pohang Works, 5 Dongchon-dong, Nam-gu, Pohang-si, Gyeongsangbuk-do, 790-785, Korea

Chief of material testing section Jo, Won Gool

POSCO Mill Test Certificate/검사증명서

Certificate No./증명서번호:080909-PPSA-004-023
Date of Issue/발행일자:Sep., 16, 2008

Order No./계약번호:0003339728
PO No./주문번호:E10660 (ASME2004EDITION)
Supplier/주문자:DAE WOO INTERNATIONAL CORP.
Commodity/품명:HR STEEL PLATE (EN10204 3.1B)
Customer/고객사:EDMONTON EXCHANGER
Spec & Type/규격:ASME SA516-70 AND SA 20(ASME2004EDITION)

Size/치수	Product No. 제품번호	Quantity 수량	Weight 중량 (kg) (LBS)	Heat No. 제강번호	POSITION	Tensile/인장시험 YP (KSI)	TS	EL (%)	Impact/ 충격시험 V Notch -50°F Energy (FT-LBS)	SF (%)	DIVISION	Chemical Composition/화학성분(%) C -4	Si -3	Mn -3	P -4	S -4	Cr -2	Ni -2	B -4	Cu -3	Mo -2	Nb -3	Ti -3	V -3	Sol-Al -3
1.125"x121"x480"	PC43391401	1	8,405 18,530	SB13583	T	48.0	73.8	34	A:117 1:147 2:133 3:113		L	1755	353	1180	113	26	2	22	Tr	101	Tr	1	1	18	34
1.125"x121"x480"	PC43391001	1	8,405 18,530	SB13583	T	48.4	74.0	31	A:131 1:130 2:122 3:118		L	1755	353	1180	113	26	2	22	Tr	101	Tr	1	1	18	34
1.125"x121"x480"	PC43391501	1	8,405 18,530	SB13583	T	48.6	74.0	32	A:123 1:123 2:142 3:141		L	1755	353	1180	113	26	2	22	Tr	101	Tr	1	1	18	34
*** Sub Total (30) ***			10			84,050 (kg)			A:136 185,296 (LBS)																
*** HEAT TREATMENT ===> Normalized : 890°C 56min. ***																									
*** Lot Total ***			240			1,097,148 (kg)			2,418,752 (LBS)																
*** Grade Total ***			240			1,097,148 (kg)			2,418,752 (LBS)																
*** Grand Total ***			240			1,097,148 (kg)			2,418,752 (LBS)																
									=== Last Item ===																

* LOT NO ==> VACUUM DEGASSED

MTR APPROVED EDMONTON EXCHANGER

* Position - T : Top, M : Middle, B : Bottom
* Tensile Test. Direction : Transversal, Gauge Length : 200㎜(Rectangular), YP Method : 0.2% off-set
* Impact Test. Direction : Longitudinal, T.L.R(Trans Longitude Ratio)
* Division - L:Ladle Analysis
* Chemical Composition Unit: -2:x1/100, -3:x1/1000, -4:x1/10000, -5:x1/100000
* Tr : It is within the standard range(<0.008%) and include trace element.
* Supply Condition : As-Rolled unless otherwise Heat Treated.

A) This material was producted under a quality system manual Rev.5 dated JUL.01.2006 and PQG01 Rev.0 dated JUL.01.2006 audited and approved by customer as conforming to the requirements of ASME Sec. III NCA-3800 and(or) KEPIC MNA/ SNA4300.
B) No repair welding was performed to the products.
C) The product numbers listed on this test report identifies the material
- We hereby certify that the material herein has been made and tested in accordance with the above specification and also with the requirements called for by the above order.
This material is fine grained steel.
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Surveyor To:

W.G. Jo

POSCO Pohang Works, 5 Dongchon-dong, Nam-gu, Pohang-si, Gyeongsangbuk-do, 790-785, Korea

Chief of material testing section Jo, Won Goo

DAEWOO INTERNATIONAL
www.daewoo.com
100-753 서울 중구 남대문로 5가 84-11 (연세재단 서브라스빌딩) 중앙지사함 2810호
C.P.O Box 2810 Seoul 100-753, Korea TEL : 759-2114 / FAX : 753-9469

September 5, 2008

ATTN : Edmonton Exchanger.
C.C : To whom it may concern.

Subject: Posco Plate SA 516 Grade 70 for Pressure Vessel Quality.

This letter is written to certify that Posco/Daewoo guarantee the test coupon and the plate is normalized, and thereon its chemical & mechanical properties are same as shown in Mill Test Certificate provided by Posco for Edmonton Exchanger PO No.E10660. Our shipment complies with your requirement.

Best Regard,

Y.H.KIM
Team Leader
Hot Rolled Steel Team 3, Steel Division1
Daewoo International Corporation

DAEWOO INTERNATIONAL
www.daewoo.com
100-753 서울 중구 남대문로 5가 84-11 (연세재단 세브란스빌딩) 중앙사서함 2610호
C.P.O Box 2610 Seoul 100-753, Korea TEL : 759-2114 / FAX : 753-9469

September 17, 2008

ATTN : Edmonton Exchanger.
C.C : To whom it may concern.

Subject: Posco Plate SA516 Grade 70 for Pressure Vessel Quality.

This letter is written to certify that Posco/Daewoo comply with DIN 50049/3.1B, EN10204(2004)/3.1, and ISO 10474/3.1B, also guarantee ASME 2004 Edition-2006 Addendum for PO no. E10647 and E10660 which was supplied by Posco for Edmonton Exchanger. Due to limited space in MTR electric system, it only shows ASME 2004 Edition and EN10204 3.1(or ISO10474 3.1B) which please understand.

Best Regard,

MTR APPROVED
EDMONTON EXCHANGER

Y.H.KIM
Team Leader
Hot Rolled Steel Team 3, Steel Division 1
Daewoo International Corporation

B

注文者 SHIPPER : HANWA CO., LTD.
注文者照合番号 REFERENCE No. : 228-38581020
契約番号 CONTRACT No. : 8-831-H1-5-X-AT01
商品名 COMMODITY : HOT ROLLED STEEL PLATES
規格 SPECIFICATION : ASME SA-516 GRADE 70-E07
文書番号 DOCUMENT No. :

新日本製鐵株式會社
Nippon Steel Corporation
鋼材検査証明書
INSPECTION CERTIFICATE

(AS PER EN 10204 CERTIFICATE ON MATERIAL TESTS 3.1)

需要家 CUSTOMER : EDMONTON EXCHANGER GROUP OF COMPANIES
需要家管理番号 CUSTOMER'S CONTROL No. : E3001P05Q1 E07

本社 HEAD OFFICE : 〒100-8071 東京都千代田区大手町二丁目6番3号 2-6-3, OTEMACHI, CHIYODA-KU, TOKYO 100-8071, JAPAN
君津製鐵所 KIMITSU WORKS : 〒299-1141 千葉県君津市君津1番地 1, KIMITSU, KIMITSU-CITY, CHIBA-PREF. 299-1141 JAPAN

証明書番号 CERTIFICATE No. : P-97187 頁 PAGE : 46
発行年月日 DATE OF ISSUE : 2008-11-14
1001 2**DM***** *****CEW**

寸法 DIMENSION mm, ":inch, ':feet	員数 QUANTITY	質量 MASS KG	製鋼番号 CAST No. / 試験番号 TEST No.	製品番号 PLATE No.	LOCATION ORIENTATION ※1	引張試験 TENSILE TEST 耐力降伏点 YS 0.2% KSI	引張強さ TS KSI	伸び EL %	% ※3	BEND TEST DIRECTION ※1	LOCATION ORIENTATION ※1	衝撃試験 IMPACT TEST 2V - 50F FT. LB 平均値 AVG	個々値 EACH	HBW	化学成分 CHEMICAL COMPOSITION % C ×100	Si ×100	Mn ×100	P ×1000	S ×1000	Cu ×100	Ni ×100	Cr ×100	Mo ×100	Nb ×100	V ×100	TAl ×100	Ceq 1 ×100	熱処理状態 HEAT TREATMENT CONDITION
																N ×1000	TE3	TE1 ×100		SN ×100	CA ×10000	B ×10000	Ti ×100	Pcm ×100	Sol Al ×100	Ceq 2 ×100 ※7	
05			G0641										222	AVG	16	39	146	6	2	2	2	2	0	14	0	34	41	
0.75"X96.5"X480"	1	4467	42216	873030509	TC	55	77	29		TL	F	226	249	154		35	2	6		0	10	2	0				
													217														
														P	16	39	146	5	2	2	2	2	0	13	0		41	
																37		6			13	1	0				
05			G0641										222	AVG	16	39	146	6	2	2	2	2	0	14	0	34	41	
0.75"X96.5"X480"	1	4467	42215	873030510	TC	55	77	29		TL	F	226	240	154		35	2	6		0	10	2	0				
													217														
														P	16	39	146	5	2	2	2	2	0	13	0		41	
																37		6			13	1	0				
06			G0641	TESTED-PL									245	AVG	16	39	146	6	2	2	2	2	0	14	0	34	41	
0.75"X120.5"X480"	1	5579	42202	873030601	TC	57	78	29		TL	F	244	254	156		35	2	6		0	10	2	0				
													232														
														P	16	39	146	5	2	2	2	2	0	13	0		41	
																37		6			13	1	0				

注 記 NOTES
※1 Location Orientation 位置・方向, T:頂部 Top, B:底部 Bottom, L:圧延方向 Longitudinal, C:直角方向 Transverse, Z:板厚方向 Through Thickness, R:45° 方向 45Deg. to the Longitudinal Axis
※2 GL 標点距離 Gage Length, A: 50mm 平形試験片 Rectangular, B:50mm 丸形試験片 Round, C: 70mm 平形試験片 Rectangular, D: 70mm 丸形試験片 Round, E: 80mm 平形試験片 Rectangular, F: 80mm 丸形試験片 Round, G: 200mm, H: 2", I: 6", J: $5.65\sqrt{So}$, K: $4.\sqrt{So}$
※3 RA :絞り Reduction of Area, YR:降伏比 Yield Ratio, ※4 A:合格 Acceptable, ※5 F:標準寸法 FULL SIZE, 2:2.5mm, 3:3.3mm, 4:3.33mm, 5:5.0mm, 6:6.67mm, 7:7.5mm, 8:6.7mm, 9:製品板厚 PlateThickness, ※6 P:製品分析 Product Analysis,
※7 N:焼準 Normalized, Q:焼入れ Quenched, T:焼戻し Tempered, CR: Controlled Rolled, NIC: NIC Process/TMC Process, CLC: CLC Process/TMC Process, AR: As Rolled, TMR: TMR Process/TMC Process, NR: Normalizing Rolled
SH:脆性破面率 Shear Fracture, CF:脆性破面率 Crystallinity Fracture, LE:横膨出 Lateral Expansion, AGS:オーステナイト粒度 Austenite Grain Size, FGS:フェライト粒度 Ferrite Grain Size, SR: Stress Relieved/Post Weld Heat Treatment
試験 Temperature

上記注文品は御指定の規格または仕様に従って製造され、その要求事項を満足していることを証明します。

WE HEREBY CERTIFY THAT THE MATERIAL DESCRIBED HEREIN HAS BEEN MADE IN ACCORDANCE WITH THE RULES OF THE CONTRACT.

14780

君津製鐵所厚板管理グループリーダー
GROUP MANAGER
PLATE QUALITY CONTROL DEPT.
KIMITSU WORKS

AX4055606243

B

注文者 SHIPPER : HANWA CO., LTD.
注文者照合番号 REFERENCE No. : 228-38581020
契約番号 CONTRACT No. : 8-831-H1-5-X-AT01
商品名 COMMODITY : HOT ROLLED STEEL PLATES
規格 SPECIFICATION : ASME SA-516 GRADE 70-E07
文書番号 DOCUMENT No. :
需要家 CUSTOMER : EDMONTON EXCHANGER GROUP OF COMPANIES

新日本製鐵株式會社
Nippon Steel Corporation
本社 HEAD OFFICE : 〒100-8071 東京都千代田区大手町二丁目6番3号 2-6-3, OTEMACHI, CHIYODA-KU, TOKYO 100-8071, JAPAN
君津製鉄所 KIMITSU WORKS : 〒299-1141 千葉県君津市君津1番地 1, KIMITSU, KIMITSU-CITY, CHIBA-PREF. 299-1141 JAPAN

鋼材検査証明書
INSPECTION CERTIFICATE

(AS PER EN 10204 CERTIFICATE ON MATERIAL TESTS 3.1)

証明書番号 CERTIFICATE No. : P-97187
頁 PAGE : 47
発行年月日 DATE OF ISSUE : 2008-11-14
需要家管理番号 CUSTOMER'S CONTROL No. : 1001
2**DM*****
*****CEW**
E3001P0501 E07

寸法 DIMENSION mm, ", inch, ' feet	員数 QUANTITY	質量 MASS KG	製鋼番号 CAST No. / 試験番号 TEST No.	製品番号 PLATE No.	LOCATION ORIENTATION ※1	引張試験 TENSILE TEST 耐力 YS 0.2% KSI	引張強さ TS KSI	伸び EL %	% ※3	HEAD TEST PIECE ※4	LOCATION ORIENTATION ※1	衝撃試験 IMPACT TEST 2V-50F FT.LB 平均値 AVG	個々値 EACH	HBW	化学成分 CHEMICAL COMPOSITION % C ×100	Si ×100	Mn ×100	P ×1000	S ×1000	Cu ×100	Ni ×100	Cr ×100	Mo ×100	Nb ×100	V ×100	TAl ×1000	Ceq.1 ×100	HEAT TREATMENT CONDITION OF SUPPLY
																N ×1000	TE3	TE1 ×100		SN ×100	CA ×10000	B ×10000	Ti ×100		Pcm ×100	Sol. Al ×100	Ceq.2 ×100	
06			G0641																								
0.75"X120.5"X480"	1	5579	42202	873030602	TCI	57	78	29			TLF	244	245	AVG	16	39	146	6	2	2	2	2	0	14	0	34	41	
													254	156		35	2	6		0	10	2	0					
													232															
														P	16	39	146	5	2	2	2	2	0	13	0		41	
																37		6			13	1	0					
06			G0641	TESTED-PL									228	AVG	16	39	146	6	2	2	2	2	0	14	0	34	41	
0.75"X120.5"X480"	1	5579	42203	873030603	TCI	56	78	29			TLF	230	232	156		35	2	6		0	10	2	0					
													230															
														P	16	39	146	5	2	2	2	2	0	13	0		41	
																37		6			13	1	0					
06			G0641										228	AVG	16	39	146	6	2	2	2	2	0	14	0	34	41	
0.75"X120.5"X480"	1	5579	42203	873030604	TCI	56	78	29			TLF	230	232	156		35	2	6		0	10	2	0					
													236															
														P	16	39	146	5	2	2	2	2	0	13	0		41	
																37		6			13	1	0					

注釈 NOTES ※1 Location Orientation 位置・方向, T:頂部 Top, B:底部 Bottom, L:圧延方向 Longitudinal, C:直角方向 Transverse, Z:板厚方向 Through Thickness, R:45° 方向 45Deg. to the Longitudinal Axis
※2 GL 標点距離 Gage Length, A:50mm 平形試験片 Rectangular, B:50mm 丸形試験片 Round, C:70mm 平形試験片 Rectangular, D:70mm丸形試験片 Round, E:80mm 平形試験片 Rectangular, F:80mm丸形試験片 Round, G:200mm, H:2", I:8", J:5.65$\sqrt{So}$, K:4.$\sqrt{So}$
※3 RA:絞り Reduction of Area, YR:降伏比 Yield Ratio, ※4 A:合格 Acceptable, ※5 F:標準寸法 FULL SIZE, 2:2.5mm, 3:3.3mm, 4:3.33mm, 5:5.0mm, 6:6.67mm, 7:7.5mm, 8:6.7mm, 9:製品板厚 PlateThickness, ※6 P:製品分析 Product Analysis,
※7 N:焼準 Normalized, Q:焼入れ Quenched, T:焼戻し Tempered, CR:Controlled Rolled, NIC:NIC Process/TMC Process, CLC:CLC Process/TMC Process, AR:As Rolled, TMR:TMR Process/TMC Process, NR:Normalizing Rolled
SH:延性破面率 Shear Fracture, CF:脆性破面率 Crystallinity Fracture, LE:横膨出 Lateral Expansion, AGS:オーステナイト粒度 Austenite Grain Size, FGS:フェライト粒度 Ferrite Grain Size, SR:Stress Relieved/Post Weld Heat Treatment
温度 Temperature C: F:

上記注文品は御指定の規格または仕様に従って製造され、その要求事項を満足していることを証明します。

WE HEREBY CERTIFY THAT THE MATERIAL DESCRIBED HEREIN HAS BEEN MADE IN ACCORDANCE WITH THE RULES OF THE CONTRACT.

T. Adachi
君津製鉄所厚板管理グループリーダー
GROUP MANAGER
PLATE QUALITY CONTROL DEPT.
KIMITSU WORKS

AX4055706244

B

注文者 SHIPPER : HANWA CO., LTD.
注文者照合番号 REFERENCE No. : 228-38581020
契約番号 CONTRACT No. : 8-831-H1-5-X-AT01
商品名 COMMODITY : HOT ROLLED STEEL PLATES
規格 SPECIFICATION : ASME SA-516 GRADE 70-E07
文書番号 DOCUMENT No. :

新日本製鐵株式會社
Nippon Steel Corporation
鋼材検査証明書
INSPECTION CERTIFICATE

(AS PER EN 10204 CERTIFICATE ON MATERIAL TESTS 3.1)

需要家 CUSTOMER : EDMONTON EXCHANGER GROUP OF COMPANIES
需要家管理番号 CUSTOMER'S CONTROL No. : E3001P05Q1 E07

本社 HEAD OFFICE : 〒100-8071 東京都千代田区大手町二丁目6番3号 2-6-3, OTEMACHI, CHIYODA-KU, TOKYO 100-8071, JAPAN
君津製鐵所 KIMITSU WORKS : 〒299-1141 千葉県君津市君津1番地 1, KIMITSU, KIMITSU-CITY, CHIBA-PREF, 299-1141 JAPAN

証明書番号 CERTIFICATE No. : P-97187
頁 PAGE : 48
発行年月日 DATE OF ISSUE : 2008-11-14
1001 2**DM***** *****CEW** E3001P05Q1 E07

寸法 DIMENSION mm, "inch, 'feet	員数 QUANTITY	質量 MASS KG	製鋼番号 CAST No. / 試験番号 TEST No.	製品番号 PLATE No.	LOCATION ORIENTATION ※1 ※2	引張試験 TENSILE TEST 耐力降伏点 YS 0.2% KSI	引張強さ TS KSI	伸び EL %	% ※3	BEND TEST ※1 ※2	衝撃試験 IMPACT TEST 2V-50F FT.LB 平均値 AVG	個々値 EACH	HBW	化学成分 CHEMICAL COMPOSITION % C ×100	Si ×100	Mn ×100	P ×1000	S ×1000	Cu ×100	Ni ×100	Cr ×100	Mo ×100	Nb ×100	V ×100	TAl ×100	Ceq.1 ×100	CONDITION OF SUPPLY ※7
06			G0641	TESTED-PL								250	AVG	16	39	146	6	2	2	2	2	0	14	0	34	41	
0.75"X120.5"X480"	1	5579	42204	873030605	TC	55	77	28		T	L F 231	192	153		35	2	6	0	10	2	0					
												251														
														P16	39	146	5	2	2	2	2	0	13	0		41
															37		6			13	1	0				
06			G0641									250	AVG	16	39	146	6	2	2	2	2	0	14	0	34	41	
0.75"X120.5"X480"	1	5579	42204	873030606	TC	55	77	28		T	L F 231	192	153		35	2	6	0	10	2	0					
												251														
														P15	39	146	5	2	2	2	2	0	13	0		41
															37		6			13	1	0				
06			G0541	TESTED-PL								227	AVG	16	39	146	6	2	2	2	2	0	14	0	34	41	
0.75"X120.5"X480"	1	5579	42205	873030607	TC	55	77	28		T	L F 228	229	153		35	2	6	0	10	2	0					
												227														
														P16	39	146	5	2	2	2	2	0	13	0		41
															37		6			13	1	0				

注釈 NOTES ※1 Location Orientation 位置・方向, T:頂部 Top, B:底部 Bottom, L:圧延方向 Longitudinal, C:直角方向 Transverse, Z:板厚方向 Through Thickness, R:45° 方向 45Deg. to the Longitudinal Axis
※2 GL 標点距離 Gage Length, A:50mm 平形試験片 Rectangular, B:50mm 丸形試験片 Round, C:70mm 平形試験片 Rectangular, D:70mm 丸形試験片 Round, E:80mm 平形試験片 Rectangular, F:80mm 丸形試験片 Round, G:200mm, H:2", I:8", J:5.65$\sqrt{So}$, K:4.$\sqrt{So}$
※3 RA:絞り Reduction of Area, YR:降伏比 Yield Ratio, ※4 A:合格 Acceptable, ※5 F:標準寸法 FULL SIZE, 2:2.5mm, 3:3.3mm, 4:3.33mm, 5:5.0mm, 6:6.67mm, 7:7.5mm, 8:8.7mm, 9:製品板厚 PlateThickness, ※6 P:製品分析 Product Analysis, 温度 Temperature C: °C F: °F
※7 N:焼準 Normalized, Q:焼入れ Quenched, T:焼戻し Tempered, CR:Controlled Rolled, NIC:NIC Process/TMC Process, CLC:CLC Process/TMC Process, AR:As Rolled, TMR:TMR Process/TMC Process, NR:Normalizing Rolled
SH:延性破面率 Shear Fracture, CF:脆性破面率 Crystallinity Fracture, LE:横膨出 Lateral Expansion, AGS:オーステナイト粒度 Austenite Grain Size, FGS:フェライト粒度 Ferrite Grain Size, SR:Stress Relieved/Post Weld Heat Treatment

上記注文品は御指定の規格または仕様に従って製造され、その要求事項を満足していることを証明します。

WE HEREBY CERTIFY THAT THE MATERIAL DESCRIBED HEREIN HAS BEEN MADE IN ACCORDANCE WITH THE RULES OF THE CONTRACT.

T. Adachi

君津製鐵所厚板管理グループリーダー
GROUP MANAGER
PLATE QUALITY CONTROL DEPT.
KIMITSU WORKS

AY405580624

8

注文者 SHIPPER : HANWA CO., LTD.
注文者照合番号 REFERENCE No. : 228-38581020
契約番号 CONTRACT No. : 8-831-H1-5-X-AT01
商品名 COMMODITY : HOT ROLLED STEEL PLATES
規格 SPECIFICATION : ASME SA-516 GRADE 70-E07
文書番号 DOCUMENT No. :

新日本製鐵株式會社
Nippon Steel Corporation
鋼材検査証明書
INSPECTION CERTIFICATE

(AS PER EN 10204 CERTIFICATE ON MATERIAL TESTS 3.1)

需要家 CUSTOMER : EDMONTON EXCHANGER GROUP OF COMPANIES

本社 HEAD OFFICE : 〒100-8071 東京都千代田区大手町二丁目6番3号 2-6-3, OTEMACHI, CHIYODA-KU, TOKYO 100-8071, JAPAN
君津製鐵所 KIMITSU WORKS : 〒299-1141 千葉県君津市君津1番地 1, KIMITSU, KIMITSU-CITY, CHIBA-PREF. 299-1141 JAPAN

証明書番号 CERTIFICATE No. : P-97187
頁 PAGE : 49
発行年月日 DATE OF ISSUE : 2008-11-14
1001
需要家管理番号 CUSTOMER'S CONTROL No. : 2**DM*****
*****CEW**
E3001P0501 E07

寸法 DIMENSION mm, "inch, 'feet	員数 QUANTITY	質量 MASS KG	製鋼番号 CAST No. / 試験番号 TEST No.	製品番号 PLATE No.	LOCATION ORIENTATION ※1	引張試験 TENSILE TEST 耐力降伏点 YS 0.2% KSI	引張強さ TS KSI	伸び EL %	% ※3	BEND TEST ※4	LOCATION ※1	衝撃試験 IMPACT TEST 2V-50F FT.LB 平均値 AVG	個々値 EACH	HBW	化学成分 CHEMICAL COMPOSITION % C ×100	Si ×100	Mn ×100	P ×1000	S ×1000	Cu ×100	Ni ×100	Cr ×100	Mo ×100	Nb ×100	V ×100	TAl ×100	Ceq.1 ×100	N ×1000	TE3	TE1 ×100	SN ×100	CA ×10000	B ×10000	Ti ×100	Pcm ×100	Sol.Al ×100	Ceq.2 ×100	HEAT TREATMENT OF TEST PIECE ※7
06			G0641																																	
0.75"X120.5"X480"	1	5579	42205	873030608	TC	55	77	28		TL	F	228	227	AVG 153	16	39	146	6	2	2	2	2	0	14	0	34	41										
													229			35	2	6		0	10	2		0												
													227																								
															P16	39	146	5	2	2	2	2	0	13	0		41										
																37		6			13	1		0												
06			G0641	TESTED-PL									225	AVG	16	39	146	6	2	2	2	2	0	14	0	34	41										
0.75"X120.5"X480"	1	5579	42207	873030621	TC	56	78	30		TL	F	235	222	157		35	2	6		0	10	2		0												
													257																								
															P16	39	146	5	2	2	2	2	0	13	0		41										
																37		6			13	1		0												
06			G0641										225	AVG	16	39	146	6	2	2	2	2	0	14	0	34	41										
0.75"X120.5"X480"	1	5579	42207	873030622	TC	56	78	30		TL	F	235	222	152		35	2	6		0	10	2		0												
													257																								
															P16	39	146	5	2	2	2	2	0	13	0		41										
																37		6			13	1		0												

注釈 NOTES
※1 Location Orientation 位置・方向, T:頂部 Top, B:底部 Bottom, L:圧延方向 Longitudinal, C:直角方向 Transverse, Z:板厚方向 Through Thickness, R:45° 方向 45Deg. to the Longitudinal Axis
※2 GL 標点距離 Gage Length, A:50mm 平形試験片 Rectangular, B:50mm 丸形試験片 Round, C:70mm 平形試験片 Rectangular, D:70mm 丸形試験片 Round, E:80mm 平形試験片 Rectangular, F:80mm 丸形試験片 Round, G:200mm, H:2", I:8", J:5.65$\sqrt{So}$, K:4.$\sqrt{So}$
※3 RA:絞り Reduction of Area, YR:降伏比 Yield Ratio, ※4 A:合格 Acceptable, ※5 F:標準寸法 FULL SIZE, 2:2.5mm, 3:3.3mm, 4:3.33mm, 5:5.0mm, 6:6.67mm, 7:7.5mm, 8:6.7mm, 9:製品板厚 PlateThickness, ※6 P:製品分析 Product Analysis,
※7 N:焼準 Normalized, Q:焼入れ Quenched, T:焼戻し Tempered, CR:Controlled Rolled, NIC:NIC Process/TMC Process, CLC:CLC Process/TMC Process, AR:As Rolled, TMR:TMR Process/TMC Process, NR:Normalizing Rolled
SH:延性破面率 Shear Fracture, CF:脆性破面率 Crystallinity Fracture, LE:横拡出 Lateral Expansion, AGS:オーステナイト粒度 Austenite Grain Size, FGS:フェライト粒度 Ferrite Grain Size, SR:Stress Relieved/Post Weld Heat Treatment
試験 Temperature C: F:

上記注文品は御指定の規格または仕様に従って製造され、その要求事項を満足していることを証明します。

WE HEREBY CERTIFY THAT THE MATERIAL DESCRIBED HEREIN HAS BEEN MADE IN ACCORDANCE WITH THE RULES OF THE CONTRACT.

T. Adachi

君津製鐵所厚板管理グループリーダー
GROUP MANAGER
PLATE QUALITY CONTROL DEPT.
KIMITSU WORKS

AX40559062A2

B

注文者 SHIPPER : HANWA CO., LTD.
注文者照合番号 REFERENCE No. : 226-38581020
契約番号 CONTRACT No. : 8-831-H1-5-X-AT01
商品名 COMMODITY : HOT ROLLED STEEL PLATES
規格 SPECIFICATION : ASME SA-516 GRADE 70-E07
文書番号 DOCUMENT No. :

新日本製鐵株式會社
Nippon Steel Corporation
鋼材検査証明書
INSPECTION CERTIFICATE

(AS PER EN 10204 CERTIFICATE ON MATERIAL TESTS 3.1)

需要家 CUSTOMER : EDMONTON EXCHANGER GROUP OF C-OMPANIES

需要家管理番号 CUSTOMER'S CONTROL No. :

本社 HEAD OFFICE : 〒100-8071 東京都千代田区大手町二丁目6番3号 2-6-3, OTEMACHI, CHIYODA-KU, TOKYO 100-8071, JAPAN
君津製鐵所 KIMITSU WORKS : 〒299-1141 千葉県君津市君津1番地 1, KIMITSU, KIMITSU-CITY, CHIBA-PREF. 299-1141 JAPAN

証明書番号 CERTIFICATE No. : P-97187 頁 PAGE : 50
発行年月日 DATE OF ISSUE : 2008-11-14

1001 2**DM***** *****CEW** E3001P05Q1 E07

寸法 DIMENSION mm, "inch, 'feet	員数 QUANTITY	質量 MASS KG	製鋼番号 CAST No. / 試験番号 TEST No.	製品番号 PLATE No.	LOCATION ORIENTATION GL ※1	引張試験 TENSILE TEST 耐力 YS 0.2% KSI	引張強さ TS KSI	伸び EL %	% ※3	BEND TEST LOCATION ORIENTATION SIZE ※1	衝撃試験 IMPACT TEST 2V-50F FT.LB 平均値 AVG	個々値 EACH	HBW	化学成分 CHEMICAL COMPOSITION % C	Si	Mn	P	S	Cu	Ni	Cr	Mo	Nb	V	TAl	Ceq.1	N	TE3	TE1	SN	CA	B	TI	Pcm	Sol.Al	Ceq.2	CONDITION OF SUPPLY ※7
06			G0641	TESTED-PL																																
0.75"X120.5"X480"	1	5579	42208	873030623	TC	56	78	31		TL	F 236	241	AVG 152	16	39	146	6	2	2	2	2	0	14	0	34	41										
												235			35	2	6		0	10	2	0														
												233																								
														P16	39	146	5	2	2	2	2	0	13	0		41										
															37		6			13	1	0														
06			G0641																																	
0.75"X120.5"X480"	1	5579	42208	873030624	TC	56	78	31		TL	F 236	241	AVG 152	16	39	146	6	2	2	2	2	0	14	0	34	41										
												235			35	2	6		0	10	2	0														
												233																								
														P16	39	146	5	2	2	2	2	0	13	0		41										
															37		6			13	1	0														
06			G0641	TESTED-PL																																
0.75"X120.5"X480"	1	5579	42209	873030625	TC	56	78	30		TL	F 233	227	AVG 152	16	39	146	6	2	2	2	2	0	14	0	34	41										
												233			35	2	6		0	10	2	0														
												240																								
														P16	39	146	5	2	2	2	2	0	13	0		41										
															37		6			13	1	0														

注釈 NOTES ※1 Location Orientation 位置・方向, T:頂部 Top, B:底部 Bottom, L:圧延方向 Longitudinal, C:直角方向 Transverse, Z:板厚方向 Through Thickness, R:45° 方向 45Deg. to the Longitudinal Axis
※2 GL 標点距離 Gage Length, A: 50mm 平形試験片 Rectangular, B: 50mm 丸形試験片 Round, C: 70mm 平形試験片 Rectangular, D: 70mm 丸形試験片 Round, E: 80mm 平形試験片 Rectangular, F: 80mm 丸形試験片 Round, G: 200mm, H: 2", I: 8", J: $5.65\sqrt{So}$, K: $4.\sqrt{So}$
※3 RA:絞り Reduction of Area, YR:降伏比 Yield Ratio, ※4 A:合格 Acceptable, ※5 F:規格寸法 FULL SIZE, 2: 2.5mm, 3: 3.3mm, 4: 3.33mm, 5: 5.0mm, 6: 6.67mm, 7: 7.5mm, 8: 6.7mm, 9: 製品板厚 PlateThickness, ※6 P:製品分析 Product Analysis,
※7 N:焼準 Normalized, Q:焼入れ Quenched, T:焼戻し Tempered, CR: Controlled Rolled, NIC: NIC Process/TMC Process, CLC: CLC Process/TMC Process, AR: As Rolled, TMR: TMR Process/TMC Process, NR: Normalizing Rolled
SH:延性破面率 Shear Fracture, CF:脆性破面率 Crystallinity Fracture, LE:横膨出 Lateral Expansion, AGS:オーステナイト粒度 Austenite Grain Size, FGS:フェライト粒度 Ferrite Grain Size, SR: Stress Relieved/Post Weld Heat Treatment
溶接 Temperature C: F:

上記注文品は御指定の規格または仕様に従って製造され、その要求事項を満足していることを証明します。

WE HEREBY CERTIFY THAT THE MATERIAL DESCRIBED HEREIN HAS BEEN MADE IN ACCORDANCE WITH THE RULES OF THE CONTRACT.

T. Adachi

君津製鐵所厚板管理グループリーダー
GROUP MANAGER
PLATE QUALITY CONTROL DEPT.
KIMITSU WORKS

AY405600624

B

注文者 SHIPPER : HANWA CO., LTD.
注文者照合番号 REFERENCE No. : 228-38581020
契約番号 CONTRACT No. : 8-831-H1-5-X-AT01
商品名 COMMODITY : HOT ROLLED STEEL PLATES
規格 SPECIFICATION : ASME SA-516 GRADE 70-E07
文書番号 DOCUMENT No. :

新日本製鐵株式会社
Nippon Steel Corporation
本社 HEAD OFFICE : 〒100-8071 東京都千代田区大手町二丁目6番3号 2-6-3, OTEMACHI, CHIYODA-KU, TOKYO 100-8071, JAPAN
君津製鐵所 KIMITSU WORKS : 〒299-1141 千葉県君津市君津1番地 1, KIMITSU, KIMITSU-CITY, CHIBA-PREF, 299-1141 JAPAN

鋼材検査証明書
INSPECTION CERTIFICATE

(AS PER EN 10204 CERTIFICATE ON MATERIAL TESTS 3.1)

証明書番号 CERTIFICATE No. : P-97187 頁 PAGE : 51
発行年月日 DATE OF ISSUE : 2008-11-14
需要家 CUSTOMER : EDMONTON EXCHANGER GROUP OF COMPANIES
需要家管理番号 CUSTOMER'S CONTROL No. : 1001 2**DM***** *****CE**** E3001P0501 E07

寸法 DIMENSION mm, "inch, 'feet	員数 QUANTITY	質量 MASS KG	製鋼番号 CAST No. / 試験番号 TEST No.	製品番号 PLATE No.	引張試験 TENSILE TEST LOCATION ORIENTATION	耐力降伏点 YS 0.2% KSI	引張強さ TS KSI	伸び EL %	%	衝撃試験 IMPACT TEST LOCATION ORIENTATION SIZE	平均値 AVG	個々値 EACH	HBW	化学成分 CHEMICAL COMPOSITION % C	Si	Mn	P	S	Cu	Ni	Cr	Mo	Nb	V	TAl	Ceq 1	熱処理条件 CONDITION OF SUPPLY
06			G0641									227		16	39	146	6	2	2	2	2	0	14	0	34	41	
0.75"X120.5"X480"	1	5579	42209	873030626	TC	56	78	30		TL	F233	233	152		35	2	6		0	10	2	0					
												240															
														P16	39	146	5	2	2	2	2	0	13	0		41	
															37		6			13	1	0					
06			G0641	TESTED-PL								253		16	39	146	6	2	2	2	2	0	14	0	34	41	
0.75"X120.5"X480"	1	5579	42210	873030627	TC	56	78	29		TL	F242	234	AVG 158		35	2	6		0	10	2	0					
												239															
														P16	39	146	5	2	2	2	2	0	13	0		41	
															37		6			13	1	0					
06			G0641									253		16	39	145	6	2	2	2	2	0	14	0	34	41	
0.75"X120.5"X480"	1	5579	42210	873030628	TC	56	78	29		TL	F242	234	AVG 158		35	2	6		0	10	2	0					
												239															
														P16	39	146	5	2	2	2	2	0	13	0		41	
															37		6			13	1	0					

注 釈 NOTES
※1 Location Orientation 位置・方向, T:頂部 Top, B:底部 Bottom, L:圧延方向 Longitudinal, C:直角方向 Transverse, Z:板厚方向 Through Thickness, R:45° 方向 45Deg. to the Longitudinal Axis
※2 GL 標点距離 Gage Length, A:50mm 平形試験片 Rectangular, B:50mm 丸形試験片 Round, C:70mm 平形試験片 Rectangular, D:70mm 丸形試験片 Round, E:80mm 平形試験片 Rectangular, F:80mm 丸形試験片 Round, G:200mm, H:2", I:8", J:5.65$\sqrt{So}$, K:4.$\sqrt{So}$
※3 RA:絞り Reduction of Area, YR:降伏比 Yield Ratio, ※4 A:合格 Acceptable, ※5 F:規準寸法 FULL SIZE, 2:2.5mm, 3:3.3mm, 4:3.33mm, 5:5.0mm, 6:6.67mm, 7:7.5mm, 8:6.7mm, 9:製品板厚 PlateThickness, ※6 P:製品分析 Product Analysis,
※7 N:焼準 Normalized, Q:焼入れ Quenched, T:焼戻し Tempered, CR:Controlled Rolled, NIC:NIC Process/TMC Process, CLC:CLC Process/TMC Process, AR:As Rolled, TMR:TMR Process/TMC Process, NR:Normalizing Rolled
SH:延性破面率 Shear Fracture, CF:脆性破面率 Crystallinity Fracture, LE:横拡出 Lateral Expansion, AGS:オーステナイト粒度 Austenite Grain Size, FGS:フェライト粒度 Ferrite Grain Size, SR:Stress Relieved/Post Weld Heat Treatment
温度 Temperature C: F:

上記注文品は御指定の規格または仕様に従って製造され、その要求事項を満足していることを証明します。

WE HEREBY CERTIFY THAT THE MATERIAL DESCRIBED HEREIN HAS BEEN MADE IN ACCORDANCE WITH THE RULES OF THE CONTRACT.

J. Adachi
君津製鐵所厚板管理グループリーダー
GROUP MANAGER
PLATE QUALITY CONTROL DEPT.
KIMITSU WORKS

AX4056106242

B

新日本製鐵株式會社
Nippon Steel Corporation

鋼材検査証明書
INSPECTION CERTIFICATE

本社：〒100-8071 東京都千代田区大手町二丁目6番3号
HEAD OFFICE 2-6-3, OTEMACHI, CHIYODA-KU, TOKYO 100-8071, JAPAN
君津製鉄所：〒299-1141 千葉県君津市君津1番地
KIMITSU WORKS 1, KIMITSU, KIMITSU-CITY, CHIBA-PREF. 299-1141 JAPAN

注文者 SHIPPER : HANWA CO., LTD.
注文者照合番号 REFERENCE No. : 228-38581020
契約番号 CONTRACT No. : 8-831-H1-5-X-AT01
商品名 COMMODITY : HOT ROLLED STEEL PLATES
規格 SPECIFICATION : ASME SA-516 GRADE 70-E07
文書番号 DOCUMENT No. :

(AS PER EN 10204 CERTIFICATE ON MATERIAL TESTS 3.1)

需要家 CUSTOMER : EDMONTON EXCHANGER GROUP OF COMPANIES
需要家管理番号 CUSTOMER'S CONTROL No. : E3001P05Q1 E07

証明書番号 CERTIFICATE No. : P-97187 頁 PAGE 52
発行年月日 DATE OF ISSUE : 2008-11-14
1001 2**DM***** *****CEW**

寸法 DIMENSION mm, ", inch, ' feet	員数 QUANTITY	質量 MASS KG	製鋼番号 CAST No. / 試験番号 TEST No.	製品番号 PLATE No.	LOCATION ORIENTATION ※1 ※2	引張試験 TENSILE TEST 耐力 YS 0.2% KSI	引張強さ TS KSI	伸び EL %	% ※3	BEND TEST ※4	衝撃試験 IMPACT TEST LOCATION ORIENTATION ※1	SIZE ※5	2V - 50F FT. LB 平均値 AVG	個々値 EACH	HBW	化学成分 CHEMICAL COMPOSITION % C ×100	Si ×100	Mn ×100	P ×1000	S ×1000	Cu ×100	Ni ×100	Cr ×100	Mo ×100	Nb ×100	V ×100	TAl ×100	Ceq. ×100	熱処理状態 CONDITION OF SUPPLY ※7
06			G0641	TESTED-PL										224	AVG	16	39	146	6	2	2	2	2	0	14	0	34	41	
0.75"X120.5"X480"	1	5579	42213	873030629	TC	55	78	33			TL	F	254	265	155		35	2	6		0	10	2	0					
														273															
																P	16	39	146	5	2	2	2	2	0	13	0	41	
																		37		6			13	1	0				
06			G0641											224	AVG	16	39	146	6	2	2	2	2	0	14	0	34	41	
0.75"X120.5"X480"	1	5579	42213	873030630	TC	55	78	33			TL	F	254	265	155		35	2	6		0	10	2	0					
														273															
																P	16	39	146	5	2	2	2	2	0	13	0	41	
																		37		6			13	1	0				
06			G0641	TESTED-PL										245	AVG	16	39	146	6	2	2	2	2	0	14	0	34	41	
0.75"X120.5"X480"	1	5579	42214	873030617	TC	56	77	30			TL	F	245	251	154		35	2	6		0	10	2	0					
														238															
																P	16	39	146	5	2	2	2	2	0	13	0	41	
																		37		6			13	1	0				

注釈 NOTES
※1 Location Orientation 位置・方向, T:頂部 Top, B:底部 Bottom, L:圧延方向 Longitudinal, C:直角方向 Transverse, Z:板厚方向 Through Thickness, R:45° 方向 45Deg. to the Longitudinal Axis
※2 GL 標点距離 Gage Length, A:50mm 平形試験片 Rectangular, B:50mm 丸形試験片 Round, C:70mm 平形試験片 Rectangular, D:70mm 丸形試験片 Round, E:80mm 平形試験片 Rectangular, F:80mm 丸形試験片 Round, G:200mm, H:2", I:8", J:5.65$\sqrt{So}$, K:4.$\sqrt{So}$
※3 RA:絞り Reduction of Area, YR:降伏比 Yield Ratio, ※4 A:合格 Acceptable, ※5 F:頂部寸法 FULL SIZE, 2:2.5mm, 3:3.33mm, 4:3.33mm, 5:5.0mm, 6:6.67mm, 7:7.5mm, 8:8.7mm, 9:製品板厚 PlateThickness, ※6 P:製品分析 Product Analysis,
※7 N:焼準 Normalized, Q:焼入れ Quenched, T:焼戻し Tempered, CR:Controlled Rolled, NIC:NIC Process/TMC Process, CLC:CLC Process/TMC Process, AR:As Rolled, TMR:TMR Process/TMC Process, NR:Normalizing Rolled
SH:延性破面率 Shear Fracture, CF:脆性破面率 Crystallinity Fracture, LE:横膨出 Lateral Expansion, AGS:オーステナイト粒度 Austenite Grain Size, FGS:フェライト粒度 Ferrite Grain Size, SR:Stress Relieved/Post Weld Heat Treatment
温度 Temperature °C °F

上記注文品は御指定の規格または仕様に従って製造され、その要求事項を満足していることを証明します。

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T. Adachi
君津製鉄所厚板管理グループリーダー
GROUP MANAGER
PLATE QUALITY CONTROL DEPT.
KIMITSU WORKS

AY4056206242

B

注文者 SHIPPER : HANWA CO., LTD.
注文者照合番号 REFERENCE No. : 228-38581020
契約番号 CONTRACT No. : 8-831-H1-5-X-AT01
商品名 COMMODITY : HOT ROLLED STEEL PLATES
規格 SPECIFICATION : ASME SA-516 GRADE 70-E07
文書番号 DOCUMENT No. :

新日本製鐵株式會社
Nippon Steel Corporation
本社 HEAD OFFICE : 〒100-8071 東京都千代田区大手町二丁目6番3号 2-6-3, OTEMACHI, CHIYODA-KU, TOKYO 100-8071, JAPAN
君津製鐵所 KIMITSU WORKS : 〒299-1141 千葉県君津市君津1番地 1, KIMITSU, KIMITSU-CITY, CHIBA-PREF. 299-1141 JAPAN

鋼材検査証明書
INSPECTION CERTIFICATE

(AS PER EN 10204 CERTIFICATE ON MATERIAL TESTS 3.1)

証明書番号 CERTIFICATE No. : P-97187 頁 PAGE : 53
発行年月日 DATE OF ISSUE : 2008-11-14
需要家 CUSTOMER : EDMONTON EXCHANGER GROUP OF COMPANIES
需要家管理番号 CUSTOMER'S CONTROL No. : 1001 2**DM***** *****CEW** E3001P0501 E07

寸法 DIMENSION mm, "inch, 'feet	員数 QUANTITY	質量 MASS KG	製鋼番号 CAST No. / 試験番号 TEST No.	製品番号 PLATE No.	LOCATION ORIENTATION GL ※1	引張試験 TENSILE TEST 耐力降伏点 YS YP 0.2% KSI	引張強さ TS KSI	伸び EL %	% ※3	BEND TEST DIR. ※1	LOCATION ORIENTATION	SIZE	衝撃試験 IMPACT TEST 2V - 50F FT. LB 平均値 AVG	個々値 EACH	HBW	化学成分 CHEMICAL COMPOSITION % C ×100	Si ×100	Mn ×100	P ×1000	S ×1000	Cu ×100	Ni ×100	Cr ×100	Mo ×100	Nb ×100	V ×100	TAl ×100	Ceq.1 ×100	熱処理条件 HEAT TREATMENT CONDITION
																	N ×1000	TE3	TE1 ×100		SN ×100	CA ×10000	B ×10000	Ti ×100	Pcm ×100	Sol. Al ×100	Ceq.2 ×100	※7
06			G0641													16	39	146	6	2	2	2	2	0	14	0	34	41	
0.75"X120.5"X480"	1	5579	42214	87303061	8TC	56	77	30		TL	F	245	245	AVG			35	2	6		0	10	2	0					
													251	154														
													238															
															P	16	39	146	5	2	2	2	2	0	13	0		41	
																	37		6			13	1	0				
06			G0641	TESTED-PL												16	39	146	6	2	2	2	2	0	14	0	34	41	
0.75"X120.5"X480"	1	5579	42215	87303061	9TC	56	78	31		TL	F	231	225	AVG			35	2	6		0	10	2	0					
													226	156														
													242															
															P	16	39	146	5	2	2	2	2	0	13	0		41	
																	37		6			13	1	0				
06			G0641													16	39	146	6	2	2	2	2	0	14	0	34	41	
0.75"X120.5"X480"	1	5579	42215	87303062	0TC	56	78	31		TL	F	231	225	AVG			35	2	6		0	10	2	0					
													226	156														
													242															
															P	16	39	146	5	2	2	2	2	0	13	0		41	
																	37		6			13	1	0				

注釈 NOTES
※1 Location Orientation 位置・方向, T:頂部 Top, B:底部 Bottom, L:圧延方向 Longitudinal, C:直角方向 Transverse, Z:板厚方向 Through Thickness, R:45° 方向 45Deg. to the Longitudinal Axis
※2 GL 標点距離 Gage Length, A:50mm 平形試験片 Rectangular, B:50mm丸形試験片 Round, C:70mm 平形試験片 Rectangular, D:70mm丸形試験片 Round, E:80mm平形試験片 Rectangular, F:80mm丸形試験片 Round, G:200mm, H:2", I:8", J:5.65$\sqrt{So}$, K:4.$\sqrt{So}$
※3 RA:絞り Reduction of Area, YR:降伏比 Yield Ratio, ※4 A:合格 Acceptable, ※5 F:試験寸法 FULL SIZE, 2:2.5mm, 3:3.33mm, 4:3.33mm, 5:5.0mm, 6:6.67mm, 7:7.5mm, 8:6.7mm, 9:製品板厚 PlateThickness, ※6 P:製品分析 Product Analysis,
※7 N:焼準 Normalized, Q:焼入れ Quenched, T:焼戻し Tempered, CR:Controlled Rolled, NIC:NIC Process/TMC Process, CLC:CLC Process/TMC Process, AR:As Rolled, TMR:TMR Process/TMC Process, NR:Normalizing Rolled
SH:延性破面率 Shear Fracture, CF:脆性破面率 Crystallinity Fracture, LE:横膨出 Lateral Expansion, AGS:オーステナイト粒度 Austenite Grain Size, FGS:フェライト粒度 Ferrite Grain Size, SR:Stress Relieved/Post Weld Heat Treatment
温度 Temperature °C °F

上記注文品は御指定の規格または仕様に従って製造され、その要求事項を満足していることを証明します。

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T. Adachi
君津製鐵所厚板管理グループリーダー
GROUP MANAGER
PLATE QUALITY CONTROL DEPT.
KIMITSU WORKS

AY405306242

B

新日本製鐵株式會社
Nippon Steel Corporation

鋼材検査証明書
INSPECTION CERTIFICATE

本　　社 : 〒100-8071　東京都千代田区大手町二丁目6番3号
HEAD OFFICE　2-6-3, OTEMACHI, CHIYODA-KU, TOKYO 100-8071, JAPAN
君津製鐵所 : 〒299-1141　千葉県君津市君津1番地
KIMITSU WORKS　1, KIMITSU, KIMITSU-CITY, CHIBA-PREF, 299-1141 JAPAN

注　文　者 SHIPPER : HANWA CO., LTD.
注文者照合番号 REFERENCE No. : 228-38581020
契約番号 CONTRACT No. : 8-831-H1-5-X-AT01
商　品　名 COMMODITY : HOT ROLLED STEEL PLATES
規　　格 SPECIFICATION : ASME SA-516 GRADE 70-E07
文書番号 DOCUMENT No. :

(AS PER EN 10204 CERTIFICATE ON MATERIAL TESTS 3.1)

需要家 CUSTOMER : EDMONTON EXCHANGER GROUP OF COMPANIES
需要家管理番号 CUSTOMER'S CONTROL No. :

証明書番号 CERTIFICATE No. : P-97187　頁 PAGE : 54
発行年月日 DATE OF ISSUE : 2008-11-14
1001　2**DM*****
*****CEW**
E3001P0501 E07

寸法 DIMENSION mm, "inch, 'feet	員数 QUANTITY	質量 MASS KG	製鋼番号 CAST No. / 試験番号 TEST No.	製品番号 PLATE No.	引張試験 TENSILE TEST: 採取位置 LOCATION ORIENTATION	試験片 GL	耐力降伏点 YS 0.2% KSI	引張強さ TS KSI	伸び EL %	試験片 %	衝撃試験 IMPACT TEST: 採取位置 LOCATION ORIENTATION	試験片 SIZE	2V-50F FT.LB 平均値 AVG	個々値 EACH	HBW	化学成分 CHEMICAL COMPOSITION % C	Si	Mn	P	S	Cu	Ni	Cr	Mo	Nb	V	TAl	Cu-1	N	TE3	TE1	SN	CA	B	Ti	Pcm	Sol.Al	Ceq.2	CONDITION OF SUPPLY
06			G0641	TESTED-PL										245	AVG	16	39	146	6	2	2	2	2	0	14	0	34	41									
0.75"X120.5"X480"	1	5579	42217	873030609	TC	L	55	78	33		TL	F	267	276	152		35	2	6		0	10	2	0												
														279																							
																P	16	39	146	5	2	2	2	2	0	13	0		41								
																		37		6			13	1	0											
06			G0641											245	AVG	16	39	146	6	2	2	2	2	0	14	0	34	41									
0.75"X120.5"X480"	1	5579	42217	873030610	TC	L	55	78	33		TL	F	267	276	152		35	2	6		0	10	2	0												
														279																							
																P	16	39	146	5	2	2	2	2	0	13	0		41								
																		37		6			13	1	0											
06			G0641	TESTED-PL										252	AVG	16	39	146	6	2	2	2	2	0	14	0	34	41									
0.75"X120.5"X480"	1	5579	42218	873030611	TC	L	55	76	27		TL	F	248	227	157		35	2	6		0	10	2	0												
														265																							
																P	16	39	146	5	2	2	2	2	0	13	0		41								
																		37		6			13	1	0											

注 釈 NOTES
※1 Location Orientation 位置・方向, T:頂部 Top, B:底部 Bottom, L:圧延方向 Longitudinal, C:直角方向 Transverse, Z:板厚方向 Through Thickness, R:45° 方向 45Deg. to the Longitudinal Axis
※2 GL 標点距離 Gage Length, A: 50mm 平形試験片 Rectangular, B: 50mm 丸形試験片 Round, C: 70mm 平形試験片 Rectangular, D: 70mm 丸形試験片 Round, E: 80mm 平形試験片 Rectangular, F: 80mm 丸形試験片 Round, G: 200mm, H: 2", I: 8", J: 5.65$\sqrt{So}$, K: 4.$\sqrt{So}$
※3 RA : 絞り Reduction of Area, YR:降伏比 Yield Ratio, ※4 A:合格 Acceptable, ※5 F:規格寸法 FULL SIZE, 2: 2.5mm, 3: 3.3mm, 4: 3.33mm, 5: 5.0mm, 6: 6.67mm, 7: 7.5mm, 8: 6.7mm, 9: 製品板厚 Plate Thickness, ※6 P:製品分析 Product Analysis,
※7 N:焼準 Normalized, Q:焼入れ Quenched, T:焼戻し Tempered, CR: Controlled Rolled, NIC: NIC Process/TMC Process, CLC: CLC Process/TMC Process, AR: As Rolled, TMR: TMR Process/TMC Process, NR: Normalizing Rolled
SH:延性破面率 Shear Fracture, CF:脆性破面率 Crystallinity Fracture, LE:横拡出 Lateral Expansion, AGS:オーステナイト粒度 Austenite Grain Size, FGS:フェライト粒度 Ferrite Grain Size, SR: Stress Relieved/Post Weld Heat Treatment
試験 Temperature °C °F

上記注文品は御指定の規格または仕様に従って製造され、その要求事項を満足していることを証明します。

WE HEREBY CERTIFY THAT THE MATERIAL DESCRIBED HEREIN HAS BEEN MADE IN ACCORDANCE WITH THE RULES OF THE CONTRACT.

T. Adachi

君津製鐵所厚板管理グループリーダー
GROUP MANAGER
PLATE QUALITY CONTROL DEPT.
KIMITSU WORKS

AX4056406242

B

注文者 SHIPPER : HANWA CO., LTD.
注文者照合番号 REFERENCE No. : 228-38581020
契約番号 CONTRACT No. : 8-831-H1-5-X-AT01
商品名 COMMODITY : HOT ROLLED STEEL PLATES
規格 SPECIFICATION : ASME SA-516 GRADE 70-E07
文書番号 DOCUMENT No. :

新日本製鐵株式會社
Nippon Steel Corporation
鋼材検査証明書
INSPECTION CERTIFICATE

(AS PER EN 10204 CERTIFICATE ON MATERIAL TESTS 3.1)

需要家 CUSTOMER : EDMONTON EXCHANGER GROUP OF COMPANIES
需要家管理番号 CUSTOMER'S CONTROL No. :

本社 HEAD OFFICE : 〒100-8071 東京都千代田区大手町二丁目6番3号 2-6-3, OTEMACHI, CHIYODA-KU, TOKYO 100-8071, JAPAN
君津製鉄所 KIMITSU WORKS : 〒299-1141 千葉県君津市君津1番地 1, KIMITSU, KIMITSU-CITY, CHIBA-PREF, 299-1141 JAPAN

証明書番号 CERTIFICATE No. : P-97187
頁 PAGE : 55
発行年月日 DATE OF ISSUE : 2008-11-14
1001
2**DM*****
*****CEW**
E3001P05Q1 E07

寸法 DIMENSION mm, "inch, 'feet	員数 QUANTITY	質量 MASS KG	製鋼番号 CAST No. / 試験番号 TEST No.	製品番号 PLATE No.	LOCATION ORIENTATION GL ※1 ※2	引張試験 TENSILE TEST 耐力 YS 0.2% KSI	引張強さ TS KSI	伸び EL %	% ※2	MAG TEST ※1 ※5	LOCATION ORIENTATION ※1	SIZE ※5	衝撃試験 IMPACT TEST 2V - 50F FT. LB 平均値 AVG	個々値 EACH	HBW	化学成分 CHEMICAL COMPOSITION % C ×100	Si ×100	Mn ×100	P ×1000	S ×1000	Cu ×100	Ni ×100	Cr ×100	Mo ×100	Nb ×100 ×1000	V ×100 ×1000	TAl ×100	Ceq.1 ×100	HEAT TREATMENT CONDITION ※7
06			G0641											252	AVG	16	39	146	6	2	2	2	2	0	14	0	34	41	
0.75"X120.5"X480"	1	5579	42218	873030612	TC	55	76	27		TL	F	248	227	157		35	2	6		0	10	2	0						
													265																
															P16	39	146	5	2	2	2	2	0	13	0		41	
																37		6			13	1	0					
06			G0641	TESTED-PL										239	AVG	16	39	146	6	2	2	2	2	0	14	0	34	41	
0.75"X120.5"X480"	1	5579	42219	873030613	TC	55	78	31		TL	F	256	237	154		35	2	6		0	10	2	0						
													291																
															P16	39	146	5	2	2	2	2	0	13	0		41	
																37		6			13	1	0					
06			G0641											239	AVG	16	39	146	6	2	2	2	2	0	14	0	34	41	
0.75"X120.5"X480"	1	5579	42219	873030614	TC	55	78	31		TL	F	256	237	154		35	2	6		0	10	2	2	0	14	0			
													291																
															P16	39	146	5	2	2	2	2	0	13	0		41	
																37		6			13	1	0					

注釈 NOTES
※1 Location Orientation 位置 - 方向, T:頂部 Top, B:底部 Bottom, L:圧延方向 Longitudinal, C:直角方向 Transverse, Z:板厚方向 Through Thickness, R:45° 方向 45Deg. to the Longitudinal Axis
※2 GL 標点距離 Gage Length, A:50mm 平形試験片 Rectangular, B:50mm 丸形試験片 Round, C:70mm 平形試験片 Rectangular, D:70mm 丸形試験片 Round, E:80mm 平形試験片 Rectangular, F:80mm 丸形試験片 Round, G:200mm, H:2", I:8", J:5.65$\sqrt{So}$, K:4$\sqrt{So}$
※3 RA:絞り Reduction of Area, YR:降伏比 Yield Ratio, ※4 A:合格 Acceptable, ※5 F:標準寸法 FULL SIZE, 2:2.5mm, 3:3.3mm, 4:3.33mm, 5:5.0mm, 6:6.67mm, 7:7.5mm, 8:6.7mm, 9:製品板厚 PlateThickness, ※6 P:製品分析 Product Analysis,
※7 N:焼準 Normalized, Q:焼入れ Quenched, T:焼戻し Tempered, CR:Controlled Rolled, NIC:NIC Process/TMC Process, CLC:CLC Process/TMC Process, AR:As Rolled, TMR:TMR Process/TMC Process, NR:Normalizing Rolled
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試験 Temperature C: F:

上記注文品は御指定の規格または仕様に従って製造され、その要求事項を満足していることを証明します。

WE HEREBY CERTIFY THAT THE MATERIAL DESCRIBED HEREIN HAS BEEN MADE IN ACCORDANCE WITH THE RULES OF THE CONTRACT.

T. Adachi
君津製鉄所原板管理グループリーダー
GROUP MANAGER
PLATE QUALITY CONTROL DEPT.
KIMITSU WORKS

AX4056506243

B

注文者 SHIPPER : HANWA CO., LTD.
注文者照合番号 REFERENCE No. : 228-38581020
契約番号 CONTRACT No. : 8-831-H1-5-X-AT01
商品名 COMMODITY : HOT ROLLED STEEL PLATES
規格 SPECIFICATION : ASME SA-516 GRADE 70-E07
文書番号 DOCUMENT No. :

新日本製鐵株式會社
Nippon Steel Corporation
鋼材検査証明書
INSPECTION CERTIFICATE

(AS PER EN 10204 CERTIFICATE ON MATERIAL TESTS 3.1)

需要家 CUSTOMER : EDMONTON EXCHANGER GROUP OF C-OMPANIES
需要家管理番号 CUSTOMER'S CONTROL No. :

本社 HEAD OFFICE : 〒100-8071 東京都千代田区大手町二丁目6番3号 2-6-3, OTEMACHI, CHIYODA-KU, TOKYO 100-8071, JAPAN
君津製鐵所 KIMITSU WORKS : 〒299-1141 千葉県君津市君津1番地 1, KIMITSU, KIMITSU-CITY, CHIBA-PREF, 299-1141 JAPAN

証明書番号 CERTIFICATE No. : P-97187
頁 PAGE : 56
発行年月日 DATE OF ISSUE : 2008-11-14

1001 2**DM***** *****CEW** E3001P05Q1 E07

寸法 DIMENSION mm, ":inch, ':feet	員数 QUANTITY	質量 MASS KG	製鋼番号 CAST No. / 試験番号 TEST No.	製品番号 PLATE No.	LOCATION ORIENTATION GL. ※1	引張試験 TENSILE TEST 耐力 YS 0.2% KSI	引張強さ TS KSI	伸び EL %	% ※3	LOCATION ORIENTATION SIZE ※1	衝撃試験 IMPACT TEST 2V-50F FT.LB 平均値 AVG	個々値 EACH	HBW	化学成分 CHEMICAL COMPOSITION % C	Si	Mn	P	S	Cu	Ni	Cr	Mo	Nb	V	TAl	Ceq.1	熱処理 CONDITION OF SUPPLY
														※6	×100 ×1000	×100	×100	×1000	×1000	×100	×100	×100	×100 ×1000	×100 ×1000	×100	×100
															N	TE3	TE1		SN	CA	B	TI			Pcm	Sol. Al	Ceq.2	※7
															×1000	×1000	×100	×100	×1000	×10000	×10000	×100			×100	×100	×100	
06 0.75"X120.5"X480"	1	5579	G0641 42220	TESTED-PL 873030615	TC	55	78	30		TL	F	233	228 233 237	AVG 153	16	39 35	146 2	6 6	2	2 0	2 10	2 2	0 0	14	0	34	41	
														P	16	39 37	146	5 6	2	2	2 13	2 1	0 0	13	0		41	
06 0.75"X120.5"X480"	1	5579	G0641 42220	873030616	TC	55	78	30		TL	F	233	228 233 237	AVG 153	16	39 35	146 2	6 6	2	2 0	2 10	2 2	0 0	14	0	34	41	
														P	16	39 37	146	5 6	2	2	2 13	2 1	0 0	13	0		41	
07 1.25"X97"X480"	1	7486	G0544 41748	TESTED-PL 873030707	TC	52	75	35		TL	F	233	231 230 237	AVG 152	15	38 36	145 2	6 6	2	2 0	2 7	2 0	0 0	11	0	34	40	
														P	15	39 37	147	6 7	2	2	2 13	3 0	0 0	12	0		40	

注釈 NOTES
※1 Location Orientation 位置・方向, T:頂部 Top, B:底部 Bottom, L:圧延方向 Longitudinal, C:直角方向 Transverse, Z:板厚方向 Through Thickness, R:45° 方向 45Deg. to the Longitudinal Axis
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※4 A:合格 Acceptable,
※5 F:標準寸法 FULL SIZE, 2:2.5mm, 3:3.3mm, 4:3.33mm, 5:5.0mm, 6:6.67mm, 7:7.5mm, 8:6.7mm, 9:製品板厚 PlateThickness,
※6 P:製品分析 Product Analysis,
※7 N:焼準 Normalized, Q:焼入れ Quenched, T:焼戻し Tempered, CR:Controlled Rolled, NIC:NIC Process/TMC Process, CLC:CLC Process/TMC Process, AR:As Rolled, TMR:TMR Process/TMC Process, NR:Normalizing Rolled
SH:剪性破面率 Shear Fracture, CF:脆性破面率 Crystallinity Fracture, LE:横拡出 Lateral Expansion, AGS:オーステナイト粒度 Austenite Grain Size, FGS:フェライト粒度 Ferrite Grain Size, SR:Stress Relieved/Post Weld Heat Treatment
温度 Temperature °C °F

上記注文品は御指定の規格または仕様に従って製造され、その要求事項を満足していることを証明します。

WE HEREBY CERTIFY THAT THE MATERIAL DESCRIBED HEREIN HAS BEEN MADE IN ACCORDANCE WITH THE RULES OF THE CONTRACT.

J. Adachi
君津製鐵所厚板管理グループリーダー
GROUP MANAGER
PLATE QUALITY CONTROL DEPT.
KIMITSU WORKS

用紙区分：厚板

B

新日本製鐵株式會社
Nippon Steel Corporation

鋼材検査証明書
INSPECTION CERTIFICATE

(AS PER EN 10204 CERTIFICATE ON MATERIAL TESTS 3.1)

本社 HEAD OFFICE : 〒100-8071 東京都千代田区大手町二丁目6番3号 2-6-3, OTEMACHI, CHIYODA-KU, TOKYO 100-8071, JAPAN
君津製鉄所 KIMITSU WORKS : 〒299-1141 千葉県君津市君津1番地 1, KIMITSU, KIMITSU-CITY, CHIBA-PREF. 299-1141 JAP.

注文者 SHIPPER : HANWA CO., LTD.
注文者照合番号 REFERENCE No. : 228-38581020
契約番号 CONTRACT No. : 8-831-H1-5-X-AT01
商品名 COMMODITY : HOT ROLLED STEEL PLATES
規格 SPECIFICATION : ASME SA-516 GRADE 70-E07
文書番号 DOCUMENT No. :
需要家 CUSTOMER : EDMONTON EXCHANGER GROUP OF COMPANIES

証明書番号 CERTIFICATE No. : P-97187
頁 PAGE : 84
発行年月日 DATE OF ISSUE : 2008-11-14
1001
2**DM*****
*****CEW**
需要家管理番号 CUSTOMER'S CONTROL No. : E3001P05Q1 E07

寸法 DIMENSION mm, ":inch, ':feet	員数 QUANTITY	質量 MASS KG	製鋼番号 CAST No. / 試験番号 TEST No.	製品番号 PLATE No.	LOCATION ORIENTATION ※1	方向 DIR.	引張試験 TENSILE TEST 降伏点又は耐力 YS 0.2% KSI	引張強さ TS KSI	伸び EL %	% ※3	LOCATION ORIENTATION ※1	SIZE ※2	衝撃試験 IMPACT TEST 2V -50F FT.LB 平均値 AVG	個々値 EACH	HBW	C ×100	Si ×100	Mn ×100	P ×1000	S ×1000	Cu ×100	Ni ×100	Cr ×100	Mo ×100	Nb ×100 <1000 ×1000	V ×100	TAl ×100	Ceq.1 ×100	熱処理記号 CONDITION CODE ※7
14 2.25"X97"X480"	1	13476	G0541 41728	TESTED-PL 87031401	TCH		55	76	38		TLF	208		226	AVG	15	38	145	8	2	2	2	2	0	13	0	35	40	
													143	36			36	2	6		0	9	1	0					
														171															
															P15		38	144	7	2	2	2	2	0	13	0		40	
																	36		6			14	1	0					
14 2.25"X97"X480"	1	13476	G0541 41729	TESTED-PL 87031402	TCH		51	75	37		TLF	227		241	AVG	15	38	145	8	2	2	2	2	0	13	0	35	40	
													144	222			36	2	6		0	9	1	0					
														217															
															P15		38	144	7	2	2	2	2	0	13	0		40	
																	36		6			14	1	0					
TOTAL	37	41889	26																										
				HEAT TREATMENT. PLATE & TEST SPECIMEN NORMALIZING : 910CX 10MIN.																										
				CHARPY IMPACT TEST TEMPERATURE (SI) :- 46C																										
				LADLE CEQ1 = C+MN/6+(NI+CU)/15+(CR+MO+V)/5																										
				PRODUCT CEQ1 = C+MN/6+(NI+CU)/15+(CR+MO+V)/5																										
				LADLE TE1 = CU+NI+CR+MO																										
				LADLE TE3 = CR+MO																										
				PRODUCT TE1 = CU+NI+CR+MO																										

注釈 NOTES ※1 Location Orientation 位置・方向. T:頂部 Top, B:底部 Bottom, L:圧延方向 Longitudinal, C:直角方向 Transverse, Z:板厚方向 Through Thickness, R:45° 方向 45Deg. to the Longitudinal Axis
※2 GL 測点距離 Gage Length, A: 50mm 平形試験片 Rectangular, B:50mm 丸形試験片 Round, C: 70mm平形試験片 Rectangular, D: 70mm丸形試験片 Round, E: 80mm平形試験片 Rectangular, F: 80mm丸形試験片 Round, G: 200mm, H: 2", I: 8", J: 5.65$\sqrt{So}$, K: 4$\sqrt{So}$
※3 RA : 絞り Reduction of Area, YR:降伏比 Yield Ratio, ※4 A:合格 Acceptable, ※5 F:標準寸法 FULL SIZE, 2:2.5mm, 3:3.3mm, 4:3.33mm, 5:5.0mm, 6:6.67mm, 7:7.5mm, 8:6.7mm, 9:製品板厚 PlateThickness, ※6 P:製品分析 Product Analysis, 温度 Temperature
※7 N:焼準 Normalized, Q:焼入れ Quenched, T:焼戻し Tempered, CR: Controlled Rolled, NIC: NIC Process/TMC Process, CLC: CLC Process/TMC Process, AR: As Rolled, TMR: TMR Process/TMC Process, NR: Normalizing Rolled
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T. Adachi
君津製鉄所厚板管理グループリーダー
GROUP MANAGER
PLATE QUALITY CONTROL DEPT.
KIMITSU WORKS

用紙区分：厚板

B

新日本製鐵株式會社
Nippon Steel Corporation

鋼材検査証明書
INSPECTION CERTIFICATE

本　　社 : 〒100-8071 東京都千代田区大手町二丁目6番3号
HEAD OFFICE 2-6-3, OTEMACHI, CHIYODA-KU, TOKYO 100-8071, JAPAN
君津製鐵所 : 〒299-1141 千葉県君津市君津1番地
KIMITSU WORKS 1, KIMITSU, KIMITSU-CITY, CHIBA-PREF, 299-1141 JAPAN

注　文　者 SHIPPER : HANWA CO., LTD.
注文者照合番号 REFERENCE No. : 228-38581020
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商　品　名 COMMODITY : HOT ROLLED STEEL PLATES
規　　格 SPECIFICATION : ASME SA-516 GRADE 70-E07
文書番号 DOCUMENT No. :

(AS PER EN 10204 CERTIFICATE ON MATERIAL TESTS 3..1)

需要家 CUSTOMER : EDMONTON EXCHANGER GROUP OF C-OMPANIES
需要家管理番号 CUSTOMER'S CONTROL No. : E3001P05Q1 E07

証明書番号 CERTIFICATE No. : P-97187　頁 PAGE : 85E
発行年月日 DATE OF ISSUE : 2008-11-14
1001
2**DM*****
*****CEW**

寸法 DIMENSION mm, ":inch, ':feet	員数 QUANTITY	質量 MASS KG	製鋼番号 CAST No. / 試験番号 TEST No.	製品番号 PLATE No.	引張試験 TENSILE TEST: LOCATION ORIENTATION 方向 ※1 ※2	耐力 YS 0.2% KSI	引張強さ TS KSI	伸び EL %	% ※3	BEND TEST 曲げ試験 ※4	LOCATION ORIENTATION 方向 ※1	衝撃試験 IMPACT TEST 2V - 50F FT.LB: 平均値 AVG	個々値 EACH	HBW	化学成分 CHEMICAL COMPOSITION %: C ×100	Si ×100	Mn ×100	P ×1000	S ×1000	Cu ×100	Ni ×100	Cr ×100	Mo ×100	Nb ×100 ×1000	V ×100	TAl ×100	Ceq 1 ×100	炭素当量 CARBON EQUIVALENT ※7
				CHEMICAL COMPOSITION % : "N" X10000																							
				CHEMICAL COMPOSITION % : "SN" X1000																							
				CHEMICAL COMPOSITION % : "TE3" X100																							
				LADLE TREATMENT : VACUUM DEGASSED																							
				SULPHIDE SHAPE CONTROL																							

	N ×10000 −×6000	TE3 −×1000−	TE1 ×100	×100	SN ×100	CA ×10000	B ×10000	TI ×100	Pcm ×100	Sol. Al ×100	Ceq 2 ×100	※7

注 記 NOTES
※1 Location Orientation 位置・方向, T:頂部 Top, B:底部 Bottom, L:圧延方向 Longitudinal, C:直角方向 Transverse, Z:板厚方向 Through Thickness, R:45° 方向 45Deg. to the Longitudinal Axis
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※3 RA : 絞り Reduction of Area, YR:降伏比 Yield Ratio, ※4 A:合格 Acceptable, ※5 F : 試験寸法 FULL SIZE, 2 : 2.5mm, 3 : 3.3mm, 4 : 3.33mm, 5 : 5.0mm, 6 : 6.67mm, 7 : 7.5mm, 8 : 6.7mm, 9 : 製品板厚 PlateThickness, ※6 P : 製品分析 Product Analysis,
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溶接 Temperature C: F:

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MTR APPROVED EDMONTON EXCHANGERS

J. Adachi
君津製鐵所厚板管理グループリーダー
GROUP MANAGER
PLATE QUALITY CONTROL DEPT.
KIMITSU WORKS

AY4055506242

製品区分 : 厚板

宝钢® 宝山钢铁股份有限公司 产品质量证明数据

BAOSHAN IRON&STEEL CO.,LTD. INSPECTION CERTIFICATE DATA

上海市宝山区同济路1800号 邮编201900
1800 TONG JI ROAD, BAOSHAN DISTRICT
201900 SHANGHAI, P.R. CHINA

14811

Issuing Date: 2008/11/19

订货单位 CUSTOMER	BAOSTEEL AMERICA INC	产品名称 PRODUCT	HOT ROLLED STEEL PLATES
标准 SPECIFICATION	ASME SA-516/SA-516M-2007 SA516GR70 MT LTUT SA578-B ASTM A516 Gr70-2006	合同号 CONTRACTO NO.	JI2B409

NO.	PLATE NO.	HEAT NO.	MATERIAL DESCRIPTION THICK	WIDTH	LENGTH (INCHES)	QTY	MASS (KG)	分析区分*1	C	Si	Mn	P	S	Tal	Ceq	PCM	X	J	位置方向*2	Y.S.	T.S.	EL*	YR	RA	位置方向*2	TEMP	IMPACT TEST 1	2	3	AVE.
									2	2	2	4	4	3	2					PSI		% (L=200mm)				F	NOTCH 2mm V thick=10mm FT.LB			
									Cu	Ni	Cr	Sn	Nb	V	Ti	Mo	B	N											
									3	3	3	4	3	3	3	3	4	5											
									1=X10 2=X100 3=X1000 4=X10000 5=X100000																					
1	SB04067100	418443	0.75	120.5	480	1	5581	L	16	32	115	95	14	37	41				TC	50750	75400	30	67		TC	-50	112	50	116	93
									170	220	190	10	14	14	12	0	3	420											
	PLATENORM	ALIZED:1652F×		16min.																											
2	SB04067200	418443	0.75	120.5	480	1	5581	L	16	32	115	95	14	37	41				TC	50750	75400	30	67		TC	-50	112	50	116	93
									170	220	190	10	14	14	12	0	3	420											
	PLATENORM	ALIZED:1657F×		16min.																											
	Test Lot No:																		PAP						PF6	47AA				
3	SB04068100	418443	0.75	120.5	480	1	5581	L	16	32	115	95	14	37	41				TC	51475	74965	31	68		TC	-50	150	125	141	139
									170	220	190	10	14	14	12	0	3	420											
	PLATENORM	ALIZED:1657F×		16min.																											
4	SB04068200	418443	0.75	120.5	480	1	5581	L	16	32	115	95	14	37	41				TC	51475	74965	31	68		TC	-50	150	125	141	139
									170	220	190	10	14	14	12	0	3	420											
	PLATENORM	ALIZED:1657F×		16min.																											
	Test Lot No:																		PAP						PF6	479A				
5	SB04069100	418443	0.75	120.5	480	1	5581	L	16	32	115	95	14	37	41				TC	52490	75255	30	69		TC	-50	129	153	131	138
									170	220	190	10	14	14	12	0	3	420											
	PLATENORM	ALIZED:167F×		17min.																											
6	SB04069200	418443	0.75	120.5	480	1	5581	L	16	32	115	95	14	37	41				TC	52490	75255	30	69		TC	-50	129	153	131	138
									170	220	190	10	14	14	12	0	3	420											
	PLATENORM	ALIZED:1654F×		16min.																											
	Test Lot No:																		PAP						PF6	477A				

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201900 SHANGHAI, P.R. CHINA

Issuing Date: 2008/11/19

订货单位 CUSTOMER	BAOSTEEL AMERICA INC	产品名称 PRODUCT	HOT ROLLED STEEL PLATES
标准 SPECIFICATION	ASME SA-516/SA-516M-2007 SA516GR70 MT LTUT SA578-B ASTM A516 Gr70-2006	合同号 CONTRACTO NO.	JI2B409

NO.	PLATE NO.	HEAT NO.	MATERIAL DESCRIPTION THICK	WIDTH	LENGTH (INCHES)	QTY	MASS (KG)	分析区分*1	CHEMICAL COMPOSITION % C	Si	Mn	P	S	Tal	Ceq	PCM	x	J	位置方向*2	TENSILE TEST Y.S. (PSI)	T.S. (PSI)	EL* (% L=200mm)	YR	RA	位置方向*2	IMPACT TEST TEMP (F)	1 NOTCH	2 2mm V	3 thick=10mm	AVE. FT.LB
									2	2	2	4	4	3	2														
									Cu	Ni	Cr	Sn	Nb	V	Ti	Mo	B	N											
									3	3	3	4	3	3	3	3	4	5											
									1=X10 2=X100 3=X1000 4=X10000 5=X100000																				
7	SB04070100	418443	0.75	120.5	480	1	5581	L	16	32	115	95	14	37	41				TC	51330	74965	30	68		TC	-50	114	36	93	81
									170	220	190	10	14	14	12	0	3	420											
	PLATENORM	ALIZED:1656Fx		16min.																									
8	SB04070200	418443	0.75	120.5	480	1	5581	L	16	32	115	95	14	37	41				TC	51330	74965	30	68		TC	-50	114	36	93	81
									170	220	190	10	14	14	12	0	3	420											
	PLATENORM	ALIZED:1654Fx		16min.																									
	Test Lot No:																		PAP						PF6	478A			
9	SB04071100	418443	0.75	120.5	480	1	5581	L	16	32	115	95	14	37	41				TC	51910	75110	30	69		TC	-50	112	132	127	124
									170	220	190	10	14	14	12	0	3	420											
	PLATENORM	ALIZED:1656Fx		20min.																									
10	SB04071200	418443	0.75	120.5	480	1	5581	L	16	32	115	95	14	37	41				TC	51910	75110	30	69		TC	-50	112	132	127	124
									170	220	190	10	14	14	12	0	3	420											
	PLATENORM	ALIZED:1656Fx		16min.																									
	Test Lot No:																		PAP						PF6	476A			
11	SB04072100	418443	0.75	120.5	480	1	5581	L	16	32	115	95	14	37	41				TC	51475	74385	28	68		TC	-50	159	207	138	168
									170	220	190	10	14	14	12	0	3	420											
	PLATENORM	ALIZED:1652Fx		16min.																									
12	SB04072200	418443	0.75	120.5	480	1	5581	L	16	32	115	95	14	37	41				TC	51475	74385	28	68		TC	-50	159	207	138	168
									170	220	190	10	14	14	12	0	3	420											
	PLATENORM	ALIZED:1656Fx		16min.																									
	Test Lot No:																		PAP						PF6	476A			

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1800 TONG JI ROAD. BAOSHAN DISTRICT
201900 SHANGHAI. P.R. CHINA

Issuing Date: 2008/11/19

订货单位 CUSTOMER	BAOSTEEL AMERICA INC	产品名称 PRODUCT	HOT ROLLED STEEL PLATES
标准 SPECIFICATION	ASME SA-516/SA-516M-2007 SA516GR70 MT LTUT SA578-B ASTM A516 Gr70-2006	合同号 CONTRACTO NO.	JI2B409

NO.	PLATE NO.	HEAT NO.	MATERIAL DESCRIPTION THICK	WIDTH	LENGTH (INCHES)	QTY	MASS (KG)	分析区分*1	C	Si	Mn	P	S	Tal	Ceq	PCM	x	J	位置方向*2	TENSILE TEST Y.S. (PSI)	T.S. (PSI)	EL* (% L=200mm)	YR	RA	位置方向*2	IMPACT TEST TEMP (F)	1 NOTCH	2 2mm V	3 thick=10mm	AVE. FT.LB
									Cu	Ni	Cr	Sn	Nb	V	Ti	Mo	B	N											
									3	3	3	4	3	3	3	3	4	5											
									1=X10 2=X100 3=X1000 4=X10000 5=X100000																					
13	8B04073100	418443	0.75	120.5	480	1	5581	L	16	32	115	95	14	37	41				TC	53070	74965	31	70		TC	-50	247	207	109	188
									170	220	190	10	14	14	12	0	3	420											
	PLATENORM	ALIZED:1652F×		16min.																										
14	8B04073200	418443	0.75	120.5	480	1	5581	L	16	32	115	95	14	37	41				TC	53070	74965	31	70		TC	-50	247	207	109	188
									170	220	190	10	14	14	12	0	3	420											
	PLATENORM	ALIZED:1657F×		16min.																										
	Test Lot No:																													
15	8B04074100	418443	0.75	120.5	480	1	5581	L	16	32	115	95	14	37	41				PAP						PF6	47EA					
									170	220	190	10	14	14	12	0	3	420	TC	49300	74095	30	66		TC	-50	142	121	168	144
	PLATENORM	ALIZED:1668F×		16min.																										
16	8B04074200	418443	0.75	120.5	480	1	5581	L	16	32	115	95	14	37	41				TC	49300	74095	30	66		TC	-50	142	121	168	144
									170	220	190	10	14	14	12	0	3	420											
	PLATENORM	ALIZED:1668F×		16min.																										
	Test Lot No:																													
17	8B04100100	418443	0.75	120.5	480	1	5581	L	16	32	115	95	14	37	41				PAP						PF6	47FA					
									170	220	190	10	14	14	12	0	3	420	TC	50605	74820	29	67		TC	-50	138	141	173	151
	PLATENORM	ALIZED:1656F×		16min.																										
18	8B04100200	418443	0.75	120.5	480	1	5581	L	16	32	115	95	14	37	41				TC	50605	74820	29	67		TC	-50	138	141	173	151
									170	220	190	10	14	14	12	0	3	420											
	PLATENORM	ALIZED:1661F×		16min.																										
	Test Lot No:																													
																			PAP						PF6	47DA				

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1800 TONG JI ROAD. BAOSHAN DISTRICT
201900 SHANGHAI P.R. CHINA

Issuing Date: 2008/11/19

订货单位 CUSTOMER	BAOSTEEL AMERICA INC	产品名称 PRODUCT	HOT ROLLED STEEL PLATES
标准 SPECIFICATION	ASME SA-516/SA-516M-2007 SA516GR70 MT LTUT SA578-B ASTM A516 Gr70-2006	合同号 CONTRACTO NO.	JI2B409

NO.	PLATE NO.	HEAT NO.	MATERIAL DESCRIPTION THICK	WIDTH	LENGTH (INCHES)	QTY	MASS (KG)	分析区分*1	C	Si	Mn	P	S	Tal	Ceq	PCM	x	J	位置方向*2	TENSILE TEST Y.S. (PSI)	T.S. (PSI)	EL* (% (L=200mm))	YR	RA	位置方向*2	IMPACT TEST TEMP (F)	1	2	3	AVE.
									2	2	2	4	4	3	2												NOTCH				
									Cu	Ni	Cr	Sn	Nb	V	Ti	Mo	B	N								2mm V				
									3	3	3	4	3	3	3	3	4	5								thick=10mm				
									1=X10 2=X100 3=X1000 4=X10000 5=X100000																	FT.LB				
19	8806170100	418443	0.75	120.5	480	1	5581	L	16	32	115	95	14	37	41				TC	50895	74530	28	68		TC	-50	187	291	303	261
									170	220	190	10	14	14	12	0	3	420												
	PLATENORM	ALIZED:1663F×		16min.																										
20	8806170200	418443	0.75	120.5	480	1	5581	L	16	32	115	95	14	37	41				TC	50895	74530	28	68		TC	-50	187	291	303	261
									170	220	190	10	14	14	12	0	3	420												
	PLATENORM	ALIZED:1665F×		16min.																										
	Test Lot No:																		PAP	AZ3A					PF6	47GA				
TOTAL						20	111620																							

REMARKS: VACUUM DEGASS, SULPHIDE SHAPE CONTROLLED . CERTIFICATION:AS EN10204 3.1 ALL DATA ONLY FOR REFERANCE. *1 ANALYSIS: L=LADLE ANALYSIS.
UT SA578-B, * EL on size 200mm(8") , PLATE NORMALIZED, TEST SPECIMEN CUT AFTER PLATE NORMALIZED *2 LOCATION AND ORIENTATION: T=Top, C=TRANS

MTR APPROVED EDMONTON EXCHANGER

DILLINGER HÜTTE

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

A02 INSPECTION CERTIFICATE 3.1 AS PER EN 10204:2004
INSPECTION CERTIFICATE 3.1.B AS PER EN 10204:1991+A1:1995 + AS PER ISO 10474:1991
MATERIAL TEST REPORT (MTR)

A10 Advice of dispatch No./ Date of dispatch: 324601-20.12.08

A08/ Manufacturer's order/ A03 Certificate No.: 343880-002 Sheet: 1/...

A05 Established inspecting body: DH

A06 Purchaser: EDMONTON STEEL,EDMON A07.1 No. ED10512-J1010-LG

Final receiver: EDMONTON STEEL,EDMON A07.2 No.

B01 Product: HOT ROLLED PLATES

B02/ Steel design.: SA516-70 SA20-S5

B03 Any suppl. requirements: ASME-2A:07
DIL-HUE-2:R24-2007-11-20

15073

A01-A99 Further commercial information - Concession requests

B14 Item No.	B07.2 Heat No.	B07.1 Rol.plate / Test No.	B16 Concession request no.	Date
01	328250	62313-01	TO/A1195/2008	19.11.08

B01-B99 Description of the product

B14 Item No.	B08 Number of pieces	B09 Thickness	B10 Width	B11 Length	B12 Theoretical mass KG	B04 Product delivery condition	B07.2 Heat No.	B07.1 Rolled plate No./ Test No.	A09 Purchaser article number
			INCH						
01	1	0,7500 x	172,00000 x	344,00000	5708	N	328250	62306-01	
01	1	0,7500 x	172,00000 x	344,00000	5708	N	328250	62306-02	
01	1	0,7500 x	172,00000 x	344,00000	5708	N	328250	62306-03	
01	1	0,7500 x	172,00000 x	344,00000	5708	N	328250	62313-01	
01	1	0,7500 x	172,00000 x	344,00000	5708	N	328250	62313-02	
01	1	0,7500 x	172,00000 x	344,00000	5708	N	328250	62313-03	
**	6				34248				
02	1	0,8750 x	178,00000 x	356,00000	7133	N	329612	76058-01	
02	1	0,8750 x	178,00000 x	356,00000	7133	N	329612	76058-02	
02	1	0,8750 x	178,00000 x	356,00000	7133	N	329614	76032-01	
02	1	0,8750 x	178,00000 x	356,00000	7133	N	329614	76032-02	
**	4				28532				
***	10				62780				

B04 Product delivery condition

ITEM NO.: 01-02
N: HT: 1670 GR.F +36 -27 GR.F
SOAKING TIME TO ATTAIN THE TARGET TEMPERATURE OVER THE WHOLE SECTION: 1-1,75 MIN/MM (25-45 MIN/INCH)
COOLING IN STILL AIR

A04 D H Manufacturer's mark

Z01/Z02/Z03 We hereby certify, that the above mentioned materials have been delivered in accordance with the terms of order.

QM-System: Certification as per ISO 9001

B. MUELLER
Test House Manager

A H B Inspector's stamp

A01 AG der Dillinger Hüttenwerke
Postfach 1580, D-66748 Dillingen/Saar
Inspection department

Date 22.12.08 KW 1

DILLINGER HÜTTE

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

A02 INSPECTION CERTIFICATE 3.1 AS PER EN 10204:2004
INSPECTION CERTIFICATE 3.1.B AS PER EN 10204:1991+A1:1995 + AS PER ISO 10474:1991
MATERIAL TEST REPORT (MTR)

A10 Advice of dispatch No./ Date of dispatch: 324601-20.12.08

A08/ Manufacturer's order/ A03 Certificate No.: 343880-002 Sheet: 2/...

A05 Established inspecting body: DH

A06 Purchaser: EDMONTON STEEL,EDMON A07.1 No.: ED10512-J1010-LG

Final receiver: EDMONTON STEEL,EDMON A07.2 No.:

B01 Product: HOT ROLLED PLATES

B02/ Steel design.: SA516-70 SA20-S5

B03 Any suppl. requirements: ASME-2A:07
DIL-HUE-2:R24-2007-11-20

B06 Marking of the product

ITEM NO.: 01-02
STEEL DESIGNATION SA516 70 MTLTV SA516 60 MTLTV
HEAT NO. / TRADEMARK / ROLLED PLATE NO.-TEST NO. / INSPECTOR'S STAMP

C10-C29 Tensile test

B14 Item No.	B07.2 Heat No.	B07.1 Rol.plate/ Test No.	B05 Reference (heat) treatment	C01	C02/ C01	C03 Temp. GR.F	C10 C11 KSI RP02	C12 RM	C13 A % L0=8IN	C14-C15 A % L0=2IN
01	328250	62306		K1	Q	RT	48,1	72,5	28,9	
01	328250	62313		K1	Q	RT	48,4	73,4		40,7
02	329612	76058		K1	Q	RT	48,9	74,7	28,4	
02	329614	76032		K1	Q	RT	44,7	72,8	27,0	

C30-C39 Hardness test

B14 Item. No.	B07.2 Heat No.	B07.1 Rol.plate/ Test No.	B05 Reference (heat) treatment	C01	C02/C01	C03 Temp. GR.F	C33 Testing method	C35 C31 Individual values			C32 Mean value
01	328250	62306		K1	O	RT	HBW 10/3000	HB 140	140	141	140
01	328250	62313		K1	O	RT	HBW 10/3000	HB 139	136	137	137
02	329612	76058		K1	O	RT	HBW 10/3000	HB 148	150	147	148
02	329614	76032		K1	O	RT	HBW 10/3000	HB 142	143	142	142

C40-C49 Impact test

B14 Item No.	B07.2 Heat No.	B07.1 Rol.plate/ Test No.	B05 Reference (heat) treatment	C01	C02/ C01	C03 Temp. GR.F	C41 Width of test piece	C40 Type of test piece	C44 Testing method	C46 Energy	C45 C42 Individual values AV=FT.LBF			C43 Mean value
01	328250	62306		K1	LV	-51		CHP-V			AV 100	128	102	110
01	328250	62313		K1	LV	-51		CHP-V			AV 94	96	112	101
02	329612	76058		K1	LV	-51		CHP-V			AV 96	158	148	134

A04 Manufacturer's mark: D H

Z01/Z02/Z03 We hereby certify, that the above mentioned materials have been delivered in accordance with the terms of order.

QM-System: Certification as per ISO 9001

B. MUELLER
Test House Manager

Inspector's stamp: A H B

Date 22.12.08 KW 1

A01 AG der Dillinger Hüttenwerke
Postfach 1580, D-66748 Dillingen/Saar
Inspection department

DILLINGER HÜTTE

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A02 INSPECTION CERTIFICATE 3.1 AS PER EN 10204:2004
INSPECTION CERTIFICATE 3.1.B AS PER EN 10204:1991+A1:1995 + AS PER ISO 10474:1991
MATERIAL TEST REPORT (MTR)

A10 Advice of dispatch No./ Date of dispatch: 324601-20.12.08

A08/ Manufacturer's order/ A03 Certificate No.: 343880-002 Sheet: 3/...

A05 Established inspecting body: DH

A06 Purchaser: EDMONTON STEEL,EDMON A07.1 No. ED10512-J1010-LG

Final receiver: EDMONTON STEEL,EDMON A07.2 No.

B01 Product: HOT ROLLED PLATES

B02/ Steel design. SA516-70 SA20-S5

B03 Any suppl. requirements: ASME-2A:07
DIL-HUE-2:R24-2007-11-20

C40-C49 Impact test

B14 Item No.	B07.2 Heat No.	B07.1 Roll.plate/ Test No.	B05 Reference (heat) treatment	C01	C02/ C01	C03 Temp. GR.F	C41 Width of test piece	C40 Type of test piece	C44 Testing method	C46 Energy	C45	C42 Individual values AV=FT.LBF			C43 Mean value
02	329614	76032		K1	LV	-51		CHP-V			AV	91	75	86	84

C70-C99 Chemical composition % - Heat analysis

B07.2 Heat	C70	C	SI	MN	P	S	N	CU	MO	NI	CR	V	NB	SN	TI
328250	Y	0,185	0,228	1,10	0,012	0,0011	0,0048	0,026	0,009	0,029	0,049	0,002	0,000	0,001	0,003
329612	Y	0,176	0,363	1,17	0,008	0,0008	0,0075	0,054	0,030	0,043	0,047	0,000	0,000	0,004	0,003
329614	Y	0,177	0,367	1,16	0,009	0,0007	0,0071	0,031	0,013	0,039	0,040	0,001	0,000	0,001	0,002

B07.2 Heat	C70	B	CA	AL-T
328250	Y	0,0000	0,0012	0,032
329612	Y	0,0002	0,0018	0,034
329614	Y	0,0002	0,0022	0,040

C94 Heat analysis Carbon equivalent / Alloying restrictions

B07.2 Heat								
328250	FO-02=	0,38	FO-55=	0,11	FO-78=	0,06	FO-91=	5,9
329612	FO-02=	0,39	FO-55=	0,17	FO-78=	0,08	FO-91=	6,6
329614	FO-02=	0,39	FO-55=	0,12	FO-78=	0,05	FO-91=	6,6

C95 Ladle treatment

ITEM NO.: 01-02
HEAT OF THE INDICATED ITEM: VACUUM DEGASSED / SULPHIDE SHAPE CONTROL

A04 D H Manufacturer's mark

Z01/Z02/Z03 We hereby certify, that the above mentioned materials have been delivered in accordance with the terms of order.

QM-System: Certification as per ISO 9001

B. MUELLER
Test House Manager

A H B Inspector's stamp

A01 AG der Dillinger Hüttenwerke
Postfach 1580, D-66748 Dillingen/Saar
Inspection department

Date 22.12.08 KW 1

DILLINGER HÜTTE

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A02 INSPECTION CERTIFICATE 3.1 AS PER EN 10204:2004
INSPECTION CERTIFICATE 3.1.B AS PER EN 10204:1991+A1:1995 + AS PER ISO 10474:1991
MATERIAL TEST REPORT (MTR)

A10 Advice of dispatch No./ Date of dispatch: 324601-20.12.08

A08/ Manufacturer's order/ A03 Certificate No.: 343880-002 Sheet: 4/...

A05 Established inspecting body: DH

A06 Purchaser: EDMONTON STEEL,EDMON A07.1 No. ED10512-J1010-LG

Final receiver: EDMONTON STEEL,EDMON A07.2 No.

B01 Product: HOT ROLLED PLATES

B02/ Steel design. SA516-70 SA20-S5

B03 Any suppl. requirements ASME-2A:07
DIL-HUE-2:R24-2007-11-20

C70-C99 Chemical composition % - Product analysis

B07.2 Heat	B07.1 Test No.	C01	C	SI	MN	P	S	N	CU	MO	NI	CR	V	NB	SN	TI
328250	62313	K1	0,181	0,218	1,08	0,012	0,0010	0,0037	0,028	0,007	0,026	0,045	0,001	0,000	0,000	0,003
329612	76050	K1	0,168	0,350	1,13	0,007	0,0008	0,0082	0,053	0,031	0,041	0,047	0,000	0,000	0,002	0,003
329614	76032	K1	0,170	0,365	1,14	0,009	0,0006	0,0070	0,027	0,011	0,038	0,039	0,000	0,000	0,000	0,002

B07.2 Heat	B07.1 Test No.	C01	B	CA	AL-T
328250	62313	K1	0,0002	0,0016	0,032
329612	76050	K1	0,0002	0,0018	0,033
329614	76032	K1	0,0002	0,0026	0,040

C94 Product analysis Carbon equivalent / Alloying restrictions

B07.2 Heat	B07.1 Test No.	C01				
328250	62313	K1	FO-02=	0,38	FO-55=	0,11
329612	76050	K1	FO-02=	0,38	FO-55=	0,17
329614	76032	K1	FO-02=	0,37	FO-55=	0,12

C94 Carbon equivalent formula / Alloying restrictions

FO-02 = C+(MN/6)+(CR+MO+V)/5+(NI+CU)/15
FO-55 = CU+MO+NI+CR
FO-78 = CR+MO
FO-91 = MN/C

A04 D H Manufacturer's mark

Z01/Z02/Z03 We hereby certify, that the above mentioned materials have been delivered in accordance with the terms of order.

QM-System: Certification as per ISO 9001

B. MUELLER
Test House Manager

A H B Inspector's stamp

A01 AG der Dillinger Hüttenwerke
Postfach 1580, D-66748 Dillingen/Saar
Inspection department

Date 22.12.08 KW 1

DILLINGER HÜTTE

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

A02 INSPECTION CERTIFICATE 3.1 AS PER EN 10204:2004
INSPECTION CERTIFICATE 3.1.B AS PER EN 10204:1991+A1:1995 + AS PER ISO 10474:1991
MATERIAL TEST REPORT (MTR)

A10 Advice of dispatch No./ Date of dispatch: 324601-20.12.08

A08/ Manufacturer's order/ A03 Certificate No.: 343880-002

Sheet: 5

A05 Established inspecting body: DH

A06 Purchaser: EDMONTON STEEL,EDMON A07.1 No. ED10512-J1010-LG

Final receiver: EDMONTON STEEL,EDMON A07.2 No.

B01 Product: HOT ROLLED PLATES

B02/ Steel design. SA516-70 SA20-S5

B03. Any suppl. requirements ASME-2A:07
DIL-HUE-2:R24-2007-11-20

D01 Marking and identification, surface appearance, shape and dimensional properties

ITEM NO.: 01-02
RESULT OF MARKING, SURFACE, SHAPE AND DIMENSIONS: NO REMARKS

SURFACE	AS PER ASME-SA20
THICKNESS	AS PER ASME-SA20
LENGTH AND WIDTH	AS PER ASME-SA20
FLATNESS	AS PER 1/2-ASME-SA20

MTR APPROVED EDMONTON EXCHANGER

A04 D H Manufacturer's mark

Z01/Z02/Z03 We hereby certify, that the above mentioned materials have been delivered in accordance with the terms of order.

QM-System: Certification as per ISO 9001

B. MUELLER
Test House Manager

A H B Inspector's stamp

A01
AG der Dillinger Hüttenwerke
Postfach 1580, D-66748 Dillingen/Saar
Inspection department

Date 22.12.08 KW 1

DILLINGER HÜTTE

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

A02 INSPECTION CERTIFICATE 3.1 AS PER EN 10204:2004
INSPECTION CERTIFICATE 3.1.B AS PER EN 10204:1991+A1:1995 + AS PER ISO 10474:1991
MATERIAL TEST REPORT (MTR)

A10 Advice of dispatch No./ Date of dispatch: 369429-17.09.10

A08/ Manufacturer's order/ A03 Certificate No.: 357359-002 Sheet: 1/...

A05 Established inspecting body: DH

A06 Purchaser: EDMONTON STEEL, EDMON A07.1 No. ED10551-J1010-ER

Final receiver: EDMONTON STEEL, EDMON A07.2 No.

B01 Product: HOT ROLLED PLATES

B02/ Steel design.: SA516-70 SA20-S5

B03 Any suppl. requirements: ASME-II-A:07+A09
DIL-HUE-2:R30-2010-01-31

15711

B01-B99 Description of the product

B14 Item No.	B08 Number of pieces	B09 Thickness	B10 Width	B11 Length	B12 Theoretical mass KG	B04 Product delivery condition	B07.2 Heat No.	B07.1 Rolled plate No./ Test No.	A09 Purchaser article number
			INCH						
01	1	0,6250 x	120,50000 x	480,00000	4650	N	348840	11315-01	
01	1	0,6250 x	120,50000 x	480,00000	4650	N	350041	63961-01	
01	1	0,6250 x	120,50000 x	480,00000	4650	N	350041	63961-02	
01	1	0,6250 x	120,50000 x	480,00000	4650	N	350399	17648-01	
01	1	0,6250 x	120,50000 x	480,00000	4650	N	350399	17648-02	
01	1	0,6250 x	120,50000 x	480,00000	4650	N	350399	17648-03	
01	1	0,6250 x	120,50000 x	480,00000	4650	N	350399	17724-01	
01	1	0,6250 x	120,50000 x	480,00000	4650	N	350399	17724-02	
01	1	0,6250 x	120,50000 x	480,00000	4650	N	350399	17724-03	
01	1	0,6250 x	120,50000 x	480,00000	4650	N	350399	20921-01	
01	1	0,6250 x	120,50000 x	480,00000	4650	N	350399	20921-02	
01	1	0,6250 x	120,50000 x	480,00000	4650	N	350399	20921-03	
01	1	0,6250 x	120,50000 x	480,00000	4650	N	350399	21295-01	
01	1	0,6250 x	120,50000 x	480,00000	4650	N	350399	21295-02	
01	1	0,6250 x	120,50000 x	480,00000	4650	N	350399	21295-03	
01	1	0,6250 x	120,50000 x	480,00000	4650	N	350399	21306-02	
01	1	0,6250 x	120,50000 x	480,00000	4650	N	350399	21306-03	
01	1	0,6250 x	120,50000 x	480,00000	4650	N	350399	21322-01	
01	1	0,6250 x	120,50000 x	480,00000	4650	N	350399	21322-02	
01	1	0,6250 x	120,50000 x	480,00000	4650	N	350399	21322-03	
01	1	0,6250 x	120,50000 x	480,00000	4650	N	350405	39539-01	
01	1	0,6250 x	120,50000 x	480,00000	4650	N	350405	39539-02	
01	1	0,6250 x	120,50000 x	480,00000	4650	N	350405	39694-02	

A04 Manufacturer's mark: D H

Z01/Z02/Z03 We hereby certify, that the above mentioned materials have been delivered in accordance with the terms of order.

QM-System: Certification as per ISO 9001

B. BALDAUF
Test House Manager

Inspector's stamp: A H B

A01
AG der Dillinger Hüttenwerke
Postfach 1580, D-66748 Dillingen/Saar
Inspection department

Date 17.09.10 BM 1

DILLINGER HÜTTE

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

A02 INSPECTION CERTIFICATE 3.1 AS PER EN 10204:2004
INSPECTION CERTIFICATE 3.1.B AS PER EN 10204:1991+A1:1995 + AS PER ISO 10474:1991
MATERIAL TEST REPORT (MTR)

A10 Advice of dispatch No./ Date of dispatch: 369429-17.09.10

A08/ Manufacturer's order/ A03 Certificate No.: 357359-002 Sheet: 2/...

A05 Established inspecting body: DH

A06 Purchaser: EDMONTON STEEL,EDMON A07.1 No. ED10551-J1010-ER

Final receiver: EDMONTON STEEL,EDMON A07.2 No.

B01 Product: HOT ROLLED PLATES

B02/ Steel design. SA516-70 SA20-S5

B03 Any suppl. requirements ASME-II-A:07+A09
DIL-HUE-2:R30-2010-01-31

B01-B99 Description of the product

B14 Item No.	B08 Number of pieces	B09 Thickness		B10 Width		B11 Length	B12 Theoretical mass KG	B04 Product delivery condition	B07.2 Heat No.	B07.1 Rolled plate No./ Test No.	A09 Purchaser article number
		INCH									
01	1	0,6250	x	120,50000	x	480,00000	4650	N	350405	39694-03	
01	1	0,6250	x	120,50000	x	480,00000	4650	N	350405	39715-02	
01	1	0,6250	x	120,50000	x	480,00000	4650	N	350405	39774-01	
01	1	0,6250	x	120,50000	x	480,00000	4650	N	350405	39774-02	
01	1	0,6250	x	120,50000	x	480,00000	4650	N	350405	39774-03	
01	1	0,6250	x	120,50000	x	480,00000	4650	N	350405	39799-01	
01	1	0,6250	x	120,50000	x	480,00000	4650	N	350405	39799-02	
01	1	0,6250	x	120,50000	x	480,00000	4650	N	350405	39799-03	
01	1	0,6250	x	120,50000	x	480,00000	4650	N	350405	39959-01	
01	1	0,6250	x	120,50000	x	480,00000	4650	N	350405	39959-02	
01	1	0,6250	x	120,50000	x	480,00000	4650	N	350405	39959-03	
01	1	0,6250	x	120,50000	x	480,00000	4650	N	350405	39965-01	
01	1	0,6250	x	120,50000	x	480,00000	4650	N	350405	39965-02	
**	36						167400				
02	1	0,7500	x	120,50000	x	480,00000	5580	N	350401	15513-01	
02	1	0,7500	x	120,50000	x	480,00000	5580	N	350401	15513-02	
02	1	0,7500	x	120,50000	x	480,00000	5580	N	350401	15513-03	
02	1	0,7500	x	120,50000	x	480,00000	5580	N	350401	15526-01	
02	1	0,7500	x	120,50000	x	480,00000	5580	N	350401	15526-02	
02	1	0,7500	x	120,50000	x	480,00000	5580	N	350401	15526-03	
02	1	0,7500	x	120,50000	x	480,00000	5580	N	350401	15608-01	
02	1	0,7500	x	120,50000	x	480,00000	5580	N	350401	15610-01	
02	1	0,7500	x	120,50000	x	480,00000	5580	N	350401	15610-02	

A04 D H Manufacturer's mark

Z01/Z02/Z03 We hereby certify, that the above mentioned materials have been delivered in accordance with the terms of order.

QM-System: Certification as per ISO 9001

B. BALDAUF
Test House Manager

A H B Inspector's stamp

Date 17.09.10 BM 1

A01 AG der Dillinger Hüttenwerke
Postfach 1580, D-66748 Dillingen/Saar
Inspection department

DILLINGER HÜTTE

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A02 INSPECTION CERTIFICATE 3.1 AS PER EN 10204:2004
INSPECTION CERTIFICATE 3.1.B AS PER EN 10204:1991+A1:1995 + AS PER ISO 10474:1991
MATERIAL TEST REPORT (MTR)

A10 Advice of dispatch No./ Date of dispatch: 369429-17.09.10

A08/ A03 Manufacturer's order/ Certificate No.: 357359-002 Sheet: 3/...

A05 Established inspecting body: DH

A06 Purchaser: EDMONTON STEEL, EDMON A07.1 No. ED10551-J1010-ER

Final receiver: EDMONTON STEEL, EDMON A07.2 No.

B01 Product: HOT ROLLED PLATES

B02/ Steel design. SA516-70 SA20-S5

B03 Any suppl. requirements ASME-II-A:07+A09
DIL-HUE-2:R30-2010-01-31

B01-B99 Description of the product

B14 Item No.	B08 Number of pieces	B09 Thickness	B10 Width	B11 Length	B12 Theoretical mass KG	B04 Product delivery condition	B07.2 Heat No.	B07.1 Rolled plate No./ Test No.	A09 Purchaser article number
			INCH						
02	1	0,7500 x	120,50000 x	480,00000	5580	N	350401	15610-03	
02	1	0,7500 x	120,50000 x	480,00000	5580	N	350401	15626-01	
02	1	0,7500 x	120,50000 x	480,00000	5580	N	350401	15626-02	
02	1	0,7500 x	120,50000 x	480,00000	5580	N	350401	15645-01	
02	1	0,7500 x	120,50000 x	480,00000	5580	N	350401	15645-02	
02	1	0,7500 x	120,50000 x	480,00000	5580	N	350401	15645-03	
02	1	0,7500 x	120,50000 x	480,00000	5580	N	350402	15169-03	
02	1	0,7500 x	120,50000 x	480,00000	5580	N	350402	15399-01	
02	1	0,7500 x	120,50000 x	480,00000	5580	N	350402	15399-02	
02	1	0,7500 x	120,50000 x	480,00000	5580	N	350402	15399-03	
02	1	0,7500 x	120,50000 x	480,00000	5580	N	350405	39714-01	
02	1	0,7500 x	120,50000 x	480,00000	5580	N	350405	39946-01	
02	1	0,7500 x	120,50000 x	480,00000	5580	N	350405	39946-02	
02	1	0,7500 x	120,50000 x	480,00000	5580	N	350405	39946-03	
02	1	0,7500 x	120,50000 x	480,00000	5580	N	350405	39963-01	
02	1	0,7500 x	120,50000 x	480,00000	5580	N	350405	39963-02	
02	1	0,7500 x	120,50000 x	480,00000	5580	N	350405	40537-01	
02	1	0,7500 x	120,50000 x	480,00000	5580	N	350405	40537-02	
**	27				150660				
03	1	0,7500 x	150,00000 x	480,00000	6946	N	350403	13199-01	
03	1	0,7500 x	150,00000 x	480,00000	6946	N	350403	13199-02	
03	1	0,7500 x	150,00000 x	480,00000	6946	N	350403	13199-03	
03	1	0,7500 x	150,00000 x	480,00000	6946	N	350403	13308-01	

A04 D H Manufacturer's mark

Z01/Z02/Z03 We hereby certify, that the above mentioned materials have been delivered in accordance with the terms of order.

QM-System: Certification as per ISO 9001

B. BALDAUF
Test House Manager

A H B Inspector's stamp

A01 AG der Dillinger Hüttenwerke
Postfach 1580, D-66748 Dillingen/Saar
Inspection department

Date 17.09.10 BM 1

DILLINGER HÜTTE

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A02 INSPECTION CERTIFICATE 3.1 AS PER EN 10204:2004
INSPECTION CERTIFICATE 3.1.B AS PER EN 10204:1991+A1:1995 + AS PER ISO 10474:1991
MATERIAL TEST REPORT (MTR)

A10 Advice of dispatch No./ Date of dispatch: 369429-17.09.10

A08/ Manufacturer's order/ A03 Certificate No.: 357359-002 Sheet: 4/...

A05 Established inspecting body: DH

A06 Purchaser: EDMONTON STEEL, EDMON A07.1 No. ED10551-J1010-ER

Final receiver: EDMONTON STEEL, EDMON A07.2 No.

B01 Product: HOT ROLLED PLATES

B02/ Steel design. SA516-70 SA20-S5

B03 Any suppl. requirements ASME-II-A:07+A09
DIL-HUE-2:R30-2010-01-31

B01-B99 Description of the product

B14 Item No.	B08 Number of pieces	B09 Thickness	B10 Width INCH	B11 Length	B12 Theoretical mass KG	B04 Product delivery condition	B07.2 Heat No.	B07.1 Rolled plate No./ Test No.	A09 Purchaser article number
03	1	0,7500 x	150,00000 x	480,00000	6946	N	350403	13308-02	
03	1	0,7500 x	150,00000 x	480,00000	6946	N	350403	13308-03	
**	6				41676				
04	1	0,8750 x	120,50000 x	480,00000	6510	N	350403	11964-01	
04	1	0,8750 x	120,50000 x	480,00000	6510	N	350403	11964-02	
04	1	0,8750 x	120,50000 x	480,00000	6510	N	350403	11964-03	
04	1	0,8750 x	120,50000 x	480,00000	6510	N	350403	11979-01	
04	1	0,8750 x	120,50000 x	480,00000	6510	N	350403	11979-02	
04	1	0,8750 x	120,50000 x	480,00000	6510	N	350403	11979-03	
04	1	0,8750 x	120,50000 x	480,00000	6510	N	350403	12013-01	
04	1	0,8750 x	120,50000 x	480,00000	6510	N	350403	12013-02	
04	1	0,8750 x	120,50000 x	480,00000	6510	N	350403	12013-03	
04	1	0,8750 x	120,50000 x	480,00000	6510	N	350403	12280-02	
04	1	0,8750 x	120,50000 x	480,00000	6510	N	350403	12280-03	
04	1	0,8750 x	120,50000 x	480,00000	6510	N	350403	12638-01	
04	1	0,8750 x	120,50000 x	480,00000	6510	N	350403	12638-02	
04	1	0,8750 x	120,50000 x	480,00000	6510	N	350403	12638-03	
04	1	0,8750 x	120,50000 x	480,00000	6510	N	350404	11955-01	
04	1	0,8750 x	120,50000 x	480,00000	6510	N	350404	11955-02	
04	1	0,8750 x	120,50000 x	480,00000	6510	N	350404	11955-03	
04	1	0,8750 x	120,50000 x	480,00000	6510	N	350405	05031-01	
04	1	0,8750 x	120,50000 x	480,00000	6510	N	350405	05031-02	
**	19				123690				

A04 Manufacturer's mark: D H

Z01/Z02/Z03 We hereby certify, that the above mentioned materials have been delivered in accordance with the terms of order.

QM-System: Certification as per ISO 9001

B. BALDAUF
Test House Manager

Inspector's stamp: A H B

Date 17.09.10 BM 1

A01 AG der Dillinger Hüttenwerke
Postfach 1580, D-66748 Dillingen/Saar
Inspection department

DILLINGER HÜTTE

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

A02 INSPECTION CERTIFICATE 3.1 AS PER EN 10204:2004
INSPECTION CERTIFICATE 3.1.B AS PER EN 10204:1991+A1:1995 + AS PER ISO 10474:1991
MATERIAL TEST REPORT (MTR)

A10 Advice of dispatch No./ Date of dispatch: 369429-17.09.10

A08/ Manufacturer's order/ A03 Certificate No.: 357359-002 Sheet: 5/...

A05 Established inspecting body: DH

A06 Purchaser: EDMONTON STEEL,EDMON A07.1 No. ED10551-J1010-ER

Final receiver: EDMONTON STEEL,EDMON A07.2 No.

B01 Product: HOT ROLLED PLATES

B02/ Steel design: SA516-70 SA20-S5

B03 Any suppl. requirements: ASME-II-A:07+A09
DIL-HUE-2:R30-2010-01-31

B01-B99 Description of the product

B14 Item No.	B08 Number of pieces	B09 Thickness	B10 Width	B11 Length	B12 Theoretical mass KG	B04 Product delivery condition	B07.2 Heat No.	B07.1 Rolled plate No./ Test No.	A09 Purchaser article number
			INCH						
05	1	0,8750 x	150,00000 x	480,00000	8104	N	350402	14854-01	
05	1	0,8750 x	150,00000 x	480,00000	8104	N	350402	14854-02	
**	2				16208				
07	1	1,0000 x	96,50000 x	480,00000	5959	N	350404	06356-02	
07	1	1,0000 x	96,50000 x	480,00000	5959	N	350404	06356-03	
07	1	1,0000 x	96,50000 x	480,00000	5959	N	350404	06357-01	
07	1	1,0000 x	96,50000 x	480,00000	5959	N	350404	06357-02	
07	1	1,0000 x	96,50000 x	480,00000	5959	N	350404	06357-03	
07	1	1,0000 x	96,50000 x	480,00000	5959	N	350404	06943-01	
07	1	1,0000 x	96,50000 x	480,00000	5959	N	350404	06943-02	
07	1	1,0000 x	96,50000 x	480,00000	5959	N	350404	06943-03	
07	1	1,0000 x	96,50000 x	480,00000	5959	N	350404	07812-01	
07	1	1,0000 x	96,50000 x	480,00000	5959	N	350404	07812-02	
07	1	1,0000 x	96,50000 x	480,00000	5959	N	350404	07812-03	
07	1	1,0000 x	96,50000 x	480,00000	5959	N	350404	07813-01	
07	1	1,0000 x	96,50000 x	480,00000	5959	N	350404	07813-02	
07	1	1,0000 x	96,50000 x	480,00000	5959	N	350404	07813-03	
07	1	1,0000 x	96,50000 x	480,00000	5959	N	350404	10672-01	
07	1	1,0000 x	96,50000 x	480,00000	5959	N	350404	10672-02	
07	1	1,0000 x	96,50000 x	480,00000	5959	N	350404	10672-03	
07	1	1,0000 x	96,50000 x	480,00000	5959	N	350404	11097-01	
07	1	1,0000 x	96,50000 x	480,00000	5959	N	350404	11097-02	
07	1	1,0000 x	96,50000 x	480,00000	5959	N	350404	11097-03	

A04 Manufacturer's mark: D H

Z01/Z02/Z03 We hereby certify, that the above mentioned materials have been delivered in accordance with the terms of order.

QM-System: Certification as per ISO 9001

B. BALDAUF
Test House Manager

Inspector's stamp: A H B

A01 AG der Dillinger Hüttenwerke
Postfach 1580, D-66748 Dillingen/Saar
Inspection department

Date 17.09.10 BM 1

DILLINGER HÜTTE

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

A02 INSPECTION CERTIFICATE 3.1 AS PER EN 10204:2004
INSPECTION CERTIFICATE 3.1.B AS PER EN 10204:1991+A1:1995 + AS PER ISO 10474:1991
MATERIAL TEST REPORT (MTR)

A10 Advice of dispatch No./ Date of dispatch: 369429-17.09.10

A08/ Manufacturer's order/ A03 Certificate No.: 357359-002 Sheet: 6/...

A05 Established Inspecting body: DH

A06 Purchaser: EDMONTON STEEL,EDMON A07.1 No. ED10551-J1010-ER

Final receiver: EDMONTON STEEL,EDMON A07.2 No.

B01 Product: HOT ROLLED PLATES

B02/ Steel design. SA516-70 SA20-S5

B03 Any suppl. requirements: ASME-II-A:07+A09
DIL-HUE-2:R30-2010-01-31

B01-B99 Description of the product

B14 Item No.	B08 Number of pieces	B09 Thickness	B10 Width	B11 Length	B12 Theoretical mass KG	B04 Product delivery condition	B07.2 Heat No.	B07.1 Rolled plate No./ Test No.	A09 Purchaser article number
			INCH						
07	1	1,0000 x	96,50000 x	480,00000	5959	N	350405	05063-01	
07	1	1,0000 x	96,50000 x	480,00000	5959	N	350405	05063-02	
07	1	1,0000 x	96,50000 x	480,00000	5959	N	350405	05063-03	
07	1	1,0000 x	96,50000 x	480,00000	5959	N	350405	05064-01	
07	1	1,0000 x	96,50000 x	480,00000	5959	N	350405	05064-02	
07	1	1,0000 x	96,50000 x	480,00000	5959	N	350405	05064-03	
07	1	1,0000 x	96,50000 x	480,00000	5959	N	350405	05065-01	
07	1	1,0000 x	96,50000 x	480,00000	5959	N	350405	05065-02	
07	1	1,0000 x	96,50000 x	480,00000	5959	N	350405	05065-03	
**	29				172811				
***	119				672445				

B04 Product delivery condition

ITEM NO.: 01-05,07-08
N: HT: 1670 GR.F +36 -27 GR.F
SOAKING TIME TO ATTAIN THE TARGET TEMPERATURE OVER THE WHOLE SECTION: 1-1,75 MIN/MM (25-45 MIN/INCH)
COOLING IN STILL AIR

B06 Marking of the product

ITEM NO.: 01-05,07-08
STEEL DESIGNATION SA516 70 MTLTV SA516 60 MTLTV
HEAT NO. / TRADEMARK / ROLLED PLATE NO.-TEST NO. / INSPECTOR'S STAMP

A04 D H Manufacturer's mark

Z01/Z02/Z03 We hereby certify, that the above mentioned materials have been delivered in accordance with the terms of order.

QM-System: Certification as per ISO 9001

B. BALDAUF
Test House Manager

A H B Inspector's stamp

Date 17.09.10 BM 1

A01 AG der Dillinger Hüttenwerke
Postfach 1580, D-66748 Dillingen/Saar
Inspection department

DILLINGER HÜTTE

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

A02 INSPECTION CERTIFICATE 3.1 AS PER EN 10204:2004
INSPECTION CERTIFICATE 3.1.B AS PER EN 10204:1991+A1:1995 + AS PER ISO 10474:1991
MATERIAL TEST REPORT (MTR)

A10 Advice of dispatch No./ Date of dispatch: 369429-17.09.10

A08/ A03 Manufacturer's order/ Certificate No.: 357359-002 Sheet: 7/...

A05 Established Inspecting body: DH

A06 Purchaser: EDMONTON STEEL, EDMON A07.1 No. ED10551-J1010-ER

Final receiver: EDMONTON STEEL, EDMON A07.2 No.

B01 Product: HOT ROLLED PLATES

B02/ Steel design.: SA516-70 SA20-S5

B03 Any suppl. requirements: ASME-II-A:07+A09
DIL-HUE-2:R30-2010-01-31

B07-B99 Further information about the product

ITEM NO.: 01-05,07-08
THICKNESS REDUCTION RATIO >= 3;0 IS FULFILLED (CF. A/SA20 PAR. 5.3)

C10-C29 Tensile test

B14 Item No.	B07.2 Heat No.	B07.1 Roll.plate/ Test No.	B05 Reference (heat) treatment	C01	C02/ C01	C03 Temp. GR.F	C10 C11 KSI RP02	C12 RM	C13 A % L0=8IN	C14-C15
01	348840	11315		K1	Q	RT	51,3	77,6	27	
01	350041	63961		K1	Q	RT	47,9	73,1	29	
01	350399	17648		K1	Q	RT	51,3	76,6	27	
01	350399	17724		K1	Q	RT	50,5	76,3	28	
01	350399	20921		K1	Q	RT	49,9	75,7	25	
01	350399	21295		K1	Q	RT	50,8	76,4	26	
01	350399	21306		K1	Q	RT	50,5	75,8	26	
01	350399	21322		K1	Q	RT	50,3	76,3	28	
01	350405	39539		K1	Q	RT	50,9	75,8	29	
01	350405	39694		K1	Q	RT	50,5	75,0	28	
01	350405	39715		K1	Q	RT	50,2	75,4	31	
01	350405	39774		K1	Q	RT	49,7	75,3	27	
01	350405	39799		K1	Q	RT	49,6	75,0	28	
01	350405	39959		K1	Q	RT	50,3	75,8	28	
01	350405	39965		K1	Q	RT	48,7	74,7	28	
02	350401	15513		K1	Q	RT	46,7	73,7	27	
02	350401	15526		K1	Q	RT	48,3	73,5	28	
02	350401	15608		K1	Q	RT	49,0	74,2	26	
02	350401	15610		K1	Q	RT	46,7	73,5	30	
02	350401	15626		K1	Q	RT	49,2	74,2	28	

A04 Manufacturer's mark: D H

Z01/Z02/Z03 We hereby certify, that the above mentioned materials have been delivered in accordance with the terms of order.

QM-System: Certification as per ISO 9001

B. BALDAUF
Test House Manager

Inspector's stamp: A H B

Date 17.09.10 BM 1

A01 AG der Dillinger Hüttenwerke
Postfach 1580, D-66748 Dillingen/Saar
Inspection department

DILLINGER HÜTTE

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

A02 INSPECTION CERTIFICATE 3.1 AS PER EN 10204:2004
INSPECTION CERTIFICATE 3.1.B AS PER EN 10204:1991+A1:1995 + AS PER ISO 10474:1991
MATERIAL TEST REPORT (MTR)

A10 Advice of dispatch No./ Date of dispatch: 369429-17.09.10

A08/ Manufacturer's order/ A03 Certificate No.: 357359-002 Sheet: 8/...

A05 Established inspecting body: DH

A06 Purchaser: EDMONTON STEEL,EDMON A07.1 No. ED10551-J1010-ER
Final receiver: EDMONTON STEEL,EDMON A07.2 No.

B01 Product: HOT ROLLED PLATES

B02/ Steel design. SA516-70 SA20-S5
B03 Any suppl. requirements ASME-II-A:07+A09
DIL-HUE-2:R30-2010-01-31

C10-C29 Tensile test

B14 Item No.	B07.2 Heat No.	B07.1 Rol.plate/ Test No.	B05 Reference (heat) treatment	C01	C02/ C01	C03 Temp. GR.F	C10 C11 KSI RP02	C12 RM	C13 A % L0=8IN	C14-C15
02	350401	15645		K1	Q	RT	48,9	74,0	29	
02	350402	15169		K1	Q	RT	49,2	75,1	28	
02	350402	15399		K1	Q	RT	50,5	75,3	28	
02	350405	39714		K1	Q	RT	49,6	75,3	26	
02	350405	39946		K1	Q	RT	49,0	75,4	28	
02	350405	39963		K1	Q	RT	48,6	74,5	27	
02	350405	40537		K1	Q	RT	46,5	73,7	27	
03	350403	13199		K1	Q	RT	50,0	75,5	27	
03	350403	13308		K1	Q	RT	49,3	75,3	26	
04	350403	11964		K1	Q	RT	49,9	74,1	30	
04	350403	11979		K1	Q	RT	49,2	74,7	29	
04	350403	12013		K1	Q	RT	49,0	74,0	29	
04	350403	12280		K1	Q	RT	49,9	74,1	27	
04	350403	12638		K1	Q	RT	50,0	74,5	28	
04	350404	11955		K1	Q	RT	49,6	74,7	29	
04	350405	05031		K1	Q	RT	48,9	74,8	30	
05	350402	14854		K1	Q	RT	49,7	75,1	27	
07	350404	06356		K1	Q	RT	49,3	75,0	28	
07	350404	06357		K1	Q	RT	50,0	74,1	29	
07	350404	06943		K1	Q	RT	49,7	74,1	30	
07	350404	07812		K1	Q	RT	49,6	74,4	30	
07	350404	07813		K1	Q	RT	50,3	74,0	30	
07	350404	10672		K1	Q	RT	50,2	74,2	30	

A04 D H Manufacturer's mark

Z01/Z02/Z03 We hereby certify, that the above mentioned materials have been delivered in accordance with the terms of order.

QM-System: Certification as per ISO 9001

B. BALDAUF
Test House Manager

A H B Inspector's stamp

A01 AG der Dillinger Hüttenwerke
Postfach 1580, D-66748 Dillingen/Saar
Inspection department

Date 17.09.10 BM 1

DILLINGER HÜTTE

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

A02 INSPECTION CERTIFICATE 3.1 AS PER EN 10204:2004
INSPECTION CERTIFICATE 3.1.B AS PER EN 10204:1991+A1:1995 + AS PER ISO 10474:1991
MATERIAL TEST REPORT (MTR)

A10 Advice of dispatch No./ Date of dispatch: 369429-17.09.10

A08/ Manufacturer's order/ A03 Certificate No.: 357359-002 Sheet: 9/...

A05 Established inspecting body: DH

A06 Purchaser: EDMONTON STEEL,EDMON A07.1 No. ED10551-J1010-ER

Final receiver: EDMONTON STEEL,EDMON A07.2 No.

B01 Product: HOT ROLLED PLATES

B02/ Steel design. SA516-70 SA20-S5

B03 Any suppl. requirements ASME-II-A:07+A09
DIL-HUE-2:R30-2010-01-31

C10-C29 Tensile test

B14 Item No.	B07.2 Heat No.	B07.1 Rol.plate/ Test No.	B05 Reference (heat) treatment	C01	C02/ C01	C03 Temp. GR.F	C10 C11 KSI RP02	C12 RM	C13	C14-C15 A % L0=5IN
07	350404	11097		K1	Q	RT	48,3	73,8		30
07	350405	05063		K1	Q	RT	50,2	74,7		29
07	350405	05064		K1	Q	RT	50,5	74,4		28
07	350405	05065		K1	Q	RT	50,0	74,1		31

C30-C39 Hardness test

B14 Item. No.	B07.2 Heat No.	B07.1 Rol.plate/ Test No.	B05 Reference (heat) treatment	C01	C02/C01	C03 Temp. GR.F	C30 Method of test	C35 C31 Individual values			C32 Mean value
01	348840	11315		K1	O	RT	HBW 10/3000	HB	147	149	148	148
01	350041	63961		K1	O	RT	HBW 10/3000	HB	141	143	142	142
01	350399	17648		K1	O	RT	HBW 10/3000	HB	146	147	146	146
01	350399	17724		K1	O	RT	HBW 10/3000	HB	148	146	145	146
01	350399	20921		K1	O	RT	HBW 10/3000	HB	146	145	144	145
01	350399	21295		K1	O	RT	HBW 10/3000	HB	144	144	143	144
01	350399	21306		K1	O	RT	HBW 10/3000	HB	144	143	142	143
01	350399	21322		K1	O	RT	HBW 10/3000	HB	142	142	142	142
01	350405	39539		K1	O	RT	HBW 10/3000	HB	142	142	141	142
01	350405	39694		K1	O	RT	HBW 10/3000	HB	142	142	141	142
01	350405	39715		K1	O	RT	HBW 10/3000	HB	142	142	141	142
01	350405	39774		K1	O	RT	HBW 10/3000	HB	144	145	143	144
01	350405	39799		K1	O	RT	HBW 10/3000	HB	145	145	144	145
01	350405	39959		K1	O	RT	HBW 10/3000	HB	144	145	145	145
01	350405	39965		K1	O	RT	HBW 10/3000	HB	139	139	138	139
02	350401	15513		K1	O	RT	HBW 10/3000	HB	142	142	141	142

A04 Manufacturer's mark

Z01/Z02/Z03 We hereby certify, that the above mentioned materials have been delivered in accordance with the terms of order.

QM-System: Certification as per ISO 9001

B. BALDAUF
Test House Manager

Inspector's stamp

A01 AG der Dillinger Hüttenwerke
Postfach 1580, D-66748 Dillingen/Saar
Inspection department

Date 17.09.10 BM 1

DILLINGER HÜTTE

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

A02 INSPECTION CERTIFICATE 3.1 AS PER EN 10204:2004
INSPECTION CERTIFICATE 3.1.B AS PER EN 10204:1991+A1:1995 + AS PER ISO 10474:1991
MATERIAL TEST REPORT (MTR)

A10 Advice of dispatch No./ Date of dispatch: 369429-17.09.10

A08/ Manufacturer's order/ A03 Certificate No.: 357359-002 Sheet: 10/...

A05 Established inspecting body: DH

A06 Purchaser: EDMONTON STEEL,EDMON A07.1 No. ED10551-J1010-ER

Final receiver: EDMONTON STEEL,EDMON A07.2 No.

B01 Product: HOT ROLLED PLATES

B02/ Steel design.: SA516-70 SA20-S5

B03 Any suppl. requirements: ASME-II-A:07+A09
DIL-HUE-2:R30-2010-01-31

C30-C39 Hardness test

B14 Item No.	B07.2 Heat No.	B07.1 Rol.plate/ Test No.	B05 Reference (heat) treatment	C01	C02/C01	C03 Temp. GR.F	C30 Method of test	C35 C31 Individual values			C32 Mean value
02	350401	15526		K1	O	RT	HBW 10/3000	HB	142	142	139	141
02	350401	15608		K1	O	RT	HBW 10/3000	HB	141	140	139	140
02	350401	15610		K1	O	RT	HBW 10/3000	HB	142	141	140	141
02	350401	15626		K1	O	RT	HBW 10/3000	HB	138	139	139	139
02	350401	15645		K1	O	RT	HBW 10/3000	HB	139	139	137	138
02	350402	15169		K1	O	RT	HBW 10/3000	HB	141	142	140	141
02	350402	15399		K1	O	RT	HBW 10/3000	HB	146	146	144	145
02	350405	39714		K1	O	RT	HBW 10/3000	HB	144	144	144	144
02	350405	39946		K1	O	RT	HBW 10/3000	HB	145	144	145	145
02	350405	39963		K1	O	RT	HBW 10/3000	HB	142	142	141	142
02	350405	40537		K1	O	RT	HBW 10/3000	HB	141	141	140	141
03	350403	13199		K1	O	RT	HBW 10/3000	HB	143	143	142	143
03	350403	13308		K1	O	RT	HBW 10/3000	HB	142	143	142	142
04	350403	11964		K1	O	RT	HBW 10/3000	HB	142	142	142	142
04	350403	11979		K1	O	RT	HBW 10/3000	HB	142	142	142	142
04	350403	12013		K1	O	RT	HBW 10/3000	HB	143	144	143	143
04	350403	12280		K1	O	RT	HBW 10/3000	HB	142	142	142	142
04	350403	12638		K1	O	RT	HBW 10/3000	HB	141	141	142	141
04	350404	11955		K1	O	RT	HBW 10/3000	HB	141	141	141	141
04	350405	05031		K1	O	RT	HBW 10/3000	HB	144	146	144	145
05	350402	14854		K1	O	RT	HBW 10/3000	HB	148	146	145	146
07	350404	06356		K1	O	RT	HBW 10/3000	HB	142	142	141	142
07	350404	06357		K1	O	RT	HBW 10/3000	HB	139	140	139	139
07	350404	06943		K1	O	RT	HBW 10/3000	HB	142	142	142	142

A04 D H Manufacturer's mark

Z01/Z02/Z03 We hereby certify, that the above mentioned materials have been delivered in accordance with the terms of order.

QM-System: Certification as per ISO 9001

B. BALDAUF
Test House Manager

A H B Inspector's stamp

Date 17.09.10

A01 AG der Dillinger Hüttenwerke
Postfach 1580, D-66748 Dillingen/Saar
Inspection department

BM 1

DILLINGER HÜTTE

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

A02 INSPECTION CERTIFICATE 3.1 AS PER EN 10204:2004
INSPECTION CERTIFICATE 3.1.B AS PER EN 10204:1991+A1:1995 + AS PER ISO 10474:1991
MATERIAL TEST REPORT (MTR)

A10 Advice of dispatch No./ Date of dispatch: 369429-17.09.10

A08/ Manufacturer's order/ A03 Certificate No.: 357359-002

Sheet: 11/...

A05 Established inspecting body: DH

A06 Purchaser: EDMONTON STEEL, EDMON — A07.1 No.: ED10551-J1010-ER

Final receiver: EDMONTON STEEL, EDMON — A07.2 No.:

B01 Product: HOT ROLLED PLATES

B02/ Steel design.: SA516-70 SA20-S5

B03 Any suppl. requirements: ASME-II-A:07+A09
DIL-HUE-2:R30-2010-01-31

C30-C39 Hardness test

B14 Item No.	B07.2 Heat No.	B07.1 Rol.plate/ Test No.	B05 Reference (heat) treatment	C01	C02/C01	C03 Temp. GR.F	C30 Method of test	C35 C31 Individual values			C32 Mean value
07	350404	07812		K1	O	RT	HBW 10/3000	HB 145	145	144	145
07	350404	07813		K1	O	RT	HBW 10/3000	HB 144	145	144	144
07	350404	10672		K1	O	RT	HBW 10/3000	HB 146	144	143	144
07	350404	11097		K1	O	RT	HBW 10/3000	HB 144	144	144	144
07	350405	05063		K1	O	RT	HBW 10/3000	HB 146	147	146	146
07	350405	05064		K1	O	RT	HBW 10/3000	HB 144	144	144	144
07	350405	05065		K1	O	RT	HBW 10/3000	HB 144	144	144	144

C40-C49 Impact test

B14 Item No.	B07.2 Heat No.	B07.1 Rol.plate/ Test No.	B05 Reference (heat) treatment	C01	C02/ C01	C03 Temp. GR.F	C41 Width of test piece	C40 Type of test piece	C44 Testing method	C46 Energy	C45 C42 Individual values AV=FT.LBF			C43 Mean value
01	348840	11315		K1	LV	-51		CHP-V			AV 101	123	139	121
01	350041	63961		K1	LV	-51		CHP-V			AV 208	195	181	195
01	350399	17648		K1	LV	-51		CHP-V			AV 193	125	111	143
01	350399	17724		K1	LV	-51		CHP-V			AV 117	181	148	149
01	350399	20921		K1	LV	-51		CHP-V			AV 124	120	162	135
01	350399	21295		K1	LV	-51		CHP-V			AV 119	119	198	145
01	350399	21306		K1	LV	-51		CHP-V			AV 141	209	132	161
01	350399	21322		K1	LV	-51		CHP-V			AV 122	197	193	171
01	350405	39539		K1	LV	-51		CHP-V			AV 184	196	195	192
01	350405	39694		K1	LV	-51		CHP-V			AV 208	187	142	179
01	350405	39715		K1	LV	-51		CHP-V			AV 104	194	152	150
01	350405	39774		K1	LV	-51		CHP-V			AV 119	198	139	152
01	350405	39799		K1	LV	-51		CHP-V			AV 129	162	197	163
01	350405	39959		K1	LV	-51		CHP-V			AV 198	150	206	185

A04 D H Manufacturer's mark

Z01/Z02/Z03 We hereby certify, that the above mentioned materials have been delivered in accordance with the terms of order.

QM-System: Certification as per ISO 9001

B. BALDAUF
Test House Manager

AHB Inspector's stamp

Date 17.09.10

BM 1

A01 AG der Dillinger Hüttenwerke
Postfach 1580, D-66748 Dillingen/Saar
Inspection department

DILLINGER HÜTTE

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

A02 INSPECTION CERTIFICATE 3.1 AS PER EN 10204:2004
INSPECTION CERTIFICATE 3.1.B AS PER EN 10204:1991+A1:1995 + AS PER ISO 10474:1991
MATERIAL TEST REPORT (MTR)

A10 Advice of dispatch No./ Date of dispatch: 369429-17.09.10

A08/ Manufacturer's order/ A03 Certificate No.: 357359-002 Sheet 12/...

A05 Established inspecting body: DH

A06 Purchaser: EDMONTON STEEL,EDMON A07.1 No. ED10551-J1010-ER

Final receiver: EDMONTON STEEL,EDMON A07.2 No.

B01 Product: HOT ROLLED PLATES

B02/ Steel design. SA516-70 SA20-S5

B03 Any suppl. requirements: ASME-II-A:07+A09
DIL-HUE-2:R30-2010-01-31

C40-C49 Impact test

B14 Item No.	B07.2 Heat No.	B07.1 Rol.plate/ Test No.	B05 Reference (heat) treatment	C01	C02/ C01	C03 Temp. GR.F	C41 Width of test piece	C40 Type of test piece	C44 Testing method	C46 Energy	C45 C42 Individual values AV=FT.LBF			C43 Mean value
01	350405	39965		K1	LV	-51		CHP-V			AV 192	147	190	176
02	350401	15513		K1	LV	-51		CHP-V			AV 128	150	127	135
02	350401	15526		K1	LV	-51		CHP-V			AV 195	209	128	177
02	350401	15608		K1	LV	-51		CHP-V			AV 137	131	130	133
02	350401	15610		K1	LV	-51		CHP-V			AV 117	193	186	165
02	350401	15626		K1	LV	-51		CHP-V			AV 122	212	190	175
02	350401	15645		K1	LV	-51		CHP-V			AV 145	207	198	183
02	350402	15169		K1	LV	-51		CHP-V			AV 159	118	201	159
02	350402	15399		K1	LV	-51		CHP-V			AV 186	164	136	162
02	350405	39714		K1	LV	-51		CHP-V			AV 144	201	116	154
02	350405	39946		K1	LV	-51		CHP-V			AV 205	124	125	151
02	350405	39963		K1	LV	-51		CHP-V			AV 119	192	124	145
02	350405	40537		K1	LV	-51		CHP-V			AV 131	131	195	152
03	350403	13199		K1	LV	-51		CHP-V			AV 120	148	117	128
03	350403	13308		K1	LV	-51		CHP-V			AV 130	188	142	153
04	350403	11964		K1	LV	-51		CHP-V			AV 192	106	181	160
04	350403	11979		K1	LV	-51		CHP-V			AV 90	142	130	121
04	350403	12013		K1	LV	-51		CHP-V			AV 136	118	146	133
04	350403	12280		K1	LV	-51		CHP-V			AV 109	187	195	164
04	350403	12638		K1	LV	-51		CHP-V			AV 114	157	116	129
04	350404	11955		K1	LV	-51		CHP-V			AV 117	127	125	123
04	350405	05031		K1	LV	-51		CHP-V			AV 157	128	190	158
05	350402	14854		K1	LV	-51		CHP-V			AV 118	125	136	126
07	350404	06356		K1	LV	-51		CHP-V			AV 131	129	145	135

A04 Manufacturer's mark: DH

Z01/Z02/Z03 We hereby certify, that the above mentioned materials have been delivered in accordance with the terms of order.

QM-System: Certification as per ISO 9001

B. BALDAUF
Test House Manager

Inspector's stamp: AHB

Date 17.09.10

A01 AG der Dillinger Hüttenwerke
Postfach 1580, D-66748 Dillingen/Saar
Inspection department

BM 1

DILLINGER HÜTTE

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

A02 INSPECTION CERTIFICATE 3.1 AS PER EN 10204:2004
INSPECTION CERTIFICATE 3.1.B AS PER EN 10204:1991+A1:1995 + AS PER ISO 10474:1991
MATERIAL TEST REPORT (MTR)

A10 Advice of dispatch No./ Date of dispatch: 369429-17.09.10

A08/ Manufacturer's order/ A03 Certificate No.: 357359-002 Sheet: 13/...

A05 Established inspecting body: DH

A06 Purchaser: EDMONTON STEEL,EDMON A07.1 No. ED10551-J1010-ER

Final receiver: EDMONTON STEEL,EDMON A07.2 No.

B01 Product: HOT ROLLED PLATES

B02/ Steel design. SA516-70 SA20-S5

B03 Any suppl. requirements ASME-II-A:07+A09
DIL-HUE-2:R30-2010-01-31

C40-C49 impact test

B14 Item No.	B07.2 Heat No.	B07.1 Rol.plate/ Test No.	B05 Reference (heat) treatment	C01	C02/ C01	C03 Temp. GR.F	C41 Width of test piece	C40 Type of test piece	C44 Testing method	C46 Energy	C45	C42 Individual values AV=FT.LBF			C43 Mean value
07	350404	06357		K1	LV	-51		CHP-V			AV	114	98	153	122
07	350404	06943		K1	LV	-51		CHP-V			AV	188	108	123	140
07	350404	07812		K1	LV	-51		CHP-V			AV	190	106	128	141
07	350404	07813		K1	LV	-51		CHP-V			AV	193	118	130	147
07	350404	10672		K1	LV	-51		CHP-V			AV	55	153	145	118
07	350404	11097		K1	LV	-51		CHP-V			AV	150	204	131	162
07	350405	05063		K1	LV	-51		CHP-V			AV	101	124	122	116
07	350405	05064		K1	LV	-51		CHP-V			AV	95	146	122	121
07	350405	05065		K1	LV	-51		CHP-V			AV	88	194	125	136

C70-C99 Chemical composition % - Heat analysis

B07.2 Heat	C70	C	SI	MN	P	S	N	CU	MO	NI	CR	V	NB	SN	TI
348840	Y	0,184	0,384	1,18	0,010	0,0011	0,0063	0,044	0,010	0,053	0,030	0,001	0,000	0,001	0,003
350041	Y	0,163	0,344	1,19	0,012	0,0009	0,0071	0,037	0,014	0,048	0,045	0,001	0,000	0,001	0,003
350399	Y	0,176	0,376	1,19	0,010	0,0011	0,0075	0,046	0,015	0,055	0,049	0,001	0,000	0,001	0,003
350401	Y	0,170	0,364	1,17	0,008	0,0013	0,0085	0,036	0,011	0,055	0,026	0,001	0,000	0,001	0,002
350402	Y	0,174	0,386	1,18	0,010	0,0012	0,0075	0,037	0,011	0,064	0,027	0,001	0,000	0,001	0,003
350403	Y	0,170	0,373	1,17	0,009	0,0010	0,0063	0,042	0,008	0,063	0,031	0,001	0,000	0,001	0,002
350404	Y	0,174	0,376	1,19	0,009	0,0009	0,0071	0,044	0,008	0,067	0,031	0,000	0,000	0,001	0,002
350405	Y	0,172	0,381	1,19	0,009	0,0010	0,0059	0,040	0,010	0,057	0,035	0,001	0,000	0,001	0,003

A04 D H Manufacturer's mark

Z01/Z02/Z03 We hereby certify, that the above mentioned materials have been delivered in accordance with the terms of order.

QM-System: Certification as per ISO 9001

B. BALDAUF
Test House Manager

A H B Inspector's stamp

Date 17.09.10

AG der Dillinger Hüttenwerke
Postfach 1580, D-66748 Dillingen/Saar
Inspection department

A01

BM 1

DILLINGER HÜTTE

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

A02 INSPECTION CERTIFICATE 3.1 AS PER EN 10204:2004
INSPECTION CERTIFICATE 3.1.B AS PER EN 10204:1991+A1:1995 + AS PER ISO 10474:1991
MATERIAL TEST REPORT (MTR)

A10 Advice of dispatch No./ Date of dispatch: 369429-17.09.10

A08/ Manufacturer's order/ A03 Certificate No.: 357359-002 Sheet: 14/...

A05 Established inspecting body: DH

A06 Purchaser: EDMONTON STEEL, EDMON A07.1 No.: ED10551-J1010-ER

Final receiver: EDMONTON STEEL, EDMON A07.2 No.:

B01 Product: HOT ROLLED PLATES

B02/ Steel design.: SA516-70 SA20-S5

B03 Any suppl. requirements: ASME-II-A:07+A09
DIL-HUE-2:R30-2010-01-31

C70-C99 Chemical composition % - Heat analysis

B07.2 Heat	C70	B	CA	AL-T
348840	Y	0,0003	0,0015	0,035
350041	Y	0,0004	0,0015	0,033
350399	Y	0,0002	0,0015	0,035
350401	Y	0,0000	0,0020	0,044
350402	Y	0,0002	0,0013	0,033
350403	Y	0,0001	0,0014	0,034
350404	Y	0,0003	0,0014	0,033
350405	Y	0,0003	0,0014	0,035

C94 Heat analysis Carbon equivalent / Alloying restrictions

B07.2 Heat										
348840	FO-02=	0,40	FO-51=	0,001	FO-55=	0,14	FO-78=	0,04	FO-91=	6,4
350041	FO-02=	0,38	FO-51=	0,001	FO-55=	0,14	FO-78=	0,06	FO-91=	7,3
350399	FO-02=	0,39	FO-51=	0,001	FO-55=	0,17	FO-78=	0,06	FO-91=	6,8
350401	FO-02=	0,38	FO-51=	0,001	FO-55=	0,13	FO-78=	0,04	FO-91=	6,9
350402	FO-02=	0,39	FO-51=	0,001	FO-55=	0,14	FO-78=	0,04	FO-91=	6,8
350403	FO-02=	0,38	FO-51=	0,001	FO-55=	0,14	FO-78=	0,04	FO-91=	6,9
350404	FO-02=	0,39	FO-51=	0,000	FO-55=	0,15	FO-78=	0,04	FO-91=	6,8
350405	FO-02=	0,39	FO-51=	0,001	FO-55=	0,14	FO-78=	0,05	FO-91=	6,9

C95 Ladle treatment

ITEM NO.: 01-05,07-08
HEAT OF THE INDICATED ITEM: VACUUM DEGASSED / SULPHIDE SHAPE CONTROL

A04 Manufacturer's mark: D H

Z01/Z02/Z03 We hereby certify, that the above mentioned materials have been delivered in accordance with the terms of order.

QM-System: Certification as per ISO 9001

B. BALDAUF
Test House Manager

Inspector's stamp: A H B

A01 AG der Dillinger Hüttenwerke
Postfach 1580, D-66748 Dillingen/Saar
Inspection department

Date 17.09.10 BM 1

DILLINGER HÜTTE

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

A02 INSPECTION CERTIFICATE 3.1 AS PER EN 10204:2004
INSPECTION CERTIFICATE 3.1.B AS PER EN 10204:1991+A1:1995 + AS PER ISO 10474:1991
MATERIAL TEST REPORT (MTR)

A10 Advice of dispatch No./ Date of dispatch: 369429-17.09.10

A08/ Manufacturer's order/ A03 Certificate No.: 357359-002

Sheet: 15/...

A05 Established Inspecting body: DH

A06 Purchaser: EDMONTON STEEL,EDMON — A07.1 No.: ED10551-J1010-ER

Final receiver: EDMONTON STEEL,EDMON — A07.2 No.:

B01 Product: HOT ROLLED PLATES

B02/ Steel design: SA516-70 SA20-S5

B03 Any suppl. requirements: ASME-II-A:07+A09
DIL-EUE-2:R30-2010-01-31

C95 Further information about ladle treatment

ITEM NO.: 01-05,07-08
CALCIUM TREATED

C70-C99 Chemical composition % - Product analysis

B07.2 Heat	B07.1 Test No.	C01	C	SI	MN	P	S	N	CU	MO	NI	CR	V	NB	SN	TI
348840	11315	K1	0,187	0,376	1,17	0,009	0,0012	0,0059	0,040	0,012	0,052	0,034	0,000	0,001	0,001	0,003
350041	63959	K1	0,157	0,335	1,16	0,010	0,0011	0,0071	0,035	0,014	0,048	0,045	0,002	0,000	0,001	0,003
350041	63961	K1	0,157	0,340	1,16	0,011	0,0010	0,0074	0,036	0,013	0,047	0,045	0,002	0,000	0,001	0,003
350399	21322	K1	0,175	0,367	1,17	0,009	0,0012	0,0072	0,046	0,015	0,055	0,042	0,000	0,000	0,001	0,003
350401	15608	K1	0,165	0,361	1,16	0,008	0,0015	0,0079	0,035	0,010	0,054	0,026	0,001	0,000	0,001	0,001
350402	14890	K1	0,168	0,389	1,17	0,010	0,0011	0,0065	0,036	0,011	0,065	0,027	0,001	0,001	0,001	0,003
350402	15169	K1	0,172	0,376	1,15	0,009	0,0010	0,0068	0,036	0,010	0,061	0,027	0,001	0,000	0,000	0,002
350403	11979	K1	0,171	0,367	1,16	0,009	0,0012	0,0067	0,042	0,007	0,063	0,032	0,001	0,000	0,000	0,002
350403	13199	K1	0,170	0,385	1,17	0,010	0,0017	0,0067	0,037	0,010	0,064	0,027	0,001	0,000	0,000	0,003
350404	11097	K1	0,164	0,375	1,17	0,009	0,0015	0,0064	0,042	0,008	0,063	0,031	0,001	0,000	0,000	0,003
350404	11955	K1	0,172	0,366	1,15	0,008	0,0012	0,0062	0,041	0,008	0,062	0,031	0,001	0,000	0,001	0,002
350405	05031	K1	0,173	0,376	1,17	0,008	0,0014	0,0059	0,041	0,010	0,062	0,033	0,000	0,001	0,001	0,002
350405	05063	K1	0,173	0,374	1,17	0,009	0,0013	0,0064	0,044	0,008	0,068	0,031	0,000	0,000	0,000	0,002
350405	39946	K1	0,175	0,370	1,16	0,008	0,0014	0,0061	0,037	0,010	0,055	0,035	0,000	0,000	0,001	0,003
350405	39965	K1	0,173	0,369	1,17	0,009	0,0012	0,0061	0,037	0,009	0,054	0,036	0,000	0,000	0,000	0,003

A04 Manufacturer's mark: D H

Z01/Z02/Z03 We hereby certify, that the above mentioned materials have been delivered in accordance with the terms of order.

QM-System: Certification as per ISO 9001

B. BALDAUF
Test House Manager

Inspector's stamp: A H B

Date 17.09.10

BM 1

A01
AG der Dillinger Hüttenwerke
Postfach 1580, D-66748 Dillingen/Saar
Inspection department

DILLINGER HÜTTE

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

A02 INSPECTION CERTIFICATE 3.1 AS PER EN 10204:2004
INSPECTION CERTIFICATE 3.1.B AS PER EN 10204:1991+A1:1995 + AS PER ISO 10474:1991
MATERIAL TEST REPORT (MTR)

A10 Advice of dispatch No./ Date of dispatch: 369429-17.09.10

A08/ Manufacturer's order/ A03 Certificate No.: 357359-002 Sheet: 16/...

A05 Established inspecting body: DH

A06 Purchaser: EDMONTON STEEL, EDMON A07.1 No.: ED10551-J1010-ER

Final receiver: EDMONTON STEEL, EDMON A07.2 No.:

B01 Product: HOT ROLLED PLATES

B02/ Steel design.: SA516-70 SA20-S5

B03 Any suppl. requirements: ASME-II-A:07+A09
DIL-HUE-2:R30-2010-01-31

C70-C99 Chemical composition % - Product analysis

B07.2 Heat	B07.1 Test No.	C01	B	CA	AL-T
348840	11315	K1	0,0002	0,0015	0,033
350041	63959	K1	0,0002	0,0016	0,033
350041	63961	K1	0,0003	0,0013	0,033
350399	21322	K1	0,0003	0,0017	0,036
350401	15608	K1	0,0002	0,0019	0,045
350402	14890	K1	0,0002	0,0017	0,032
350402	15169	K1	0,0002	0,0015	0,035
350403	11979	K1	0,0000	0,0017	0,036
350403	13199	K1	0,0003	0,0014	0,033
350404	11097	K1	0,0002	0,0016	0,035
350404	11955	K1	0,0002	0,0016	0,037
350405	05031	K1	0,0002	0,0018	0,031
350405	05063	K1	0,0000	0,0016	0,032
350405	39946	K1	0,0003	0,0015	0,035
350405	39965	K1	0,0003	0,0014	0,035

C94 Product analysis Carbon equivalent / Alloying restrictions

B07.2 Heat	B07.1 Test No.	C01						
348840	11315	K1	FO-02=	0,40	FO-51=	0,001	FO-55=	0,14
350041	63959	K1	FO-02=	0,37	FO-51=	0,002	FO-55=	0,14
350041	63961	K1	FO-02=	0,37	FO-51=	0,002	FO-55=	0,14
350399	21322	K1	FO-02=	0,39	FO-51=	0,000	FO-55=	0,16
350401	15608	K1	FO-02=	0,37	FO-51=	0,001	FO-55=	0,13
350402	14890	K1	FO-02=	0,38	FO-51=	0,002	FO-55=	0,14
350402	15169	K1	FO-02=	0,38	FO-51=	0,001	FO-55=	0,13

A04 Manufacturer's mark: DH

Z01/Z02/Z03 We hereby certify, that the above mentioned materials have been delivered in accordance with the terms of order.

QM-System: Certification as per ISO 9001

B. BALDAUF
Test House Manager

Inspector's stamp: AHB

A01 AG der Dillinger Hüttenwerke
Postfach 1580, D-66748 Dillingen/Saar
Inspection department

Date 17.09.10 BM 1

DILLINGER HÜTTE

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

A02 INSPECTION CERTIFICATE 3.1 AS PER EN 10204:2004
INSPECTION CERTIFICATE 3.1.B AS PER EN 10204:1991+A1:1995 + AS PER ISO 10474:1991
MATERIAL TEST REPORT (MTR)

A10 Advice of dispatch No./ Date of dispatch: 369429-17.09.10

A08/ Manufacturer's order/ A03 Certificate No.: 357359-002 Sheet: 17

A05 Established inspecting body: DH

A06 Purchaser: EDMONTON STEEL,EDMON A07.1 No. ED10551-J1010-ER

Final receiver: EDMONTON STEEL,EDMON A07.2 No.

B01 Product: HOT ROLLED PLATES

B02/ Steel design. SA516-70 SA20-S5

B03 Any suppl. requirements: ASME-II-A:07+A09
DIL-HUE-2:R30-2010-01-31

C94 Product analysis Carbon equivalent / Alloying restrictions

B07.2 Heat	B07.1 Test No.	C01						
350403	11979	K1	FO-02=	0,38	FO-51=	0,001	FO-55=	0,14
350403	13199	K1	FO-02=	0,38	FO-51=	0,001	FO-55=	0,14
350404	11097	K1	FO-02=	0,37	FO-51=	0,001	FO-55=	0,14
350404	11955	K1	FO-02=	0,38	FO-51=	0,001	FO-55=	0,14
350405	05031	K1	FO-02=	0,38	FO-51=	0,001	FO-55=	0,15
350405	05063	K1	FO-02=	0,38	FO-51=	0,000	FO-55=	0,15
350405	39946	K1	FO-02=	0,38	FO-51=	0,000	FO-55=	0,14
350405	39965	K1	FO-02=	0,38	FO-51=	0,000	FO-55=	0,14

C94 Carbon equivalent formula / Alloying restrictions

FO-02 = C+(MN/6)+(CR+MO+V)/5+(NI+CU)/15
FO-51 = V +NB
FO-55 = CU+MO+NI+CR
FO-78 = CR+MO
FO-91 = MN/C

D01 Marking and identification, surface appearance, shape and dimensional properties

ITEM NO.: 01-05,07-08
RESULT OF MARKING, SURFACE, SHAPE AND DIMENSIONS: NO REMARKS

SURFACE	AS PER ASME-SA20
THICKNESS	AS PER ASME-SA20
LENGTH AND WIDTH	AS PER ASME-SA20
FLATNESS	AS PER 1/2-ASME-SA20

MTR APPROVED EDMONTON EXCHANGER

A04 D H Manufacturer's mark

Z01/Z02/Z03 We hereby certify, that the above mentioned materials have been delivered in accordance with the terms of order.

QM-System: Certification as per ISO 9001

B. BALDAUF
Test House Manager

A H B Inspector's stamp

A01 AG der Dillinger Hüttenwerke
Postfach 1580, D-66748 Dillingen/Saar
Inspection department

Date 17.09.10 BM 1

RJV GAS FIELD SERVICES

4901 Bruce Road Vegreville, Alberta T9C 1C3
Phone: (780) 632-7774

PURCHASE ORDER #	**2764**
DATE	Sept 12,2011
VENDOR	V.E.G. Oilfield Supply
DATE REQUIRED	All
JOB NUMBERS	8" Stock Scrubbers
VESSEL SER#	12207 to 12221

Item	Quantity	Material Spec.	Description	Nom. Thickness	Min. Head	Mill Test	Q.C. Check	Price
1	20'	SA-106-B	8" Sml's Pipe	.322"	-	yes	✓	
2	8	SA-234-WPB	8" weld cap	0.322	-	yes	✓	
3	8	SA-105	2" N.P.T.Half cplg.	#3000	-			
4	24	SA-105	1" N.P.T. Full Cplg.	#3000	-			
5	2	SA-105	3/4" N.P.T.Half cplg.	#3000	-			

1.The above items are to be formed to meet the requirements of ASME Section VII, Div. 1 USC 79(d).
2. Tack welds that are welded must use procedures and welders qualified to ASME Section IX
3. On all code required material, Markings must be accurately transferred to formed material or cut pieces.

Authorized Signature

RJV GAS FIELD SERVICES

PRESSURE TEST RECORD

Date:	Sept 30/11
Vessel Serial Number:	12319
Vessel Design Pressure:	150psi.
Hydro Test Pressure:	225psi
Temperature:	+16
Test Gauge No.:	#1
Hydro By:	Wes
Q.C. Signature:	

Print Clearly

Original to be returned to Q.C. on completion of hydro.

RJV GAS FIELD SERVICES

Vessel Name Plate Travel Sheet

Vessel Serial Number:	12319
Vessel Name:	Fuel Gas Scrubber
Vessel DWG #:	V8505
Vessel C.R.N. #	F6388.231
Vessel Design Pressure:	150psi.
Hydro Pressure:	225psi

Plate Originator:	Wes	Date:	Sept 28,2011
Engraved By:	Scott K.	Date:	Sept 30-11
Picked Up By:		Date:	

Print Clearly

Original to be returned to Q.C.

W

Certified By

RJV GAS FIELD SERVICES

Vegreville, Alberta
Phone (780)632-7774

UNIT NAME

Fuel Gas Scrubber

M.A.W.P. Internal		AT	DESIGN TEMP.		M.A.W.P. External
1035	Kpa.	@	38	°C	Kpa.
150	Psi.	@	100	°F	p.s.i.

MINIMUM DESIGN METAL TEMPERATURE				YEAR BUILT
-29	°C	@	1035 Kpa.	Sept. 2011
-20	°F	@	150 p.s.i.	

C.R. NUMBER	SERIAL NO.
F6388.231	12319

CORR. ALLOW.	HEAT TREATMENT	HYDRO TEST
3.17 mm	NIL	1555 Kpa. 225 p.s.i.

SHELL THICK.	HEAD THICK.	WEIGHT
8.1 mm	Top - 7.16 mm Bottom - 19.05 mm	50 Kg.

SHELL MAT'L	HEAD MAT'L	SIZE
SA-106-B	Top- SA-234-WPB Bottom- SA-516-70	219 X 762mm

ALBERTA MUNICIPAL AFFAIRS
ABSA, the pressure equipment safety authority
9410 – 20th Avenue
Edmonton, AB T6N 0A4

MANUFACTURER'S DATA REPORT FOR MINIATURE PRESSURE VESSEL
DÉCLARATION DE CONFORMITÉ DU CONSTRUCTEUR D'APPAREILS SOUS PRESSION

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

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

Manufactured by *Construit par*	Name and address of Manufacturer/ *Nom et adresse du constructeur* **RJV Gasfield Services 4901 Bruce Road, Vegreville, Alberta, T9C 1C3**
Manufactured for *Construit pour*	Name and address of Purchaser or Consignee/ *Nom et adresse du client ou de son représentant* **RJV Gasfield Services 4901 Bruce Road, Vegreville, Alberta, T9C 1C3**
Ultimate owner *Utilisateur*	Name and address/ *Nom et adresse* **Stock**
Location of installation *Lieu d'installation*	Name and address/ *Nom et adresse* **Stock**

Pressure vessel/ *Appareil*

Type/ *Genre*	Overall Length/*Longeur totale*	Serial No./ *N° de série*	Year built/Année de fabrication
Vertical Fuel Gas Scrubber	**762mm sm/sm**	**12319**	**2011**
Provincial Registration No. – C.R.N./N° d'enregistrement provincial - N.E.C. **F6388.231**			Drawing No./ *N° de dessin* **V85-05 Rev.2**

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

The design, construction and workmanship conform to CSA B51. *La conception, la construction et la façon sont conformes à ACNOR B51.*	ASME	Division	Addenda/*Supplément*	Code case No. *N ° de cas*
	Section VIII	1	**2010**	**N/A**

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

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

Shell/ *Virole*

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

Heads/ *Tetes*

Description	Material *Matériau*	Min. Thickn. *Épais minim.*	Corr. Allow *Surép. Corr.*	Crown. Radius *Rayon couron.*	Knuckle Radius *Petit rayon*	Ellipse Ratio *Rapp. ellipse*	Conical Apex Angle *Angle conique*	Hemisph. Radius *Ray. Hémisph*	Flat Diameter *Diam.plat*	Side to pressure *Côte sous pression*
Top	SA-234-WPB	**7.16mm**	**3.17 mm**	---	---	**Weld Cap**	---	---	---	**Concave**
Bottom	**SA-516-70**	**19.05mm**	**3.17 mm**	---	---	---	---	---	**305 mm**	**Flat**

Removable bolts used (describe other fastenings) *Boulons amovible utilisés (décrire tout autre attache)*	Mat'l Spec./ *Spéc. du mat.*	Grade	Size/ *Dimension*

Pressure - Temperature/ *Pression - température*

Pressure Vessel Part *Partie de l'appareil*	Constructed for max. allowable working pressure *Construit pour une pression maximale de marche permise*	At max. temp. *A une temp. max.*	Minimum design metal temp. *Temp. min.*	Test pressure (hydro-pneumatic or combination) *Pression d'épreuvre (hydro-pneumatique ou combinaison)*
Vessel	**1035 Kpa**	**38°**	**-29°**	**1555 kPA**

Tube Section/ *Faisceau tubulaire*

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

Jacket/ *Chemise*

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

Safety Valve Outlets/ *Soupapes de sûreté*

Number/ *Nombre*	Dimension	Location/ *Endroit*
1	33.4MM	Shell

Nozzles and Openings/ *Tubulures et ouvertures*

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

Supports/ *Supports*

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

Remarks/ *Observations* (Cubical capacity/ Volume)

Volume-(.022 cubic meters)
Exempt from impact test requirements as per UG 20(f) 1 to 5
Flat head o.d. is 203mm
Hydrostatically tested in the Vertical Position

Certificate of Compliance/ *Certificat de conformité*

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

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

Provincial Registered Design
Enregistrement provincial F6388.231

Manufacturer
Constructeur RJV Gasfield Services

Signature _____ Date SEP 30 2011
(Representative)

Signature _____ Date SEP 30 2011
(Certified Individual)