

Travel Sheet

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

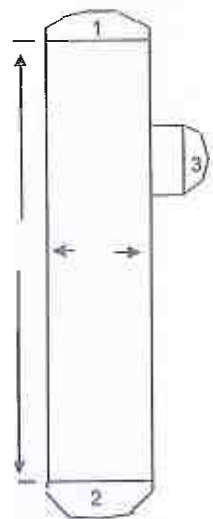
"A"-Hold Point, "I"- Inspection Point, "R"-Revision, "W"- Witness Point

Hold Points established - Sign & Date _____

(Authorized Inspector)

Vessel Serial #		12839	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				March 26, 2013	AD
CALCULATIONS ON FILE				March 26, 2013	AD
MATERIAL CHECKED AGAINST DRAWING, MATERIAL LIST				March 26, 2013	AD
MTR'S CHECKED				March 26, 2013	AD
VESSEL LAYOUT				March 26, 2013	AD
NOZZLES	ORIENTATION			April 2, 2013	AD
& FITTINGS	RATINGS			April 2, 2013	AD
FIT	NOZZLES&FITTINGS			April 8, 2013	AD
UP	SHELL & HEAD			April 19, 2013	AD
INTERNALS (tray, baffles, etc)				April 16, 2013	AD
INTERNAL INSPECTION				April 16, 2013	AD
WELD SIZES				April 26, 2013	AD
WELDERS I.D.				April 26, 2013	AD
EXTERNAL AFTER COMPLETION OF ALL WELDING				April 26, 2013	AD
RADIOGRAPHS					
OTHER N.D.E.					
IMPACT TESTS					
POST WELD HEAT TREATMENT		YES: NO: ☒			
EXTERNAL BEFORE PWHT					
PWHT CHART CHECKED					
NAMEPLATE				May 30, 2013	AD
HYDROSTATIC TEST				May 30, 2013	AD
DATA REPORT				May 30, 2013	AD
NONCONFORMANCES					

		SPECIFICATIONS		HEAT NUMBER	VERIFIED THICKNESS
		C1	C2		
SHELL		SA-106-B		1233174V	8.1mm
HEADS	1	SA-234-WPB		012248	7.16mm
	2	SA-516-70		PA08203901-M13158	19.05mm
	3				
REPADS	1				
	2				
	3				
	4				
		SPECIFICATIONS		SIZE	SCHEDULE
NOZZLES					
FITTINGS		SA-105		1", 2", 3/4"	#3000 cplg.
TUBES					



1833174V
863121092
B3

853121092

Add: 10 Daliximura, Nungnung City, Bataan, P. R. China
P. C. : 421001
Tel and Fax: +85 784 867373
E-mail: huifeng@chinaonline.com

MILL TEST CERTIFICATE

HENGYANG VALIN STEEL
TUBE CO., LTD

[illegible]



8" Sch. 40 weld cap

#012248

311011



INSPECTION CERTIFICATE

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

DATE: 2011-10-27
ORDER NO: 7004734/172510
P.I. NO: 1455-1
CERTIF. NO: 553

MATERIALS JIS G3103 SB410/ASTM A515 Gr.85

8, WEI-CHUNG RD, NING-SONG,
KAO-HSIUNG HSIEN, 83301 TAIWAN
TEL: 886-77310527-8
FAX 886-77315887

INSPECTION SPEC.: ASME B16.9 - 03

ACCORDING TO EN10204/DIN50049/3.1

ITEM NO.	PRODUCT & SIZE	QUANTITY PCS	MFG NO.	VISUAL & DIMENSIONAL INSPECTION	HARDNESS MAX 197 HB	HEAT TREATMENT (NOTE)	MAGNETIC PARTICLE EXAMINATION	IMPACT TEST (J)
1	CAP 8" 160	10	92756	GOOD	134 - 139	N		
2	CAP 8" 160	70	02248	GOOD	135 - 139	N		

ITEM NO.	MATERIAL CHARGE NO.	CHEMICAL COMPOSITION %										PHYSICAL TEST			
		C	Si	Mn	P	S	Cu	Ni	Cr	Mo	V	Nb	Y S	T S	E
		x100	x100	x100	x1000	x1000	x100	x100	x100	x100	x100	x1000	KEI	ksi	%
1	30756	21	28	108	17	2	2	2	3	<1	<1	12	55.7	80.7	24.0
2	31148	22	20	81	13	5	<1	1	2	<1	<1	<1	42.0	71.4	31.0

(NOTE): A HOT FORMED WITH FINAL TEMPERATURE BETWEEN 610C-900C AIR COOLING.

N: NORMALIZING AT TEMPERATURE 800C X 3.5 HR AIR COOLING.

MADE MR-01-75-031501 5155.2 & NACE MR 0109-03: SATISFACTORY

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

On E Lam

MANAGER OF Q.A. DEPT.



edmonton exchanger
& manufacturing ltd.

CERTIFICATE OF COMPLIANCE

5545-89 Street Edmonton, Alberta Canada T6E 5W9 www.edmontonexchanger.com tel 780.468.6722 • QC fax 780.468.4688 • sales fax 780.468.5155

Customer RJV GASFIELD LTD.	po 2918	Work Order C96097	Date 2012/09/17	colts 35910	Page 1 of 1
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Item#	Description	Qty	Heat#	Brinell Hardn.
P96097-1	DISC(S) - 0.7500" NOM X 12" OD (Material Spec: SA 516-70 Normalized) Conforms to NACE MR0175 / ISO 15156-2 2009 Annex A Conforms to NACE MR0103 2007	7	Q4225-275240623	112R
		4	M13158-PA08203901	151
		21	M13160-PA08204002	151
		5	M13158-PA08267901	145
		13	350401-15560	112R

Brinell Equipment: Newage Calibrated Pin
Brinell Hardness Tester

Material being supplied conforms to the latest ASME Code Section II, Part A, 2010 Edition, Addenda July 1, 2011. All welders and procedures are qualified to ASME Code Section IX.

Supplementary Examination - Items

Checked By

Conforms to

ASME Section VIII, Div. 1

2011a

Edition

SEP 20 2012

Date



edmonton exchanger
& manufacturing ltd.

CERTIFICATE OF COMPLIANCE

MTR List

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 2918 Work Order C96097 Date 2012/09/17 CotC# 35910 Page 1 of 1

MTR ID	Pages	Heat#	Thickness	Material Grades
15709	5	350401-15560	.75"	SA 516-70 N
15933	5	M13158-PA08203901	.75"	SA 516-70 N
		M13160-PA08204002	.75"	SA 516-70 N
15934	1	M13158-PA08267901	.75"	SA 516-70 N
16082	11	G4225-275240623	.75"	SA 516-70 N

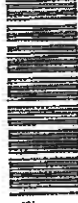
Heat#	Material Grades	MTR ID
350401-15560	SA 516-70 N	15709
G4225-275240623	SA 516-70 N	16082
M13158-PA08203901	SA 516-70 N	15933
M13158-PA08267901	SA 516-70 N	15934
M13160-PA08204002	SA 516-70 N	15933



DILLINGER HÜTTE

Bitte zurücksenden Sie Rückseite/Explications voir au verso/See reverse for explanations (www.dillinger.de/certificate)

A02 INSPECTION CERTIFICATE 3.1 AS PER EN 10204:2004		A10 Advice of dispatch No./ Date of dispatch		A08/ Manufacturer's order/ A03 Certificate No.		Sheet	
INSPECTION CERTIFICATE 3.1.B AS PER EN 10204:1991+A1:1995 + AS PER ISO 10474:1991		368578-09.09.10		357359-001		1/...	
MATERIAL TEST REPORT (MTR)							
A03 Established inspecting body		A05 Purchaser		A07.1 No.		A07.2 No.	
DIL		EDMONTON STEEL, EDMONTON		EDMONTON STEEL, EDMONTON		SA20-S5	
B02/ Steel design.		SA516-70					
B03 Any suppl. requirements		ASME-III-A-07+A09					
		DIL-HUSE-2:R30-2010-01-31					



15789

B01-B99 Description of the product

B14 Item No.	B08 Number of pieces	B09 Thickness	B10 Width	B11 Length	B12 Theoretical mass	B04 Product delivery condition	B07.2 Heat No.	B07.1 Rolled plate No./ Test No.	A09 Purchaser article number
02	1	0,7500 X	120,50000 X	480,00000 X	5580	N	350401	15517-01	
02	1	0,7500 X	120,50000 X	480,00000 X	5580	N	350401	15517-02	
02	1	0,7500 X	120,50000 X	480,00000 X	5580	N	350401	15517-03	
02	1	0,7500 X	120,50000 X	480,00000 X	5580	N	350401	15560-01	
02	1	0,7500 X	120,50000 X	480,00000 X	5580	N	350401	15560-02	
02	1	0,7500 X	120,50000 X	480,00000 X	5580	N	350401	15560-03	
02	1	0,7500 X	120,50000 X	480,00000 X	5580	N	350401	15608-02	
02	1	0,7500 X	120,50000 X	480,00000 X	5580	N	350401	15608-03	
02	1	0,7500 X	120,50000 X	480,00000 X	5580	N	350401	15626-03	
02	1	0,7500 X	120,50000 X	480,00000 X	5580	N	350402	15169-01	
02	1	0,7500 X	120,50000 X	480,00000 X	5580	N	350402	15169-02	
**	11				61380				
***	11				61380				

B04 Product delivery condition

ITEM NO.: 02,05
 N: RT: 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.: 02,05
 STEEL DESIGNATION SA516 70 MLTY SA516 60 MLTY
 HEAT NO. / TRADEMARK / ROLLED PLATE NO. - TEST NO. / INSPECTOR'S STAMP

A04		201202203 We hereby certify, that the above mentioned materials have been delivered in accordance with the terms of order.		AG der Dillinger Hüttenwerke Postfach 1580, D-66746 Dillingen/Saar Inspection department		A01	
D/H Manufacturer's mark		B. BALDAUF Test House Manager		AHB Inspector's stamp		Date 09.09.10 BM I	
		QM-System: Certification as per ISO 9001					



DILLINGER HÜTTE

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

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INSPECTION CERTIFICATE 3.1.B AS PER EN 10204:1991+A1:1995 + AS PER ISO 10474:1991		368578-09.09.10		357359-001		2/...	
MATERIAL TEST REPORT (MTR)							
A05 Established inspecting body		A06 Purchaser		A07.1 No.		A07.2 No.	
DH		Final receiver		EDMONTON STEEL, EDMON		EDMONTON STEEL, EDMON	
B02/ Steel design.		SA516-70		A07.1 No.		ED10551-J1010-ER	
B03 Any suppl.		ASME-II-A:07+A09		A07.2 No.		SA20-S5	
requirements		DIL-HUE-2-R30-2010-01-31					
B07-B99 Further information about the product							
ITEM NO.: 02.05							
THICKNESS REDUCTION RATIO >= 3.0 IS FULFILLED (CF. A/SA20 PAR. 5.3)							
C10-C29 Tensile test							
B14 Item No.	B07.2 Heat No.	B05 Reference (heat) treatment	C01 C02/ C03 C01 Temp. GRF	C10 C11 KSI RP02	C12 RM	C13 A %	C14-C15 L0-BIN
02	350401.15517	KL Q	RT	47,1	73,1	29	
02	350401.15560	KL Q	RT	48,6	73,4	30	
02	350401.15608	KL Q	RT	49,0	74,2	26	
02	350401.15626	KL Q	RT	49,2	74,2	28	
02	350402.15169	KL Q	RT	49,2	75,1	28	
C30-C39 Hardness test							
B14 Item No.	B07.2 Heat No.	B05 Reference (heat) treatment	C01 C02/ C01	C03 Temp. GRF	C30 Method of test	C31 Individual values	C32 Mean value
02	350401.15517	KL Q	KL O	RT HBW 10/3000	HB 137	137	136
02	350401.15560	KL Q	KL O	RT HBW 10/3000	HB 137	137	137
02	350401.15608	KL Q	KL O	RT HBW 10/3000	HB 141	140	140
02	350401.15626	KL Q	KL O	RT HBW 10/3000	HB 138	139	139
02	350402.15169	KL Q	KL O	RT HBW 10/3000	HB 141	142	141
A04							
2017022003 We hereby certify, that the above mentioned materials have been delivered in accordance with the terms of order.		B. BALDAUF Test House Manager		AG der Dillinger Hüttenwerke Postfach 1580, D-66748 Dillingen/Saar Inspection department		A01	
QM-System: Certification as per ISO 9001		B. BALDAUF Test House Manager		AG der Dillinger Hüttenwerke Postfach 1580, D-66748 Dillingen/Saar Inspection department		A01	
D/H Manufacturer's mark		B. BALDAUF Test House Manager		AG der Dillinger Hüttenwerke Postfach 1580, D-66748 Dillingen/Saar Inspection department		A01	



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INSPECTION CERTIFICATE 3.1.B AS PER EN 10204:1991+A1:1995 + AS PER ISO 10474:1991		368578-09.09.10		357359-001		3/...	
MATERIAL TEST REPORT (MTR)				801 Product		HOT ROLLED PLATES	
A05 Established inspecting body		A06 Purchaser		A07.1 No.		A07.2 No.	
DE		EDMONTON STEEL, EDMONT		EDMONTON STEEL, EDMONT		SA20-S5	
B02/ Steel design.		SA516-70					
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 Rel. plate/ Test No.	B05 Reference (heat treatment)	C01	C02/ C01	C03 Temp. GRF	C41 Width of test piece	C40 Type of test piece	C44 Testing method	C46 Energy	C45 Individual values AV=FT.LBF	C43 Mean value
02	350401	15517		KL LV		-51		CHP-V			AV 98	137
02	350401	15560		KL LV		-51		CHP-V			AV 195	187
02	350401	15608		KL LV		-51		CHP-V			AV 137	133
02	350401	15626		KL LV		-51		CHP-V			AV 122	175
02	350402	15169		KL LV		-51		CHP-V			AV 159	159

C70-C99 Chemical composition % - Heat analysis

B07.2 Heat No.	C70	C	SI	MN	P	S	N	CU	MO	NI	CR	V	NB	SN	TI
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	0,037	0,001	0,000	0,001	0,003
B07.2 Heat No.	C70	B	CA	AL-T											
350401	Y	0,0000	0,0020	0,044											
350402	Y	0,0002	0,0013	0,033											

C94 Heat analysis Carbon equivalent / Alloying restrictions

B07.2 Heat No.	FO-02=	0,38	FO-51=	0,001	FO-55=	0,13	FO-78=	0,04	FO-91=	6,9
350401										
350402	FO-02=	0,39	FO-51=	0,001	FO-55=	0,14	FO-78=	0,04	FO-91=	6,8

C95 Ladle treatment

ITEM NO.: 02,05
HEAT OF THE INDICATED ITEM: VACUUM DEGASSED / SULPHIDE SHAPE CONTROL

A04		Z01/20203 We hereby certify, that the above mentioned materials have been delivered in accordance with the terms of order.	A01
QM-System: Certification as per ISO 9001			AG der Dillinger Hüttenwerke Postfach 1580, D-66748 Dillingen/Saar Inspection department
Manufacturer's mark		B. BALDAUF Test House Manager	Inspector's stamp Date 09.09.10 BM 1



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FO-02 = C + (MN/6) + (CR+MO+V) / 5 + (NI+CU) / 15.																																																																																							
FO-51 = V + NE																																																																																							
FO-55 = CU+MO+NI+CR																																																																																							
FO-78 = CR+MO																																																																																							
FO-91 = MN/C																																																																																							
A04		Z01Z02Z03 We hereby certify, that the above mentioned materials have been delivered in accordance with the terms of order.		AG der Dillinger Hüttenwerke Postfach 1580, D-66748 Dillingen/Saar Inspection department		A01																																																																																	
D/H		Manufacturer's mark		AHB		Date 09.09.10																																																																																	
				Inspector's stamp		BM 1																																																																																	
				B. BALDAUF Test House Manager																																																																																			



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A02 INSPECTION CERTIFICATE 3.1 AS PER EN 10204:2004		A10 Advice of dispatch No./ Date of dispatch 368578-09.09.10	A08/ Manufacturer's order/ A03 Certificate No. 357359-001	Shoot 5
INSPECTION CERTIFICATE 3.1.B AS PER EN 10204:1991+A1:1995 + AS PER ISO 10474:1991				
MATERIAL TEST REPORT (MTR)				
A05 Established inspecting body DH	A06 Purchaser EDMONTON STEEL, EDMON	A07.1 No. ED10551-J1010-ER		
	Final receiver EDMONTON STEEL, EDMON	A07.2 No.		
B02/ Steel design. SA516-70				
B03 Any suppl. requirements	SA20-S5			
DIL-HUB-2:R30-2010-01-31				

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

ITEM NO.: 02,05

RESULT OF MARKING, SURFACE, SHAPE AND DIMENSIONS: NO REMARKS

SURFACE AS PER ASME-SA20

THICKNESS AS PER ASME-SA20

LENGTH AND WIDTH AS PER ASME-SA20

FLATNESS AS PER 1/2-ASME-SA20



A04	201702/2013 We hereby certify, that the above mentioned materials have been delivered in accordance with the terms of order.		AHB	AG der Dillinger Hüttenwerke Postfach 1580, D-66748 Dillinger/Saar Inspection department	A01
QM-System: Certification as per ISO 9001		R. BALDAUF Test House Manager	Inspector's stamp	Date 09.09.10	BM 1

검사증명서

MILL TEST CERTIFICATE



주요번호
Our Order No
F101200028

품명
Commodity
Hot Rolled Steel Plate

제품규격
Specification
SA516-70-N

고객사
Customer
EDMONTON EXCHANGER

주공자
Contractor
HYUNDAI CORPORATION

증서번호
Certificate No
20110113-PS-001-008

발행일자
Date of Issue
2011-02-10

제품치수 Dimension	수량 Quantity	중량 Weight (LBS)	재간번호 Heat NO	제품번호 Product NO	Position	인장시험 Tensile Test						충격시험 Impact test V Notch -50°F		화학성분 Chemical Composition(%)																	
						YP	TS	EL	YP-EL	RA	YR	N	Energy	SF	D ₅₀	C	Si	Mn	P	S	Cr	N	Nb	Ti	V	Sb	Cu	Mo	Ni	As	Se
0.75" x 120.5" x 480"	1	12,288	M13158	PA08203901	T	54.0	78.1	28					11.107		1.542	338	1,131	152	14	19	15	2	126	0	35	13	1	1	35	389	
													2.138		1.588	310	1,116	163	32	18	16	4	132	0	41	12	1	1	30	400	
													3.181																		
													A-142																		
0.75" x 120.5" x 480"	1	12,288	M13153	PA08203902	T	54.0	78.1	28					11.107		1.542	338	1,131	152	14	19	15	2	126	0	35	13	1	1	35	389	
													2.138		1.588	310	1,116	163	32	18	16	4	132	0	41	12	1	1	30	400	
													3.181																		
													A-142																		
0.75" x 120.5" x 480"	1	12,288	M13158	PA08203903	T	54.0	78.1	28					11.107		1.542	338	1,131	152	14	19	15	2	126	0	35	13	1	1	35	389	
													2.138		1.588	310	1,116	163	32	18	16	4	132	0	41	12	1	1	30	400	
													3.181																		
													A-142																		
0.75" x 120.5" x 480"	1	12,288	M13150	PA08204001	T	52.8	77.0	28					11.142		1.582	310	1,143	149	28	20	17	2	141	0	31	13	1	1	29	408	
													2.249		1.576	304	1,168	147	30	19	17	2	139	0	37	12	1	1	31	404	
													3.211																		
													A-200																		

NOTE

Division - C: Check analysis, L: Lab analysis
 Position - T: Top, M: Middle, B: Bottom
 Tensile test - Direction: Transverse, Gauge length: 200mm (Rectangular), YP method: 0.2% off-set
 Impact test - Direction: Longitudinal, Size: 10mm x 10mm, SF: Shear fracture

WE HEREBY CERTIFY THAT THE MATERIAL HAS BEEN MADE AND TESTED IN ACCORDANCE WITH THE ABOVE SPECIFICATION AND THE REQUIREMENTS

Signature: *C. S. Han*
 SURVEILLANT OF QUALITY ASSURANCE TEAM



검사 증명서

MILL TEST CERTIFICATE



주문번호
Our Order No

: F101200028

품명
Commodity

: Hot Rolled Steel Plate

제품규격
Specification

: SAS16-70-N

고객사
Customer

: EDMONTON EXCHANGER

주문자
Contractor

: HYUNDAI CORPORATION

증명서 번호
Certificate No

: 20110113-PS-001-009

발행일자
Date of Issue

: 2011-02-10

제품치수 Dimension	수량 Quantity	중량 Weight (LBS)	제강번호 Heat NO	제품번호 Product NO	Position	인장시험 Tensile Test							충격시험 Impact Test V-notch, 50°F		화학성분 Chemical Composition(%)																	
						YP	TS	EL (%)	YP-EL (%)	RA (%)	YR (%)	N	Energy (Ft-Lbs)	SF (%)	D. Test	C	S	Mn	P	S	Cr	Ni	B	Cu	Mo	N	Nb	Ti	V	Sn	Al	O50
0.75" x 120.5" x 480"	1	12,239	M13160	PA08204002	T	52.8	77.0	26					1:142 2:249 3:211 A:200	1:142 2:249 3:211 A:200	L C	1.582 1.508	310 304	1.143 1.168	149 147	28 30	20 19	17 17	2 2	141 139	0 0	31 37	13 12	1 1	1 1	29 31	408 404	
0.75" x 120.5" x 480"	1	12,239	M13160	PA08204003	T	52.8	77.0	26					1:142 2:249 3:211 A:200	1:142 2:249 3:211 A:200	L C	1.582 1.518	310 304	1.143 1.168	149 147	28 30	20 19	17 17	2 2	141 139	0 0	31 37	13 12	1 1	1 1	29 31	408 404	
0.75" x 120.5" x 480"	1	12,239	M13160	PA08204101	T	52.7	77.2	29					1:151 2:243 3:47 A:147	1:151 2:243 3:47 A:147	L C	1.582 1.491	310 314	1.143 1.182	148 140	28 26	20 19	17 16	2 1	141 135	0 0	31 36	13 12	1 1	1 1	29 33	408 404	
0.75" x 120.5" x 480"	1	12,239	M13160	PA08204102	T	52.7	77.2	29					1:151 2:243 3:47 A:147	1:151 2:243 3:47 A:147	L C	1.582 1.491	310 314	1.143 1.182	149 140	28 26	20 19	17 16	2 1	141 135	0 0	31 36	13 12	1 1	1 1	29 33	408 404	

* Division - C: Check analysis, L: Ladle analysis
* Position - T: Top, M: Middle, B: Bottom
* Tensile test - Direction: Transverse, Gauge length: 200mm (Rectangular), YP method: 0.2% off-set
* Impact test - Direction: Longitudinal, Size: 10mmx10mm, SF: Shear fracture

* The plate is fully killed and lime oxygen process and Vacuum degassing process were applied.
* Applicable Code is ASME Section II Part A 2010 Edition. The Certificate has been issued in compliance with EN 10204(2004) 3.1.

WE HEREBY CERTIFY THAT THE MATERIAL HAS BEEN MADE AND TESTED IN ACCORDANCE WITH THE ABOVE SPECIFICATION AND THE REQUIREMENTS

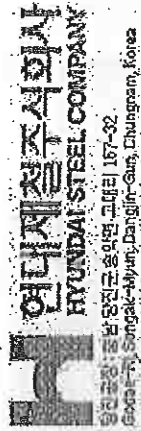
Signature

Signature of Quality Assurance Team

본 증명서는 현대제철주식회사에서 발행된 것으로, 본 증명서의 유효성은 현대제철주식회사의 품질 관리 정책에 따라 결정됩니다.

검사증명서

MILL TEST CERTIFICATE



주문번호
Our Order No

종명
Commodity

제품규격
Specification

: F101200028

: Hot Rolled Steel Plate

고객사
Customer

: EDMONTON EXCHANGER

증명서 번호
Certificate No

: 20110113-PS-001-010

발행일자
Date of Issue

: 2011-02-10

주문자
Contractor

: HYUNDAI CORPORATION

제품치수 Dimension	수량 Quantity	중량 Weight (LBS)	제강번호 Heat NO	제품번호 Product NO	Position	인장시험 Tensile Test								충격시험 Impact Test V-notch -50°F		화학성분 Chemical Composition(%)																단위 Unit																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																						
						YP	TS	EL	YF-EL	RA	YR	N	Energy (Ft-Lbs)	SF (%)	C	S	Mn	P	S	Cr	N	B	Cu	Mo	Nb	Ti	V	Nb	Al																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																									
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- * Division - C: Check analysis, L: Ladle analysis
- * Position - T: Top, M: Middle, B: Bottom
- * Tensile test - Direction: Transverse, Gauge length: 200mm (Rectangular), YP method: 0.2% off-set
- * Impact test - Direction: Longitudinal, Size: 10mm x 10mm, SF: Shear fracture

NOTE

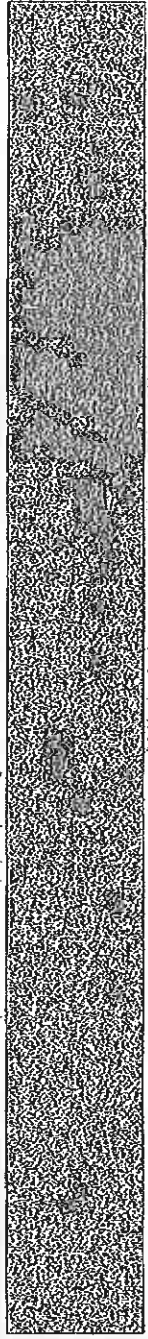
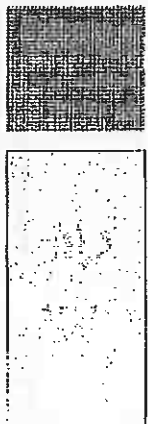
* The plate is fully killed and line drained steel. Basic oxygen process and Vacuum degassing process were applied.
* Applicable Code is ASME Section II Part A 2010 Edition. The Certificate has been issued in compliance with EN 10204(2004) 3.1.

WE HEREBY CERTIFY THAT THE MATERIAL HAS BEEN MADE AND TESTED IN ACCORDANCE WITH THE ABOVE SPECIFICATION AND THE REQUIREMENTS

Signature

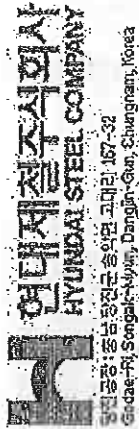
Ch. S. Han

SUPERVISOR: CHIEF OF QUALITY ASSURANCE TEAM



검사 증명서

MILL TEST CERTIFICATE



주문번호 : F101200028

Our Order No

종 명 : Hot Rolled Steel Plate

고객사 : EDMONTON EXCHANGER

제품명

주문자 : HYUNDAI CORPORATION

제품규격

Specification : SA616-70-N

증명서 번호 : 20110113-PS-001-012

Certificate No

발행 일자

Date of Issue

제품번호 Dimension	수량 Quantity	중량 Weight (LBS)	재질번호 Heat NO	제품번호 Product NO	Position	인장시험 Tensile Test										충격시험 Impact Test V Notch -50°F		화학성분 Chemical Composition(%)																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																					
						YP (KSI)	TS (%)	EL (%)	YP-EL (%)	RA (%)	VR (%)	N	SF (%)	Energy (Ft-Lbs)	Division	C	S	Mn	P	S	Cr	Ni	B	Cu	Mo	Nb	Ti	V	Si	Al	CEQ																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																								
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Sub Total(004) 18 221,382(LBS)

***Heat Treatment: Normalized : 1193/4, 0.75 37 Min.

Grade/Total 45 446,171(LBS) Ceq. G=C+Mn/6+(Ni+Cu)/15+(Cr+Mo)/5

Last Item



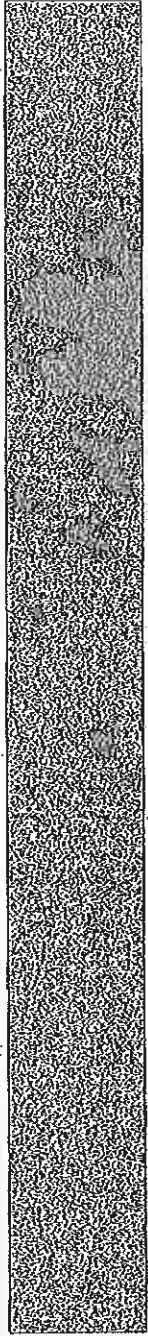
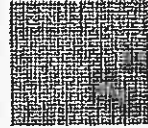
* Division - C: Check analysis, L: Ladie analysis
* Position - T: Top, M: Middle, B: Bottom
* Tensile test - Direction: Transverse, Gauge length: 200mm (Rectangular), YP method : 0.2% off-set
* Impact test - Direction: Longitudinal, Size: 10mmX10mm, SF: Shear fracture

NOTE

* The plate is fully killed and fine grained steel. Basic oxygen process and vacuum degassing process were applied.
* Applicable Code is ASME Section II Part A 2010 Edition. The Certificate has been issued in compliance with EN 10204(2004) 3.1

WE HEREBY CERTIFY THAT THE MATERIAL HAS BEEN MADE AND TESTED IN ACCORDANCE WITH THE ABOVE SPECIFICATION AND THE REQUIREMENTS.

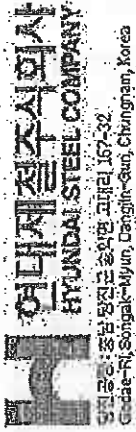
Signature
SUPERIOR TO CHIEF OF QUALITY ASSURANCE TEAM



본 증명서는 현대제철의 품질관리시스템에 따라 발급된 것으로, 이 증명서의 효력은 현대제철의 품질관리시스템에 따라 발급된 것입니다.

검사증명서

MILL TEST CERTIFICATE



소재지: 중남성진공공업단지 167-32
Gosae-Ri, Songhak-Myun, Dangjin-Gun, Chungnam, Korea

주문번호
Our Order No : F101200028

품명
Commodity : Hot Rolled Steel Plate

제품규격
Specification : SA516-70-N

고객사
Customer : EDMONTON EXCHANGER

주공자
Contractor : HYUNDAI CORPORATION

증명서 번호
Certificate No : 20110129-PS-004-015

발행일자
Date of Issue : 2011-02-10

제품차수 Dimension	수량 Quantity	중량 Weight (LBS)	제강번호 Heat NO	제품번호 Product NO	Position	인장시험 Tensile Test						충격시험 Impact Test V-notch -50°F		화학성분 Chemical Composition												단위 Unit																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																							
						YP	TS	EL	YP-EL	PA	YR	N	Brkly	SF	C	Mn	P	S	Q	N	B	Cr	Mo	Si	Al	2"x100	3"x100	4"x100																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																					
Heat Treatment: Normalized : 1630-1732 Min.																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																	
0.75" x 120.5" x 480"	1	12,299	M13158	PA08267901	T	54.6	79.4	27																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																									

*** Heat Treatment: Normalized : 1634.0°F 32 Min.

*** Sub Total (004) *** 3 36,897 (LBS)

*** Heat Treatment: Normalized : 1634.0°F 37 Min.

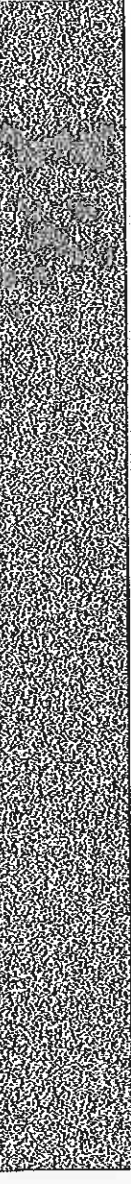
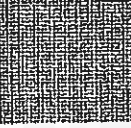
* Division : C-Check analysis, L-Ladle analysis
* Position : T-Top, M-Middle, B-Bottom
* Tensile test - Direction: Transverse, Gauge length: 200mm (Rectangular), YP method : 0.2% off-set
* Impact test - Direction: Longitudinal, Size: 10mmx10mm, SF-Shear fracture

* The plate is fully killed and line grain steel. Basic oxygen process and Vacuum degassing process were applied.
* Applicable Code is ASME Section II Part A 2010 Edition. The Certificate has been issued in compliance with EN 10204(2004)'s 1.

WE HEREBY CERTIFY THAT THE MATERIAL HAS BEEN MADE AND TESTED IN ACCORDANCE WITH THE ABOVE SPECIFICATION AND THE REQUIREMENTS

Signature

S. PARK TO : CHIEF OF QUALITY ASS. PANCE TEAM



본 검사증명서는 본 회사에서 발행한 것으로서, 본 회사에서 발행한 검사증명서와 일치하지 않으면, 본 회사에서 발행한 검사증명서와 일치하지 않습니다.

B

社 名 : 新日本製鐵株式会社
SHIPPER : HANWA CO., LTD.
注文書番号 : 228-38501080
REFERENCE No. : 228-38501080
契約番号 : 1-831-H1-5-4-A101
品名 : HOT ROLLED STEEL PLATES
COMMODITY :
規格 : ASME SA-516 GRADE 70-E10
SPECIFICATION :
文書番号 :
DOCUMENT No. :

鋼材検査証明書

INSPECTION CERTIFICATE

(AS PER EN 10204 CERTIFICATE ON MATERIAL TESTS 3.1)

需要家 : EDMONTON EXCHANGER GROUP OF C- CUSTOMER : COMPANIES

寸 法 DIMENSION mm, 'inch, 'feet	数量 QUAN- TITY	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 Y.S. 0.2% T.S. 伸び EL %	位置 LOCATION ORIENTATION M1	化 学 成 分 CHEMICAL COMPOSITION %														衝撃試験 IMPACT TEST 2V - 50F FT. LB 平均値 AVG EACH	HBW	P	C	Si	Mn	P	S	Cu	Ni	Cr	Mo	Nb	V	Ti	Al	Other	X9																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																				
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0.75"X120.5"X480"	06	2	11158	G4224 FROM 11506	275240608 TO 275240609	56 77 28																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																				

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
Head of Department
PLATE QUALITY CONTROL DEPT.
KUMITSUWORKS



注 記 NOTES
※1 寸法公差 : 長さ・幅・厚さ : 公差は JIS B 7709 に従う。
※2 寸法公差 : 長さ・幅・厚さ : 公差は JIS B 7709 に従う。
※3 寸法公差 : 長さ・幅・厚さ : 公差は JIS B 7709 に従う。
※4 寸法公差 : 長さ・幅・厚さ : 公差は JIS B 7709 に従う。
※5 寸法公差 : 長さ・幅・厚さ : 公差は JIS B 7709 に従う。
※6 寸法公差 : 長さ・幅・厚さ : 公差は JIS B 7709 に従う。
※7 寸法公差 : 長さ・幅・厚さ : 公差は JIS B 7709 に従う。
※8 寸法公差 : 長さ・幅・厚さ : 公差は JIS B 7709 に従う。
※9 寸法公差 : 長さ・幅・厚さ : 公差は JIS B 7709 に従う。
※10 寸法公差 : 長さ・幅・厚さ : 公差は JIS B 7709 に従う。

B

SHIPPER : HANWA CO., LTD.

REFERENCE No. : 228-38501090

CONTRACT No. : 1-83J-HI-5-4-A101

COMMODITY : HOT ROLLED STEEL PLATES

SPECIFICATION : ASME SA-516 GRADE 70-F10

DOCUMENT No. :

新日本製鐵株式會社

Nippon Steel Corporation

鋼材検査証明書

INSPECTION CERTIFICATE

社 100-8971 東京都千代田区丸の内二丁目6番1号
HEAD OFFICE : 2-6-1, MARUNOUCHI, CHYODA-KU, TOKYO 100-8971, JAPAN
営業所 : 〒209-1141 千葉県君津市君津1番地
KIMITSU WORKS : 1, KIMITSU, KIMITSU-CITY, CHIBA-PREF. 299-1141 JAPAN

証明番号 : P-13163 PAGE : 56
発行年月日 : 2011-04-06
DATE OF ISSUE : 2011-04-06

需要家管理番号 : E3001P07Q1 EQ7
CUSTOMER'S CONTROL No. : 220M*****

(AS PER EN 10204 CERTIFICATE ON MATERIAL TESTS 3.1)
EDMONTON EXCHANGER GROUP OF C-
需要家管理番号 : E3001P07Q1 EQ7
CUSTOMER'S CONTROL No. : 220M*****

寸法 DIMENSION mm, inch, feet	数量 QUANTITY	質量 MASS KG	鋼種番号 CAST No.	製品番号 PLATE No.	引張試験 TENSILE TEST				衝撃試験 IMPACT TEST				化学成分 CHEMICAL COMPOSITION %											
					Y.S.	T.S.	EL.	%	2V	FT.	LB.	AVG	C	SI	Mn	P	S	Q	Ni	Cr	Mo	Nb	V	Co
0.75' X 120.5' X 480'	06	5579	G4225 11514	TESTED-PL 275240635	56	77	32		269	295	303	AVG	16	38	144	9	2	2	2	2	0	0	0	0
0.75' X 120.5' X 480'	06	18158	G4225 11514	TESTED-PL 275240635	56	77	32		269	295	303	AVG	16	38	144	9	2	2	2	2	0	0	0	0
0.75' X 120.5' X 480'	06	5579	G4225 11514	TESTED-PL 275240635	56	77	29		277	281	276	AVG	16	38	144	9	2	2	2	2	0	0	0	0

注 記 NOTES : 1. 位置 Orientation : 位置 - 方向, T: 縦部 Top, B: 底面 Bottom, L: 縦部方向 Longitudinal, C: 縦部方向 Through Thickness, R: 45° 方向 45Deg to the Longitudinal Axis

2. C.L. 中心線 Center Line, A: 50mm 半形試験片 Rectangular, B: 50mm 半形試験片 Rectangular, C: 70mm 半形試験片 Rectangular, D: 70mm 半形試験片 Rectangular, E: 80mm 半形試験片 Rectangular, F: 80mm 半形試験片 Rectangular, G: 200mm 半形試験片 Rectangular, H: 200mm 半形試験片 Rectangular, I: 200mm 半形試験片 Rectangular, J: 200mm 半形試験片 Rectangular, K: 4/50

3. R.A. : 絞り Reduction of Area, Y.T. : 降伏点 Yield Point, 4. 合格 Acceptable, 5. F: 試験片 FULL SIZE, 2: 25mm, 3: 33mm, 4: 33mm, 5: 50mm, 6: 67mm, 7: 77mm, 8: 67mm, 9: 製品厚 Plate Thickness, 10. 試験厚 Test Thickness

7. N: 通常 Normalized, Q: 焼入 Quenched, T: 焼戻し Tempered, C.R.: Controlled Rolled, N.I.C.: NIC Process/TMC Process, C.L.C.: CLG Process/TMC Process, A.R.: As Rolled, T.M.R.: TMR Process/TMC Process, N.R.: Normalizing Rolled, S.H.: 酸洗表面 Shear Fracture, C.F.: 酸洗表面 Charismatic Fracture, L.E.: 酸洗表面 Laminar Fracture, A.G.S.: オーステナイト相 Austenite Grain Size, F.G.S.: フェライト相 Ferrite Grain Size, S.R.: 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.

J. Adachi

代表取締役 板金管理グループリーダー
Head of Department
PLATE QUALITY CONTROL DEPT.
KIMITSU WORKS



注文者: HANWA CO., LTD.
 SHIPPER
 注文照会番号: 228-38501090
 契約番号: 1-831-HI-5-4-AI01
 商品名: HOT ROLLED STEEL PLATES
 規格: ASME SA-516 GRADE 70-E10

新日本製鋼株式会社
 Nippon Steel Corporation

鋼材検査証明書

INSPECTION CERTIFICATE

本 社: 〒100-8071 東京都千代田区丸の内二丁目6番1号
 HEAD OFFICE: 2-6-1, MARUNOUCHI, CHIYODA-KU, TOKYO 100-8071, JAPAN
 営業所: 〒299-1141 千葉県君津市君津1番地
 KAMITSUWORKS: 1, KIMITSU, KAMITSU-CITY, CHIBA-PREF. 299-1141, JAPAN

証明書番号: P-13163
 発行年月日: 2011-04-06
 頁: 57

(AS PER EN 10204 CERTIFICATE ON MATERIAL TESTS 3.1)

需要家: EDMONTON EXCHANGER GROUP OF C-
 CUSTOMER: COMPANIES

需要家管理番号: 1001
 2***D***
 *****C***

寸法 DIMENSION mm, inch, feet	数量 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				衝撃試験 IMPACT TEST				化学成分 CHEMICAL COMPOSITION													
						YS 0.2%	TS	EL	%	YS 0.2%	TS	EL	%	C	Si	Mn	P	S	Al	Ni	Q	Mo	Nb	V	Ti	Co	As
0.75' X 120.5' X 480"	06	2	11158	G4225FROM 11520	275240627	56	77	28		277	281	288	278	0.16	0.38	1.44	0.008	0.005	0.005	0.005	0.005	0.005	0.005	0.005	0.005	0.005	0.005
0.75' X 120.5' X 480"	06	1	3579	G4225TESTED-PL 11520	275240627	56	77	28		253	266	266	280	0.16	0.38	1.44	0.008	0.005	0.005	0.005	0.005	0.005	0.005	0.005	0.005	0.005	0.005
0.75' X 120.5' X 480"	06	2	11158	G4225FROM 11520	275240627	56	77	28		253	266	266	280	0.16	0.38	1.44	0.008	0.005	0.005	0.005	0.005	0.005	0.005	0.005	0.005	0.005	0.005

注釈 NOTES: 1. 位置: 長さ方向 Longitudinal, C: 長さ方向 Transverse, 2. 試験方法 Through Thickness, R: 15° 方向 450g, to the Longitudinal Axis
 3. GL: 長さ方向 Gauge Length, A: 50mm 平均試験片 Rectangular, B: 50mm 平均試験片 Rectangular, C: 70mm 平均試験片 Rectangular, D: 70mm 平均試験片 Rectangular, E: 80mm 平均試験片 Rectangular, F: 80mm 平均試験片 Rectangular, G: 80mm 平均試験片 Rectangular, H: 80mm 平均試験片 Rectangular, I: 80mm 平均試験片 Rectangular, J: 80mm 平均試験片 Rectangular, K: 80mm 平均試験片 Rectangular, L: 80mm 平均試験片 Rectangular, M: 80mm 平均試験片 Rectangular, N: 80mm 平均試験片 Rectangular, O: 80mm 平均試験片 Rectangular, P: 80mm 平均試験片 Rectangular, Q: 80mm 平均試験片 Rectangular, R: 80mm 平均試験片 Rectangular, S: 80mm 平均試験片 Rectangular, T: 80mm 平均試験片 Rectangular, U: 80mm 平均試験片 Rectangular, V: 80mm 平均試験片 Rectangular, W: 80mm 平均試験片 Rectangular, X: 80mm 平均試験片 Rectangular, Y: 80mm 平均試験片 Rectangular, Z: 80mm 平均試験片 Rectangular
 4. RA: 絞り Reduction of Area, YR: 引張強さ Yield Ratio, 5. A: 合格 Acceptable, 6. P: 試験片 Full Size, 7. 2.5mm, 3. 3.2mm, 4. 3.2mm, 5. 5.0mm, 6. 6.67mm, 7. 7.5mm, 8. 6.67mm, 9. 5.0mm, 10. 6.67mm, 11. 7.5mm, 12. 6.67mm, 13. 5.0mm, 14. 6.67mm, 15. 7.5mm, 16. 6.67mm, 17. 5.0mm, 18. 6.67mm, 19. 7.5mm, 20. 6.67mm, 21. 5.0mm, 22. 6.67mm, 23. 7.5mm, 24. 6.67mm, 25. 5.0mm, 26. 6.67mm, 27. 7.5mm, 28. 6.67mm, 29. 5.0mm, 30. 6.67mm, 31. 7.5mm, 32. 6.67mm, 33. 5.0mm, 34. 6.67mm, 35. 7.5mm, 36. 6.67mm, 37. 5.0mm, 38. 6.67mm, 39. 7.5mm, 40. 6.67mm, 41. 5.0mm, 42. 6.67mm, 43. 7.5mm, 44. 6.67mm, 45. 5.0mm, 46. 6.67mm, 47. 7.5mm, 48. 6.67mm, 49. 5.0mm, 50. 6.67mm, 51. 7.5mm, 52. 6.67mm, 53. 5.0mm, 54. 6.67mm, 55. 7.5mm, 56. 6.67mm, 57. 5.0mm, 58. 6.67mm, 59. 7.5mm, 60. 6.67mm, 61. 5.0mm, 62. 6.67mm, 63. 7.5mm, 64. 6.67mm, 65. 5.0mm, 66. 6.67mm, 67. 7.5mm, 68. 6.67mm, 69. 5.0mm, 70. 6.67mm, 71. 7.5mm, 72. 6.67mm, 73. 5.0mm, 74. 6.67mm, 75. 7.5mm, 76. 6.67mm, 77. 5.0mm, 78. 6.67mm, 79. 7.5mm, 80. 6.67mm, 81. 5.0mm, 82. 6.67mm, 83. 7.5mm, 84. 6.67mm, 85. 5.0mm, 86. 6.67mm, 87. 7.5mm, 88. 6.67mm, 89. 5.0mm, 90. 6.67mm, 91. 7.5mm, 92. 6.67mm, 93. 5.0mm, 94. 6.67mm, 95. 7.5mm, 96. 6.67mm, 97. 5.0mm, 98. 6.67mm, 99. 7.5mm, 100. 6.67mm, 101. 5.0mm, 102. 6.67mm, 103. 7.5mm, 104. 6.67mm, 105. 5.0mm, 106. 6.67mm, 107. 7.5mm, 108. 6.67mm, 109. 5.0mm, 110. 6.67mm, 111. 7.5mm, 112. 6.67mm, 113. 5.0mm, 114. 6.67mm, 115. 7.5mm, 116. 6.67mm, 117. 5.0mm, 118. 6.67mm, 119. 7.5mm, 120. 6.67mm, 121. 5.0mm, 122. 6.67mm, 123. 7.5mm, 124. 6.67mm, 125. 5.0mm, 126. 6.67mm, 127. 7.5mm, 128. 6.67mm, 129. 5.0mm, 130. 6.67mm, 131. 7.5mm, 132. 6.67mm, 133. 5.0mm, 134. 6.67mm, 135. 7.5mm, 136. 6.67mm, 137. 5.0mm, 138. 6.67mm, 139. 7.5mm, 140. 6.67mm, 141. 5.0mm, 142. 6.67mm, 143. 7.5mm, 144. 6.67mm, 145. 5.0mm, 146. 6.67mm, 147. 7.5mm, 148. 6.67mm, 149. 5.0mm, 150. 6.67mm, 151. 7.5mm, 152. 6.67mm, 153. 5.0mm, 154. 6.67mm, 155. 7.5mm, 156. 6.67mm, 157. 5.0mm, 158. 6.67mm, 159. 7.5mm, 160. 6.67mm, 161. 5.0mm, 162. 6.67mm, 163. 7.5mm, 164. 6.67mm, 165. 5.0mm, 166. 6.67mm, 167. 7.5mm, 168. 6.67mm, 169. 5.0mm, 170. 6.67mm, 171. 7.5mm, 172. 6.67mm, 173. 5.0mm, 174. 6.67mm, 175. 7.5mm, 176. 6.67mm, 177. 5.0mm, 178. 6.67mm, 179. 7.5mm, 180. 6.67mm, 181. 5.0mm, 182. 6.67mm, 183. 7.5mm, 184. 6.67mm, 185. 5.0mm, 186. 6.67mm, 187. 7.5mm, 188. 6.67mm, 189. 5.0mm, 190. 6.67mm, 191. 7.5mm, 192. 6.67mm, 193. 5.0mm, 194. 6.67mm, 195. 7.5mm, 196. 6.67mm, 197. 5.0mm, 198. 6.67mm, 199. 7.5mm, 200. 6.67mm, 201. 5.0mm, 202. 6.67mm, 203. 7.5mm, 204. 6.67mm, 205. 5.0mm, 206. 6.67mm, 207. 7.5mm, 208. 6.67mm, 209. 5.0mm, 210. 6.67mm, 211. 7.5mm, 212. 6.67mm, 213. 5.0mm, 214. 6.67mm, 215. 7.5mm, 216. 6.67mm, 217. 5.0mm, 218. 6.67mm, 219. 7.5mm, 220. 6.67mm, 221. 5.0mm, 222. 6.67mm, 223. 7.5mm, 224. 6.67mm, 225. 5.0mm, 226. 6.67mm, 227. 7.5mm, 228. 6.67mm, 229. 5.0mm, 230. 6.67mm, 231. 7.5mm, 232. 6.67mm, 233. 5.0mm, 234. 6.67mm, 235. 7.5mm, 236. 6.67mm, 237. 5.0mm, 238. 6.67mm, 239. 7.5mm, 240. 6.67mm, 241. 5.0mm, 242. 6.67mm, 243. 7.5mm, 244. 6.67mm, 245. 5.0mm, 246. 6.67mm, 247. 7.5mm, 248. 6.67mm, 249. 5.0mm, 250. 6.67mm, 251. 7.5mm, 252. 6.67mm, 253. 5.0mm, 254. 6.67mm, 255. 7.5mm, 256. 6.67mm, 257. 5.0mm, 258. 6.67mm, 259. 7.5mm, 260. 6.67mm, 261. 5.0mm, 262. 6.67mm, 263. 7.5mm, 264. 6.67mm, 265. 5.0mm, 266. 6.67mm, 267. 7.5mm, 268. 6.67mm, 269. 5.0mm, 270. 6.67mm, 271. 7.5mm, 272. 6.67mm, 273. 5.0mm, 274. 6.67mm, 275. 7.5mm, 276. 6.67mm, 277. 5.0mm, 278. 6.67mm, 279. 7.5mm, 280. 6.67mm, 281. 5.0mm, 282. 6.67mm, 283. 7.5mm, 284. 6.67mm, 285. 5.0mm, 286. 6.67mm, 287. 7.5mm, 288. 6.67mm, 289. 5.0mm, 290. 6.67mm, 291. 7.5mm, 292. 6.67mm, 293. 5.0mm, 294. 6.67mm, 295. 7.5mm, 296. 6.67mm, 297. 5.0mm, 298. 6.67mm, 299. 7.5mm, 300. 6.67mm, 301. 5.0mm, 302. 6.67mm, 303. 7.5mm, 304. 6.67mm, 305. 5.0mm, 306. 6.67mm, 307. 7.5mm, 308. 6.67mm, 309. 5.0mm, 310. 6.67mm, 311. 7.5mm, 312. 6.67mm, 313. 5.0mm, 314. 6.67mm, 315. 7.5mm, 316. 6.67mm, 317. 5.0mm, 318. 6.67mm, 319. 7.5mm, 320. 6.67mm, 321. 5.0mm, 322. 6.67mm, 323. 7.5mm, 324. 6.67mm, 325. 5.0mm, 326. 6.67mm, 327. 7.5mm, 328. 6.67mm, 329. 5.0mm, 330. 6.67mm, 331. 7.5mm, 332. 6.67mm, 333. 5.0mm, 334. 6.67mm, 335. 7.5mm, 336. 6.67mm, 337. 5.0mm, 338. 6.67mm, 339. 7.5mm, 340. 6.67mm, 341. 5.0mm, 342. 6.67mm, 343. 7.5mm, 344. 6.67mm, 345. 5.0mm, 346. 6.67mm, 347. 7.5mm, 348. 6.67mm, 349. 5.0mm, 350. 6.67mm, 351. 7.5mm, 352. 6.67mm, 353. 5.0mm, 354. 6.67mm, 355. 7.5mm, 356. 6.67mm, 357. 5.0mm, 358. 6.67mm, 359. 7.5mm, 360. 6.67mm, 361. 5.0mm, 362. 6.67mm, 363. 7.5mm, 364. 6.67mm, 365. 5.0mm, 366. 6.67mm, 367. 7.5mm, 368. 6.67mm, 369. 5.0mm, 370. 6.67mm, 371. 7.5mm, 372. 6.67mm, 373. 5.0mm, 374. 6.67mm, 375. 7.5mm, 376. 6.67mm, 377. 5.0mm, 378. 6.67mm, 379. 7.5mm, 380. 6.67mm, 381. 5.0mm, 382. 6.67mm, 383. 7.5mm, 384. 6.67mm, 385. 5.0mm, 386. 6.67mm, 387. 7.5mm, 388. 6.67mm, 389. 5.0mm, 390. 6.67mm, 391. 7.5mm, 392. 6.67mm, 393. 5.0mm, 394. 6.67mm, 395. 7.5mm, 396. 6.67mm, 397. 5.0mm, 398. 6.67mm, 399. 7.5mm, 400. 6.67mm, 401. 5.0mm, 402. 6.67mm, 403. 7.5mm, 404. 6.67mm, 405. 5.0mm, 406. 6.67mm, 407. 7.5mm, 408. 6.67mm, 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569. 5.0mm, 570. 6.67mm, 571. 7.5mm, 572. 6.67mm, 573. 5.0mm, 574. 6.67mm, 575. 7.5mm, 576. 6.67mm, 577. 5.0mm, 578. 6.67mm, 579. 7.5mm, 580. 6.67mm, 581. 5.0mm, 582. 6.67mm, 583. 7.5mm, 584. 6.67mm, 585. 5.0mm, 586. 6.67mm, 587. 7.5mm, 588. 6.67mm, 589. 5.0mm, 590. 6.67mm, 591. 7.5mm, 592. 6.67mm, 593. 5.0mm, 594. 6.67mm, 595. 7.5mm, 596. 6.67mm, 597. 5.0mm, 598. 6.67mm, 599. 7.5mm, 600. 6.67mm, 601. 5.0mm, 602. 6.67mm, 603. 7.5mm, 604. 6.67mm, 605. 5.0mm, 606. 6.67mm, 607. 7.5mm, 608. 6.67mm, 609. 5.0mm, 610. 6.67mm, 611. 7.5mm, 612. 6.67mm, 613. 5.0mm, 614. 6.67mm, 615. 7.5mm, 616. 6.67mm, 617. 5.0mm, 618. 6.67mm, 619. 7.5mm, 620. 6.67mm, 621. 5.0mm, 622. 6.67mm, 623. 7.5mm, 624. 6.67mm, 625. 5.0mm, 626. 6.67mm, 627. 7.5mm, 628. 6.67mm, 629. 5.0mm, 630. 6.67mm, 631. 7.5mm, 632. 6.67mm, 633. 5.0mm, 634. 6.67mm, 635. 7.5mm, 636. 6.67mm, 637. 5.0mm, 638. 6.67mm, 639. 7.5mm, 640. 6.67mm, 641. 5.0mm, 642. 6.67mm, 643. 7.5mm, 644. 6.67mm, 645. 5.0mm, 646. 6.67mm, 647. 7.5mm, 648. 6.67mm, 649. 5.0mm, 650. 6.67mm, 651. 7.5mm, 652. 6.67mm, 653. 5.0mm, 654. 6.67mm, 655. 7.5mm, 656. 6.67mm, 657. 5.0mm, 658. 6.67mm, 659. 7.5mm, 660. 6.67mm, 661. 5.0mm, 662. 6.67mm, 663. 7.5mm, 664. 6.67mm, 665. 5.0mm, 666. 6.67mm, 667. 7.5mm, 668. 6.67mm, 669. 5.0mm, 670. 6.67mm, 671. 7.5mm, 672. 6.67mm, 673. 5.0mm, 674. 6.67mm, 675. 7.5mm, 676. 6.67mm, 677. 5.0mm, 678. 6.67mm, 679. 7.5mm, 680. 6.67mm, 681. 5.0mm, 682. 6.67mm, 683. 7.5mm, 684. 6.67mm, 685. 5.0mm, 686. 6.67mm, 687. 7.5mm, 688. 6.67mm, 689. 5.0mm, 690. 6.67mm, 691. 7.5mm, 692. 6.67mm, 693. 5.0mm, 694. 6.67mm, 695. 7.5mm, 696. 6.67mm, 697. 5.0mm, 698. 6.67mm, 699. 7.5mm, 700. 6.67mm, 701. 5.0mm, 702. 6.67mm, 703. 7.5mm, 704. 6.67mm, 705. 5.0mm, 706. 6.67mm, 707. 7.5mm, 708. 6.67mm, 709. 5.0mm, 710. 6.67mm, 711. 7.5mm, 712. 6.67mm, 713. 5.0mm, 714. 6.67mm, 715. 7.5mm, 716. 6.67mm, 717. 5.0mm, 718. 6.67mm, 719. 7.5mm, 720. 6.67mm, 721. 5.0mm, 722. 6.67mm, 723. 7.5mm, 724. 6.67mm, 725. 5.0mm, 726. 6.67mm, 727. 7.5mm, 728. 6.67mm, 729. 5.0mm, 730. 6.67mm, 731. 7.5mm, 732. 6.67mm, 733. 5.0mm, 734. 6.67mm, 735. 7.5mm, 736. 6.67mm, 737. 5.0mm, 738. 6.67mm, 739. 7.5mm, 740. 6.67mm, 741. 5.0mm, 742. 6.67mm, 743. 7.5mm, 744. 6.67mm, 745. 5.0mm, 746. 6.67mm, 747. 7.5mm, 748. 6.67mm, 749. 5.0mm, 750. 6.67mm, 751. 7.5mm, 752. 6.67mm, 753. 5.0mm, 754. 6.67mm, 755. 7.5mm, 756. 6.67mm, 757. 5.0mm, 758. 6.67mm, 759. 7.5mm, 760. 6.67mm, 761. 5.0mm, 762. 6.67mm, 763. 7.5mm, 764. 6.67mm, 765. 5.0mm, 766. 6.67mm, 767. 7.5mm, 768. 6.67mm, 769. 5.0mm, 770. 6.67mm, 771. 7.5mm, 772. 6.67mm, 773. 5.0mm, 774. 6.67mm, 775. 7.5mm, 776. 6.67mm, 777. 5.0mm, 778. 6.67mm, 779. 7.5mm, 780. 6.67mm, 781. 5.0mm, 782. 6.67mm, 783. 7.5mm, 784. 6.67mm, 785. 5.0mm, 786. 6.67mm, 787. 7.5mm, 788. 6.67mm, 789. 5.0mm, 790. 6.67mm, 791. 7.5mm, 792. 6.67mm, 793. 5.0mm, 794. 6.67mm, 795. 7.5mm, 796. 6.67mm, 797. 5.0mm, 798. 6.67mm, 799. 7.5mm, 800. 6.67mm, 801. 5.0mm, 802. 6.67mm, 803. 7.5mm, 804. 6.67mm, 805. 5.0mm, 806. 6.67mm, 807. 7.5mm, 808. 6.67mm, 809. 5.0mm, 810. 6.67mm, 811. 7.5mm, 812. 6.67mm, 813. 5.0mm, 814. 6.67mm, 815. 7.5mm, 816. 6.67mm, 817. 5.0mm, 818. 6.67mm, 819. 7.5mm, 820. 6.67mm, 821. 5.0mm, 822. 6.67mm, 823. 7.5mm, 824. 6.67mm, 825. 5.0mm, 826. 6.67mm, 827. 7.5mm, 828. 6.67mm, 829. 5.0mm, 830. 6.67mm, 831. 7.5mm, 832. 6.67mm, 833. 5.0mm, 834. 6.67mm, 835. 7.5mm, 836. 6.67mm, 837. 5.0mm, 838. 6.67mm, 839. 7.5mm, 840. 6.67mm, 841. 5.0mm, 842. 6.67mm, 843. 7.5mm, 844. 6.67mm, 845. 5.0mm, 846. 6.67mm, 847. 7.5mm, 848. 6.67mm, 849. 5.0mm, 850. 6.67mm, 851. 7.5mm, 852. 6.67mm, 853. 5.0mm, 854. 6.67mm, 855. 7.5mm, 856. 6.67mm, 857. 5.0mm, 8

本社 〒100-8371 東京都千代田区丸の内二丁目6番1号
 HEAD OFFICE 〒2-6-1, MARUNOUCHI, CHIYODA-KU, TOKYO 100-8371, JAPAN
 香港代表所 〒295-1141 千葉県佐津市松井 1 番地
 KIMTSUWORKS 〒1-KUNITSU KUNITSU-CITY, CHIBA-PREF. 295-1141, JAPAN

工 部 局 公 告
 CERTIFICATE NO. : P-13163
 頁 數 : 59

DATE OF ISSUE : 2011-04-06
1001 2##DK###

E3001P0701 E07

[illegible]

記号	名称	単位	値	備考
1	位置方位 (Location Orientation)	方位・方向	2: 縦方向 (Vertical), 3: 横方向 (Horizontal), 4: 斜方向 (Diagonal), 5: 任意 (Arbitrary)	
2	長さ (Length)	mm	50.0	
3	幅 (Width)	mm	25.0	
4	厚さ (Thickness)	mm	1.0	
5	重量 (Weight)	g	10.0	
6	密度 (Density)	g/cm ³	1.2	
7	弾性率 (Elasticity)	MPa	100	
8	引張強さ (Tensile Strength)	MPa	50	
9	引張伸び (Elongation)	%	10	
10	圧縮強さ (Compressive Strength)	MPa	50	
11	圧縮伸び (Compressive Elongation)	%	10	
12	曲げ強さ (Flexural Strength)	MPa	50	
13	曲げ伸び (Flexural Elongation)	%	10	
14	衝撃強さ (Impact Strength)	J/m ²	10	
15	熱安定性 (Thermal Stability)	h	100	
16	熱分解温度 (Thermal Decomposition Temp.)	°C	300	
17	融点 (Melting Point)	°C	150	
18	ガラス転移点 (Glass Transition Temp.)	°C	100	
19	熱膨張係数 (Thermal Expansion Coefficient)	1/°C	10 ⁻⁵	
20	熱収縮係数 (Thermal Contraction Coefficient)	1/°C	10 ⁻⁵	
21	熱伝導率 (Thermal Conductivity)	W/mK	0.1	
22	熱容量 (Heat Capacity)	J/gK	1.0	
23	比熱 (Specific Heat)	J/gK	1.0	
24	比熱容 (Specific Heat Capacity)	J/gK	1.0	
25	比熱積 (Specific Heat Product)	J/gK	1.0	
26	比熱積率 (Specific Heat Product Rate)	J/gK	1.0	
27	比熱積率率 (Specific Heat Product Rate Rate)	J/gK	1.0	
28	比熱積率率率 (Specific Heat Product Rate Rate Rate)	J/gK	1.0	
29	比熱積率率率率 (Specific Heat Product Rate Rate Rate Rate)	J/gK	1.0	
30	比熱積率率率率率 (Specific Heat Product Rate Rate Rate Rate Rate)	J/gK	1.0	

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

Head of Department
PLATE QUALITY CONTROL DEPT.
KIMITSU WORKS

Head of Department
PLATE QUALITY CONTROL DEPT.
KIMITSU WORKS

社 千100-8071 東京都千代田区丸の内二丁目6番1号
HEAD OFFICE : 2-6-1 MARUNOUCHI, CHIYODA-KU, TOKYO 100-8071, JAPAN
支店 東京所 : 〒299-1141 千葉県君津市君津 1 番地
KUMISUWORKS I. KUNITSU KUNITSU-CITY, CHIBA-PREF. 299-1141 JAPAN

新日本製鋼所株式会社
Nippon Steel Corporation
鋼材検査証明書
INSPECTION CERTIFICATE

注文者 : HANWA CO., LTD.
注文者番号 : 228-38501090
契約番号 : 1-831-HJ-5-4-A101
商品名 : HOT ROLLED STEEL PLATES
規格 : ASME SA-516 GRADE 70-E10
文書番号 :
DOCUMENT No.

証明番号 : P-13183 PAGE : 99E
CERTIFICATE No. :
発行年月日 : 2011-04-06
DATE OF ISSUE : 1001

*****CEW*****
*****E3001P0701 E07

(AS PER EN 10204 CERTIFICATE ON MATERIAL TESTS 3.1)
需要家管理番号 :
CUSTOMER'S CONTROL No. :
需要家 : EDMONTON EXCHANGER GROUP OF COMPANIES
CUSTOMER :

文書番号 : DOCUMENT No.	顧客番号 : CUSTOMER NO.		製品番号 CASTING No.		製品番号 PLATE No.		製品番号 TEST No.		重量 MASS		寸法 DIMENSION		試験方法 TEST METHOD		試験結果 TEST RESULT		試験結果 TEST RESULT		試験結果 TEST RESULT		試験結果 TEST RESULT		試験結果 TEST RESULT		試験結果 TEST RESULT		試験結果 TEST RESULT		試験結果 TEST RESULT		試験結果 TEST RESULT		試験結果 TEST RESULT		試験結果 TEST RESULT		試験結果 TEST RESULT		試験結果 TEST RESULT		試験結果 TEST RESULT		試験結果 TEST RESULT		試験結果 TEST RESULT		試験結果 TEST RESULT		試験結果 TEST RESULT		試験結果 TEST RESULT		試験結果 TEST RESULT		試験結果 TEST RESULT		試験結果 TEST RESULT		試験結果 TEST RESULT		試験結果 TEST RESULT		試験結果 TEST RESULT		試験結果 TEST RESULT		試験結果 TEST RESULT		試験結果 TEST RESULT		試験結果 TEST RESULT		試験結果 TEST RESULT		試験結果 TEST RESULT		試験結果 TEST RESULT		試験結果 TEST RESULT		試験結果 TEST RESULT		試験結果 TEST RESULT		試験結果 TEST RESULT		試験結果 TEST RESULT		試験結果 TEST RESULT		試験結果 TEST RESULT		試験結果 TEST RESULT		試験結果 TEST RESULT		試験結果 TEST RESULT		試験結果 TEST RESULT		試験結果 TEST RESULT		試験結果 TEST RESULT		試験結果 TEST RESULT		試験結果 TEST RESULT		試験結果 TEST RESULT		試験結果 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6892

GAS FIELD SERVICES

4901 Bruce Road Vegreville, Alberta T9C 1C3

Phone: (780) 632-7774

March 26, 2013

VENDOR	V.E.G. Oilfield Supply
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[illegible]

JOB NUMBERS 8" Stock Scrubbers

VESSEL SER#

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



PRESSURE TEST RECORD

Date:

May 30, 2012

Vessel Serial Number:

12839

Vessel Design Pressure:

150psi.

Hydro Test Pressure:

225psi

Temperature:

+16

Test Gauge No.:

#2

Hydro By:

Wes

Q.C. Signature:

CS

Print Clearly

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



Vessel Name Plate Travel Sheet

Vessel Serial Number:

Vessel Name:

Vessel DWG #:

Vessel C.R.N. #:

Vessel Design Pressure:

Hydro Pressure:

Plate Originator: Date:

Engraved By: Date:

Picked Up By: Date:

Print Clearly

Original to be returned to Q.C.



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.	2013	
-20	°F	@	150	p.s.i.		
C.R. NUMBER				SERIAL NO.		
F6388.231				12839		
CORR. ALLOW.		HEAT TREATMENT		HYDRO TEST		
3.17 mm		NIL		1555 Kpa.		
SHELL THICK.		HEAD THICK.		225 p.s.i.		
8.1 mm		Top - 7.16 mm		WEIGHT		
SHELL MAT'L		Bottom - 19.05 mm		50 Kg.		
SA-106-B		HEAD MAT'L		SIZE		
		Top- SA-234-WPB		219 X 762mm		
		Bottom- SA-516-70				

Date		Description		Amount	
1890	Jan 1	Balance		100.00	
	Feb 1	Interest		5.00	
	Mar 1	Interest		5.00	
	Apr 1	Interest		5.00	
	May 1	Interest		5.00	
	Jun 1	Interest		5.00	
	Jul 1	Interest		5.00	
	Aug 1	Interest		5.00	
	Sep 1	Interest		5.00	
	Oct 1	Interest		5.00	
	Nov 1	Interest		5.00	
	Dec 1	Interest		5.00	
1891	Jan 1	Balance		100.00	
	Feb 1	Interest		5.00	
	Mar 1	Interest		5.00	
	Apr 1	Interest		5.00	
	May 1	Interest		5.00	
	Jun 1	Interest		5.00	
	Jul 1	Interest		5.00	
	Aug 1	Interest		5.00	
	Sep 1	Interest		5.00	
	Oct 1	Interest		5.00	
	Nov 1	Interest		5.00	
	Dec 1	Interest		5.00	
1892	Jan 1	Balance		100.00	
	Feb 1	Interest		5.00	
	Mar 1	Interest		5.00	
	Apr 1	Interest		5.00	
	May 1	Interest		5.00	
	Jun 1	Interest		5.00	
	Jul 1	Interest		5.00	
	Aug 1	Interest		5.00	
	Sep 1	Interest		5.00	
	Oct 1	Interest		5.00	
	Nov 1	Interest		5.00	
	Dec 1	Interest		5.00	
1893	Jan 1	Balance		100.00	
	Feb 1	Interest		5.00	
	Mar 1	Interest		5.00	
	Apr 1	Interest		5.00	
	May 1	Interest		5.00	
	Jun 1	Interest		5.00	
	Jul 1	Interest		5.00	
	Aug 1	Interest		5.00	
	Sep 1	Interest		5.00	
	Oct 1	Interest		5.00	
	Nov 1	Interest		5.00	
	Dec 1	Interest		5.00	

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 envoyé au bureau de l'inspecteur en chef de la province d'installation tel que prévu dans les règlements de la loi sur les appareils sous pression.

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

Pressure vessel/ *Appareil*

Type/ <i>Genre</i> Vertical Fuel Gas Scrubber	Overall Length/ <i>Longueur totale</i> 762mm sm/sm	Serial No./ <i>N° de série</i> 12839	Year built/ <i>Année de fabrication</i> 2013
Provincial Registration No. – C.R.N./ <i>N° d'enregistrement provincial</i> – N.E.C. F6388.231			Drawing No./ <i>N° de dessin</i> 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. <i>La conception, la construction et la façon sont conformes à ACNOR B51.</i>	ASME Section VIII	Division 1	Addenda/ <i>Supplément</i> 2011a	Code case No. <i>N° de cas</i> 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: <i>Les rapports partiels du constructeur adéquatement identifiés et signés par les inspecteurs autorisés ont été produits pour les items suivants du rapport, et attachés à ce rapport:</i>				
Names of parts/ <i>Nom de la composante</i>	Item No./ <i>N° d'item</i>	Manufacturer's Name/ <i>Nom du constructeur</i>	Identifying Stamp/ <i>Estampe d'identification</i>	

Shell/ *Virole*

Description	Material <i>Matériau</i>	Thickness <i>Épaisseur</i>	Corr. Allow. <i>Surépais. de corr.</i>	Diameter <i>Diamètre</i>	Longitudinal Joints <i>Joints longitudinaux</i>			P.W.H.T. <i>Traitement therm</i>		Girth Joints <i>Joints de circonférence</i>		Number of courses <i>Nombre de sections</i>
					Type	R.T. <i>Radiog.</i>	Efficiency <i>Efficacité</i>	Temp.	Time <i>Durée</i>	Type	R.T. <i>Radiog.</i>	
Shell	SA-106-B	8.1mm	3.2mm	219mm	1	sm/s	100%	-----	-----	None	None	1

Heads/ *Têtes*

Description	Material <i>Matériau</i>	Min. Thickn. <i>Épais min.</i>	Corr. Allow <i>Surép. Corr.</i>	Crown Radius <i>Rayon couron.</i>	Knuckle Radius <i>Petit rayon</i>	Ellipse Ratio <i>Rapp. ellipse</i>	Conical Apex Angle <i>Angle conique</i>	Hemisp. Radius <i>Ray. Hémisph</i>	Flat Diameter <i>Diam.plat</i>	Side to pressure <i>Côte sous pression</i>
Top	SA-234-WPB	7.2mm	3.2 mm	-----	-----	Weld Cap	-----	-----	-----	Concave
Bottom	SA-516-70	19.mm	3.2 mm	-----	-----	-----	-----	-----	305 mm	Flat
Removable bolts used (describe other fastenings) <i>Boulons amovibles utilisés (décrire tout autre attache)</i>					Mat'l Spec./ <i>Spéc. du mat.</i>			Grade		Size/ <i>Dimension</i>

Pressure - Temperature/ *Pression - température*

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

Tube Section/ Faisceau tubulaire

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

Jacket/ Chemise

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

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

Purpose/ But	Number Nombre	Dimension	Type	Material Matériau	Nominal Thickness Épaisseur nominale	Reinforcement material Matériau de renfort	How attached Genre d'attaches	Location/ Endroit
Outlet	1	60.3mm	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 No	Legs/ Pieds No./ Nbre No	Other/ Autres (Description) N/A	Attached/ Attaches (Where and How/ Méthode et endroit) Flat bottom head welded to shell
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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

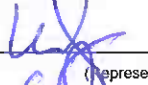
Certificate of Compliance/ Certificat de conformité

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 **R/V Gasfield Services**

Signature  Date **MAY 30 2013**
(Representative)

Signature  Date **MAY 30 2013**
(Certified Individual)