

Travel Sheet

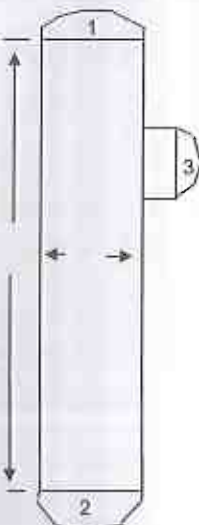
Authorized Inspector to be given travel sheet prior to construction so that he can indicate hold points and Inspection Points.

"H"-Hold Point, "I"- Inspection Point, "R"-Review "W"- Witness Point

Hold Points established - Sign & Date _____

(Authorized Inspector)

Vessel Serial # 13063		Shop Dwg: V85-05		(A) #	
Vessel Title: 8" Fuel Gas Scrubber		CRN # F6388.231		CRN Dwg: V85-05	
ITEM	COMMENTS	AUTH Insp., Hold Rev., Witness POINTS	DATE FUNCTION COMPLETE & INSPECTORS INITIALS		
			QC INSPECTOR	AUTHORIZED INSPECTOR	
APPROVED DRAWING			March 17, 2014	[Signature]	
CALCULATIONS ON FILE			March 17, 2014	[Signature]	
MATERIAL CHECKED AGAINST DRAWING, MATERIAL LIST			March 17, 2014	[Signature]	
MTR'S CHECKED			March 17, 2014	[Signature]	
VESSEL LAYOUT			March 18, 2014	[Signature]	
NOZZLES	ORIENTATION		March 18, 2014	[Signature]	
& FITTINGS	RATINGS		March 18, 2014	[Signature]	
	NOZZLES & FITTINGS		March 18, 2014	[Signature]	
FIT	SHELL & HEAD		March 19, 2014	[Signature]	
UP			March 19, 2014	[Signature]	
INTERNALS (tray, baffles, etc)			March 18, 2014	[Signature]	
INTERNAL INSPECTION			March 18, 2014	[Signature]	
MATERIAL INSPECTION REPORT			March 20, 2014	[Signature]	
WELD SIZES			March 19, 2014	[Signature]	
WELDERS I.D.			March 19, 2014	[Signature]	
EXTERNAL AFTER COMPLETION OF ALL WELDING			March 19, 2014	[Signature]	
RADIOGRAPHS					
OTHER N.D.E.					
IMPACT TESTS					
POST WELD HEAT TREATMENT	YES: [Signature] NO: [Signature]				
EXTERNAL BEFORE PWHT					
PWHT CHART CHECKED					
NAMEPLATE			March 21, 2014	[Signature]	
HYDROSTATIC TEST			March 21, 2014	[Signature]	
DATA REPORT			March 21, 2014	[Signature]	
NONCONFORMANCES					



		SPECIFICATIONS		HEAT NUMBER	VERIFIED THICKNESS
SHELL	C1	SA-106-B	1233174V	✓	8.1mm
	C2				
HEADS	1	SA-234-WPB	2D5921	✓	7.16mm
	2	SA-516-70	355730-92492	✓	19.05mm
	3				
REPADS	1				
	2				
	3				
	4				
		SPECIFICATIONS	SIZE	SCHEDULE	
NOZZLES					
FITTINGS		SA-105	1", 2", 3/4"	#3000 cplg.	
TUBES					

6071355

Address: 10 Dolfinum, Mangrove City, Houston, P. O. China
P. C. 482001
Tel: and Fax: +86 734 8378708
E-mail: hai@cellhydronitube.com

MILL TEST CERTIFICATE

(ACCORDING TO EN12043.1)

CUSTOMER		END TUBULARS LIMITED		CERTIFICATE NO.		DATE:		2012-10-10		PAGE: 20	
CONTRACT/ITEM NO.		P.O. NO.		SEAMLESS STEEL LINE PIPE		DELIVERY CONDITION		HR			
PRODUCT		SEE SPECIFICATION NOTE		HEAT TREATMENT							
SPECIFICATION		ASTM/ASME A1063.1 (a) PART 5 BLANKS FOR 6175/550 15155-2A/GR-6103/Spec 5		DIMENSIONS							
GRADE		Series/CSA ZN-S1 GRADE190									
TOTAL BUNDLES:		TOTAL PIECES:		TOTAL LENGTH:		TOTAL WEIGHT:		FT		MT	
HEAT NO.		LOT NO.		TYPE		CHEMICAL COMPOSITION (%)					
						C		Si		Mn	
						P		S		Cu	
						Ni		Cr		Mo	
						W		V		Nb	
						Ti		Zr		N	
						B		S		Al	
						Fe		Pb		As	
						Sn		Al		P	
						S		Cu		Ni	
						W		Cr		Mo	
						V		Nb		Ti	
						Zr		N		B	
						S		Al			
						Fe		Pb		As	
						Sn		Al		P	
						S		Cu		Ni	
						W		Cr		Mo	
						V		Nb		Ti	
						Zr		N		B	
						S		Al			
						Fe		Pb		As	
						Sn		Al		P	
						S		Cu		Ni	
						W		Cr		Mo	
						V		Nb		Ti	
						Zr		N		B	
						S		Al			
						Fe		Pb		As	
						Sn		Al		P	
						S		Cu		Ni	
						W		Cr		Mo	
						V		Nb		Ti	
						Zr		N		B	
						S		Al			
						Fe		Pb		As	
						Sn		Al		P	
						S		Cu		Ni	
						W		Cr		Mo	
						V		Nb		Ti	
						Zr		N		B	
						S		Al			
						Fe		Pb		As	
						Sn		Al		P	
						S		Cu		Ni	
						W		Cr		Mo	
						V		Nb		Ti	
						Zr		N		B	
						S		Al			
						Fe		Pb		As	
						Sn		Al		P	
						S		Cu		Ni	
						W		Cr		Mo	
						V		Nb		Ti	
						Zr		N		B	
						S		Al			
						Fe		Pb		As	
						Sn		Al		P	
						S		Cu		Ni	
						W		Cr		Mo	
						V		Nb		Ti	
						Zr		N		B	
						S		Al			
						Fe		Pb		As	
						Sn		Al		P	
						S		Cu		Ni	
						W		Cr		Mo	
						V		Nb		Ti	
						Zr		N		B	
						S		Al			
						Fe		Pb		As	
						Sn		Al		P	
						S		Cu		Ni	
						W		Cr		Mo	
						V		Nb		Ti	
						Zr		N		B	
						S		Al			
						Fe		Pb		As	
						Sn		Al		P	
						S		Cu		Ni	
						W		Cr		Mo	
						V		Nb		Ti	
						Zr		N		B	
						S		Al			
						Fe		Pb		As	
						Sn		Al		P	
						S		Cu		Ni	
						W		Cr		Mo	
						V		Nb		Ti	
						Zr		N		B	
						S		Al			
						Fe		Pb		As	
						Sn		Al		P	
						S		Cu		Ni	
						W		Cr		Mo	
						V		Nb		Ti	
						Zr		N		B	
						S		Al			
						Fe		Pb		As	
						Sn		Al		P	
						S		Cu		Ni	
						W		Cr		Mo	
						V		Nb		Ti	
						Zr		N		B	
						S		Al			
						Fe		Pb		As	
						Sn		Al		P	
						S		Cu		Ni	
						W		Cr		Mo	
						V		Nb		Ti	
						Zr		N		B	
						S		Al			
						Fe		Pb		As	
						Sn		Al		P	
						S		Cu		Ni	
						W		Cr		Mo	
						V		Nb		Ti	
						Zr		N		B	
						S		Al			
						Fe		Pb		As	
						Sn		Al		P	
						S		Cu		Ni	
						W		Cr		Mo	
						V		Nb		Ti	
						Zr		N		B	
						S		Al			
						Fe		Pb		As	
						Sn		Al		P	
						S		Cu		Ni	
						W		Cr		Mo	
						V		Nb		Ti	
						Zr		N		B	
						S		Al			
						Fe		Pb		As	
						Sn		Al		P	
						S		Cu		Ni	
						W		Cr		Mo	
						V		Nb		Ti	
						Zr		N		B	
						S		Al			
						Fe		Pb		As	
						Sn		Al		P	
						S		Cu		Ni	
						W		Cr		Mo	
						V		Nb		Ti	
						Zr		N		B	
						S		Al			
						Fe		Pb		As	
						Sn		Al		P	
						S		Cu		Ni	
						W		Cr		Mo	
						V		Nb		Ti	
						Zr		N		B	
						S		Al			
						Fe		Pb		As	
						Sn		Al		P	
						S		Cu		Ni	
						W		Cr		Mo	
						V		Nb		Ti	
						Zr		N		B	
						S		Al			
						Fe		Pb		As	
						Sn		Al		P	
						S		Cu		Ni	
						W		Cr		Mo	
						V		Nb		Ti	
						Zr		N		B	
						S		Al			
						Fe		Pb		As	
						Sn		Al		P	
						S		Cu		Ni	
						W		Cr		Mo	
						V		Nb		Ti	
						Zr		N		B	
						S		Al			
						Fe		Pb		As	
						Sn		Al		P	
						S		Cu		Ni	
						W		Cr		Mo	
						V		Nb		Ti	
						Zr		N		B	
						S		Al			
						Fe		Pb		As	
						Sn		Al		P	
						S		Cu		Ni	
						W		Cr		Mo	
						V		Nb		Ti	
						Zr		N		B	
						S		Al			
						Fe		Pb		As	
						Sn		Al		P	
						S		Cu		Ni	
						W		Cr		Mo	
						V		Nb		Ti	
						Zr		N		B	
						S		Al			
						Fe		Pb		As	
						Sn		Al		P	
						S		Cu		Ni	
						W		Cr		Mo	
						V		Nb		Ti	
						Zr		N		B	
						S		Al			
						Fe		Pb		As	
						Sn		Al		P	
						S		Cu		Ni	
						W		Cr		Mo	
						V		Nb		Ti	
						Zr		N		B	
						S		Al			
						Fe		Pb		As	
						Sn		Al		P	
						S		Cu		Ni	
						W		Cr		Mo	
						V		Nb		Ti	
						Zr		N		B	
						S		Al			
						Fe		Pb		As	
						Sn		Al		P	
						S		Cu		Ni	
						W		Cr		Mo	
						V		Nb		Ti	
						Zr		N		B	
						S		Al			
						Fe		Pb		As	
						Sn		Al		P	
						S		Cu		Ni	
						W		Cr		Mo	
						V		Nb		Ti	
				</							

121574

PURCHASER: SEYBOLD

STANDARD : ASTM A234 WPB-11
ASTM A234 WPB-04

MATERIALS : OSA Z245.11-09 Gr.241 Cat I Sour Service

INSPECTION SPEC.: JIS G3103 SB410/ASTM A516 Gr.65

INSPECTION SPEC.: ASME B16.9 - 07



INSPECTION CERTIFICATE

RIGID INDUSTRIES CO., LTD.

8, MEI-CHUNG RD. NIAO-SUNG,
KAOHSIUNG HSEIN 83361 TAIWAN
TEL: 886-77310527-8
FAX: 886-77315887

DATE: 2012-03-03

ORDER NO: 750355/11846325

P.I. NO: 2015-2

CERTIF. NO: 330

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"	5	203915	6000	127 - 135	N		
2	CAP 8"	74	203921	6000	126 - 140	N		
3	CAP 10"	10	201312	6000	135 - 150	N		
4	CAP 16"	4	207112	6000	131 - 148	N		

ITEM NO.	MATERIAL CHARGE NO.	CHEMICAL COMPOSITION %										PHYSICAL TEST			
		C x100	Si x100	Mn x100	P x1000	S x10000	Cu x100	Ni x100	Cr x100	Mo x100	V x100	Y S KSI	T S KSI	E %	C.E. x100
	STANDARD		MIN.												
	MAX.														
1	1XK15	30	10	29	50	56	40	40	40	15	8	35.0	60.0	17.0	50
2	3NP21	21	25	110	12	1	1	1	2	<1	<1	46.8	70.4	34.0	38
3	3NL12	21	24	107	17	3	<1	4	3	<1	<1	47.1	68.7	34.0	38
4	3NL12	20	27	107	13	3	1	1	2	<1	<1	46.7	68.0	31.8	38
		20	27	107	13	3	1	1	2	<1	<1	46.7	68.0	31.8	38

(NOTE): A: HOT FORMED WITH FINAL TEMPERATURE BETWEEN 820°C-880°C AIR COOLING.

N: NORMALIZING AT TEMPERATURE 880°CX0.5HR AIR COOLING.

NACE MR-01-75-08ISO15169.2 & NACE MR 0103-10: SATISFACTORY

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

On L Lam

MANAGER OF Q.A. DEPT.

8" STD Cap 205921



edmonton exchanger
& manufacturing ltd.

CERTIFICATE OF COMPLIANCE

5545-89 Street Edmonton, Alberta Canada T6E 5W9

www.edmontonexchanger.com

tel 780.468.6722 • QC fax 780.468.4668 • sales fax 780.468.5155

Customer RJV GASFIELD LTD.

PO 2976

Work Order C99295 Date 2013/06/07 CalCo 41523 Page 1 of 1

Item#	Description	Qty	Heat#	Brinell Hardn.
P99295-1	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	6	G4160-073310210	HTH
		8	355730-92486	HTH
		12	355730-92492	HTH
		11	58180-014	HTH
		13	G4160-073310206	HTH

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
1 JUL 10 2013 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.

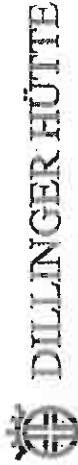
no 2976

Work Order C99295 Date 2013/06/07 cofc# 41523 Page 1 of 1

MTR ID	Pages	Heat#	Thickness	Material Grades
16020	7	355730-92486	.75"	SA 516-70 N
		355730-92492	.75"	SA 516-70 N
17400	8	58180-014	.75"	SA 516-70 N
17418	5	G4160-073310208	.75"	SA 516-70 N
		G4160-073310210	.75"	SA 516-70 N

Heat#	Material Grades	MTR ID
355730-92486	SA 516-70 N	16020
355730-92492	SA 516-70 N	16020
58180-014	SA 516-70 N	17400
G4160-073310208	SA 516-70 N	17418
G4160-073310210	SA 516-70 N	17418

QM-System: Certification as per ISO 9001



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

A02 INSPECTION CERTIFICATE 3.1 AS PER EN 10204:2004		A10 Advice of dispatch No./ Date of dispatch		A08/ Manufacturer's order/ A03 Certificate No.		Sheet	
INSPECTION CERTIFICATE 3.1.B AS PER EN 10204:1991+AL:1995 + AS PER ISO 10474:1991		380983-27.02.11		362037-003		1/...	
MATERIAL TEST REPORT (MTR)				B01 Product			
A05 Established inspecting body		A06 Purchaser		EDMONTON STEEL, EDMON		A07.1 No. ED10557-J1010-ER	
DH		Final receiver		EDMONTON STEEL, EDMON		A07.2 No.	
B02/ Steel design. SA516-70						SA20-S5	
B03 Any suppl. ASME-II-A:10							
requirements DIL-HUE-2:R31-2010-11-22							



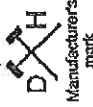
A01-A99 Further commercial information - Concession requests

B14 Item No.	B07.2 Heat No.	B07.1 Rel. plate / Test No.	B16 Concession request no.	Date
09	354638	54388-01	1-HQVGN	24.01.11

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 Rel. plate No./ Test No.	A05 Purchase article number
04	1	0,7500 x	150,00000 x	450,00000	6512 N	N	355730	92486-01	
04	1	0,7500 x	150,00000 x	450,00000	6512 N	N	355730	92486-02	
04	1	0,7500 x	150,00000 x	450,00000	6512 N	N	355730	92486-03	
04	1	0,7500 x	150,00000 x	450,00000	6512 N	N	355730	92492-01	
04	1	0,7500 x	150,00000 x	450,00000	6512 N	N	355730	92492-02	
04	1	0,7500 x	150,00000 x	450,00000	6512 N	N	355730	92492-03	
**	6				39072		355730	92508-02	
07	1	1,0000 x	150,00000 x	450,00000	8683 N	N	355730	92508-03	
07	1	1,0000 x	150,00000 x	450,00000	8683 N	N			
**	2				17366				
09	1	1,1250 x	97,00000 x	480,00000	6738 N	N	354638	54388-01	
10	1	1,1250 x	121,00000 x	480,00000	8405 N	N	355728	93534-01	
10	1	1,1250 x	121,00000 x	480,00000	8405 N	N	355728	93534-02	
10	1	1,1250 x	121,00000 x	480,00000	8405 N	N	355728	93603-01	
10	1	1,1250 x	121,00000 x	480,00000	8405 N	N	355728	93603-02	
10	1	1,1250 x	121,00000 x	480,00000	8405 N	N	355730	92371-03	
10	1	1,1250 x	121,00000 x	480,00000	8405 N	N	355730	92483-01	
10	1	1,1250 x	121,00000 x	480,00000	8405 N	N	355730	92483-03	
10	1	1,1250 x	121,00000 x	480,00000	8405 N	N	355732	92230-01	

2017/2002/2003 We hereby certify, that the above mentioned materials have been delivered in accordance with the terms of order.



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



B. BALDUF
Test House Manager

Inspector's stamp

Date 28.02.11

pp 1

QM-System: Certification as per ISO 9001



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

A02 INSPECTION CERTIFICATE 3.1 AS PER EN 10204-2:2004		A10 Advice of dispatch No./ Date of dispatch	A09 Manufacturer's order/ Certificate No.	Sheet
INSPECTION CERTIFICATE 3.1.B AS PER EN 10204-1:1991+AL:1995 + AS PER ISO 10474:1991		380983-27.02.11	362037-003	2/...
MATERIAL TEST REPORT (MTR)		901 Product		
A05 Established inspecting body		HOT ROLLED PLATES		
DH	A06 Purchaser	EDMONTON STEEL, EDMON		
	Final receiver	EDMONTON STEEL, EDMON		
B02 Steel design.		A07.1 No. ED10557-J1010-ER		
SA516-70		A07.2 No. SA20-S5		
B03 Any suppl. requirements		ASME-II-A:10		
DIL-HUE-2:R31-2010-11-22				

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
10	1	1,1250 x	121,00000 x	480,00000	8405 N	8405 N	355732	92230-02	
10	1	1,1250 x	121,00000 x	480,00000	8405 N	8405 N	355732	92230-03	
10	1	1,1250 x	121,00000 x	480,00000	8405 N	8405 N	355732	92290-02	
10	1	1,1250 x	121,00000 x	480,00000	8405 N	8405 N	355732	92290-03	
**	12				100860				
***	21				164036				

B04 Product delivery condition

ITEM NO.: 02,04-07,09-10
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.: 02,04-07,09-10
STEEL DESIGNATION SA516 70 MTLV SA516 60 MTLV
HEAT NO. / TRADEMARK / ROLLED PLATE NO.-TEST NO. / INSPECTOR'S STAMP

B07-B99 Further information about the product

ITEM NO.: 02,04-07,09-10
THICKNESS REDUCTION RATIO >= 3,0 IS FULFILLED (CF. A/SA20 PAR. 5.3)

A04	Z01/202203 We hereby certify, that the above mentioned materials have been delivered in accordance with the terms of order.		A01
			AG der Dillinger Hüttenwerke Postfach 1580, D-66748 Dillingen/Saar Inspection department
B. BALDAUF Test House Manager		Inspector's stamp	Date 28.02.11
			PP 1

QM-System: Certification as per ISO 9001



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		A10 Advice of dispatch No./ Date of dispatch 380983-27.02.11	A08/ Manufacturer's order/ A03 Certificate No. 362037-003	Sheet 3/...
A05 Established inspecting body DH		B01 Product HOT ROLLED PLATES		
A06 Purchaser EDMONTON STEEL, EDMON		A07.1 No. ED10557-J1010-ER		
Final receiver EDMONTON STEEL, EDMON		A07.2 No.		
SA516-70		SA20-S5		
B03 Any suppl. ASME-II-A:10				
requirements DIL-HUE-2:R31-2010-11-22				

C10-C29 Tensile test

Item No.	B07.2 Heat No.	B07.4 Rel.plate/ Test No.	B05 Reference (heat) treatment	C01 Temp. GR.F	C02/C03	C10 KSI	C11 RP02	C12 RM	C13 A % LO-SIN	C14-C15
04	355730	92486	K1 Q	RT	50,0	50,0	27	76,0	27	
04	355730	92492	K1 Q	RT	50,8	50,8	26	75,8	26	
07	355730	92508	K1 Q	RT	49,3	49,3	29	74,1	29	
09	354638	54388	K1 Q	RT	49,3	49,3	31	73,8	31	
10	355728	93534	K1 Q	RT	49,3	49,3	31	75,1	31	
10	355728	93603	K1 Q	RT	49,6	49,6	31	75,5	31	
10	355730	92371	K1 Q	RT	49,7	49,7	29	74,7	29	
10	355730	92483	K1 Q	RT	50,0	50,0	33	74,2	33	
10	355732	92230	K1 Q	RT	49,4	49,4	29	73,8	29	
10	355732	92290	K1 Q	RT	50,0	50,0	29	74,2	29	

C30-C39 Hardness test

Item No.	B07.2 Heat No.	B07.1 Rel.plate/ Test No.	B05 Reference (heat) treatment	C01	C02/C03	C30 Temp. GR.F	C30 Method of test	C35 C31 Individual values	C32 Mean value
04	355730	92486	K1	O	O	RT HBW 10/3000	HB 148	147	147
04	355730	92492	K1	O	O	RT HBW 10/3000	HB 150	150	150
07	355730	92508	K1	O	O	RT HBW 10/3000	HB 148	149	148
09	354638	54388	K1	O	O	RT HBW 10/3000	HB 142	146	144
10	355728	93534	K1	O	O	RT HBW 10/3000	HB 149	149	149
10	355728	93603	K1	O	O	RT HBW 10/3000	HB 146	146	146
10	355730	92371	K1	O	O	RT HBW 10/3000	HB 145	145	145
10	355730	92483	K1	O	O	RT HBW 10/3000	HB 145	146	146
10	355732	92230	K1	O	O	RT HBW 10/3000	HB 144	142	143
10	355732	92290	K1	O	O	RT HBW 10/3000	HB 145	145	145

A04		Z01/Z02/Z03 We hereby certify, that the above mentioned materials have been delivered in accordance with the terms of order.		AG der Dillinger Hüttenwerke Postfach 1580, D-66748 Dillingen/Saar Inspection department		Date 28.02.11		PP 1	
Manufacturer's mark		B. BALDAUF Test House Manager		Inspector's stamp		Date		PP	

QM-System: Certification as per ISO 9001

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



A02 INSPECTION CERTIFICATE 3.1 AS PER EN 10204:2004		A10 Advice of dispatch No./ Date of dispatch		A08 Manufacturer's order/ A03 Certificate No.		Sheet	
INSPECTION CERTIFICATE 3.1.B AS PER EN 10204:1991+A1:1995 + AS PER ISO 10474:1991		380983-27.02.11		362037-003		4 / ...	
MATERIAL TEST REPORT (MTR)				S01 Product			
A05 Established inspecting body		EDMONTON STEEL, EDMON		HOT ROLLED PLATES			
DH		Final receiver					
B02/ Steel design		SA516-70					
B03 Any suppl. requirements		ASME-II-A:10					
		DIL-HUB-2:R31-2010-11-22					
		EDMONTON STEEL, EDMON					
		A07.1 No. ED10557-J1010-ER					
		A07.2 No.					
		SA20-S5					

C40-C49 Impact test

B14 Item No.	B07.2 Heat No.	B07.1 Roll plate/ Test No.	B05 Reference (heat) treatment	C61	C62 C01	C03 Temp. GR.F	C41 Width of test piece	C40 Type of test piece	C44 Testing method	C46 Energy	C45 Individual values AV=FILEF	C43 Mean value
04	355730	92486		K1	LV	-51	-51	CHP-V		AV 195	122	125
04	355730	92492		K1	LV	-51	-51	CHP-V		AV 77	193	114
07	355730	92508		K1	LV	-51	-51	CHP-V		AV 114	146	123
09	354638	54388		K1	LV	-51	-51	CHP-V		AV 134	137	136
10	355728	93534		K1	LV	-51	-51	CHP-V		AV 24	100	114
10	355728	93603		K1	LV	-51	-51	CHP-V		AV 81	105	117
10	355730	92371		K1	LV	-51	-51	CHP-V		AV 103	115	122
10	355730	92483		K1	LV	-51	-51	CHP-V		AV 100	119	106
10	355732	92230		K1	LV	-51	-51	CHP-V		AV 103	132	110
10	355732	92290		K1	LV	-51	-51	CHP-V		AV 127	109	117

C70-C99 Chemical composition % - Heat analysis

B07.2 Heat	C70	C	SI	MN	P	S	N	CU	MO	NI	CR	V	NB	SN	TI
354638	Y	0,171	0,372	1,19	0,009	0,0012	0,0070	0,030	0,012	0,030	0,037	0,000	0,000	0,001	0,002
355728	Y	0,175	0,372	1,18	0,009	0,0013	0,0070	0,036	0,021	0,059	0,045	0,000	0,000	0,002	0,003
355730	Y	0,178	0,372	1,17	0,008	0,0010	0,0069	0,034	0,010	0,033	0,042	0,000	0,000	0,002	0,003
355732	Y	0,181	0,357	1,16	0,007	0,0011	0,0076	0,039	0,010	0,040	0,039	0,000	0,000	0,003	0,002

B07.2 Heat	C70	B	CA	AL-T
354638	Y	0,0001	0,0026	0,034
355728	Y	0,0002	0,0028	0,034
355730	Y	0,0000	0,0017	0,034
355732	Y	0,0000	0,0019	0,033

A04 2012/02/2003 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		Date 28.02.11	
Manufacturer's mark		Inspector's stamp		PP 1	

QM-System: Certification as per ISO 9001



DILLINGER HÜTTE

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

A02 INSPECTION CERTIFICATE 3.1 AS PER EN 10204:2004		A10 Advice of dispatch No./ Date of dispatch		A08/ Manufacturer's order/ A03 Certificate No.		Sheet	
INSPECTION CERTIFICATE 3.1.B AS PER EN 10204:1991+A1:1995 + AS PER ISO 10474:1991		380983-27.02.11		362037-003		5/...	
MATERIAL TEST REPORT (MTR)				B01 Product			
A05 Established inspecting body		A06 Purchaser		A07.1 No.		A07.2 No.	
DH		Final receiver		EDMONTON STEEL, EDMONTON		EDMONTON STEEL, EDMONTON	
B02/ Steel design.		SA516-70		SA20-SS			
B03 Any suppl.		ASME-II-A:10					
requirements		DIL-HUE-2:R31-2010-11-22					

C94 Heat analysis Carbon equivalent / Alloying restrictions

B07.2 Heat	FO-02=	FO-51=	FO-55=	FO-78=	FO-91=	7,0
354638	0,38	0,39	0,00	0,11	0,05	7,0
355728	0,39	0,39	0,00	0,16	0,07	6,7
355730	0,39	0,39	0,00	0,12	0,05	6,6
355732	0,39	0,39	0,00	0,13	0,05	6,4

C95 Ladle treatment

ITEM NO.: 02.04-07.09-10
HEAT OF THE INDICATED ITEM: VACUUM DEGASSED / SULPHIDE SHAPE CONTROL

C95 Further information about ladle treatment

ITEM NO.: 02.04-07.09-10
CALCIUM TREATED

C70-C99 Chemical composition % - Product analysis

B07.2 Heat	C01 Test No.	C	Si	Mn	P	S	N	CU	MO	NI	CR	V	NB	SN	TI
354638	54388	X1	0,169	0,366	1,16	0,009	0,0071	0,025	0,010	0,029	0,033	0,000	0,000	0,001	0,001
354638	93547	X1	0,181	0,365	1,15	0,008	0,0069	0,037	0,014	0,032	0,033	0,000	0,002	0,000	0,002
354638	93854	X1	0,188	0,369	1,15	0,005	0,0070	0,053	0,016	0,034	0,033	0,000	0,004	0,001	0,002
355728	93060	X1	0,174	0,368	1,17	0,008	0,0067	0,035	0,021	0,059	0,046	0,000	0,000	0,001	0,003
355728	93269	X1	0,179	0,369	1,18	0,009	0,0075	0,035	0,020	0,060	0,046	0,000	0,000	0,001	0,003
355728	93391	X1	0,182	0,367	1,16	0,009	0,0081	0,035	0,020	0,059	0,045	0,000	0,000	0,001	0,003
355728	93534	X1	0,180	0,370	1,17	0,009	0,0078	0,035	0,021	0,060	0,046	0,000	0,000	0,001	0,003
355730	92483	X1	0,173	0,371	1,16	0,008	0,0073	0,033	0,009	0,033	0,041	0,000	0,000	0,001	0,003
355730	92486	X1	0,173	0,369	1,16	0,008	0,0075	0,034	0,011	0,037	0,042	0,000	0,000	0,001	0,003
355730	92508	X1	0,169	0,370	1,16	0,008	0,0066	0,034	0,017	0,052	0,044	0,000	0,000	0,001	0,003
355732	92290	X1	0,170	0,359	1,16	0,007	0,0076	0,035	0,009	0,037	0,041	0,000	0,000	0,001	0,002

201202203 We hereby certify, that the above mentioned materials have been delivered in accordance with the terms of order.



Manufacturer's mark



AG der Dillinger Hüttenwerke
Postfach 1583, D-66748 Dillingen/Saar
Inspection department

B. BALDAUF
Test House Manager

Inspector's stamp

Date 28.02.11

pp

1

QM-System: Certification as per ISO 9001

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



A02 INSPECTION CERTIFICATE 3.1 AS PER EN 10204:2004		A10 Advice of dispatch No./ Date of dispatch		A08/ Manufacturer's order/ A09 Certificate No.		Sheet	
INSPECTION CERTIFICATE 3.1.B AS PER EN 10204:1991+A1:1995 + AS PER ISO 10474:1991		380983-27.02.11		362037-003		6/...	
MATERIAL TEST REPORT (MTR)							
A03 Established inspecting body		A06 Purchaser		A07.1 No.		A07.2 No.	
DH		EDMONTON STEEL, EDMON		EDMONTON STEEL, EDMON		SA20-S5	
B02/ Steel design.		SA516-70					
B03 Any suppl.		ASME-II-A:10					
requirements		DIL-HUE-2:R31-2010-11-22					

C70-C99 Chemical composition % - Product analysis

B07.2 Heat	B07.1 Test No.	C01				
		C	B	CA	AL-T	
354638	54388	X1	0,0003	0,0023	0,034	
354638	93547	X1	0,0001	0,0018	0,031	
354638	93854	X1	0,0000	0,0015	0,030	
355728	93060	X1	0,0002	0,0025	0,035	
355728	93269	X1	0,0001	0,0023	0,033	
355728	93391	X1	0,0001	0,0022	0,031	
355728	93534	X1	0,0003	0,0024	0,033	
355730	92483	X1	0,0002	0,0016	0,034	
355730	92486	X1	0,0000	0,0015	0,033	
355730	92508	X1	0,0002	0,0021	0,034	
355732	92290	X1	0,0000	0,0016	0,033	

C94 Product analysis Carbon equivalent / Alloying restrictions

B07.2 Heat	B07.1 Test No.	C01				
		C	B	CA	AL-T	
354638	54388	X1	FO-02=	0,37	FO-S1=	0,000
354638	93547	X1	FO-02=	0,39	FO-S1=	0,002
354638	93854	X1	FO-02=	0,40	FO-S1=	0,004
355728	93060	X1	FO-02=	0,39	FO-S1=	0,000
355728	93269	X1	FO-02=	0,40	FO-S1=	0,000
355728	93391	X1	FO-02=	0,39	FO-S1=	0,000
355728	93534	X1	FO-02=	0,39	FO-S1=	0,000
355730	92483	X1	FO-02=	0,38	FO-S1=	0,000
355730	92486	X1	FO-02=	0,38	FO-S1=	0,000
355730	92508	X1	FO-02=	0,38	FO-S1=	0,000
355732	92290	X1	FO-02=	0,38	FO-S1=	0,000

20/12/2003 Via hereby certify, that the above mentioned materials have been delivered in accordance with the terms of order.

A04		AG der Dillinger Hüttenwerke Postfach 1580, D-66748 Dillingen/Saar Inspection department		A01	
Manufacturer's mark		Inspector's stamp		Date 28.02.11	
		Test House Manager		PP 1	

QM-System: Certification as per ISO 9001

Erläuterungen siehe Rückseite/Explications voir au verso/See reverse for explanations (www.dillingerdilling.com/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		A10 Advice of despatch No./ Date of dispatch	A08 Manufacturer's order/ A03 Certificate No.	Sheet
MATERIAL TEST REPORT (MTR)		380983-27.02.11	362037-003	7
A05 Established inspecting body DE	A06 Purchaser Final receiver	B01 Product HOT ROLLED PLATES		
B02/ Steel design. SA516-70	EDMONTON STEEL, EDMON	A07.1 No. ED10557-J1010-ER		
B03 Any suppl. ASME-II-A:10 requirements DILL-HUE-2:R31-2010-11-22	EDMONTON STEEL, EDMON	A07.2 No. SA20-S5		
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.: 02.04-07,09-10 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 201202203 We hereby certify, that the above mentioned materials have been delivered in accordance with the terms of order.		AG der Dillinger Hüttenwerke Postfach 1581, D-66748 Dillingen/Saar Inspection department		
DH Manufacturers' mark		Inspector's stamp Date 28.02.11		
S. BALDAUF Test House Manager		PP 1		



AINESTODISTUS TEST REPORT

4-77
A 27398. -002
09.10.2012.

EN 10204-3:1 (2004)

Tilling Purchase
GOLBERT METAL SALES LIMITED.
 SUITE 305
 Tullus nro Order No.
 VA-9391

VASTAANOTAJA: Consignee
ROLBERT METAL SALES LIMITED
SUITE 305
Saskatoon, Saskatchewan S7N 1X6
Shipping mark

LV	10.01.2013	Valmistaja Date
	10.01.2013	Valmistajan merkki
		Mark of the Manufacturer

1000

SA516 GR.70 MTLV

Latentecity: Quality Specifications

PRESS.VESSEL STEEL ASME CODE SEC II ED 2011A SA20

Disbursement set Additional requirements

**Iskcon advocates inappropriate
Oxygen steel, continuous casting
Fully killed. Fine grain practices**

[illegible]

NON-ENCAPSULIZED

Pos. Item	Sublot Cart. Item No.	Isokone Impact test			Sakemururu Dorelle fracture			Enkoshokozel. Special tests		Room No		
		K3	F		1	2	3	K4	F		1	2
001	58260 011	115	-051	80	73	77	77	1B				146
001	58260 012	115	-051	104	74	81	86	1B				137
001	58260 013	115	-051	75	70	79	74	1B				140
001	58260 014	115	-051	60	83	72	72	1B				144
001	58260 016	115	-051	79	80	93	84	1B				146
001	58397 021	115	-051	90	82	85	86	1B				142
002	58262 041	115	-051	86	85	85	87	1B				143
002	58262 042	115	-051	85	90	119	98	1B				140
002	58262 043	115	-051	88	88	88	88	1B				145
002	58262 044	115	-051	99	102	91	97	1B				148
002	58262 045	115	-051	87	90	94	90	1B				146
002	58263 011	115	-051	78	103	92	91	1B				146
002	58263 012	115	-051	88	91	87	89	1B				146
002	58263 013	115	-051	86	81	99	89	1B				146

K3: 115=CH/MSOM/JUL7-5X10TOP LONGIT.KV600.
K4: 1B=HARDNESS/HB TOP

Raah: Steel Works

Testibus laetantur

der Faller todtsamme, als obmils on usarvhuistusegrumukaiten.

IAKKO-IRISO

Authorized inspection representative

Project Name	Community Name	Start Date	End Date
...	...	...	...

Kotipolikka Registered Office:
Helsinki

PL 93, P.O. Box 93
FIN-92101 RAAHKE, FINLAND

**Publin-Téléphone: 020 5911
-358 20 5911**

Telekopio Telefaks: 020 592 2735
+358 20 592 2735

Buy: 5 ID: 23894457



AINESTODISTUS TEST REPORT

5/7

A 27398 -002 A

EN 10 204-3:1 (2004)

Client: Purchaser

OLBERT METAL SALES LIMITED

SUITE 305

Tilau nro / Order No.

VA-9391

Laat. / Date

SA516 GR 70IMTLV

Instructions: Quality Specifications

PRESS VESSEL STEEL ASME CODE SEC II ED 2011A SA20

Vastaottaja, Consignee

OLBERT METAL SALES LIMITED

SUITE 305

Asiakkaan nimi / Shipping mark

LA-9391

Uusi vaatimukset / Additional requirements

Parimitus / Date

10.01.2013

Valmistajan merkki / Mark of the manufacturer

Mark of the manufacturer

Jalkavälillä läpikuultava / Oxygen steel, continuous casting

Full killed, fine grain practice

Pos. Item	Sitouksen k. nro / Contract No.	Tähtä / Mark	Vetoaika / Tensile test				Vetoaika / Tensile test				Vetoaika / Tensile test				Vetoaika / Tensile test				Vetoaika / Tensile test				Huom. / Remark	Plasti. / Plastic
			K2	F	REH	REH	K2	F	REH	REH	K2	F	REH	REH	K2	F	REH	REH	K2	F	REH	REH		
002	58263	014	N	F1	51	51	75	75	75	75	75	75	75	75	75	75	75	75	75	75	75	75		
002	58263	015	N	F1	53	53	75	75	75	75	75	75	75	75	75	75	75	75	75	75	75	75		
002	58263	021	N	F1	50	50	75	75	75	75	75	75	75	75	75	75	75	75	75	75	75	75		
002	58263	023	N	F1	51	51	75	75	75	75	75	75	75	75	75	75	75	75	75	75	75	75		
003	58262	014	N	F1	51	51	75	75	75	75	75	75	75	75	75	75	75	75	75	75	75	75		
007	58180	011	N	F1	48	48	74	74	74	74	74	74	74	74	74	74	74	74	74	74	74	74		
007	58180	012	N	F1	47	47	74	74	74	74	74	74	74	74	74	74	74	74	74	74	74	74		
007	58180	013	N	F1	49	49	74	74	74	74	74	74	74	74	74	74	74	74	74	74	74	74		
007	58180	014	N	F1	48	48	74	74	74	74	74	74	74	74	74	74	74	74	74	74	74	74		
007	58180	021	N	F1	48	48	75	75	75	75	75	75	75	75	75	75	75	75	75	75	75	75		
007	58180	022	N	F1	47	47	75	75	75	75	75	75	75	75	75	75	75	75	75	75	75	75		
007	58180	023	N	F1	47	47	74	74	74	74	74	74	74	74	74	74	74	74	74	74	74	74		
007	58180	024	N	F1	47	47	73	73	73	73	73	73	73	73	73	73	73	73	73	73	73	73		
007	58180	031	N	F1	46	46	74	74	74	74	74	74	74	74	74	74	74	74	74	74	74	74		

K2: FI-TOP-TRANSV.

NORMALIZED

Pos. Item	Sitouksen k. nro / Contract No.	Tähtä / Mark	Vetoaika / Tensile test				Vetoaika / Tensile test				Vetoaika / Tensile test				Vetoaika / Tensile test				Vetoaika / Tensile test				Huom. / Remark	Plasti. / Plastic
			K2	F	REH	REH	K2	F	REH	REH	K2	F	REH	REH	K2	F	REH	REH	K2	F	REH	REH		
002	58263	014	115	-051	103	91	84	93	93	93	93	93	93	93	93	93	93	93	93	93	93	93		
002	58263	015	115	-051	80	87	100	89	89	89	89	89	89	89	89	89	89	89	89	89	89	89		
002	58263	021	115	-051	75	102	90	89	89	89	89	89	89	89	89	89	89	89	89	89	89	89		
002	58263	023	115	-051	86	84	84	85	85	85	85	85	85	85	85	85	85	85	85	85	85	85		
003	58262	014	111	-051	107	57	74	80	80	80	80	80	80	80	80	80	80	80	80	80	80	80		
007	58180	011	111	-051	119	97	78	98	98	98	98	98	98	98	98	98	98	98	98	98	98	98		
007	58180	012	111	-051	102	97	99	99	99	99	99	99	99	99	99	99	99	99	99	99	99	99		
007	58180	013	111	-051	90	105	82	92	92	92	92	92	92	92	92	92	92	92	92	92	92	92		
007	58180	014	111	-051	83	113	89	95	95	95	95	95	95	95	95	95	95	95	95	95	95	95		
007	58180	021	111	-051	111	122	105	113	113	113	113	113	113	113	113	113	113	113	113	113	113	113		
007	58180	022	111	-051	89	99	96	94	94	94	94	94	94	94	94	94	94	94	94	94	94	94		
007	58180	023	111	-051	100	97	74	90	90	90	90	90	90	90	90	90	90	90	90	90	90	90		
007	58180	024	111	-051	76	97	94	89	89	89	89	89	89	89	89	89	89	89	89	89	89	89		
007	58180	031	111	-051	100	86	108	98	98	98	98	98	98	98	98	98	98	98	98	98	98	98		

K3: 115-CH-ISO-VJ7.5X10-TOP-LONGIT-RV600 1115-CH-VISO-VJ110X10-TOP-LONGIT-RV600

K4: 18-HARDNESS TOP

Raah Steel Works

Tutkimus ja tarkastus / Testing and inspection

Pauli P.

JAAKKO JUUSO

Valtuutus / Authorization

Authorised inspection representative

Yhtiön / Company Name: RAUKKI METALS OY

Kaupunkin / Registered Office: HELSINKI

Postiosoite / Post Address: PL 93, P.O. Box 93

Postiosoite / Post Address: FIN-02101 RAUHE, FINLAND

Puhelin / Telephone: 020 5911

Puhelin / Telephone: +358 20 5811

Telekopio / Telex: 020 592 2736

Telekopio / Telex: +358 20 582 2735

Yhteyshenkilö / Contact Person: YOUNG BUSINESS ID: 2389445-7

Täten todistamme, että toimittu on tilausvahvistuksen mukainen.
We hereby certify that the material described above has been tested and complies with the terms of the order confirmation.



AINESTODISTIUS: TEST REPORT

6/7

A 27398 -002 A
09.10.2012

Tilauksen Purchaser
OILBERT METAL SALES LIMITED
SUITE 305

Tilauksen Order No.
VA-9391

Välittäjä Consignee
OILBERT METAL SALES LIMITED
SUITE 305
Asiakkaanmerkki: Shipping mark.

Päivämäärä Date
10.01.2013
Välittäjän nimi Mark of the Manufacturer



Lähtökohta
SAS16 GR 70 MTLTV

Lähtökohta Quality Specification
PRESS VESSEL STEEL ASME CODE SEC. II DIV 1 SA20

Lähtökohta Additional requirements

Lähtökohta
Oxygen steel, continuous casting
Fully killed, Fine grain processed

N-920C, T=1.1(MIN)XTHICK(NMM)

Pos. Item	Status, Load no Cast, test No	Tila Cond	Vetoake Tensile test				REL KSI	REH KSI	RM KSI	1	2	3	A ₅₀	A ₈₀	200	REM /RM	RM * A5	RAZ % 1	2	3	Keskiläro Average	Tälvätkä Bend test	KSI D = X1	Huom Nb	Rakko Tempering F
			K2	F	RPO2 KSI	K2																			
007	58180 032	N F1			46				74						28										
007	58180 033	N F1			46				74						26										
007	58180 034	N F1			47				74						26										
007	58180 041	N F1			46				74						27										
007	58180 042	N F1			46				73						28										
007	58180 043	N F1			47				73						27										
007	58180 044	N F1			47				74						27										
007	58181 011	N F1			48				75						27										
007	58181 012	N F1			48				74						27										
007	58181 014	N F1			48				74						27										
007	58181 021	N F1			48				74						26										
007	58181 022	N F1			48				75						27										
007	58181 023	N F1			48				75						27										
007	58181 024	N F1			48				74						28										

K2: F1=TOP TRANSV.

N-NORMALIZED

Pos. Item	Status, Load no Cast, test No	Tila Cond	Vetoake Impact test				K3	F	1	2	3	Keskiläro Average	Sikilänsä KSI	1	2	3	Keskiläro Average	Huom Nb	Rakko Tempering F
			K3	F	1	2	3												
007	58180 032	111	-051	100	103	113	105						18						
007	58180 033	111	-051	99	80	69	83						18						
007	58180 034	111	-051	96	83	87	89						18						
007	58180 041	111	-051	110	101	100	103						18						
007	58180 042	111	-051	69	112	83	88						18						
007	58180 043	111	-051	92	89	99	93						18						
007	58180 044	111	-051	108	68	70	82						18						
007	58181 011	111	-051	95	100	17	71						18						
007	58181 012	111	-051	100	117	67	95						18						
007	58181 014	111	-051	114	80	106	100						18						
007	58181 021	111	-051	100	106	86	97						18						
007	58181 022	111	-051	93	74	110	89						18						
007	58181 023	111	-051	88	100	74	87						18						
007	58181 024	111	-051	103	99	109	104						18						

K3: 11=CHEMISOAKU) 10X10 TOP LONGIT. K1060
K4: 18=HARDNESS HB TOP

Raabe Steel Works

Tilauksen tilaus Testing and inspection

Jaakko Juuso
JAAKKO JUUSO
Välittäjä tilaus
Yhtiön nimi Company name: RUKKI METALS OY
Kotipaikka Registered Office: HELSINKI

Autentisoitu insinööri
Yhtiön nimi Company name: RUKKI METALS OY
Kotipaikka Registered Office: HELSINKI

Osasto Address: RA 03120 RA 03
Puhelin Telephone: +358 20 5811

Telokopio Telokop: 020 582 2708
+358 20 582 2708

Yhtiön nimi Business ID: 2389457

Tilauksen tilaus, olti tilauksen on tilauksen mukainen.
No hereby certify that the material described above has been tested and complies with the terms of the order confirmation.



ANALYYSITODISTUS ANALYSIS CERTIFICATE
ANALYSEBESCHÜDIGUNG COMPOSITIO CHIMIQUE CERTIFICAT
СЕРТИФИКАТ АНАЛИЗА

7/7

A 27398 -002 A
09.10.2012

Päivämäärä Date Datum Date Data

10.01.2013

IV

СЕРТИФИКАТ АНАЛИЗА																	09.10.2012		
Analysis: % Chemical composition % Chemisch Zusammensetzung % Composition Chimique % Анализ: состав, %																	Physical Data Data физическая		
																	10.01.2013		
																	IV		
State no Состояние №	Счетчик Schutzhelm №	№ партии No de caillon / № партии	C	SI	NI	P	S	AL	NB	V	TI	CU	CR	NI	MO	N	SN	B	ZR
58260	001	38	183	33	1.11	0.11	0.00	0.028	0.01	0.010	0.04	0.12	0.05	0.04	0.04	0.04	0.03	0.004	0.01
58197	001	37	181	32	1.08	0.09	0.02	0.039	0.00	0.007	0.04	0.11	0.04	0.03	0.03	0.05	0.005	0.002	0.01
58262	002	38	187	33	1.10	0.11	0.03	0.044	0.00	0.008	0.04	0.11	0.04	0.04	0.03	0.05	0.003	0.002	0.00
58263	002	38	180	35	1.11	0.10	0.01	0.037	0.01	0.008	0.05	0.13	0.05	0.03	0.04	0.03	0.003	0.002	0.01
58262	003	38	187	33	1.10	0.11	0.03	0.044	0.00	0.008	0.04	0.11	0.04	0.04	0.03	0.05	0.003	0.002	0.00
58180	007	38	181	32	1.11	0.12	0.02	0.046	0.01	0.012	0.04	0.14	0.05	0.04	0.04	0.03	0.002	0.002	0.00
58181	007	40	188	34	1.15	0.12	0.02	0.041	0.01	0.009	0.04	0.17	0.05	0.04	0.05	0.04	0.002	0.002	0.01



CEQ=C+NI/6+(CR+MO+V)/5+(NI+CU)/15

Raake Steel Works

Testaus ja tarkastus
Prüfung und Kontrolle
Mittlung und Kontrolle

Valtuutettu edustaja
Sachverständiger
Authorized inspection representative
Inspection agents

JAAKKO JUUSO

Yhtiön nimi Company Name: RAUKKI METALS OY
Kotipaikka Registered Office: HELSINKI

Postiosoite Post Address: P.O. Box 53
FIN-02101 RAUKKI, FINLAND

Puhelin Telephone: +358 20 592 2736
Telefaxi: +358 20 592 2736

Yhteystiedot Business ID: 239457

Steel manufactured and supplied by Raake Steel Works
Stahl hergestellt und geliefert von Raake Stahlwerke
Acier fabriqué et fourni par Raake Sidérurgie

PUUKKI

ANALYSIS CERTIFICATE ANALYSEBESCHEINIGUNG COMPOSITIO CHIMIQUE CERTIFICAT СЕРТИФИКАТ АНАЛИЗА

L/I
A 27398 -002 A

Revision Date Datum Date
10.01.2013

Analysis %: Chemical composition %: Chemisch Zusammensetzung %: Composition Chimique %: Analisa %: (ppm)

Analysis %: Chemical composition %: Chemisch Zusammensetzung %: Composition Chimique %: Analisa %: (ppm)

Analysis %: Chemical composition %: Chemisch Zusammensetzung %: Composition Chimique %: Analisa %: (ppm)

Substanz no Cust No Schmelz Nr Neste number	Positio Item Post. No	C	SI	MM	P	S	AL	NE	V	TI	CU	CR	NI	MO	N	SN	B	ZR
* 58260	013	001	.38	.184	.32	1.09	.011	.001	.030	.000	.009	.004	.012	0.05	0.04	.003	.004	.002.0003 .001
* 58397	021	001	.37	.177	.31	1.09	.009	.002	.041	.001	.007	.004	.012	0.04	0.04	.003	.004	.002.0002 .001
* 58262	042	002	.38	.182	.34	1.11	.010	.002	.045	.000	.009	.004	.011	0.04	0.03	.003	.004	.002.0002 .000
* 58263	012	002	.38	.181	.34	1.10	.009	.001	.039	.001	.007	.004	.012	0.04	0.04	.003	.004	.002.0002 .001
* 58262	012	003	.38	.184	.33	1.09	.010	.002	.043	.000	.008	.003	.010	0.04	0.03	.003	.004	.002.0003 .001
* 58180	021	007	.39	.183	.32	1.12	.012	.002	.047	.001	.012	.004	.016	0.05	0.04	.005	.004	.002.0002 .001
* 58181	011	007	.38	.178	.33	1.12	.011	.002	.043	.000	.011	.004	.014	0.05	0.04	.006	.003	.002.0002 .001



CEO=C+MM/6+(CR+MO+V)/S+(NI+CU)/LS

*=RPL-ANALYSIS, CHECK ANALYSIS, KONTROLLE ANALYSE, COMP. CHIM. DE CONTROLE

Raabe Steel Works

Testing and Inspection
Prüfung und Kontrolle

Jaakko Juuso

Authorized inspection representative
Valtuutettu tarkastaja
Substantiirittö
Yrityksen nimi/Company Name: PUUKKI METALS OY
Osoite/Address: PL 63, P.O. Box 63
FIN-02101 RAABE, FINLAND
Helsinki

Yhteystiedot/Contact Info: 020 582 2736
Yhteystiedot/Contact Info: 020 5911
Yhteystiedot/Contact Info: +358 20 582 2736
Yhteystiedot/Contact Info: +358 20 5911

Steel manufactured and supplied by Raabe Steel Works
Rauhanvalmistus ja -toimitus Raabe Steel Works
Заказчик стальной продукции Раабе



新日鐵住金株式会社
NIPPON STEEL & SUMITOMO METAL CORPORATION

注文者名: HANWA CO., LTD.
注文者照会番号: 228-68521080
契約番号: 2-811-H1-5-Y-A103
商品名: HOT ROLLED STEEL PLATES

鋼材検査証明書 INSPECTION CERTIFICATE

規格: ASME SA-516 GRADE 70-E10-A11

文書番号: DOCUMENT No.

顧客: EDMONTON EXCHANGER GROUP OF COMPANIES

必要検査項目番号: TESTS 3.1)

(AS PER EN 10204 CERTIFICATE ON MATERIAL TESTS 3.1)

必要検査項目番号: CUSTOMER'S CONTROL No.

必要検査項目番号: E3001A0200 E05

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 %											
					Y.S.	T.S.	EL.	%	Y.S.	T.S.	EL.	%	C	Si	Mn	P	S	Q	Ni	Cr	Mo	Nb	V	Co
0.75" X 120.5" X 480"	02	5579	G4160 61751	TESTED-PL 073310209TCI	52	77	27		273	259	238		16	37	143	9	3	1	2	2	0.11	0.03640		
0.75" X 120.5" X 480"	02	5579	G4160 61751	TESTED-PL 073310209TCI	52	77	27		273	259	238		16	37	143	9	3	1	2	2	0.11	0.03640		
0.75" X 120.5" X 480"	02	5579	G4160 61751	TESTED-PL 073310209TCI	54	77	33		232	223	203		16	37	143	9	3	1	2	2	0.11	0.03640		

注: 1) Location Orientation 縦長・方向: T: 縦長 Top, B: 縦長 Bottom, L: 縦長方向 Longitudinal, C: 縦長方向 Transverse, R: 45° 方向 45Deg. to the Longitudinal Axis
2) C.L. 縦長方向 Center Line, A: 50mm 厚板用 Rectangular, B: 50mm 厚板用 Rectangular, D: 70mm 厚板用 Rectangular, E: 80mm 厚板用 Rectangular, F: 90mm 厚板用 Rectangular, G: 100mm 厚板用 Rectangular, H: 120mm 厚板用 Rectangular, I: 150mm 厚板用 Rectangular, J: 200mm 厚板用 Rectangular, K: 250mm 厚板用 Rectangular, L: 300mm 厚板用 Rectangular, M: 350mm 厚板用 Rectangular, N: 400mm 厚板用 Rectangular, O: 450mm 厚板用 Rectangular, P: 500mm 厚板用 Rectangular, Q: 550mm 厚板用 Rectangular, R: 600mm 厚板用 Rectangular, S: 650mm 厚板用 Rectangular, T: 700mm 厚板用 Rectangular, U: 750mm 厚板用 Rectangular, V: 800mm 厚板用 Rectangular, W: 850mm 厚板用 Rectangular, X: 900mm 厚板用 Rectangular, Y: 950mm 厚板用 Rectangular, Z: 1000mm 厚板用 Rectangular
3) R.A.: 20° Reduction of Area, Y.R.: 降伏比 Yield Ratio, 4) A: 合格 Acceptable, 5) F: 試験方法 Full Size, 2: 25mm, 3: 30mm, 4: 35mm, 5: 40mm, 6: 45mm, 7: 50mm, 8: 55mm, 9: 60mm, 10: 65mm, 11: 70mm, 12: 75mm, 13: 80mm, 14: 85mm, 15: 90mm, 16: 95mm, 17: 100mm, 18: 105mm, 19: 110mm, 20: 115mm, 21: 120mm, 22: 125mm, 23: 130mm, 24: 135mm, 25: 140mm, 26: 145mm, 27: 150mm, 28: 155mm, 29: 160mm, 30: 165mm, 31: 170mm, 32: 175mm, 33: 180mm, 34: 185mm, 35: 190mm, 36: 195mm, 37: 200mm, 38: 205mm, 39: 210mm, 40: 215mm, 41: 220mm, 42: 225mm, 43: 230mm, 44: 235mm, 45: 240mm, 46: 245mm, 47: 250mm, 48: 255mm, 49: 260mm, 50: 265mm, 51: 270mm, 52: 275mm, 53: 280mm, 54: 285mm, 55: 290mm, 56: 295mm, 57: 300mm, 58: 305mm, 59: 310mm, 60: 315mm, 61: 320mm, 62: 325mm, 63: 330mm, 64: 335mm, 65: 340mm, 66: 345mm, 67: 350mm, 68: 355mm, 69: 360mm, 70: 365mm, 71: 370mm, 72: 375mm, 73: 380mm, 74: 385mm, 75: 390mm, 76: 395mm, 77: 400mm, 78: 405mm, 79: 410mm, 80: 415mm, 81: 420mm, 82: 425mm, 83: 430mm, 84: 435mm, 85: 440mm, 86: 445mm, 87: 450mm, 88: 455mm, 89: 460mm, 90: 465mm, 91: 470mm, 92: 475mm, 93: 480mm, 94: 485mm, 95: 490mm, 96: 495mm, 97: 500mm, 98: 505mm, 99: 510mm, 100: 515mm, 101: 520mm, 102: 525mm, 103: 530mm, 104: 535mm, 105: 540mm, 106: 545mm, 107: 550mm, 108: 555mm, 109: 560mm, 110: 565mm, 111: 570mm, 112: 575mm, 113: 580mm, 114: 585mm, 115: 590mm, 116: 595mm, 117: 600mm, 118: 605mm, 119: 610mm, 120: 615mm, 121: 620mm, 122: 625mm, 123: 630mm, 124: 635mm, 125: 640mm, 126: 645mm, 127: 650mm, 128: 655mm, 129: 660mm, 130: 665mm, 131: 670mm, 132: 675mm, 133: 680mm, 134: 685mm, 135: 690mm, 136: 695mm, 137: 700mm, 138: 705mm, 139: 710mm, 140: 715mm, 141: 720mm, 142: 725mm, 143: 730mm, 144: 735mm, 145: 740mm, 146: 745mm, 147: 750mm, 148: 755mm, 149: 760mm, 150: 765mm, 151: 770mm, 152: 775mm, 153: 780mm, 154: 785mm, 155: 790mm, 156: 795mm, 157: 800mm, 158: 805mm, 159: 810mm, 160: 815mm, 161: 820mm, 162: 825mm, 163: 830mm, 164: 835mm, 165: 840mm, 166: 845mm, 167: 850mm, 168: 855mm, 169: 860mm, 170: 865mm, 171: 870mm, 172: 875mm, 173: 880mm, 174: 885mm, 175: 890mm, 176: 895mm, 177: 900mm, 178: 905mm, 179: 910mm, 180: 915mm, 181: 920mm, 182: 925mm, 183: 930mm, 184: 935mm, 185: 940mm, 186: 945mm, 187: 950mm, 188: 955mm, 189: 960mm, 190: 965mm, 191: 970mm, 192: 975mm, 193: 980mm, 194: 985mm, 195: 990mm, 196: 995mm, 197: 1000mm, 198: 1005mm, 199: 1010mm, 200: 1015mm, 201: 1020mm, 202: 1025mm, 203: 1030mm, 204: 1035mm, 205: 1040mm, 206: 1045mm, 207: 1050mm, 208: 1055mm, 209: 1060mm, 210: 1065mm, 211: 1070mm, 212: 1075mm, 213: 1080mm, 214: 1085mm, 215: 1090mm, 216: 1095mm, 217: 1100mm, 218: 1105mm, 219: 1110mm, 220: 1115mm, 221: 1120mm, 222: 1125mm, 223: 1130mm, 224: 1135mm, 225: 1140mm, 226: 1145mm, 227: 1150mm, 228: 1155mm, 229: 1160mm, 230: 1165mm, 231: 1170mm, 232: 1175mm, 233: 1180mm, 234: 1185mm, 235: 1190mm, 236: 1195mm, 237: 1200mm, 238: 1205mm, 239: 1210mm, 240: 1215mm, 241: 1220mm, 242: 1225mm, 243: 1230mm, 244: 1235mm, 245: 1240mm, 246: 1245mm, 247: 1250mm, 248: 1255mm, 249: 1260mm, 250: 1265mm, 251: 1270mm, 252: 1275mm, 253: 1280mm, 254: 1285mm, 255: 1290mm, 256: 1295mm, 257: 1300mm, 258: 1305mm, 259: 1310mm, 260: 1315mm, 261: 1320mm, 262: 1325mm, 263: 1330mm, 264: 1335mm, 265: 1340mm, 266: 1345mm, 267: 1350mm, 268: 1355mm, 269: 1360mm, 270: 1365mm, 271: 1370mm, 272: 1375mm, 273: 1380mm, 274: 1385mm, 275: 1390mm, 276: 1395mm, 277: 1400mm, 278: 1405mm, 279: 1410mm, 280: 1415mm, 281: 1420mm, 282: 1425mm, 283: 1430mm, 284: 1435mm, 285: 1440mm, 286: 1445mm, 287: 1450mm, 288: 1455mm, 289: 1460mm, 290: 1465mm, 291: 1470mm, 292: 1475mm, 293: 1480mm, 294: 1485mm, 295: 1490mm, 296: 1495mm, 297: 1500mm, 298: 1505mm, 299: 1510mm, 300: 1515mm, 301: 1520mm, 302: 1525mm, 303: 1530mm, 304: 1535mm, 305: 1540mm, 306: 1545mm, 307: 1550mm, 308: 1555mm, 309: 1560mm, 310: 1565mm, 311: 1570mm, 312: 1575mm, 313: 1580mm, 314: 1585mm, 315: 1590mm, 316: 1595mm, 317: 1600mm, 318: 1605mm, 319: 1610mm, 320: 1615mm, 321: 1620mm, 322: 1625mm, 323: 1630mm, 324: 1635mm, 325: 1640mm, 326: 1645mm, 327: 1650mm, 328: 1655mm, 329: 1660mm, 330: 1665mm, 331: 1670mm, 332: 1675mm, 333: 1680mm, 334: 1685mm, 335: 1690mm, 336: 1695mm, 337: 1700mm, 338: 1705mm, 339: 1710mm, 340: 1715mm, 341: 1720mm, 342: 1725mm, 343: 1730mm, 344: 1735mm, 345: 1740mm, 346: 1745mm, 347: 1750mm, 348: 1755mm, 349: 1760mm, 350: 1765mm, 351: 1770mm, 352: 1775mm, 353: 1780mm, 354: 1785mm, 355: 1790mm, 356: 1795mm, 357: 1800mm, 358: 1805mm, 359: 1810mm, 360: 1815mm, 361: 1820mm, 362: 1825mm, 363: 1830mm, 364: 1835mm, 365: 1840mm, 366: 1845mm, 367: 1850mm, 368: 1855mm, 369: 1860mm, 370: 1865mm, 371: 1870mm, 372: 1875mm, 373: 1880mm, 374: 1885mm, 375: 1890mm, 376: 1895mm, 377: 1900mm, 378: 1905mm, 379: 1910mm, 380: 1915mm, 381: 1920mm, 382: 1925mm, 383: 1930mm, 384: 1935mm, 385: 1940mm, 386: 1945mm, 387: 1950mm, 388: 1955mm, 389: 1960mm, 390: 1965mm, 391: 1970mm, 392: 1975mm, 393: 1980mm, 394: 1985mm, 395: 1990mm, 396: 1995mm, 397: 2000mm, 398: 2005mm, 399: 2010mm, 400: 2015mm, 401: 2020mm, 402: 2025mm, 403: 2030mm, 404: 2035mm, 405: 2040mm, 406: 2045mm, 407: 2050mm, 408: 2055mm, 409: 2060mm, 410: 2065mm, 411: 2070mm, 412: 2075mm, 413: 2080mm, 414: 2085mm, 415: 2090mm, 416: 2095mm, 417: 2100mm, 418: 2105mm, 419: 2110mm, 420: 2115mm, 421: 2120mm, 422: 2125mm, 423: 2130mm, 424: 2135mm, 425: 2140mm, 426: 2145mm, 427: 2150mm, 428: 2155mm, 429: 2160mm, 430: 2165mm, 431: 2170mm, 432: 2175mm, 433: 2180mm, 434: 2185mm, 435: 2190mm, 436: 2195mm, 437: 2200mm, 438: 2205mm, 439: 2210mm, 440: 2215mm, 441: 2220mm, 442: 2225mm, 443: 2230mm, 444: 2235mm, 445: 2240mm, 446: 2245mm, 447: 2250mm, 448: 2255mm, 449: 2260mm, 450: 2265mm, 451: 2270mm, 452: 2275mm, 453: 2280mm, 454: 2285mm, 455: 2290mm, 456: 2295mm, 457: 2300mm, 458: 2305mm, 459: 2310mm, 460: 2315mm, 461: 2320mm, 462: 2325mm, 463: 2330mm, 464: 2335mm, 465: 2340mm, 466: 2345mm, 467: 2350mm, 468: 2355mm, 469: 2360mm, 470: 2365mm, 471: 2370mm, 472: 2375mm, 473: 2380mm, 474: 2385mm, 475: 2390mm, 476: 2395mm, 477: 2400mm, 478: 2405mm, 479: 2410mm, 480: 2415mm, 481: 2420mm, 482: 2425mm, 483: 2430mm, 484: 2435mm, 485: 2440mm, 486: 2445mm, 487: 2450mm, 488: 2455mm, 489: 2460mm, 490: 2465mm, 491: 2470mm, 492: 2475mm, 493: 2480mm, 494: 2485mm, 495: 2490mm, 496: 2495mm, 497: 2500mm, 498: 2505mm, 499: 2510mm, 500: 2515mm, 501: 2520mm, 502: 2525mm, 503: 2530mm, 504: 2535mm, 505: 2540mm, 506: 2545mm, 507: 2550mm, 508: 2555mm, 509: 2560mm, 510: 2565mm, 511: 2570mm, 512: 2575mm, 513: 2580mm, 514: 2585mm, 515: 2590mm, 516: 2595mm, 517: 2600mm, 518: 2605mm, 519: 2610mm, 520: 2615mm, 521: 2620mm, 522: 2625mm, 523: 2630mm, 524: 2635mm, 525: 2640mm, 526: 2645mm, 527: 2650mm, 528: 2655mm, 529: 2660mm, 530: 2665mm, 531: 2670mm, 532: 2675mm, 533: 2680mm, 534: 2685mm, 535: 2690mm, 536: 2695mm, 537: 2700mm, 538: 2705mm, 539: 2710mm, 540: 2715mm, 541: 2720mm, 542: 2725mm, 543: 2730mm, 544: 2735mm, 545: 2740mm, 546: 2745mm, 547: 2750mm, 548: 2755mm, 549: 2760mm, 550: 2765mm, 551: 2770mm, 552: 2775mm, 553: 2780mm, 554: 2785mm, 555: 2790mm, 556: 2795mm, 557: 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4340mm, 866: 4345mm, 867: 4350mm, 868:



3101

ivier 17, 2014

V.E.G. Oilfield Supply

All

8" Stock Scrubbers

VESSEL SER#

4901 Bruce Road Vegreville, Alberta T9C 1C3

Phone: (780) 632-7774

[illegible]

Authorized
Signature

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.



PRESSURE TEST RECORD

Date:

Mar 21/2014

Vessel Serial Number:

13063

Vessel Design Pressure:

150psi.

Hydro Test Pressure:

225psi

Temperature:

+16

Test Gauge No.:

3 / PI4449

Hydro By:

Wes

Q.C. Signature:

Wes

Print Clearly

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



GAS FIELD SERVICES

MATERIAL INSPECTION REPORT

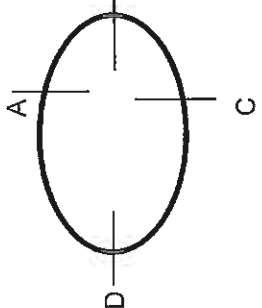
13063

INSPECTED BY Wes Markowsky
DATE March 20, 2014
FROM PURCHASE ORDER NUMBER

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

MATERIAL	NOM. THICK	HEAT NUMBERS	HEAD MIN. THICK.	MATERIAL MARKINGS VERIFICATION	INSP. SURF & Edge	CONFORM Y or N	QUALITY CONTROL MANAGER
SHELL SA 106 B	0.322	1233174V	0.322	.324/ .322/ .323	✓	Y	
PLATE SA 516.70	3/4"	355730-92492	3/4"	.768/ .760/ .758	✓	Y	

Heads 24" & Smaller 0° - 90°



PIPE

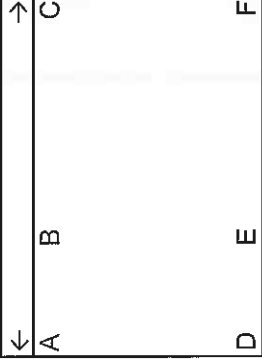


PLATE & REPADS

REMARKS:



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**

W

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.

2014

-20 °F

@

150 p.s.i.

C.R. NUMBER

SERIAL NO.

F6388.231

15063

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

Bottom - **19.05** mm

WEIGHT

SHELL MAT'L

HEAD MAT'L

50 Kg.

SA-106-B

Top- **SA-234-WPB**

Bottom- **SA-516-70**

SIZE

219 X 762mm

Subscription price, Five Dollars per Annum in Advance. Single Copies, Fifteen Cents.
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Acceptance for mailing at special rate of postage provided for in Act of October 3, 1917.
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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 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 Vertical Fuel Gas Scrubber	Overall Length/Longueur totale 762mm sm/sm	Serial No./ N° de série 13063	Year built/Année de fabrication 2014
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. <i>La conception, la construction et la façon sont conformes à ACNOR B51.</i>	ASME Section VIII	Division 1	Addenda/Supplément 2011a	Code case No. N° de cas 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/ 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/ Têtes

Description	Material Matériau	Min. Thckn. Épais min.	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) <i>Boulons amovibles utilisés (décrire tout autre attache)</i>					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'épreuve (hydro-pneumatique ou combinaison)
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

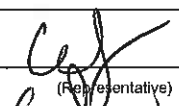
Certificate of Compliance/ Certificat de conformité

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.

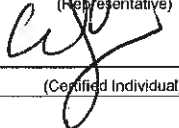
Nous certifions que les données de la déclaration de conformité sont correctes et que l'appareil a été construit en accord avec l'enregistrement provincial ci-dessous et les exigences de la norme ACNOR B51.

Provincial Registered Design
Enregistrement provincial **F6388.231**

Manufacturer
Constructeur **RJV Gasfield Services**

Signature  Date **MAR 21 2014**

(Representative)

Signature  Date **MAR 21 2014**

(Certified Individual)