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

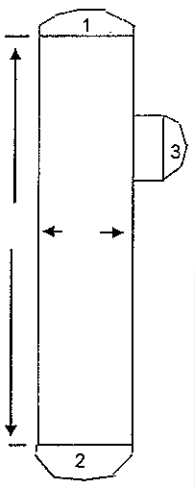
Hold Points established - Sign & Date April 12/11
(Authorized Inspector)

Vessel Range 12091 to 12096

Vessel Serial # 12095 DWG # V01-381 (A) # 607778

Vessel Title: **16" 3 Phase Separator** CRN # **P7217.231**

ITEM		COMMENTS	AUTH Insp.,Hold Rev.,Witness POINTS	DATE FUNCTION COMPLETE & INSPECTORS INITIALS	
				QC INSPECTOR	AUTHORIZED INSPECTOR
APPROVED DRAWING			X	April 4,2011	May 10/11
CALCULATIONS ON FILE			X	April 4,2011	May 10/11
MATERIAL CHECKED AGAINST DRAWING,MATERIAL LIST				April 4,2011	
MTR'S CHECKED			X	April 5,2011	May 10/11
VESSEL LAYOUT				April 5,2011	
NOZZLES	ORIENTATION			April 5,2011	
& FITTINGS	RATINGS		X	April 5,2011	May 10/11
FIT	NOZZLES&FITTINGS			April 6,2011	
UP	SHELL & HEAD			April 12,2011	
INTERNALS (tray,baffles,etc)				April 8,2011	
INTERNAL INSPECTION			H	April 12,2011	April 12/11
WELD SIZES			X	April 27,2011	May 10/11
WELDERS I.D.				April 27,2011	
EXTERNAL AFTER COMPLETION OF ALL WELDING			X	April 27,2011	May 10/11
RADIOGRAPHS			X	April 28,2011	May 10/11
OTHER N.D.E.					
IMPACT TESTS					
POST WELD HEAT TREATMENT	YES: NO: √				
EXTERNAL BEFORE PWHT					
PWHT CHART CHECKED					
NAMEPLATE			X	May 10,2011	May 10/11
HYDROSTATIC TEST			H	May 10,2011	May 10/11
DATA REPORT			X	May 10,2011	May 10/11
NONCONFORMANCES					



		SPECIFICATIONS	HEAT NUMBER	VERIFIED THICKNESS
SHELL	C1	SA-106-B	6704635	21.44mm
	C2			
HEADS	1	SA-516-70	344393-71994	20.63mm.
	2	SA-516-70	344396 - 71801	20.63mm.
	3			
REPADS	1			
	2			
	3			
	4			

	SPECIFICATIONS	SIZE	SCHEDULE
NOZZLES	SA-106-B	2"	Sch. 160
FITTINGS	SA-105	1/2", 3/4", 1", 2"	#6000 cplg.
TUBES			

CONTRACT No.:2006BGEL01

CERTIFICATE NO.: BSC001/2006

SHIPPER:
Baotou Steel International Economic and Trading Co., Ltd.

包头钢铁（集团）有限责任公司
BAOTOU IRON AND STEEL（GROUP）CO., LTD.
Hexi Industrial Zone, Kun Distract, Baotou, Inner Mongolia, China

TOTAL QUANTITY:
482.722MT

PURCHASER:
Eldon Development Ltd.(LAI WU GROUP)
42/F., Office Tower, Convention Plaza, 1 Harbour Road,
Wanchai, Hong Kong

无缝钢管质量证明书
QUALITY AND TEST CERTIFICATE
ORIGINAL
16" × .844" wall

PACKING:
Binding together three pieces per bundle

DESCRIPTION OF GOODS:
CARBON SEAMLESS PIPE
UNDER CONTRACT NO.2006BGEL01
(1)16" O.D. X0.844" W.T.X7.5FT
(2)16" O.D. X0.844" W.T.X LESS THAN7.5FT

SHIPPING MARKS :
LW WSC
COMMODITY: CARBON SEAMLESS PIPE
SPEC.: ASTM A106B/ASME SA 106B
SIZE: OD 16" X 0.844" WALL THICKNESS X 7.5FT
OD 16" X 0.844" WALL THICKNESS X LESS THAN 7.5FT

HEAT NO.:
BUNDLE NO.:
BUNDLE WEIGHT:
MADE IN CHINA

Heat No.	Specification		Quantity		Chemical Compositions(%)										Mechanical Properties		
	O.D.(in.)	W.T.(in.)	Meters	Tons	C	MN	S	P	SI	CR	CU	MO	NI	V	TS (Mpa)	YS (Mpa)	EL (%)
6204801	16	0.844	225.06	45.806	0.200	0.550	0.016	0.011	0.270	0.036	0.008	0.005	0.008	0.005	480	240	33
6104585	16	0.844	293.31	59.697	0.180	0.530	0.015	0.019	0.270	0.019	0.008	0.005	0.008	0.005	515	325	28
6601454	16	0.844	355.3	72.314	0.190	0.540	0.007	0.012	0.260	0.018	0.008	0.005	0.009	0.005	505	300	27.5
6704635	16	0.844	446.73	90.923	0.230	0.500	0.007	0.017	0.240	0.015	0.005	0.005	0.009	0.005	510	340	28
6304294	16	0.844	296.23	60.292	0.230	0.560	0.004	0.016	0.300	0.022	0.010	0.005	0.009	0.005	510	325	27.5
6704637	16	0.844	377.88	76.910	0.210	0.520	0.006	0.019	0.300	0.010	0.005	0.005	0.009	0.005	510	340	28
6304295	16	0.844	377.24	76.780	0.180	0.530	0.009	0.014	0.260	0.024	0.009	0.005	0.016	0.005	480	260	30.5
			2371.75	482.722													

Technical Testing

Dimension Check	Surface Quality	Hydrostatic	Flattening Test	Bending Test	Rolling process	Eddy Current Test
OK	OK	5.8(Mpa)	OK	OK	Hot rolling	OK

Conclusion: The above mentioned material have been made in accordance with ASTM A106 B-2004
Ispector:
Date:Sept. 2006

NOV 2 2 2006

edmonton exchanger
& manufacturing ltd.

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

CERTIFICATE OF COMPLIANCE

Customer RJV GASFIELD LTD. PO 2699 Work Order C88802 Date 2011/03/23 CofC# 23570 Page 1 of 1

Item#	Description	Qty	Heat#	Brinell Hardn.	Required Min Thk	Recorded Min Thk	Form. Proc.
H88802-1	HEAD(S) - Semi-Elliptical 2:1 - 0.8750" NOM (0.8125"_MIN) X 16" OD (Material Spec: SA 516-70 Normalized) Conforms to NACE MR0175 / ISO 15156-2 2003 Annex A	20	JK566053-A084058-2	151	0.8125"	0.8160"	1
		2	JK566053-A084058-2	151	0.8125"	0.8160"	1
		1	344393-71996	MTR	0.8125"	0.8170"	1
		2	329614-76032	MTR	0.8125"	0.8320"	1
		2	351659-35145	MTR	0.8125"	0.8180"	1
		2	178130-7225077100	164	0.8125"	0.8440"	1
		1	344396-71801	MTR	0.8125"	0.8190"	1
		3	G3355-Y74800801	MTR	0.8125"	0.8240"	1
		2	344393-71994	MTR	0.8125"	0.8310"	1
		1	JK566051-A084056-1	151	0.8125"	0.8320"	1

Forming Procedure:
1. Hot Formed @ 1650F/899C and Air Cooled

Brinell Equipment: Newage Calibrated Pin
Brinell Hardness Tester

Supplementary Requirements

Normalized Material Identification Marking:
'MT' indicates normalized by the mill per ASME Code Section II, Part A, SA 20, Paragraph 13.1.1.
'GMT' indicates normalized by Edmonton Exchanger per ASME Code Section II, Part A, SA 20, Paragraph 13.1.2.
'GT' indicates normalized by Edmonton Exchanger per ASME Code Section VIII Division 1, UG-85 or ASME Code Section I, PG-77.4.

The item(s) listed above comply with the requirements of ASME Code Section I, PG-29, PG-81 and ASME Code Section VIII, Division 1, UCS-79(d), UG-79 & UG-81. All welders and procedures are qualified to ASME Code Section IX. Material being supplied conforms to the latest ASME Code Section II, Part A, 2010 Edition.

Supplementary Examination - Items

APR 0 5 2011

宝钢 宝山钢铁股份有限公司 产品质量证明数据

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

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

13242

Issuing Date: 2007/04/07

订货单位 CUSTOMER	BAOSTEEL AMERICA INC	产品名称 PRODUCT	HOT ROLLED STEEL PLATES
标准 SPECIFICATION	ASME SA-516/SA-516M-2004 SA 516GR70N UT SA 578-B ASTM A516 Gr70	合同号 CONTRACTO NO.	JH10077

NO.	PLATE NO.	HEAT NO.	MATERIAL DESCRIPTION			QTY	MASS (KG)	CHEMICAL COMPOSITION %										TENSILE TEST			IMPACT TEST				
			THICK	WIDTH	LENGTH			C	Si	Mn	P	S	Tal	Ceq				Y.S.	T.S.	EL.	TEMP	1	2	3	AVE.
			INCHES					2	2	2	4	4	3	2				PSI		%	F	NOTCH			
								Cu	Ni	Cr	Sn	Nb	V	Ti	Mo	B	N					2mm V			
								3	3	3	4	3	3	3	3	4	5					thick=10mm			
								1=X10 2=X100 3=X1000 4=X10000 5=X100000														FT.LB			
1	7225077100	178130	0.875	96.5	480	1	5212	17	30	113	47	9	30	40				49880	76270	28	-50	145	136	150	144
								220	340	20	0	14	1	15	0	1	280								
2	7225077200	178130	0.875	96.5	480	1	5212	17	30	113	47	9	30	40				49880	76270	28	-50	145	136	150	144
								220	340	20	0	14	1	15	0	1	280								
3	7225077300	178130	0.875	96.5	480	1	5212	17	30	113	47	9	30	40				49880	76270	28	-50	145	136	150	144
								220	340	20	0	14	1	15	0	1	280								
4	7223134100	178130	0.875	96.5	480	1	5212	17	30	113	47	9	30	40				52345	76125	30	-50	99	93	87	93
								220	340	20	0	14	1	15	0	1	280								
5	7223134200	178130	0.875	96.5	480	1	5212	17	30	113	47	9	30	40				52345	76125	30	-50	99	93	87	93
								220	340	20	0	14	1	15	0	1	280								
6	7223134300	178130	0.875	96.5	480	1	5212	17	30	113	47	9	30	40				52345	76125	30	-50	99	93	87	93
								220	340	20	0	14	1	15	0	1	280								
TOTAL						6	31272																		

REMARKS	VACUUM DEGASS, SULPHIDE SHAPE CONTROLLED , CERTIFICATION:AS EN10204 3.1 ALL DATA ONLY FOR REFERANCE PLATE NORMALIZED: 900¡æ×15min. UT SA578-B

MTR APPROVED
EDMONTON EXCHANGER

B

注文者 SHIPPER : HANWA CO., LTD.
注文者照合番号 REFERENCE No. : 228-38561030
契約番号 CONTRACT No. : 7-831-H1-5-3-AT01
商品名 COMMODITY : HOT ROLLED STEEL PLATES
規格 SPECIFICATION : ASME SA-516 GRADE 70-E04-A05
文書番号 DOCUMENT No. :
需要家 CUSTOMER : EDMONTON EXCHANGER GROUP OF C-OMPANIES

新日本製鐵株式會社
Nippon Steel Corporation

鋼材検査証明書
INSPECTION CERTIFICATE

(AS PER EN 10204 CERTIFICATE ON MATERIAL TESTS 3.1)

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

証明書番号 CERTIFICATE No. : P-88316
頁 PAGE : 44
発行年月日 DATE OF ISSUE : 2007-04-19
1001
需要家管理番号 CUSTOMER'S CONTROL No. : 2**DM*****
*****EW****
E3001P01Q0 E07

寸法 DIMENSION MM	員数 QUANTITY	質量 MASS KG	製鋼番号 CAST No. / 試験番号 TEST No.	製品番号 PLATE No.	引張試験 TENSILE TEST: LOCATION ORIENTATION ※1	GL ※2	耐力降伏点 YS 0.2% KSI	引張強さ TS KSI	伸び EL %	% ※3	BEND TEST 曲げ試験 ※4	衝撃試験 IMPACT TEST: LOCATION ※1	SIZE ※5	2V-50F FT.LB 平均値 AVG	個々値 EACH	HBW	化学成分 CHEMICAL COMPOSITION %: C ×100	Si ×100	Mn ×100	P ×1000	S ×1000	Cu ×100	Ni ×100	Cr ×100	Mo ×100	Nb ×100	V ×100	Ti ×100	Ceq.1 ×100	Pcm ×100	Sol. Al ×100	Ceq.2 ×100	熱処理状態 CONDITION OF SUPPLY ※7
07			G8173	TESTED-PL											177	144	16	37	114	7	21	8	16	1	0	1	030	37			
0.75"X96.5"X480"	1	4467	46862	Y74800709	TC	I	54	75	30			TL	F	176	160	146		45	1		35	0	11	1	0						
															192	146 AVG															
																145	P15	38	113	6	21	8	16	1	0	1	030	36			
																		47		35		2	21	2	0						
08			G3355	TESTED-PL											185	146	15	36	115	7	21	6	18	2	0	1	037	37			
0.875"X96.5"X480"	1	5211	43575	Y74800804	TC	I	51	74	29			TL	F	185	207	143		35	2		36	0	14	0	0						
															164	144 AVG															
																144	P15	37	112	6	21	6	17	2	0	1	036	36			
																		36		35		2	19	2	0						

13336

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

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

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

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

AX4075808552

B

注文者 SHIPPER : HANWA CO., LTD.

注文者照合番号 REFERENCE No. : 228-38561030

契約番号 CONTRACT No. : 7-831-H1-5-3-AT01

商品名 COMMODITY : HOT ROLLED STEEL PLATES

規格 SPECIFICATION : ASME SA-516 GRADE 70-E04-A05

文書番号 DOCUMENT No. :

需要家 CUSTOMER : EDMONTON EXCHANGER GROUP OF C-OMPANIES

新日本製鐵株式會社
Nippon Steel Corporation

鋼材検査証明書
INSPECTION CERTIFICATE

(AS PER EN 10204 CERTIFICATE ON MATERIAL TESTS 3.1)

本社 HEAD OFFICE : 〒100-8071 東京都千代田区大手町二丁目6番3号 2-6-3, OTEMACHI, CHIYODA-KU, TOKYO 100-8071, JAPAN

君津製鐵所 KIMITSU WORKS : 〒299-1141 千葉県君津市君津1番地 1, KIMITSU, KIMITSU-CITY, CHIBA-PREF, 299-1141 JAPAN

証明書番号 CERTIFICATE No. : P-88316 頁 PAGE : 45

発行年月日 DATE OF ISSUE : 2007-04-19

需要家管理番号 CUSTOMER'S CONTROL No. : 1001 2**DM***** *****EW*** E3001P01Q0 E07

寸法 DIMENSION MM	員数 QUANTITY	質量 MASS KG	製鋼番号 CAST No. / 試験番号 TEST No.	製品番号 PLATE No.	引張試験 TENSILE TEST: LOCATION ORIENTATION ※1	※2	耐力降伏点 YS 0.2% KSI	引張強さ TS KSI	伸び EL %	※3	衝撃試験 IMPACT TEST: DIRECTION ※4	LOCATION ORIENTATION ※1	SIZE ※5	2V-50F FT.LB 平均値 AVG	個々値 EACH	HBW ※6	化学成分 CHEMICAL COMPOSITION % C ×100	Si ×100	Mn ×100	P ×1000	S ×1000	Cu ×100	Ni ×100	Cr ×100	Mo ×100	Nb ×100	V ×100	TAl ×100	Ceq.1 ×100	熱処理 CONDITION OF SUPPLY ※7
																	×1000									×1000	×1000			
																		N ×1000	TE3 ×1000	TE1 ×100	TE2 ×100	SN ×100	CA ×10000	B ×10000	TI ×100		Pcm ×100	Sol.Al ×100	Ceq.2 ×100	
08 0.875"X96.5"X480"	2	10422	G3355 43575	FROM Y74800805 TO Y74800806	TC	I	51	74	29		TL	F	185	185	207	146	15	36	115	7	21	16	18	2	0	1	037	37	
															164	143		35	2		36	0	14	0	0				
																144 AVG													
																144	P15	37	112	6	21	16	17	2	0	1	036	36	
																		36		35		2	19	2	0				
08 0.875"X96.5"X480"	1	5211	G3355 43584	TESTED-PL Y74800801	TC	I	52	75	33		TL	F	184	131	203	149	15	36	115	7	21	16	18	2	0	1	037	37	
																149		35	2		36	0	14	0	0				
															217	149 AVG													
																149	P15	37	112	6	21	16	17	2	0	1	036	36	
																		36		35		2	19	2	0				

注釈 NOTES

※1 Location Orientation 位置・方向, T:頭部 Top, B:底部 Bottom, L:圧延方向 Longitudinal, C:直角方向 Transverse, Z:板厚方向 Through Thickness, R:45° 方向 45Deg. to the Longitudinal Axis

※2 GL 標点距離 Gage Length, A:50mm 平形試験片 Rectangular, B:50mm 丸形試験片 Round, C:70mm 平形試験片 Rectangular, D:70mm 丸形試験片 Round, E:80mm 平形試験片 Rectangular, F:80mm 丸形試験片 Round, G:200mm, H:2", I:8", J:5.65$\sqrt{So}$, K:4.$\sqrt{So}$

※3 RA:絞り Reduction of Area, YR:降伏比 Yield Ratio, ※4 A:合格 Acceptable, ※5 F:標準寸法 FULL SIZE, 2:2.5mm, 3:3.3mm, 4:3.33mm, 5:5.0mm, 6:6.67mm, 7:7.5mm, 8:6.7mm, 9:製品板厚 PlateThickness, ※6 P:製品分析 Product Analysis,

※7 N:焼準 Normalized, Q:焼入れ Quenched, T:焼戻し Tempered, CR:Controlled Rolled, NIC:NIC Process/TMC Process, CLC:CLC Process/TMC Process, AR:As Rolled, TMR:TMR Process/TMC Process, NR:Normalizing Rolled

SH:延性破面率 Shear Fracture, CF:脆性破面率 Crystallinity Fracture, LE:横膨出 Lateral Expansion, AGS:オーステナイト粒度 Austenite Grain Size, FGS:フェライト粒度 Ferrite Grain Size, SR:Stress Relieved/Post Weld Heat Treatment

温度 Temperature C: °C F: °F

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

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

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GROUP MANAGER
PLATE QUALITY CONTROL DEPT.
KIMITSU WORKS

AX4075908552

B

***

新日本製鐵株式會社
Nippon Steel Corporation

鋼材検査証明書
INSPECTION CERTIFICATE

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

注文者 SHIPPER : HANWA CO., LTD.
注文者照合番号 REFERENCE No. : 228-38561030
契約番号 CONTRACT No. : 7-831-H1-5-3-AT01
商品名 COMMODITY : HOT ROLLED STEEL PLATES
規格 SPECIFICATION : ASME SA-516 GRADE 70-E04-A05
文書番号 DOCUMENT No. :

(AS PER EN 10204 CERTIFICATE ON MATERIAL TESTS 3.1)

需要家 CUSTOMER : EDMONTON EXCHANGER GROUP OF COMPANIES

証明書番号 CERTIFICATE No. : P-88316
頁 PAGE : 46
発行年月日 DATE OF ISSUE : 2007-04-19
1001
2**DM*****
*****EW***
需要家管理番号 CUSTOMER'S CONTROL No. : E3001P01Q0 E07

寸法 DIMENSION MM	員数 QUANTITY	質量 MASS KG	製鋼番号 CAST No. / 試験番号 TEST No.	製品番号 PLATE No.	LOCATION ORIENTATION ※1	OIL ※2	引張試験 TENSILE TEST 耐力降伏点 YS 0.2% KSI	引張強さ TS KSI	伸び EL %	% ※3	HEAT TREATMENT ※4	NORMALIZING ※1	SIZE ※5	衝撃試験 IMPACT TEST 2V-50F FT.LB 平均値 AVG	個々値 EACH	HBW	化学成分 CHEMICAL COMPOSITION % C ×100 >=1000	Si ×100	Mn ×100	P ×1000	S ×1000	Cu ×100	Ni ×100	Cr ×100	Mo ×100	Nb ×100 <=1000	V ×100 <=1000	TiAl ×100	Ceq.1 ×100	STEEL MAKING PROCESS ※6	HEAT TREATMENT CONDITION ※7
																	※2 ×1000	N <=1000	TE3 >=1000	TE1 ×100	TE2 ×100	SN ×100	CA ×10000	B ×10000	Ti ×100	Pcm ×100	Sol.Al ×100	Ceq.2 ×100		
08			G3355	FROM																										
0.875"X96.5"X480"	2	10422	43584	Y74800802	TC	L	52	75	33		T	L	F	184	203	149	15	36	115	7	21	60	18	2	0	1	037	37		
				TO														35	2		36		14	0	0					
				Y74800803											217	149														
																AVG														
																149														
																	P	15	37	112	6	21	60	17	2	0	1	036	36		
																		36		35		2	19	2	0					
08			G3355	TESTED-PL											215	150	15	36	115	7	21	60	18	2	0	1	037	37		
0.875"X96.5"X480"	1	5211	43585	Y74800807	TC	L	52	74	27		T	L	F	225	222	149		35	2		36	0	14	0	0					
															239	149														
																AVG														
																149														
																	P	15	37	112	6	21	60	17	2	0	1	036	36		
																		36		35		2	19	2	0					

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

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

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

T. Adachi

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

B

注文者 SHIPPER : HANWA CO., LTD.
注文者照合番号 REFERENCE No. : 228-38561030
契約番号 CONTRACT No. : 7-831-H1-5-3-AT01
商品名 COMMODITY : HOT ROLLED STEEL PLATES
規格 SPECIFICATION : ASME SA-516 GRADE 70-E04-A05
文書番号 DOCUMENT No. :
需要家 CUSTOMER : EDMONTON EXCHANGER GROUP OF COMPANIES

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

(AS PER EN 10204 CERTIFICATE ON MATERIAL TESTS 3.1)

需要家管理番号 CUSTOMER'S CONTROL No. : E3001P01Q0 E07

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

証明書番号 CERTIFICATE No. : P-88316

発行年月日 DATE OF ISSUE : 2007-04-19
1001 2**DM***** *****EW***

寸法 DIMENSION MM	員数 QUANTITY	質量 MASS KG	製鋼番号 CAST No. / 試験番号 TEST No.	製品番号 PLATE No.	LOCATION ORIENTATION SIZE ※1	引張試験 TENSILE TEST 耐力降伏点 YS 0.2% KSI	引張強さ TS KSI	伸び EL %	% ※3	BEND TEST ※4/※5	LOCATION ※1	SIZE	衝撃試験 IMPACT TEST 2V-50F FT.LB 平均値 AVG	個々値 EACH	HBW	化学成分 CHEMICAL COMPOSITION % C ×100 -1000	Si ×100	Mn ×100	P ×1000	S ×1000	Cu ×100	Ni ×100	Cr ×100	Mo ×100	Nb ×100 +1000	V ×100 +1000	TAl ×100	Ceq.1 ×100	CONDITION OF SUPPLY ※7
																	N ×1000 -1000	TE3 -1000	TE1 ×100	TE2 ×100	SN ×100	CA ×10000	B ×10000	TI ×100		Pcm ×100	Sol. Al ×100	Ceq.2 ×100	
08			G3355											215	150	15	36	115	7	21	6	18	2	0	1	0	37	37	
0.875"X96.5"X480"	1	5211	43585	Y74800808	TC	52	74	27			TL	F	225	222	149		35	2		36	0	14	0	0					
														239	149 AVG													
															149	P15	37	112	6	21	6	17	2	0	1	0	36	36	
																	36		35		2	19	2	0					
09			G3355	TESTED-PL										213	148	15	36	115	7	21	6	18	2	0	1	0	37	37	
0.875"X120.5"X480"	1	6509	43572	Y74800913	TC	51	74	33			TL	F	218	223	146		35	2		36	0	14	0	0					
														218	146 AVG													
															147	P15	37	112	6	21	6	17	2	0	1	0	36	36	
																	36		35		2	19	2	0					

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

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

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

T. Adachi

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

AX4076109532

B

注文者 SHIPPER : HANWA CO., LTD.
注文者照合番号 REFERENCE No. : 228-38561030
契約番号 CONTRACT No. : 7-831-H1-5-3-AT01
商品名 COMMODITY : HOT ROLLED STEEL PLATES
規格 SPECIFICATION : ASME SA-516 GRADE 70-E04-A05
文書番号 DOCUMENT No. :
需要家 CUSTOMER : EDMONTON EXCHANGER GROUP OF C-OMPANIES

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

鋼材検査証明書
INSPECTION CERTIFICATE

(AS PER EN 10204 CERTIFICATE ON MATERIAL TESTS 3.1)

証明書番号 CERTIFICATE No. : P-88316 頁 PAGE : 119E
発行年月日 DATE OF ISSUE : 2007-04-19
需要家管理番号 CUSTOMER'S CONTROL No. : 1001 2**DM***** *****EW*** E3001P01Q0 E07

寸法 DIMENSION MM	員数 QUANTITY	質量 MASS KG	製鋼番号 CAST No. / 試験番号 TEST No.	製品番号 PLATE No.	LOCATION ORIENTATION GL ※1 ※2	引張試験 TENSILE TEST 耐力降伏点 YS 0.2% KSI	引張強さ TS KSI	伸び EL %	% ※3	BEND TEST ※4	LOCATION ORIENTATION ※1	衝撃試験 IMPACT TEST 2V-50F FT.LB 平均値 AVG	個々値 EACH	HBW	C ×100	Si ×100	Mn ×100	P ×1000	S ×1000	Cu ×100	Ni ×100	Cr ×100	Mo ×100	Nb ×100	V ×100	TAl ×100	Ceq.1 ×100	熱処理状態 CONDITION OF SUPPLY
															N ×1000	TE3 ×1000	TE1 ×100	TE2 ×100	SN ×100	CA ×10000	B ×10000	Ti ×100		Pcm ×100	Sol.Al ×100	Ceq.2 ×100	※7
26			G3272	TESTED-PL									120	147	13	37	115	5	21	7	37	2	7	1	23	38		
2.25"X97"X480"	1	13476	54018	Y74802605	TCH	52	74	36			TLF	96	100	148		36	9		63	0	8	1	1					
													68	148 AVG														
														148														
															P13	38	117	6	21	8	37	2	7	1	23	38		
																35		64		1	14	1	1					
TOTAL	30	1941.750																										

LADLE TREATMENT : VACUUM DEGASSED
HEAT TREATMENT.
PLATE & TEST SPECIMEN NORMALIZING : 910CX 10MIN.
CHARPY IMPACT TEST TEMPERATURE (SI) : -46C
LADLE CEQ1 = C+MN/6+(NI+CU)/15+(CR+MO+V)/5
PRODUCT CEQ1 = C+MN/6+(NI+CU)/15+(CR+MO+V)/5
LADLE TE2 = CU+NI+CR+MO
LADLE TE3 = CR+MO
PRODUCT TE1 = CU+NI+CR+MO
CHEMICAL COMPOSITION % : "N" X10000
CHEMICAL COMPOSITION % : "SN" X1000
CHEMICAL COMPOSITION % : "TE3" X100

MTR APPROVED EDMONTON EXCHANGER

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

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

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

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

AY4000000000

DILLINGER HÜTTE

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

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

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

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

A05 Established inspecting body: DH

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

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

B01 Product: HOT ROLLED PLATES

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

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

15073

A01-A99 Further commercial information - Concession requests

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

B01-B99 Description of the product

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

B04 Product delivery condition

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

A04 D H Manufacturer's mark

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

QM-System: Certification as per ISO 9001

B. MUELLER
Test House Manager

A H B Inspector's stamp

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

Date 22.12.08 KW 1

DILLINGER HÜTTE

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

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

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

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

A05 Established inspecting body: DH

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

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

B01 Product: HOT ROLLED PLATES

B02/ Steel design. SA516-70 SA20-S5

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

B06 Marking of the product

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

C10-C29 Tensile test

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

C30-C39 Hardness test

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

C40-C49 Impact test

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

A04 D H Manufacturer's mark

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

QM-System: Certification as per ISO 9001

B. MUELLER
Test House Manager

AHB Inspector's stamp

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

Date 22.12.08 KW 1

DILLINGER HÜTTE

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

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

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

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

A05 Established Inspecting body: DH

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

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

B01 Product: HOT ROLLED PLATES

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

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

C40-C49 Impact test

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

C70-C99 Chemical composition % - Heat analysis

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

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

C94 Heat analysis Carbon equivalent / Alloying restrictions

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

C95 Ladle treatment

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

A04 Manufacturer's mark: D H

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

QM-System: Certification as per ISO 9001

B. MUELLER
Test House Manager

AHB Inspector's stamp

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

Date 22.12.08 KW 1

DILLINGER HÜTTE

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

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

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

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

A05 Established inspecting body: DH

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

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

B01 Product: HOT ROLLED PLATES

B02/ Steel design. SA516-70 SA20-S5

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

C70-C99 Chemical composition % - Product analysis

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

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

C94 Product analysis Carbon equivalent / Alloying restrictions

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

C94 Carbon equivalent formula / Alloying restrictions

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

A04 Manufacturer's mark: D H

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

QM-System: Certification as per ISO 9001

B. MUELLER
Test House Manager

Inspector's stamp: A H B

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

Date 22.12.08 KW 1

DILLINGER HÜTTE

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

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

A08/ Manufacturer's order/ A03 Certificate No.: 343880-002 Sheet: 5

A05 Established inspecting body: DH

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

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

B01 Product: HOT ROLLED PLATES

B02/ Steel design. SA516-70 SA20-S5

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

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

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

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

MTR APPROVED EDMONTON EXCHANGER

A04 D H Manufacturer's mark

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

QM-System: Certification as per ISO 9001

B. MUELLER
Test House Manager

A H B Inspector's stamp

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

Date 22.12.08 KW 1

DILLINGER HÜTTE

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

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

A10 Advice of dispatch No./ Date of dispatch: 355536-23.03.10

A08/ Manufacturer's order/ A03 Certificate No.: 353891-001 Sheet: 1/...

A05 Established inspecting body: DH

A06 Purchaser: EDMONTON STEEL,EDMON A07.1 No. ED10547-J1010-ER

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

B01 Product: HOT ROLLED PLATES

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

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

15461

B01-B99 Description of the product

B14 Item No.	B08 Number of pieces	B09 Thickness	B10 Width	B11 Length	B12 Theoretical mass KG	B04 Product delivery condition	B07.2 Heat No.	B07.1 Rolled plate No./ Test No.	A09 Purchaser article number
			INCH						
01	1	0,6250 x	120,50000 x	480,00000	4650	N	330006	21558-01	
01	1	0,6250 x	120,50000 x	480,00000	4650	N	344392	72252-01	
01	1	0,6250 x	120,50000 x	480,00000	4650	N	344392	72252-02	
01	1	0,6250 x	120,50000 x	480,00000	4650	N	344392	72252-03	
01	1	0,6250 x	120,50000 x	480,00000	4650	N	344392	72253-01	
01	1	0,6250 x	120,50000 x	480,00000	4650	N	344392	72253-02	
01	1	0,6250 x	120,50000 x	480,00000	4650	N	344392	72253-03	
01	1	0,6250 x	120,50000 x	480,00000	4650	N	344392	72254-01	
01	1	0,6250 x	120,50000 x	480,00000	4650	N	344392	72254-02	
01	1	0,6250 x	120,50000 x	480,00000	4650	N	344392	72254-03	
01	1	0,6250 x	120,50000 x	480,00000	4650	N	344392	72255-01	
01	1	0,6250 x	120,50000 x	480,00000	4650	N	344392	72255-02	
01	1	0,6250 x	120,50000 x	480,00000	4650	N	344392	72566-01	
01	1	0,6250 x	120,50000 x	480,00000	4650	N	344392	72566-02	
01	1	0,6250 x	120,50000 x	480,00000	4650	N	344392	72566-03	
01	1	0,6250 x	120,50000 x	480,00000	4650	N	344392	72567-01	
01	1	0,6250 x	120,50000 x	480,00000	4650	N	344392	72567-02	
01	1	0,6250 x	120,50000 x	480,00000	4650	N	344393	71999-02	
01	1	0,6250 x	120,50000 x	480,00000	4650	N	344393	71999-03	
01	1	0,6250 x	120,50000 x	480,00000	4650	N	344393	72248-01	
01	1	0,6250 x	120,50000 x	480,00000	4650	N	344393	72248-02	
01	1	0,6250 x	120,50000 x	480,00000	4650	N	344393	72248-03	
01	1	0,6250 x	120,50000 x	480,00000	4650	N	344393	72250-01	

A04 D H Manufacturer's mark

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

QM-System: Certification as per ISO 9001

B. MUELLER
Test House Manager

A H B Inspector's stamp

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

Date 23.03.10 PP 1

DILLINGER HÜTTE

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

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

A10 Advice of dispatch No./ Date of dispatch: 355536-23.03.10

A08/ Manufacturer's order/ A03 Certificate No.: 353891-001 Sheet: 2/...

A05 Established inspecting body: DH

A06 Purchaser: EDMONTON STEEL, EDMON A07.1 No.: ED10547-J1010-ER

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

B01 Product: HOT ROLLED PLATES

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

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

B01-B99 Description of the product

B14 Item No.	B08 Number of pieces	B09 Thickness		B10 Width		B11 Length	B12 Theoretical mass KG	B04 Product delivery condition	B07.2 Heat No.	B07.1 Rolled plate No./ Test No.	A09 Purchaser article number
				INCH							
01	1	0,6250	x	120,50000	x	480,00000	4650	N	344393	72250-02	
01	1	0,6250	x	120,50000	x	480,00000	4650	N	344393	72251-01	
01	1	0,6250	x	120,50000	x	480,00000	4650	N	344393	72251-02	
01	1	0,6250	x	120,50000	x	480,00000	4650	N	344396	71463-01	
01	1	0,6250	x	120,50000	x	480,00000	4650	N	344396	71463-02	
01	1	0,6250	x	120,50000	x	480,00000	4650	N	344404	46011-01	
01	1	0,6250	x	120,50000	x	480,00000	4650	N	344404	46011-02	
**	30						139500				
02	1	0,7500	x	150,00000	x	480,00000	6946	N	344392	72568-02	
02	1	0,7500	x	150,00000	x	480,00000	6946	N	344394	71803-01	
02	1	0,7500	x	150,00000	x	480,00000	6946	N	344394	71803-02	
02	1	0,7500	x	150,00000	x	480,00000	6946	N	344394	71805-01	
02	1	0,7500	x	150,00000	x	480,00000	6946	N	344394	71805-02	
02	1	0,7500	x	150,00000	x	480,00000	6946	N	344394	71805-03	
**	6						41676				
03	1	0,8750	x	120,50000	x	480,00000	6510	N	344393	71994-01	
03	1	0,8750	x	120,50000	x	480,00000	6510	N	344393	71994-02	
03	1	0,8750	x	120,50000	x	480,00000	6510	N	344393	71994-03	
03	1	0,8750	x	120,50000	x	480,00000	6510	N	344393	71995-01	
03	1	0,8750	x	120,50000	x	480,00000	6510	N	344393	71995-02	
03	1	0,8750	x	120,50000	x	480,00000	6510	N	344393	71995-03	
03	1	0,8750	x	120,50000	x	480,00000	6510	N	344393	71996-01	
03	1	0,8750	x	120,50000	x	480,00000	6510	N	344393	71996-02	

A04 D H Manufacturer's mark

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

QM-System: Certification as per ISO 9001

B. MUELLER
Test House Manager

AHB Inspector's stamp

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

Date 23.03.10 PP 1

DILLINGER HÜTTE

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

A10 Advice of dispatch No./ Date of dispatch: 355536-23.03.10

A09/ Manufacturer's order/ A03 Certificate No.: 353891-001

Sheet: 3/...

A05 Established inspecting body: DH

A06 Purchaser: EDMONTON STEEL,EDMON A07.1 No. ED10547-J1010-ER

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

B01 Product: HOT ROLLED PLATES

B02/ Steel design. SA516-70 SA20-S5

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

B01-B99 Description of the product

B14 Item No.	B08 Number of pieces	B09 Thickness	B10 Width	B11 Length	B12 Theoretical mass KG	B04 Product delivery condition	B07.2 Heat No.	B07.1 Rolled plate No./ Test No.	A09 Purchaser article number
			INCH						
03	1	0,8750 x	120,50000 x	480,00000	6510	N	344393	71996-03	
03	1	0,8750 x	120,50000 x	480,00000	6510	N	344393	71997-01	
03	1	0,8750 x	120,50000 x	480,00000	6510	N	344393	71997-02	
03	1	0,8750 x	120,50000 x	480,00000	6510	N	344393	71997-03	
03	1	0,8750 x	120,50000 x	480,00000	6510	N	344393	71998-01	
03	1	0,8750 x	120,50000 x	480,00000	6510	N	344393	71998-02	
03	1	0,8750 x	120,50000 x	480,00000	6510	N	344394	71993-01	
03	1	0,8750 x	120,50000 x	480,00000	6510	N	344394	71993-02	
03	1	0,8750 x	120,50000 x	480,00000	6510	N	344394	71993-03	
03	1	0,8750 x	120,50000 x	480,00000	6510	N	344404	75996-01	
03	1	0,8750 x	120,50000 x	480,00000	6510	N	344404	75996-02	
**	19				123690				
04	1	0,8750 x	150,00000 x	480,00000	8104	N	344396	71801-01	
04	1	0,8750 x	150,00000 x	480,00000	8104	N	344396	71801-02	
04	1	0,8750 x	150,00000 x	480,00000	8104	N	344396	71801-03	
**	3				24312				
05	1	1,0000 x	96,50000 x	480,00000	5959	N	344393	72249-01	
05	1	1,0000 x	96,50000 x	480,00000	5959	N	344394	71802-01	
05	1	1,0000 x	96,50000 x	480,00000	5959	N	344394	71802-02	
05	1	1,0000 x	96,50000 x	480,00000	5959	N	344394	71802-03	
05	1	1,0000 x	96,50000 x	480,00000	5959	N	344394	71804-01	
05	1	1,0000 x	96,50000 x	480,00000	5959	N	344394	71804-02	
05	1	1,0000 x	96,50000 x	480,00000	5959	N	344394	71804-03	

A04 Manufacturer's mark: D H

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

QM-System: Certification as per ISO 9001

B. MUELLER
Test House Manager

Inspector's stamp: AHB

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

Date 23.03.10 PP 1

DILLINGER HÜTTE

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

A10 Advice of dispatch No./ Date of dispatch: 355536-23.03.10

A08/ Manufacturer's order/ A03 Certificate No.: 353891-001 Sheet: 4/...

A05 Established inspecting body: DH

A06 Purchaser: EDMONTON STEEL, EDMON A07.1 No. ED10547-J1010-ER

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

B01 Product: HOT ROLLED PLATES

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

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

B01-B99 Description of the product

B14 Item No.	B08 Number of pieces	B09 Thickness	B10 Width	B11 Length	B12 Theoretical mass KG	B04 Product delivery condition	B07.2 Heat No.	B07.1 Rolled plate No./ Test No.	A09 Purchaser article number
			INCH						
05	1	1,0000 x	96,50000 x	480,00000	5959	N	344394	71806-01	
05	1	1,0000 x	96,50000 x	480,00000	5959	N	344394	71806-02	
05	1	1,0000 x	96,50000 x	480,00000	5959	N	344394	71806-03	
05	1	1,0000 x	96,50000 x	480,00000	5959	N	344394	71992-01	
05	1	1,0000 x	96,50000 x	480,00000	5959	N	344394	71992-02	
05	1	1,0000 x	96,50000 x	480,00000	5959	N	344394	71992-03	
05	1	1,0000 x	96,50000 x	480,00000	5959	N	344396	71465-01	
05	1	1,0000 x	96,50000 x	480,00000	5959	N	344396	71465-02	
05	1	1,0000 x	96,50000 x	480,00000	5959	N	344396	71465-03	
05	1	1,0000 x	96,50000 x	480,00000	5959	N	344396	71800-01	
05	1	1,0000 x	96,50000 x	480,00000	5959	N	344396	71800-02	
05	1	1,0000 x	96,50000 x	480,00000	5959	N	344396	71800-03	
**	19				113221				
08	1	1,2500 x	97,00000 x	480,00000	7487	N	344392	72569-01	
08	1	1,2500 x	97,00000 x	480,00000	7487	N	344392	72569-02	
08	1	1,2500 x	97,00000 x	480,00000	7487	N	344392	72569-03	
08	1	1,2500 x	97,00000 x	480,00000	7487	N	344392	72570-01	
08	1	1,2500 x	97,00000 x	480,00000	7487	N	344392	72570-02	
08	1	1,2500 x	97,00000 x	480,00000	7487	N	344392	72571-01	
08	1	1,2500 x	97,00000 x	480,00000	7487	N	344392	72571-02	
08	1	1,2500 x	97,00000 x	480,00000	7487	N	344392	72571-03	
**	8				59896				
***	85				502295				

A04 Manufacturer's mark: D H

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

QM-System: Certification as per ISO 9001

B. MUELLER
Test House Manager

A H B
Inspector's stamp

Date 23.03.10

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

PP 1

DILLINGER HÜTTE

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

A10 Advice of dispatch No./ Date of dispatch: 355536-23.03.10

A08/ A03 Manufacturer's order/ Certificate No.: 353891-001 Sheet: 5/...

A05 Established inspecting body: DH

A06 Purchaser: EDMONTON STEEL, EDMON A07.1 No. ED10547-J1010-ER

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

B01 Product: HOT ROLLED PLATES

B02/ Steel design. SA516-70 SA20-S5

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

B04 Product delivery condition

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

B06 Marking of the product

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

B07-B99 Further information about the product

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

C10-C29 Tensile test

B14 Item No.	B07.2 Heat No.	B07.1 Rol.plate/ Test No.	B05 Reference (heat) treatment	C01	C02/ C01	C03 Temp. GR.F	C10 KSI RP02	C11 RM	C12 A % L0=8IN	C13 A % L0=2IN	C14-C15
01	330006	21558		K1	Q	RT	48,0	72,6	29		
01	344392	72252		K1	Q	RT	51,6	75,5	28		
01	344392	72253		K1	Q	RT	51,8	76,0	27		
01	344392	72254		K1	Q	RT	52,6	76,0	28		
01	344392	72255		K1	Q	RT	51,5	76,6	27		
01	344392	72566		K1	Q	RT	51,8	76,3	27		
01	344392	72567		K1	Q	RT	52,1	77,0	25		
01	344393	71999		K1	Q	RT	50,6	74,7	30		
01	344393	72248		K1	Q	RT	50,6	76,1	29		

A04 Manufacturer's mark: D H

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

QM-System: Certification as per ISO 9001

B. MUELLER
Test House Manager

Inspector's stamp: A H B

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

Date 23.03.10 PP 1

DILLINGER HÜTTE

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

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

A10 Advice of dispatch No./ Date of dispatch: 355536-23.03.10

A08/ Manufacturer's order/ A03 Certificate No.: 353891-001 Sheet: 6/...

A05 Established inspecting body: DH

A06 Purchaser: EDMONTON STEEL, EDMON A07.1 No. ED10547-J1010-ER

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

B01 Product: HOT ROLLED PLATES

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

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

C10-C29 Tensile test

B14 Item No.	B07.2 Heat No.	B07.1 Rol.plate/ Test No.	B05 Reference (heat) treatment	C01	C02/ C01	C03 Temp. GR.F	C10	C11 KSI RP02	C12 RM	C13	C14-C15 A % L0=8IN	C14-C15 A % L0=2IN
01	344393	72250		K1	Q	RT		50,6	75,0		28	
01	344393	72251		K1	Q	RT		51,2	75,7		27	
01	344396	71463		K1	Q	RT		49,3	74,7		28	
01	344404	46011		K1	Q	RT		51,0	75,7		30	
02	344392	72568		K1	Q	RT		50,3	76,0		26	
02	344394	71803		K1	Q	RT		48,9	74,0		29	
02	344394	71805		K1	Q	RT		49,0	73,1		31	
03	344393	71994		K1	Q	RT		49,3	73,1		30	
03	344393	71995		K1	Q	RT		49,3	73,1		31	
03	344393	71996		K1	Q	RT		49,7	73,1		30	
03	344393	71997		K1	Q	RT		49,3	73,4		31	
03	344393	71998		K1	Q	RT		50,5	73,7		31	
03	344394	71993		K1	Q	RT		50,2	73,5		31	
03	344404	75996		K1	Q	RT		50,3	74,0		28	
04	344396	71801		K1	Q	RT		48,7	73,8		27	
05	344393	72249		K1	Q	RT		50,6	73,8		31	
05	344394	71802		K1	Q	RT		49,9	74,1		33	
05	344394	71804		K1	Q	RT		49,4	73,5		31	
05	344394	71806		K1	Q	RT		48,3	72,9		30	
05	344394	71992		K1	Q	RT		49,4	73,8		29	
05	344396	71465		K1	Q	RT		49,3	73,4		30	
05	344396	71800		K1	Q	RT		49,7	73,7		31	
08	344392	72569		K1	QV	RT		50,0	75,4			41

A04 D H Manufacturer's mark

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

QM-System: Certification as per ISO 9001

B. MUELLER
Test House Manager

A H B Inspector's stamp

Date 23.03.10 PP 1

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

DILLINGER HÜTTE

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

A10 Advice of dispatch No./ Date of dispatch: 355536-23.03.10

A08/ A03 Manufacturer's order/ Certificate No.: 353891-001 Sheet: 7/...

A05 Established Inspecting body: DH

A06 Purchaser: EDMONTON STEEL,EDMON A07.1 No. ED10547-J1010-ER

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

B01 Product: HOT ROLLED PLATES

B02/ Steel design. SA516-70 SA20-S5

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

C10-C29 Tensile test

B14 Item No.	B07.2 Heat No.	B07.1 Rol.plate/ Test No.	B05 Reference (heat) treatment	C01	C02/ C01	C03 Temp. GR.F	C10 KSI RP02	C11	C12 RM	C13	A % L0=8IN	C14-C15 A % L0=2IN
08	344392	72570		K1	QV	RT	51,8		76,4			37
08	344392	72571		K1	QV	RT	50,2		75,1			42

C30-C39 Hardness test

B14 Item. No.	B07.2 Heat No.	B07.1 Rol.plate/ Test No.	B05 Reference (heat) treatment	C01	C02/C01	C03 Temp. GR.F	C33 Testing method	C35	C31 Individual values			C32 Mean value
01	330006	21558		K1	O	RT	HBW 10/3000	HB	136	136	136	136
01	344392	72252		K1	O	RT	HBW 10/3000	HB	149	152	151	151
01	344392	72253		K1	O	RT	HBW 10/3000	HB	155	152	153	153
01	344392	72254		K1	O	RT	HBW 10/3000	HB	152	149	149	150
01	344392	72255		K1	O	RT	HBW 10/3000	HB	149	152	149	150
01	344392	72566		K1	O	RT	HBW 10/3000	HB	149	149	149	149
01	344392	72567		K1	O	RT	HBW 10/3000	HB	149	149	153	150
01	344393	71999		K1	O	RT	HBW 10/3000	HB	150	150	149	150
01	344393	72248		K1	O	RT	HBW 10/3000	HB	149	148	148	148
01	344393	72250		K1	O	RT	HBW 10/3000	HB	149	150	150	150
01	344393	72251		K1	O	RT	HBW 10/3000	HB	154	153	152	153
01	344396	71463		K1	O	RT	HBW 10/3000	HB	148	148	148	148
01	344404	46011		K1	O	RT	HBW 10/3000	HB	142	142	142	142
02	344392	72568		K1	O	RT	HBW 10/3000	HB	148	149	148	148
02	344394	71803		K1	O	RT	HBW 10/3000	HB	143	144	144	144
02	344394	71805		K1	O	RT	HBW 10/3000	HB	143	141	144	143
03	344393	71994		K1	O	RT	HBW 10/3000	HB	143	146	144	144
03	344393	71995		K1	O	RT	HBW 10/3000	HB	147	146	143	145

A04 D H Manufacturer's mark

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

QM-System: Certification as per ISO 9001

B. MUELLER
Test House Manager

AHB Inspector's stamp

Date 23.03.10 PP 1

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

DILLINGER HÜTTE

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

A10 Advice of dispatch No./ Date of dispatch: 355536-23.03.10

A08/ Manufacturer's order/ A03 Certificate No.: 353891-001 Sheet: 8/...

A05 Established Inspecting body: DH

A06 Purchaser: EDMONTON STEEL,EDMON A07.1 No. ED10547-J1010-ER

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

B01 Product: HOT ROLLED PLATES

B02/ Steel design: SA516-70 SA20-S5

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

C30-C39 Hardness test

B14 Item No.	B07.2 Heat No.	B07.1 Rol.plate/ Test No.	B05 Reference (heat) treatment	C01	C02/C01	C03 Temp. GR.F	C33 Testing method	C35 C31 Individual values			C32 Mean value
03	344393	71996		K1	O	RT	HBW 10/3000	HB 144	144	144	144
03	344393	71997		K1	O	RT	HBW 10/3000	HB 146	143	147	145
03	344393	71998		K1	O	RT	HBW 10/3000	HB 146	148	148	147
03	344394	71993		K1	O	RT	HBW 10/3000	HB 147	147	146	147
03	344404	75996		K1	O	RT	HBW 10/3000	HB 138	138	138	138
04	344396	71801		K1	O	RT	HBW 10/3000	HB 146	145	148	146
05	344393	72249		K1	O	RT	HBW 10/3000	HB 148	143	144	145
05	344394	71802		K1	O	RT	HBW 10/3000	HB 143	146	144	144
05	344394	71804		K1	O	RT	HBW 10/3000	HB 145	144	146	145
05	344394	71806		K1	O	RT	HBW 10/3000	HB 144	142	143	143
05	344394	71992		K1	O	RT	HBW 10/3000	HB 146	145	146	146
05	344396	71465		K1	O	RT	HBW 10/3000	HB 145	144	144	144
05	344396	71800		K1	O	RT	HBW 10/3000	HB 146	145	143	145
08	344392	72569		K1	O	RT	HBW 10/3000	HB 140	140	141	140
08	344392	72570		K1	O	RT	HBW 10/3000	HB 141	142	141	141
08	344392	72571		K1	O	RT	HBW 10/3000	HB 142	142	140	141

C40-C49 Impact test

B14 Item No.	B07.2 Heat No.	B07.1 Rol.plate/ Test No.	B05 Reference (heat) treatment	C01	C02/ C01	C03 Temp. GR.F	C41 Width of test piece	C40 Type of test piece	C44 Testing method	C46 Energy	C45 C42 Individual values AV=FT.LBF			C43 Mean value
01	330006	21558		K1	LV	-51		CHP-V			AV 260	243	249	251
01	344392	72252		K1	LV	-51		CHP-V			AV 199	184	184	189
01	344392	72253		K1	LV	-51		CHP-V			AV 203	131	202	179
01	344392	72254		K1	LV	-51		CHP-V			AV 101	197	192	163
01	344392	72255		K1	LV	-51		CHP-V			AV 191	193	75	153

A04 Manufacturer's mark

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

QM-System: Certification as per ISO 9001

B. MUELLER
Test House Manager

Inspector's stamp

Date 23.03.10

PP 1

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

DILLINGER HÜTTE

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

A10 Advice of dispatch No./ Date of dispatch: 355536-23.03.10

A08/ Manufacturer's order/ A03. Certificate No.: 353891-001 Sheet: 9/...

A05 Established inspecting body: DH

A06 Purchaser: EDMONTON STEEL, EDMON A07.1 No. ED10547-J1010-ER

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

B01 Product: HOT ROLLED PLATES

B02/ Steel design. SA516-70 SA20-S5

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

C40-C49 Impact test

B14 Item No.	B07.2 Heat No.	B07.1 Rol.plate/ Test No.	B05 Reference (heat) treatment	C01	C02/ C01	C03 Temp. GR.F	C41 Width of test piece	C40 Type of test piece	C44 Testing method	C46 Energy	C45	C42 Individual values AV=FT.LBF			C43 Mean value
01	344392	72566		K1	LV	-51		CHP-V			AV	126	206	198	177
01	344392	72567		K1	LV	-51		CHP-V			AV	190	133	125	149
01	344393	71999		K1	LV	-51		CHP-V			AV	191	202	128	174
01	344393	72248		K1	LV	-51		CHP-V			AV	97	117	188	134
01	344393	72250		K1	LV	-51		CHP-V			AV	107	195	155	152
01	344393	72251		K1	LV	-51		CHP-V			AV	203	122	111	145
01	344396	71463		K1	LV	-51		CHP-V			AV	113	127	136	125
01	344404	46011		K1	LV	-51		CHP-V			AV	193	122	162	159
02	344392	72568		K1	LV	-51		CHP-V			AV	99	136	86	107
02	344394	71803		K1	LV	-51		CHP-V			AV	119	193	190	167
02	344394	71805		K1	LV	-51		CHP-V			AV	188	109	68	122
03	344393	71994		K1	LV	-51		CHP-V			AV	120	148	118	129
03	344393	71995		K1	LV	-51		CHP-V			AV	211	195	198	201
03	344393	71996		K1	LV	-51		CHP-V			AV	125	197	113	145
03	344393	71997		K1	LV	-51		CHP-V			AV	204	108	120	144
03	344393	71998		K1	LV	-51		CHP-V			AV	120	131	126	126
03	344394	71993		K1	LV	-51		CHP-V			AV	209	123	119	150
03	344404	75996		K1	LV	-51		CHP-V			AV	124	119	114	119
04	344396	71801		K1	LV	-51		CHP-V			AV	192	123	83	133
05	344393	72249		K1	LV	-51		CHP-V			AV	190	111	153	151
05	344394	71802		K1	LV	-51		CHP-V			AV	118	108	136	121
05	344394	71804		K1	LV	-51		CHP-V			AV	203	80	115	133
05	344394	71806		K1	LV	-51		CHP-V			AV	125	111	126	121
05	344394	71992		K1	LV	-51		CHP-V			AV	193	114	135	147

A04 Manufacturer's mark: D H

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

QM-System: Certification as per ISO 9001

B. MUELLER
Test House Manager

Inspector's stamp: A H B

Date 23.03.10 PP 1

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

DILLINGER HÜTTE

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

A10 Advice of dispatch No./ Date of dispatch: 355536-23.03.10

A08/ A03 Manufacturer's order/ Certificate No.: 353891-001 Sheet: 10/...

A05 Established inspecting body: DH

A06 Purchaser: EDMONTON STEEL, EDMON A07.1 No.: ED10547-J1010-ER
Final receiver: EDMONTON STEEL, EDMON A07.2 No.:

B01 Product: HOT ROLLED PLATES

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

C40-C49 Impact test

B14 Item No.	B07.2 Heat No.	B07.1 Rol.plate/ Test No.	B05 Reference (heat) treatment	C01	C02/ C01	C03 Temp. GR.F	C41 Width of test piece	C40 Type of test piece	C44 Testing method	C46 Energy	C45	C42 Individual values AV=FT.LBF			C43 Mean value
05	344396	71465		K1	LV	-51		CHP-V			AV	117	162	107	129
05	344396	71800		K1	LV	-51		CHP-V			AV	118	117	151	129
08	344392	72569		K1	LV	-51		CHP-V			AV	66	123	109	99
08	344392	72570		K1	LV	-51		CHP-V			AV	116	104	126	115
08	344392	72571		K1	LV	-51		CHP-V			AV	109	108	107	108

C70-C99 Chemical composition % - Heat analysis

B07.2 Heat	C70	C	SI	MN	P	S	N	CU	MO	NI	CR	V	NB	SN	TI
330006	Y	0,148	0,376	1,17	0,010	0,0008	0,0058	0,023	0,021	0,034	0,227	0,001	0,000	0,001	0,002
344392	Y	0,176	0,371	1,18	0,009	0,0010	0,0065	0,023	0,016	0,037	0,033	0,000	0,000	0,001	0,002
344393	Y	0,173	0,357	1,18	0,008	0,0007	0,0062	0,024	0,008	0,029	0,028	0,000	0,000	0,001	0,002
344394	Y	0,175	0,364	1,17	0,008	0,0008	0,0058	0,022	0,013	0,030	0,030	0,000	0,000	0,001	0,002
344396	Y	0,172	0,378	1,18	0,009	0,0009	0,0068	0,023	0,008	0,035	0,030	0,000	0,000	0,001	0,003
344404	Y	0,182	0,363	1,18	0,010	0,0007	0,0054	0,021	0,009	0,029	0,031	0,000	0,000	0,001	0,002

B07.2 Heat	C70	B	CA	AL-T
330006	Y	0,0002	0,0020	0,036
344392	Y	0,0002	0,0016	0,034
344393	Y	0,0002	0,0016	0,035
344394	Y	0,0002	0,0016	0,035
344396	Y	0,0003	0,0017	0,035
344404	Y	0,0002	0,0013	0,033

A04 Manufacturer's mark

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

QM-System: Certification as per ISO 9001

B. MUELLER
Test House Manager

Inspector's stamp

Date 23.03.10

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

PP 1

DILLINGER HÜTTE

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

A10 Advice of dispatch No./ Date of dispatch: 355536-23.03.10

A08/ Manufacturer's order/ A03 Certificate No.: 353891-001 Sheet: 11/...

A05 Established Inspecting body: DH

A06 Purchaser: EDMONTON STEEL,EDMON A07.1 No. ED10547-J1010-ER

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

B01 Product: HOT ROLLED PLATES

B02/ Steel design. SA516-70 SA20-S5

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

C94 Heat analysis Carbon equivalent / Alloying restrictions

B07.2 Heat										
330006	FO-02=	0,40	FO-51=	0,001	FO-55=	0,31	FO-78=	0,25	FO-91=	7,9
344392	FO-02=	0,39	FO-51=	0,000	FO-55=	0,11	FO-78=	0,05	FO-91=	6,7
344393	FO-02=	0,38	FO-51=	0,000	FO-55=	0,09	FO-78=	0,04	FO-91=	6,8
344394	FO-02=	0,38	FO-51=	0,000	FO-55=	0,10	FO-78=	0,04	FO-91=	6,7
344396	FO-02=	0,38	FO-51=	0,000	FO-55=	0,10	FO-78=	0,04	FO-91=	6,9
344404	FO-02=	0,39	FO-51=	0,000	FO-55=	0,09	FO-78=	0,04	FO-91=	6,5

C95 Ladle treatment

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

C95 Further information about ladle treatment

ITEM NO.: 01-05,08
CALCIUM TREATED

C70-C99 Chemical composition % - Product analysis

B07.2 Heat	B07.1 Test No.	C01	C	SI	MN	P	S	N	CU	MO	NI	CR	V	NB	SN	TI
330006	21558	K1	0,143	0,372	1,17	0,009	0,0008	0,0056	0,022	0,022	0,035	0,222	0,001	0,000	0,000	0,002
344392	72567	K1	0,178	0,371	1,16	0,009	0,0008	0,0066	0,022	0,018	0,037	0,034	0,000	0,000	0,001	0,002
344392	72568	K1	0,175	0,369	1,16	0,008	0,0009	0,0067	0,023	0,014	0,036	0,030	0,000	0,000	0,000	0,002
344392	72570	K1	0,176	0,376	1,17	0,008	0,0010	0,0067	0,023	0,015	0,038	0,030	0,000	0,001	0,001	0,002
344393	71997	K1	0,171	0,357	1,16	0,008	0,0006	0,0059	0,023	0,009	0,030	0,028	0,000	0,000	0,001	0,002
344393	72249	K1	0,174	0,354	1,15	0,008	0,0007	0,0063	0,023	0,011	0,030	0,029	0,000	0,000	0,001	0,002
344393	72250	K1	0,179	0,359	1,16	0,008	0,0007	0,0070	0,023	0,012	0,032	0,032	0,000	0,000	0,000	0,002
344394	71803	K1	0,176	0,364	1,16	0,007	0,0009	0,0057	0,021	0,014	0,030	0,030	0,000	0,000	0,001	0,002
344394	71804	K1	0,175	0,368	1,16	0,008	0,0005	0,0057	0,021	0,015	0,031	0,029	0,000	0,001	0,001	0,002

A04 D H Manufacturer's mark

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

QM-System: Certification as per ISO 9001

B. MUELLER
Test House Manager

AHB Inspector's stamp

Date 23.03.10

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

PP 1

DILLINGER HÜTTE

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

A10 Advice of dispatch No./ Date of dispatch: 355536-23.03.10

A08/ Manufacturer's order/ A03 Certificate No.: 353891-001 Sheet: 12/...

A05 Established inspecting body: DH

A06 Purchaser: EDMONTON STEEL, EDMON A07.1 No.: ED10547-J1010-ER

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

B01 Product: HOT ROLLED PLATES

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

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

C70-C99 Chemical composition % - Product analysis

B07.2 Heat	B07.1 Test No.	C01	C	SI	MN	P	S	N	CU	MO	NI	CR	V	NB	SN	TI
344394	71993	K1	0,176	0,366	1,16	0,007	0,0007	0,0059	0,023	0,011	0,029	0,028	0,000	0,001	0,001	0,002
344396	71463	K1	0,172	0,373	1,15	0,008	0,0009	0,0065	0,023	0,008	0,036	0,030	0,000	0,000	0,000	0,003
344396	71465	K1	0,171	0,381	1,16	0,008	0,0009	0,0063	0,023	0,010	0,034	0,030	0,000	0,000	0,000	0,003
344396	71801	K1	0,174	0,362	1,16	0,007	0,0010	0,0061	0,020	0,014	0,030	0,029	0,000	0,000	0,001	0,002
344404	46011	K1	0,177	0,358	1,16	0,009	0,0008	0,0055	0,020	0,007	0,026	0,030	0,000	0,000	0,000	0,002
344404	75996	K1	0,179	0,356	1,16	0,009	0,0006	0,0058	0,019	0,007	0,026	0,029	0,000	0,000	0,000	0,002

B07.2 Heat	B07.1 Test No.	C01	B	CA	AL-T
330006	21558	K1	0,0002	0,0016	0,036
344392	72567	K1	0,0001	0,0017	0,033
344392	72568	K1	0,0001	0,0017	0,036
344392	72570	K1	0,0001	0,0018	0,035
344393	71997	K1	0,0001	0,0017	0,034
344393	72249	K1	0,0001	0,0017	0,034
344393	72250	K1	0,0000	0,0014	0,033
344394	71803	K1	0,0001	0,0016	0,035
344394	71804	K1	0,0001	0,0016	0,035
344394	71993	K1	0,0001	0,0015	0,035
344396	71463	K1	0,0002	0,0016	0,035
344396	71465	K1	0,0002	0,0017	0,035
344396	71801	K1	0,0000	0,0015	0,035
344404	46011	K1	0,0002	0,0010	0,034
344404	75996	K1	0,0002	0,0013	0,034

A04 D H Manufacturer's mark

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

QM-System: Certification as per ISO 9001

B. MUELLER
Test House Manager

A H B Inspector's stamp

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

Date 23.03.10 PP 1

DILLINGER HÜTTE

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

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

A10 Advice of dispatch No./ Date of dispatch: 355536-23.03.10

A08/ Manufacturer's order/ A03 Certificate No.: 353891-001 Sheet: 13/...

A05 Established Inspecting body: DH

A06 Purchaser: EDMONTON STEEL,EDMON A07.1 No. ED10547-J1010-ER

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

B01 Product: HOT ROLLED PLATES

B02/ Steel design. SA516-70 SA20-S5

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

C94 Product analysis Carbon equivalent / Alloying restrictions

B07.2 Heat	B07.1 Test No.	C01						
330006	21558	K1	FO-02=	0,39	FO-51=	0,001	FO-55=	0,30
344392	72567	K1	FO-02=	0,39	FO-51=	0,000	FO-55=	0,11
344392	72568	K1	FO-02=	0,38	FO-51=	0,000	FO-55=	0,10
344392	72570	K1	FO-02=	0,38	FO-51=	0,001	FO-55=	0,11
344393	71997	K1	FO-02=	0,38	FO-51=	0,000	FO-55=	0,09
344393	72249	K1	FO-02=	0,38	FO-51=	0,000	FO-55=	0,09
344393	72250	K1	FO-02=	0,38	FO-51=	0,000	FO-55=	0,10
344394	71803	K1	FO-02=	0,38	FO-51=	0,000	FO-55=	0,10
344394	71804	K1	FO-02=	0,38	FO-51=	0,001	FO-55=	0,10
344394	71993	K1	FO-02=	0,38	FO-51=	0,001	FO-55=	0,09
344396	71463	K1	FO-02=	0,38	FO-51=	0,000	FO-55=	0,10
344396	71465	K1	FO-02=	0,38	FO-51=	0,000	FO-55=	0,10
344396	71801	K1	FO-02=	0,38	FO-51=	0,000	FO-55=	0,09
344404	46011	K1	FO-02=	0,38	FO-51=	0,000	FO-55=	0,08
344404	75996	K1	FO-02=	0,38	FO-51=	0,000	FO-55=	0,08

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

A04 Manufacturer's mark: D H

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

QM-System: Certification as per ISO 9001

B. MUELLER
Test House Manager

Inspector's stamp: AHB

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

Date 23.03.10 PP 1

DILLINGER HÜTTE

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

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

A10 Advice of dispatch No./ Date of dispatch: 355536-23.03.10

A08/ Manufacturer's order/ A03 Certificate No.: 353891-001 Sheet: 14

A05 Established inspecting body: DH

A06 Purchaser: EDMONTON STEEL,EDMON A07.1 No. ED10547-J1010-ER

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

B01 Product: HOT ROLLED PLATES

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

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

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

ITEM NO.: 01-05,08

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

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

MTR APPROVED EDMONTON EXCHANGER

A04 D H Manufacturer's mark

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

QM-System: Certification as per ISO 9001

B. MUELLER
Test House Manager

A H B Inspector's stamp

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

Date 23.03.10 PP 1

ORIGINAL

MILL TEST CERTIFICATE

15801

DONGKUK STEEL

Order No. : J10A400091
PO No. : LPP201009011
Commodity : STEEL PLATE
Specification : ASME SA516-70N: 2007 ED

Supplier : DONGKUK INTERNATIONAL,INC.
Customer : DAEWOO INTERNATIONAL AMERICA

Certificate No. : DP3-2-101129-057-001
Date of issue : Nov. 29, 2010

Dimension Unit inch: ", mm: Space	Product No	Quantity	Weight kg	Heat No	Position	Tensile Test GL	Tensile Test YP ksi	Tensile Test TS ksi	Tensile Test EL %	Impact Test Sub	Impact Test -50 °F V Notch ft*lbf	Division	C 2	Si 2	Mn 2	P 3	S 3	Cr 3	Ni 2	Cu 2	Mo 3	Nb 3	Ti 3	V 3	T.Al 3	S.Al 3	Ceq 3	Remarks
9.52*2451*12192 0.375"X96.5"X480" *Specimen No :DP02100303-a, DP02100303-c ** Normalized:1670°F,23min	A085441-01,02,03		2,235	J1011839	T	1	54	77	23	1	1:140 2:157 3:126 A:141	L	16	36	143	11	3	13	2	1	5	1	1	1	32		399	
	Sub Total (10)	3	6,705																									
9.52*2451*12192 0.375"X96.5"X480" *Specimen No :DP02108303-a, DP02108303-c ** Normalized:1670°F,23min	A085443-01,02,03		2,235	J1021969	T	1	54	78	22	1	1: 99 2:109 3: 62 A: 89	L	17	35	144	16	2	12	2	1	2	1	2	1	34		410	
	Sub Total (10)	3	6,705																									
9.52*2451*12192 0.375"X96.5"X480" *Specimen No :DP02103703-a, DP02103703-c ** Normalized:1670°F,23min	A085442-01,02,03		2,235	J1031953	T	1	54	77	24	1	1:145 2:198 3:154 A:165	L	16	38	144	12	2	14	1	1	3	1	2	1	27		403	
	Sub Total (10)	3	6,705																									

* Tensile Test Direction-Transverse
* Impact Test Direction-Longitudinal
* Ceq = C+Mn/6+(Ni+Cu)/15+(Cr+Mo+V)/5
* Supply Condition - Normalized
* Chemical Composition Unit(%) : 2-x100, 3-x1000, 4-x10000

We hereby certify that the material has been made by Basic oxygen process (Fully killed steel, Fine grain practice) and satisfactorily tested in accordance with above specification requirements called for by the above order. This mill test certificate has been issued in compliance with EN 10204 3.1.

When using the ordered product for other uses, rather than the above specification use, product damage and safety accidents may be caused.

* Specimen No. : a-Tension, c-Impact
* Position : T-Top, M-Middle, B-Bottom
* Division : L-Ladle Analysis, P-Product Analysis
* Sub(Sub Size, Real Value, mm) : Blank-Full Size, 1-7.5*10, 2-5.0*10
* GL(Gauge Length, mm) : 1-200, 2-100, 3-80, 4-70, 5-50, 6-5.65√A, 7-5d, 8-4d, 9-8d
* T(S).Al : Total(Soluble) Al

Surveyor to | Surveyor to | Surveyor to | Surveyor to | Chief of Quality Control Team

ORIGINAL

MILL TEST CERTIFICATE

DONGKUK STEEL

Order No. : J10A400091
PO No. : LPP201009011
Commodity : STEEL PLATE
Specification : ASME SA516-70N: 2007 ED

Supplier : DONGKUK INTERNATIONAL,INC.
Customer : DAEWOO INTERNATIONAL AMERICA

Certificate No. : DP3-2-101129-057-002
Date of issue : Nov. 29, 2010

Dimension Unit inch: ", mm: Space	Product No	Quantity	Weight kg	Heat No	Position	Tensile Test GL	Tensile Test YP ksi	Tensile Test TS ksi	Tensile Test EL %	Impact Test Sub	Impact Test -50 °F V Notch ft*lbf	Division	Chemical Composition C 2	Si 2	Mn 2	P 3	S 3	Cr 3	Ni 2	Cu 2	Mo 3	Nb 3	Ti 3	V 3	T.Al 3	S.Al 3	Ceq 3	Remarks
9.52*2451*12192 0.375"X96.5"X480" *Specimen No :DP02020804-a, DP02020804-c ** Normalized:1670°F,23min	A083298-01		2,235	JK566054	T	1	52	79	23	1	1:147 2:137 3:160 A:148	L	.16	37	143	20	4	30	1	3	2	1	1	2		34	408	
	Sub Total (10)	1	2,235																									
9.52*3061*12192 0.375"X120.5"X480" *Specimen No :DP02072808-a, DP02072808-c ** Normalized:1670°F,23min	A084297-01.02		2,790	JK566052	T	1	53	79	24	1	1: 96 2: 89 3: 94 A: 93	L	16	37	143	17	3	20	1	2	1	1	1	2		31	405	
	Sub Total (20)	2	5,580																									
9.52*3061*12192 0.375"X120.5"X480" *Specimen No :DP02071803-a, DP02071803-c ** Normalized:1670°F,23min	A084295-01.02		2,790	JK566053	T	1	53	78	22	1	1: 87 2:108 3:132 A:109	L	16	37	143	19	4	30	1	2	1	1	1	2		39	407	
	Sub Total (20)	2	5,580																									

* Tensile Test Direction-Transverse
* Impact Test Direction-Longitudinal
* Ceq = C+Mn/6+(Ni+Cu)/15+(Cr+Mo+V)/5
* Supply Condition - Normalized
* Chemical Composition Unit(%) : 2-x100, 3-x1000, 4-x10000

We hereby certify that the material has been made by Basic oxygen process (Fully killed steel. Fine grain practice) and satisfactorily tested in accordance with above specification requirements called for by the above order. This mill test certificate has been issued in compliance with EN 10204 3.1.

When using the ordered product for other uses, rather than the above specification use, product damage and safety accidents may be caused.

* Specimen No. : a-Tension, c-Impact
* Position : T-Top, M-Middle, B-Bottom
* Division : L-Ladle Analysis, P-Product Analysis
* Sub(Sub Size, Real Value, mm) : Blank-Full Size, 1-7.5*10, 2-5.0*10
* GL(Gauge Length, mm) : 1-200, 2-100, 3-80, 4-70, 5-50, 6-5.65√A, 7-5d, 8-4d, 9-8d
* T(S).Al : Total(Soluble) Al

Surveyor to | Surveyor to | Surveyor to | Surveyor to | Chief of Quality Control Team

ORIGINAL

MILL TEST CERTIFICATE

DONGKUK STEEL

Order No. : J10A400091
PO No. : LPP201009011
Commodity : STEEL PLATE
Specification : ASME SA516-70N: 2007 ED
Supplier : DONGKUK INTERNATIONAL,INC.
Customer : DAEWOO INTERNATIONAL AMERICA
Certificate No. : DP3-2-101129-057-003
Date of issue : Nov. 29, 2010

Dimension Unit inch: ", mm: Space	Product No	Quantity	Weight kg	Heat No	Position	Tensile Test GL	Tensile Test YP ksi	Tensile Test TS ksi	Tensile Test EL %	Impact Test Sub	Impact Test -50 °F V Notch ft*lbf	Division	C 2	Si 2	Mn 2	P 3	S 3	Cr 3	Ni 2	Cu 2	Mo 3	Nb 3	Ti 3	V 3	T.Al 3	S.Al 3	Ceq 3	Remarks
9.52*3061*12192 0.375"X120.5"X480" *Specimen No :DP02065507-a, DP02065507-c ** Normalized:1670°F,23min	A084296-02,03		2,790	JK566054	T	1	51	78	23	1	1:143 2:122 3:141 A:135	L	16	37	143	20	4	30	1	3	2	1	1	2		34	408	
	Sub Total (20)	2	5,580																									
12.70*2451*12192 0.5"X96.5"X480" *Specimen No :DP02204501-a, DP02204501-c ** Normalized:1670°F,28min	A087507-01,02,03		2,980	J1775888	T	1	50	74	24		1: 61 2: 61 3: 73 A: 72	L	16	36	143	16	8	20	1	1	1	1	1	3	34		404	
	Sub Total (30)	3	8,940																									
12.70*3061*12192 0.5"X120.5"X480" *Specimen No :DP02040403-a, DP02040403-c ** Normalized:1670°F,28min	A083738-01,02		3,721	JK566051	T	1	49	78	23		1:133 2:146 3:134 A:137	L	16	39	143	16	4	20	1	2	1	1	1	2		39	405	
	Sub Total (40)	2	7,442																									

* Tensile Test Direction-Transverse
* Impact Test Direction-Longitudinal
* Ceq = C+Mn/6+(Ni+Cu)/15+(Cr+Mo+V)/5
* Supply Condition - Normalized
* Chemical Composition Unit(%) : 2-x100, 3-x1000, 4-x10000

We hereby certify that the material has been made by Basic oxygen process (Fully killed steel, Fine grain practice) and satisfactorily tested in accordance with above specification requirements called for by the above order. This mill test certificate has been issued in compliance with EN 10204 3.1.

When using the ordered product for other uses, rather than the above specification use, product damage and safety accidents may be caused.

* Specimen No. : a-Tension, c-Impact
* Position : T-Top, M-Middle, B-Bottom
* Division : L-Ladle Analysis, P-Product Analysis
* Sub(Sub Size, Real Value, mm) : Blank-Full Size, 1-7.5*10, 2-5.0*10
* GL(Gauge Length, mm) : 1-200, 2-100, 3-80, 4-70, 5-50, 6-5.65√A, 7-5d, 8-4d, 9-8d
* T(S).Al : Total(Soluble) Al

Surveyor to | Surveyor to | Surveyor to | Surveyor to | Chief of Quality Control Team

ORIGINAL

MILL TEST CERTIFICATE

DONGKUK STEEL

Order No. : J10A400091
PO No. : LPP201009011
Commodity : STEEL PLATE
Specification : ASME SA516-70N; 2007 ED

Supplier : DONGKUK INTERNATIONAL,INC.
Customer : DAEWOO INTERNATIONAL AMERICA

Certificate No. : DP3-2-101129-057-004
Date of issue : Nov. 29, 2010

Dimension Unit inch: ", mm: Space	Product No	Quantity	Weight kg	Heat No	Position	Tensile Test GL	Tensile Test YP ksi	Tensile Test TS ksi	Tensile Test EL %	Impact Test Sub	Impact Test -50 °F V Notch ft*lbf	Division	C 2	Si 2	Mn 2	P 3	S 3	Cr 3	Ni 2	Cu 2	Mo 3	Nb 3	Ti 3	V 3	T.Al 3	S.Al 3	Ceq 3	Remarks
12.70*3061*12192 0.5"X120.5"X480" *Specimen No :DP02072807-a, DP02072807-c ** Normalized:1670°F,28min	A084290-01,02		3,721	JK566052	T	1	52	77	24		1: 77 2:120 3: 75 A: 90	L	16	37	143	17	3	20	1	2	1	1	1	2		31	405	
	Sub Total (40)	2	7,442																									
12.70*3061*12192 0.5"X120.5"X480" *Specimen No :DP02065505-a, DP02065505-c ** Normalized:1670°F,28min	A084288-01,02		3,721	JK566054	T	1	52	78	23		1: 70 2: 81 3: 70 A: 73	L	16	37	143	20	4	30	1	3	2	1	1	2		34	408	
	Sub Total (40)	2	7,442																									
12.70*3061*12192 0.5"X120.5"X480" *Specimen No :DP02065506-a, DP02065506-c ** Normalized:1670°F,28min	A084289-01,02		3,721	JK566054	T	1	54	78	23		1:127 2:146 3:158 A:143	L	16	37	143	20	4	30	1	3	2	1	1	2		34	408	
	Sub Total (40)	2	7,442																									

* Tensile Test Direction-Transverse
* Impact Test Direction-Longitudinal
* Ceq = C+Mn/6+(Ni+Cu)/15+(Cr+Mo+V)/5
* Supply Condition - Normalized
* Chemical Composition Unit(%) : 2-x100, 3-x1000, 4-x10000

We hereby certify that the material has been made by Basic oxygen process (Fully killed steel, Fine grain practice) and satisfactorily tested in accordance with above specification requirements called for by the above order. This mill test certificate has been issued in compliance with EN 10204 3.1.

When using the ordered product for other uses, rather than the above specification use, product damage and safety accidents may be caused.

* Specimen No. : a-Tension, c-Impact
* Position : T-Top, M-Middle, B-Bottom
* Division : L-Ladle Analysis, P-Product Analysis
* Sub(Sub Size, Real Value, mm) : Blank-Full Size, 1-7.5*10, 2-5.0*10
* GL(Gauge Length, mm) : 1-200, 2-100, 3-80, 4-70, 5-50, 6-5.65√A, 7-5d, 8-4d, 9-8d
* T(S).Al : Total(Soluble) Al

Surveyor to

Surveyor to

Surveyor to

Surveyor to

Chief of Quality Control Team

ORIGINAL

MILL TEST CERTIFICATE

DONGKUK STEEL

Order No. : J10A400091
PO No. : LPP201009011
Commodity : STEEL PLATE
Specification : ASME SA516-70N: 2007 ED

Supplier : DONGKUK INTERNATIONAL,INC.
Customer : DAEWOO INTERNATIONAL AMERICA

Certificate No. : DP3-2-101129-057-005
Date of issue : Nov. 29, 2010

Dimension Unit inch: ", mm: Space	Product No	Quantity	Weight kg	Heat No	Position	Tensile Test GL	YP ksi	TS ksi	EL %	Impact Test Sub	-50 °F V Notch ft*lbf	Division	C 2	Si 2	Mn 2	P 3	S 3	Cr 3	Ni 2	Cu 2	Mo 3	Nb 3	Ti 3	V 3	T.Al 3	S.Al 3	Ceq 3	Remarks
15.88*3061*12192 0.625"X120.5"X480" *Specimen No :DP02069506-a, DP02069506-c ** Normalized:1670°F,32min	A084042-01		4,652	J2752178	T	1	49	74	24		1: 79 2: 75 3:106 A: 87	L	16	39	140	16	7	20	1	1	1	1	1	4	31		400	
	Sub Total (50)	1	4,652																									
15.88*3061*12192 0.625"X120.5"X480" *Specimen No :DP02067501-a, DP02067501-c ** Normalized:1670°F,32min	A084041-01		4,652	J2753135	T	1	47	73	24		1: 96 2: 61 3: 91 A: 83	L	15	37	143	17	11	20	1	1	1	1	1	3	31		394	
	Sub Total (50)	1	4,652																									
19.05*3061*12192 0.75"X120.5"X480" *Specimen No :DP02069504-a, DP02069504-c ** Normalized:1670°F,37min	A084024-01,02		5,580	J2752178	T	1	50	75	25		1: 92 2: 50 3: 80 A: 74	L	16	39	140	16	7	20	1	1	1	1	1	4	31		400	
	Sub Total (60)	2	11,160																									

* Tensile Test Direction-Transverse
* Impact Test Direction-Longitudinal
* Ceq = C+Mn/6+(Ni+Cu)/15+(Cr+Mo+V)/5
* Supply Condition - Normalized
* Chemical Composition Unit(%) : 2-x100, 3-x1000, 4-x10000

We hereby certify that the material has been made by Basic oxygen process (Fully killed steel, Fine grain practice) and satisfactorily tested in accordance with above specification requirements called for by the above order. This mill test certificate has been issued in compliance with EN 10204 3.1.

When using the ordered product for other uses, rather than the above specification use, product damage and safety accidents may be caused.

* Specimen No. : a-Tension, c-Impact
* Position : T-Top, M-Middle, B-Bottom
* Division : L-Ladle Analysis, P-Product Analysis
* Sub(Sub Size, Real Value, mm) : Blank-Full Size, 1-7.5*10, 2-5.0*10
* GL(Gauge Length, mm) : 1-200, 2-100, 3-80, 4-70, 5-50, 6-5.65√A, 7-5d, 8-4d, 9-8d
* T(S).Al : Total(Soluble) Al

Chief of Quality Control Team

Surveyor to | Surveyor to | Surveyor to | Surveyor to

Dangjin Works. 400 Hanjin-ri, Songak-myeon, Dangjin-gun, Chungcheongnam-do, 343-823, Korea

ORIGINAL

MILL TEST CERTIFICATE

DONGKUK STEEL

Order No. : J10A400091
PO No. : LPP201009011
Commodity : STEEL PLATE
Specification : ASME SA516-70N; 2007 ED
Supplier : DONGKUK INTERNATIONAL,INC.
Customer : DAEWOO INTERNATIONAL AMERICA
Certificate No. : DP3-2-101129-057-006
Date of issue : Nov. 29, 2010

Dimension Unit inch: ", mm: Space	Product No	Quantity	Weight kg	Heat No	Position	Tensile Test GL	Tensile Test YP ksi	Tensile Test TS ksi	Tensile Test EL %	Impact Test Sub	Impact Test -50 °F V Notch ft*lbf	Division	C 2	Si 2	Mn 2	P 3	S 3	Cr 3	Ni 2	Cu 2	Mo 3	Nb 3	Ti 3	V 3	T.Al 3	S.Al 3	Ceq 3	Remarks
19.05*3061*12192 0.75"X120.5"X480" *Specimen No :DP02071401-a, DP02071401-c ** Normalized:1670°F,37min	A084063-01.02		5,580	JK467025	T	1	54	78	25		1:123 2: 96 3: 94 A:104	L	16	38	144	17	4	20	1	2	1	1	1	2		35	407	
	Sub Total (60)	2	11,160																									
19.05*3061*12192 0.75"X120.5"X480" *Specimen No :DP02072805-a, DP02072805-c ** Normalized:1670°F,37min	A084062-01.02		5,580	JK566052	T	1	53	77	24		1:120 2:133 3:134 A:129	L	16	37	143	17	3	20	1	2	1	1	1	2		31	405	
	Sub Total (60)	2	11,160																									
19.05*3061*12192 0.75"X120.5"X480" *Specimen No :DP02065503-a, DP02065503-c ** Normalized:1670°F,37min	A084061-01.02		5,580	JK566054	T	1	53	77	27		1:126 2:101 3:125 A:117	L	16	37	143	20	4	30	1	3	2	1	1	2		34	408	
	Sub Total (60)	2	11,160																									

* Tensile Test Direction-Transverse
* Impact Test Direction-Longitudinal
* Ceq = C+Mn/6+(Ni+Cu)/15+(Cr+Mo+V)/5
* Supply Condition - Normalized
* Chemical Composition Unit(%) : 2-x100, 3-x1000, 4-x10000

We hereby certify that the material has been made by Basic oxygen process (Fully killed steel, Fine grain practice) and satisfactorily tested in accordance with above specification requirements called for by the above order. This mill test certificate has been issued in compliance with EN 10204 3.1.

When using the ordered product for other uses, rather than the above specification use, product damage and safety accidents may be caused.

* Specimen No. : a-Tension, c-Impact
* Position : T-Top, M-Middle, B-Bottom
* Division : L-Ladle Analysis, P-Product Analysis
* Sub(Sub Size, Real Value, mm) : Blank-Full Size, 1-7.5*10, 2-5.0*10
* GL(Gauge Length, mm) : 1-200, 2-100, 3-80, 4-70, 5-50, 6-5.65√A, 7-5d, 8-4d, 9-8d
* T(S).Al : Total(Soluble) Al

Surveyor to | Surveyor to | Surveyor to | Surveyor to | Chief of Quality Control Team

ORIGINAL

MILL TEST CERTIFICATE

DONGKUK STEEL

Order No. : J10A400091
PO No. : LPP201009011
Commodity : STEEL PLATE
Specification : ASME SA516-70N; 2007 ED

Supplier : DONGKUK INTERNATIONAL,INC.
Customer : DAEWOO INTERNATIONAL AMERICA

Certificate No. : DP3-2-101129-057-007
Date of issue : Nov. 29, 2010

Dimension Unit inch: ", mm: Space	Product No	Quantity	Weight kg	Heat No	Position	Tensile Test GL	Tensile Test YP ksi	Tensile Test TS ksi	Tensile Test EL %	Impact Test Sub	Impact Test -50 °F V Notch ft*lbf	Division	C 2	Si 2	Mn 2	P 3	S 3	Cr 3	Ni 2	Cu 2	Mo 3	Nb 3	Ti 3	V 3	T.Al 3	S.Al 3	Ceq 3	Remarks
19.05*3061*12192 0.75"X120.5"X480" *Specimen No :DP02065504-a, DP02065504-c ** Normalized:1670°F,37min	A084064-01.02		5,580	JK566054	T	1	53	78	24		1:115 2:116 3: 78 A:103	L	16	37	143	20	4	30	1	3	2	1	1	2		34	408	
	Sub Total (60)	2	11,160																									
22.22*3061*12192 0.875"X120.5"X480" *Specimen No :DP02039801-a, DP02039801-c ** Normalized:1670°F,51min	A083492-01		6,512	J2751863	T	1	45	74	26		1: 59 2: 78 3:118 A: 84	L	15	38	144	20	6	20	1	1	1	1	1	4	32		396	
	Sub Total (70)	1	6,512																									
22.22*3061*12192 0.875"X120.5"X480" *Specimen No :DP02069503-a, DP02069503-c ** Normalized:1670°F,51min	A084021-01.02		6,512	J2752178	T	1	45	74	27		1:125 2:118 3:113 A:119	L	16	39	140	16	7	20	1	1	1	1	1	4	31		400	
	Sub Total (70)	2	13,024																									

* Tensile Test Direction-Transverse
* Impact Test Direction-Longitudinal
* Ceq = C+Mn/6+(Ni+Cu)/15+(Cr+Mo+V)/5
* Supply Condition - Normalized
* Chemical Composition Unit(%) : 2-x100, 3-x1000, 4-x10000

We hereby certify that the material has been made by Basic oxygen process (Fully killed steel, Fine grain practice) and satisfactorily tested in accordance with above specification requirements called for by the above order. This mill test certificate has been issued in compliance with EN 10204 3.1.

When using the ordered product for other uses, rather than the above specification use, product damage and safety accidents may be caused.

* Specimen No. : a-Tension, c-Impact
* Position : T-Top, M-Middle, B-Bottom
* Division : L-Ladle Analysis, P-Product Analysis
* Sub(Sub Size, Real Value, mm) : Blank-Full Size, 1-7.5*10, 2-5.0*10
* GL(Gauge Length, mm) : 1-200, 2-100, 3-80, 4-70, 5-50, 6-5.65√A, 7-5d, 8-4d, 9-8d
* T(S).Al : Total(Soluble) Al

Surveyor to

Surveyor to

Surveyor to

Surveyor to

Chief of Quality Control Team

Dangjin Works. 400 Hanjin-ri, Songak-myeon, Dangjin-gun, Chungcheongnam-do, 343-823, Korea

ORIGINAL

MILL TEST CERTIFICATE

DONGKUK STEEL

Order No. : J10A400091
PO No. : LPP201009011
Commodity : STEEL PLATE
Specification : ASME SA516-70N: 2007 ED

Supplier : DONGKUK INTERNATIONAL,INC.
Customer : DAEWOO INTERNATIONAL AMERICA

Certificate No. : DP3-2-101129-057-008
Date of issue : Nov. 29, 2010

Dimension Unit inch: *, mm: Space	Product No	Quantity	Weight kg	Heat No	Position	Tensile Test GL	YP ksi	TS ksi	EL %	Impact Test Sub	-50 °F V Notch ft*lbf	Division	C 2	Si 2	Mn 2	P 3	S 3	Cr 3	Ni 2	Cu 2	Mo 3	Nb 3	Ti 3	V 3	T.Al 3	S.Al 3	Ceq 3	Remarks
22.22*3061*12192 0.875"X120.5"X480" *Specimen No :DP02039303-a, DP02039303-c ** Normalized:1670°F,51min	A083493-01		6,512	J3202300	T	1	48	76	27		1: 87 2:110 3:108 A:102	L	16	38	143	17	6	20	1	1	1	1	1	3	33		404	
	Sub Total (70)	1	6,512																									
22.22*3061*12192 0.875"X120.5"X480" *Specimen No :DP02060901-a, DP02060901-c ** Normalized:1670°F,51min	A084056-01,02		6,512	JK566051	T	1	47	77	26		1:127 2:152 3:155 A:145	L	16	39	143	16	4	20	1	2	1	1	1	2		39	405	
	Sub Total (70)	2	13,024																									
22.22*3061*12192 0.875"X120.5"X480" *Specimen No :DP02072804-a, DP02072804-c ** Normalized:1670°F,51min	A084057-01,02		6,512	JK566052	T	1	51	76	27		1:151 2:151 3:146 A:149	L	16	37	143	17	3	20	1	2	1	1	1	2		31	405	
	Sub Total (70)	2	13,024																									

* Tensile Test Direction-Transverse
* Impact Test Direction-Longitudinal
* Ceq = C+Mn/6+(Ni+Cu)/15+(Cr+Mo+V)/5
* Supply Condition - Normalized
* Chemical Composition Unit(%) : 2-x100, 3-x1000, 4-x10000

We hereby certify that the material has been made by Basic oxygen process (Fully killed steel, Fine grain practice) and satisfactorily tested in accordance with above specification requirements called for by the above order. This mill test certificate has been issued in compliance with EN 10204 3.1.

When using the ordered product for other uses, rather than the above specification use, product damage and safety accidents may be caused.

* Specimen No. : a-Tension, c-Impact
* Position : T-Top, M-Middle, B-Bottom
* Division : L-Ladle Analysis, P-Product Analysis
* Sub(Sub Size, Real Value, mm) : Blank-Full Size, 1-7.5*10, 2-5.0*10
* GL(Gauge Length, mm) : 1-200, 2-100, 3-80, 4-70, 5-50, 6-5.65√A, 7-5d, 8-4d, 9-8d
* T(S).Al : Total(Soluble) Al

Surveyor to | Surveyor to | Surveyor to | Surveyor to | Chief of Quality Control Team

Dangjin Works, 400 Hanjin-ri, Songak-myeon, Dangjin-gun, Chungcheongnam-do, 343-823, Korea

ORIGINAL

MILL TEST CERTIFICATE

DONGKUK STEEL

Order No. : J10A400091
PO No. : LPP201009011
Commodity : STEEL PLATE
Specification : ASME SA516-70N; 2007 ED

Supplier : DONGKUK INTERNATIONAL,INC.
Customer : DAEWOO INTERNATIONAL AMERICA

Certificate No. : DP3-2-101129-057-009
Date of issue : Nov. 29, 2010

Dimension Unit inch: ", mm: Space	Product No	Quantity	Weight kg	Heat No	Position	Tensile Test GL	YP ksi	TS ksi	EL %	Impact Test Sub	-50 °F V Notch ft*lbf	Division	C 2	Si 2	Mn 2	P 3	S 3	Cr 3	Ni 2	Cu 2	Mo 3	Nb 3	Ti 3	V 3	T.Al 3	S.Al 3	Ceq 3	Remarks
22.22*3061*12192 0.875"X120.5"X480" *Specimen No :DP02071801-a, DP02071801-c ** Normalized:1670°F,51min	A084058-01,02		6,512	JK566053	T	1	48	77	26		1:135 2:149 3:138 A:141	L	16	37	143	19	4	30	1	2	1	1	1	2		39	407	
	Sub Total (70)	2	13,024																									
25.40*2451*12192 1"X96.5"X480" *Specimen No :DP02040202-a, DP02040202-c ** Normalized:1670°F,56min	A083466-01		5,958	J1774078	T	1	49	74	27		1: 58 2: 82 3: 57 A: 66	L	16	37	143	20	8	20	1	1	1	1	1	4	30		405	
	Sub Total (80)	1	5,958																									
25.40*3061*12192 1"X120.5"X480" *Specimen No :DP02072801-a, DP02072801-c ** Normalized:1670°F,56min	A084052-01		7,439	JK566052	T	1	45	75	27		1:151 2:129 3:151 A:144	L	16	37	143	17	3	20	1	2	1	1	1	2		31	405	
	Sub Total (90)	1	7,439																									

* Tensile Test Direction-Transverse
* Impact Test Direction-Longitudinal
* Ceq = C+Mn/6+(Ni+Cu)/15+(Cr+Mo+V)/5
* Supply Condition - Normalized
* Chemical Composition Unit(%) : 2-x100, 3-x1000, 4-x10000

We hereby certify that the material has been made by Basic oxygen process (Fully killed steel, Fine grain practice) and satisfactorily tested in accordance with above specification requirements called for by the above order. This mill test certificate has been issued in compliance with EN 10204 3.1.

When using the ordered product for other uses, rather than the above specification use, product damage and safety accidents may be caused.

* Specimen No..: a-Tension, c-Impact
* Position : T-Top, M-Middle, B-Bottom
* Division : L-Ladle Analysis, P-Product Analysis
* Sub(Sub Size, Real Value, mm) : Blank-Full Size, 1-7.5*10, 2-5.0*10
* GL(Gauge Length, mm) : 1-200, 2-100, 3-80, 4-70, 5-50, 6-5.65√A, 7-5d, 8-4d, 9-8d
* T(S).Al : Total(Soluble) Al

Chief of Quality Control Team

Surveyor to | Surveyor to | Surveyor to | Surveyor to

Dangjin Works, 400 Hanjin-ri, Songak-myeon, Dangjin-gun, Chungcheongnam-do, 343-823, Korea

ORIGINAL

MILL TEST CERTIFICATE

DONGKUK STEEL

Order No. : J10A400091
PO No. : LPP201009011
Commodity : STEEL PLATE
Specification : ASME SA516-70N; 2007 ED.

Supplier : DONGKUK INTERNATIONAL,INC.
Customer : DAEWOO INTERNATIONAL AMERICA

Certificate No. : DP3-2-101129-057-010
Date of issue : Nov. 29, 2010

Dimension Unit inch: ", mm: Space	Product No	Quantity	Weight kg	Heat No	Position	Tensile Test GL	YP ksi	TS ksi	EL %	Impact Test Sub	-50 °F V Notch ft*lbf	Division	Chemical Composition C 2	Si 2	Mn 2	P 3	S 3	Cr 3	Ni 2	Cu 2	Mo 3	Nb 3	Ti 3	V 3	T.Al 3	S.Al 3	Ceq 3	Remarks
31.75*2464*12192 1.25"X97"X480" *Specimen No :DP02050001-a, DP02050001-c ** Normalized:1670°F,64min	A083461-01		7,488	J1774052	T	1	48	74	30		1: 78 2: 79 3:109 A: 89	L	16	36	142	19	7	20	1	1	1	2	1	3	27		.403	
	Sub Total (100)	1	7,488																									
31.75*2464*12192 1.25"X97"X480" *Specimen No :DP02039301-a, DP02039301-c ** Normalized:1670°F,64min	A083462-01		7,488	J3202300	T	1	48	74	28		1: 16 2: 13 3: 30 A: 19	L	16	38	143	17	6	20	1	1	1	1	1	3	33		404	
	Sub Total (100)	1	7,488																									
31.75*2464*12192 1.25"X97"X480" *Specimen No :DP02102401-a, DP02102401-c ** Normalized:1670°F,64min	A085028-01		7,488	JFD8307	T	1	49	75	27		1:100 2:121 3:119 A:113	L	17	34	145	19	7	20	1	2	1	1	1	2		47	418	
	Sub Total (100)	1	7,488																									

* Tensile Test Direction-Transverse
* Impact Test Direction-Longitudinal
* Ceq = C+Mn/6+(Ni+Cu)/15+(Cr+Mo+V)/5
* Supply Condition - Normalized
* Chemical Composition Unit(%) : 2-x100, 3-x1000, 4-x10000

We hereby certify that the material has been made by Basic oxygen process (Fully killed steel, Fine grain practice) and satisfactorily tested in accordance with above specification requirements called for by the above order. This mill test certificate has been issued in compliance with EN 10204 3.1.

When using the ordered product for other uses, rather than the above specification use, product damage and safety accidents may be caused.

* Specimen No. : a-Tension, c-Impact
* Position : T-Top, M-Middle, B-Bottom
* Division : L-Ladle Analysis, P-Product Analysis
* Sub(Sub Size, Real Value, mm) : Blank-Full Size, 1-7.5*10, 2-5.0*10
* GL(Gauge Length, mm) : 1-200, 2-100, 3-80, 4-70, 5-50, 6-5.65√A, 7-5d, 8-4d, 9-8d
* T(S).Al : Total(Soluble) Al

Surveyor to | Surveyor to | Surveyor to | Surveyor to | Chief of Quality Control Team

ORIGINAL

MILL TEST CERTIFICATE

DONGKUK STEEL

Order No. : J10A400091
PO No. : LPP201009011
Commodity : STEEL PLATE
Specification : ASME SA516-70N; 2007 ED

Supplier : DONGKUK INTERNATIONAL,INC.
Customer : DAEWOO INTERNATIONAL AMERICA

Certificate No. : DP3-2-101129-057-011
Date of issue : Nov. 29, 2010

Dimension Unit inch: ", mm: Space	Product No	Quantity	Weight kg	Heat No	Position	Tensile Test GL	YP ksi	TS ksi	EL %	Impact Test Sub	-50°F V Notch ft*lbf	Division	C 2	Si 2	Mn 2	P 3	S 3	Cr 3	Ni 2	Cu 2	Mo 3	Nb 3	Ti 3	V 3	T.Al 3	S.Al 3	Ceq 3	Remarks
31.75*2464*12192 1.25"X97"X480" *Specimen No :DP02106802-a, DP02106802-c ** Normalized:1670°F,64min	A085029-01		7,488	JFD8311	T	1	48	74	28		1: 95 2:137 3:109 A:114	L	15	36	144	20	5	30	1	2	1	-1	1	2	.	60	399	
	Sub Total (100)	1	7,488																									
31.75*3073*12192 1.25"X121"X480" *Specimen No :DP02040203-a, DP02040203-c ** Normalized:1670°F,64min	A083489-01		9,340	J1774078	T	1	47	74	28		1: 90 2: 56 3: 59 A: 68	L	16	37	143	20	8	20	1	1	1	1	1	4	30		405	
	Sub Total (110)	1	9,340																									
31.75*3073*12192 1.25"X121"X480" *Specimen No :DP02047501-a, DP02047501-c ** Normalized:1670°F,64min	A083490-01		9,340	J2751834	T	1	47	73	27		1: 92 2: 62 3: 67 A: 73	L	16	39	144	15	9	20	1	1	1	1	1	3	28		406	
	Sub Total (110)	1	9,340																									

* Tensile Test Direction-Transverse
* Impact Test Direction-Longitudinal
* Ceq = C+Mn/6+(Ni+Cu)/15+(Cr+Mo+V)/5
* Supply Condition - Normalized
* Chemical Composition Unit(%) : 2-x100, 3-x1000, 4-x10000

We hereby certify that the material has been made by Basic oxygen process (Fully killed steel, Fine grain practice) and satisfactorily tested in accordance with above specification requirements called for by the above order. This mill test certificate has been issued in compliance with EN 10204 3.1.

When using the ordered product for other uses, rather than the above specification use, product damage and safety accidents may be caused.

* Specimen No. : a-Tension, c-Impact
* Position : T-Top, M-Middle, B-Bottom
* Division : L-Ladle Analysis, P-Product Analysis
* Sub(Sub Size, Real Value, mm) : Blank-Full Size, 1-7.5*10, 2-5.0*10
* GL(Gauge Length, mm) : 1-200, 2-100, 3-80, 4-70, 5-50, 6-5.65√A, 7-5d, 8-4d, 9-8d
* T(S).Al : Total(Soluble) Al

Surveyor to | Surveyor to | Surveyor to | Surveyor to | Chief of Quality Control Team

Dangjin Works. 400 Hanjin-ri, Songak-myeon, Dangjin-gun, Chungcheongnam-do, 343-823, Korea

ORIGINAL

MILL TEST CERTIFICATE

DONGKUK STEEL

Order No. : J10A400091
PO No. : LPP201009011
Commodity : STEEL PLATE
Specification : ASME SA516-70N; 2007 ED.

Supplier : DONGKUK INTERNATIONAL,INC.
Customer : DAEWOO INTERNATIONAL AMERICA

Certificate No. : DP3-2-101129-057-012
Date of issue : Nov. 29, 2010

Dimension Unit inch: ", mm: Space	Product No	Quantity	Weight kg	Heat No	Position	Tensile Test GL	YP ksi	TS ksi	EL %	Impact Test Sub	-50°F V Notch ft*lbf	Division	C 2	Si 2	Mn 2	P 3	S 3	Cr 3	Ni 2	Cu 2	Mo 3	Nb 3	Ti 3	V 3	T.Al 3	S.Al 3	Ceq 3	Remarks
31.75*3073*12192 1.25"X121"X480" *Specimen No :DP02069502-a, DP02069502-c ** Normalized:1670°F,64min	A084020-01		9,340	J2752178	T	1	44	73	27		1: 96 2: 99 3:115 A:103	L	16	39	140	16	7	20	1	1	1	1	1	4	31		400	
	Sub Total (110)	1	9,340																									
31.75*3073*12192 1.25"X121"X480" *Specimen No :DP02021603-a, DP02021603-c ** Normalized:1670°F,64min	A082939-01		9,340	JK467027	T	1	49	75	27		1:100 2: 94 3:103 A: 99	L	16	37	143	16	5	20	1	2	1	2	2	2		42	405	
	Sub Total (110)	1	9,340																									
31.75*3073*12192 1.25"X121"X480" *Specimen No :DP02067201-a, DP02067201-c ** Normalized:1670°F,64min	A084050-01		9,340	JK467027	T	1	49	75	27		1: 82 2: 64 3: 83 A: 76	L	16	37	143	16	5	20	1	2	1	2	2	2		42	405	
	Sub Total (110)	1	9,340																									
<Grand Total>		60	298,071																									

MTR APPROVED
EDMONTON EXCHANGE

* Tensile Test Direction-Transverse
* Impact Test Direction-Longitudinal
* Ceq = C+Mn/6+(Ni+Cu)/15+(Cr+Mo+V)/5
* Supply Condition - Normalized
* Chemical Composition Unit(%) : 2-x100, 3-x1000, 4-x10000

We hereby certify that the material has been made by Basic oxygen process (Fully killed steel, Fine grain practice) and satisfactorily tested in accordance with above specification requirements called for by the above order. This mill test certificate has been issued in compliance with EN 10204 3.1.

When using the ordered product for other uses, rather than the above specification use, product damage and safety accidents may be caused.

* Specimen No. : a-Tension, c-Impact
* Position : T-Top, M-Middle, B-Bottom
* Division : L-Ladle Analysis, P-Product Analysis
* Sub(Sub Size, Real Value, mm) : Blank-Full Size, 1-7.5*10, 2-5.0*10
* GL(Gauge Length, mm) : 1-200, 2-100, 3-80, 4-70, 5-50, 6-5.65√A, 7-5d, 8-4d, 9-6d
* T(S).Al : Total(Soluble) Al

Surveyor to | Surveyor to | Surveyor to | Surveyor to | Chief of Quality Control Team

Dangjin Works. 400 Hanjin-ri, Songak-myeon, Dangjin-gun, Chungcheongnam-do, 343-823, Korea

DILLINGER HÜTTE

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

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

A10 Advice of dispatch No./ Date of dispatch: 372664-05.11.10

A08/ Manufacturer's order/ A03 Certificate No.: 359527-001 Sheet: 1/...

A05 Established Inspecting body: DH

A06 Purchaser: EDMONTON STEEL,EDMON A07.1 No. ED10553-J1010-ER

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

B01 Product: HOT ROLLED PLATES

B02/ Steel design. SA516-70 SA20-S5

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

15903

B01-B99 Description of the product

B14 Item No.	B08 Number of pieces	B09 Thickness	B10 Width	B11 Length	B12 Theoretical mass KG	B04 Product delivery condition	B07.2 Heat No.	B07.1 Rolled plate No./ Test No.	A09 Purchaser article number
			INCH						
01	1	0,6250 x	120,50000 x	480,00000	4650	N	351660	34359-01	
01	1	0,6250 x	120,50000 x	480,00000	4650	N	351660	34359-02	
01	1	0,6250 x	120,50000 x	480,00000	4650	N	351660	34359-03	
01	1	0,6250 x	120,50000 x	480,00000	4650	N	351660	34482-01	
01	1	0,6250 x	120,50000 x	480,00000	4650	N	351660	34482-02	
01	1	0,6250 x	120,50000 x	480,00000	4650	N	351660	34532-01	
01	1	0,6250 x	120,50000 x	480,00000	4650	N	351660	34532-02	
01	1	0,6250 x	120,50000 x	480,00000	4650	N	351660	34532-03	
01	1	0,6250 x	120,50000 x	480,00000	4650	N	351660	34572-01	
01	1	0,6250 x	120,50000 x	480,00000	4650	N	351660	34572-02	
01	1	0,6250 x	120,50000 x	480,00000	4650	N	351660	34572-03	
01	1	0,6250 x	120,50000 x	480,00000	4650	N	351660	34692-01	
01	1	0,6250 x	120,50000 x	480,00000	4650	N	351660	34692-02	
01	1	0,6250 x	120,50000 x	480,00000	4650	N	351660	34692-03	
01	1	0,6250 x	120,50000 x	480,00000	4650	N	351661	34107-01	
01	1	0,6250 x	120,50000 x	480,00000	4650	N	351661	34107-02	
01	1	0,6250 x	120,50000 x	480,00000	4650	N	351661	34107-03	
01	1	0,6250 x	120,50000 x	480,00000	4650	N	351661	34287-01	
01	1	0,6250 x	120,50000 x	480,00000	4650	N	351661	34287-02	
01	1	0,6250 x	120,50000 x	480,00000	4650	N	351661	34287-03	
01	1	0,6250 x	120,50000 x	480,00000	4650	N	351661	34331-01	
01	1	0,6250 x	120,50000 x	480,00000	4650	N	351661	34331-02	
01	1	0,6250 x	120,50000 x	480,00000	4650	N	351661	34331-03	

A04 DH Manufacturer's mark

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

QM-System: Certification as per ISO 9001

B. BALDAUF
Test House Manager

ADB Inspector's stamp

Date 05.11.10 PP 1

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

DILLINGER HÜTTE

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

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

A10 Advice of dispatch No./ Date of dispatch: 372664-05.11.10

A08/ Manufacturer's order/ A03 Certificate No.: 359527-001 Sheet: 2/...

A05 Established Inspecting body: DH

A06 Purchaser: EDMONTON STEEL,EDMON A07.1 No. ED10553-J1010-ER

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

B01 Product: HOT ROLLED PLATES

B02/ Steel design. SA516-70 SA20-S5

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

B01-B99 Description of the product

B14 Item No.	B08 Number of pieces	B09 Thickness	B10 Width INCH	B11 Length	B12 Theoretical mass KG	B04 Product delivery condition	B07.2 Heat No.	B07.1 Rolled plate No./ Test No.	A09 Purchaser article number
**	23				106950				
02	1	0,7500 x	120,50000 x	480,00000	5580	N	351660	34360-01	
02	1	0,7500 x	120,50000 x	480,00000	5580	N	351660	34360-02	
02	1	0,7500 x	120,50000 x	480,00000	5580	N	351660	34360-03	
02	1	0,7500 x	120,50000 x	480,00000	5580	N	351660	34479-01	
02	1	0,7500 x	120,50000 x	480,00000	5580	N	351660	34479-02	
02	1	0,7500 x	120,50000 x	480,00000	5580	N	351660	34479-03	
02	1	0,7500 x	120,50000 x	480,00000	5580	N	351660	34507-01	
02	1	0,7500 x	120,50000 x	480,00000	5580	N	351660	34507-02	
02	1	0,7500 x	120,50000 x	480,00000	5580	N	351660	34507-03	
02	1	0,7500 x	120,50000 x	480,00000	5580	N	351660	34541-01	
02	1	0,7500 x	120,50000 x	480,00000	5580	N	351660	34541-02	
02	1	0,7500 x	120,50000 x	480,00000	5580	N	351660	34541-03	
02	1	0,7500 x	120,50000 x	480,00000	5580	N	351660	34646-01	
02	1	0,7500 x	120,50000 x	480,00000	5580	N	351660	34646-02	
02	1	0,7500 x	120,50000 x	480,00000	5580	N	351660	34646-03	
02	1	0,7500 x	120,50000 x	480,00000	5580	N	351660	34695-01	
02	1	0,7500 x	120,50000 x	480,00000	5580	N	351660	34695-02	
02	1	0,7500 x	120,50000 x	480,00000	5580	N	351660	34695-03	
02	1	0,7500 x	120,50000 x	480,00000	5580	N	351661	34129-01	
02	1	0,7500 x	120,50000 x	480,00000	5580	N	351661	34129-02	
02	1	0,7500 x	120,50000 x	480,00000	5580	N	351661	34129-03	
02	1	0,7500 x	120,50000 x	480,00000	5580	N	351661	34269-01	

A04 Manufacturer's mark: D H

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

QM-System: Certification as per ISO 9001

B. BALDAUF
Test House Manager

Inspector's stamp: A H B

Date 05.11.10

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

PP 1

DILLINGER HÜTTE

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

A10 Advice of dispatch No./ Date of dispatch: 372664-05.11.10

A08/ Manufacturer's order/ A03 Certificate No.: 359527-001

Sheet: 3/...

A05 Established inspecting body: DH

A06 Purchaser: EDMONTON STEEL, EDMON — A07.1 No. ED10553-J1010-ER

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

B01 Product: HOT ROLLED PLATES

B02/ Steel design. SA516-70 SA20-S5

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

B01-B99 Description of the product

B14 Item No.	B08 Number of pieces	B09 Thickness	B10 Width	B11 Length	B12 Theoretical mass KG	B04 Product delivery condition	B07.2 Heat No.	B07.1 Rolled plate No./ Test No.	A09 Purchaser article number
		INCH							
02	1	0,7500 x	120,50000 x	480,00000	5580	N	351661	34269-02	
02	1	0,7500 x	120,50000 x	480,00000	5580	N	351661	34269-03	
02	1	0,7500 x	120,50000 x	480,00000	5580	N	351661	34342-01	
02	1	0,7500 x	120,50000 x	480,00000	5580	N	351661	34342-02	
02	1	0,7500 x	120,50000 x	480,00000	5580	N	351661	34342-03	
**	27				150660				
03	1	0,8750 x	120,50000 x	480,00000	6510	N	351658	35146-01	
03	1	0,8750 x	120,50000 x	480,00000	6510	N	351658	35146-02	
03	1	0,8750 x	120,50000 x	480,00000	6510	N	351658	35147-01	
03	1	0,8750 x	120,50000 x	480,00000	6510	N	351658	35147-02	
03	1	0,8750 x	120,50000 x	480,00000	6510	N	351658	35193-01	
03	1	0,8750 x	120,50000 x	480,00000	6510	N	351658	35193-02	
03	1	0,8750 x	120,50000 x	480,00000	6510	N	351658	35239-01	
03	1	0,8750 x	120,50000 x	480,00000	6510	N	351658	35239-02	
03	1	0,8750 x	120,50000 x	480,00000	6510	N	351658	35350-01	
03	1	0,8750 x	120,50000 x	480,00000	6510	N	351658	35350-02	
03	1	0,8750 x	120,50000 x	480,00000	6510	N	351659	34829-01	
03	1	0,8750 x	120,50000 x	480,00000	6510	N	351659	34829-02	
03	1	0,8750 x	120,50000 x	480,00000	6510	N	351659	34831-01	
03	1	0,8750 x	120,50000 x	480,00000	6510	N	351659	34831-02	
03	1	0,8750 x	120,50000 x	480,00000	6510	N	351659	34851-01	
03	1	0,8750 x	120,50000 x	480,00000	6510	N	351659	34851-02	
03	1	0,8750 x	120,50000 x	480,00000	6510	N	351659	34997-01	

A04 Manufacturer's mark: D H

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

QM-System: Certification as per ISO 9001

B. BALDAUF
Test House Manager

A H B
Inspector's stamp

Date 05.11.10 PP 1

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

DILLINGER HÜTTE

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

A10 Advice of dispatch No./ Date of dispatch: 372664-05.11.10

A08/ Manufacturer's order/ A03 Certificate No.: 359527-001

Sheet: 4/...

A05 Established Inspecting body: DH

A06 Purchaser: EDMONTON STEEL,EDMON A07.1 No. ED10553-J1010-ER

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

B01 Product: HOT ROLLED PLATES

B02/ Steel design. SA516-70 SA20-S5

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

B01-B99 Description of the product

B14 Item No.	B08 Number of pieces	B09 Thickness	B10 Width	B11 Length	B12 Theoretical mass KG	B04 Product delivery condition	B07.2 Heat No.	B07.1 Rolled plate No./ Test No.	A09 Purchaser article number
			INCH						
03	1	0,8750 x	120,50000 x	480,00000	6510	N	351659	34997-02	
03	1	0,8750 x	120,50000 x	480,00000	6510	N	351659	35145-01	
03	1	0,8750 x	120,50000 x	480,00000	6510	N	351659	35145-02	
**	20				130200				
04	1	1,0000 x	96,50000 x	480,00000	5959	N	351658	35403-01	
04	1	1,0000 x	96,50000 x	480,00000	5959	N	351658	35450-01	
04	1	1,0000 x	96,50000 x	480,00000	5959	N	351658	35450-02	
04	1	1,0000 x	96,50000 x	480,00000	5959	N	351658	35453-01	
04	1	1,0000 x	96,50000 x	480,00000	5959	N	351658	35453-02	
04	1	1,0000 x	96,50000 x	480,00000	5959	N	351658	35458-01	
04	1	1,0000 x	96,50000 x	480,00000	5959	N	351658	35458-02	
04	1	1,0000 x	96,50000 x	480,00000	5959	N	351658	35463-01	
04	1	1,0000 x	96,50000 x	480,00000	5959	N	351658	35463-02	
**	9				53631				
05	1	1,0000 x	120,50000 x	480,00000	7440	N	351661	33863-01	
05	1	1,0000 x	120,50000 x	480,00000	7440	N	351661	33863-02	
05	1	1,0000 x	120,50000 x	480,00000	7440	N	351661	34106-01	
05	1	1,0000 x	120,50000 x	480,00000	7440	N	351664	32679-01	
05	1	1,0000 x	120,50000 x	480,00000	7440	N	351664	32679-02	
05	1	1,0000 x	120,50000 x	480,00000	7440	N	351664	32686-01	
05	1	1,0000 x	120,50000 x	480,00000	7440	N	351664	32686-02	
05	1	1,0000 x	120,50000 x	480,00000	7440	N	351664	32697-01	
05	1	1,0000 x	120,50000 x	480,00000	7440	N	351664	32700-01	

A04 Manufacturer's mark: D H

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

QM-System: Certification as per ISO 9001

B. BALDAUF
Test House Manager

A H B
Inspector's stamp

Date 05.11.10

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

PP 1

DILLINGER HÜTTE

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

A10 Advice of dispatch No./ Date of dispatch: 372664-05.11.10

A08/ Manufacturer's order/ A03 Certificate No.: 359527-001

Sheet: 5/...

A05 Established Inspecting body: DH

A06 Purchaser: EDMONTON STEEL,EDMON A07.1 No. ED10553-J1010-ER

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

B01 Product: HOT ROLLED PLATES

B02/ Steel design. SA516-70 SA20-S5

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

B01-B99 Description of the product

B14 Item No.	B08 Number of pieces	B09 Thickness	B10 Width	B11 Length	B12 Theoretical mass KG	B04 Product delivery condition	B07.2 Heat No.	B07.1 Rolled plate No./ Test No.	A09 Purchaser article number
			INCH						
05	1	1,0000 x	120,50000 x	480,00000	7440	N	351664	32700-02	
05	1	1,0000 x	120,50000 x	480,00000	7440	N	351664	32701-01	
05	1	1,0000 x	120,50000 x	480,00000	7440	N	351664	32701-02	
05	1	1,0000 x	120,50000 x	480,00000	7440	N	351664	32814-01	
05	1	1,0000 x	120,50000 x	480,00000	7440	N	351664	32814-02	
**	14				104160				
06	1	1,0000 x	178,00000 x	480,00000	10991	N	351663	33457-01	
07	1	1,1250 x	97,00000 x	480,00000	6738	N	351659	34697-01	
07	1	1,1250 x	97,00000 x	480,00000	6738	N	351659	34764-01	
07	1	1,1250 x	97,00000 x	480,00000	6738	N	351659	34764-02	
07	1	1,1250 x	97,00000 x	480,00000	6738	N	351659	34779-01	
07	1	1,1250 x	97,00000 x	480,00000	6738	N	351659	34780-01	
07	1	1,1250 x	97,00000 x	480,00000	6738	N	351659	34827-01	
07	1	1,1250 x	97,00000 x	480,00000	6738	N	351659	34827-02	
**	7				47166				
08	1	1,2500 x	97,00000 x	480,00000	7487	N	351664	32678-01	
09	1	1,2500 x	121,00000 x	480,00000	9339	N	351663	33459-01	
09	1	1,2500 x	121,00000 x	480,00000	9339	N	351663	33460-01	
09	1	1,2500 x	121,00000 x	480,00000	9339	N	351663	33690-01	
09	1	1,2500 x	121,00000 x	480,00000	9339	N	351663	33768-01	
09	1	1,2500 x	121,00000 x	480,00000	9339	N	351663	33771-01	
**	5				46695				
***	107				657940				

A04 Manufacturer's mark: D H

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

QM-System: Certification as per ISO 9001

B. BALDAUF
Test House Manager

Inspector's stamp: A H B

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

Date 05.11.10 PP 1

DILLINGER HÜTTE

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

A10 Advice of dispatch No./ Date of dispatch: 372664-05.11.10

A08/ Manufacturer's order/ A03 Certificate No.: 359527-001 Sheet: 6/...

A05 Established Inspecting body: DH

A06 Purchaser: EDMONTON STEEL,EDMON A07.1 No. ED10553-J1010-ER

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

B01 Product: HOT ROLLED PLATES

B02/ Steel design. SA516-70 SA20-S5

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

B04 Product delivery condition

ITEM NO.: 01-09
N: HT: 1670 GR.F +36 -27 GR.F
SOAKING TIME TO ATTAIN THE TARGET TEMPERATURE OVER THE WHOLE SECTION: 1-1,75 MIN/MM (25-45 MIN/INCH)
COOLING IN STILL AIR

B06 Marking of the product

ITEM NO.: 01-09
STEEL DESIGNATION SA516 70 MTLTV SA516 60 MTLTV
HEAT NO. / TRADEMARK / ROLLED PLATE NO.-TEST NO. / INSPECTOR'S STAMP

B07-B99 Further information about the product

ITEM NO.: 01-09
THICKNESS REDUCTION RATIO >= 3,0 IS FULFILLED (CF. A/SA20 PAR. 5.3)

C10-C29 Tensile test

B14 Item No.	B07.2 Heat No.	B07.1 Rol.plate/ Test No.	B05 Reference (heat) treatment	C01	C02/ C01	C03 Temp. GR.F	C10	C11 KSI RP02	C12 RM	C13	C14-C15 A % L0=8IN	C14-C15 A % L0=2IN
01	351660	34359		K1	Q	RT		50,3	75,0		26	
01	351660	34482		K1	Q	RT		50,5	75,4		28	
01	351660	34532		K1	Q	RT		50,0	75,1		27	
01	351660	34572		K1	Q	RT		50,8	75,4		27	
01	351660	34692		K1	Q	RT		51,8	75,7		27	
01	351661	34107		K1	Q	RT		49,7	74,5		26	
01	351661	34287		K1	Q	RT		49,4	74,7		26	
01	351661	34331		K1	Q	RT		49,7	74,2		26	
02	351660	34360		K1	Q	RT		50,2	74,8		27	

A04 D H Manufacturer's mark

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

QM-System: Certification as per ISO 9001

B. BALDAUF
Test House Manager

A H B Inspector's stamp

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

Date 05.11.10 PP 1

DILLINGER HÜTTE

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

A10 Advice of dispatch No./ Date of dispatch: 372664-05.11.10

A08/ Manufacturer's order/ A03 Certificate No.: 359527-001 Sheet: 7/...

A05 Established inspecting body: DH

A06 Purchaser: EDMONTON STEEL,EDMON A07.1 No. ED10553-J1010-ER

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

B01 Product: HOT ROLLED PLATES

B02/ Steel design. SA516-70 SA20-S5

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

C10-C29 Tensile test

B14 Item No.	B07.2 Heat No.	B07.1 Rol.plate/ Test No.	B05 Reference (heat) treatment	C01	C02/ C01	C03 Temp. GR.F	C10 C11 KSI RP02	C12 RM	C13	C14-C15 A % L0=8IN	C14-C15 A % L0=2IN
02	351660	34479		K1	Q	RT	49,9	75,4		27	
02	351660	34507		K1	Q	RT	50,6	75,4		27	
02	351660	34541		K1	Q	RT	50,9	75,4		27	
02	351660	34646		K1	Q	RT	50,0	75,4		27	
02	351660	34695		K1	Q	RT	50,3	75,3		28	
02	351661	34129		K1	Q	RT	50,0	74,5		27	
02	351661	34269		K1	Q	RT	49,7	75,3		29	
02	351661	34342		K1	Q	RT	49,6	75,1		26	
03	351658	35146		K1	Q	RT	48,0	74,2		27	
03	351658	35147		K1	Q	RT	49,2	74,7		28	
03	351658	35193		K1	Q	RT	48,1	74,5		28	
03	351658	35239		K1	Q	RT	49,2	74,5		29	
03	351658	35350		K1	Q	RT	48,3	74,2		26	
03	351659	34829		K1	Q	RT	49,0	75,0		29	
03	351659	34831		K1	Q	RT	49,3	74,7		27	
03	351659	34851		K1	Q	RT	49,0	74,5		29	
03	351659	34997		K1	Q	RT	49,0	74,4		27	
03	351659	35145		K1	Q	RT	48,7	74,4		27	
04	351658	35403		K1	Q	RT	50,0	74,1		29	
04	351658	35450		K1	Q	RT	49,0	74,4		27	
04	351658	35453		K1	Q	RT	49,4	74,0		28	
04	351658	35458		K1	Q	RT	50,3	75,0		29	
04	351658	35463		K1	Q	RT	50,5	75,1		27	

A04 D H Manufacturer's mark

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

QM-System: Certification as per ISO 9001

B. BALDAUF
Test House Manager

A H B Inspector's stamp

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

Date 05.11.10 PP 1

DILLINGER HÜTTE

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

A10 Advice of dispatch No./ Date of dispatch: 372664-05.11.10

A08/ Manufacturer's order/ A03 Certificate No.: 359527-001

Sheet: 8/...

A05 Established inspecting body: DH

A06 Purchaser: EDMONTON STEEL,EDMON — A07.1 No.: ED10553-J1010-ER

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

B01 Product: HOT ROLLED PLATES

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

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

C10-C29 Tensile test

B14 Item No.	B07.2 Heat No.	B07.1 Rol.plate/ Test No.	B05 Reference (heat) treatment	C01	C02/ C01	C03 Temp. GR.F	C10	C11 KSI RP02	C12 RM	C13	C14-C15 A % L0=8IN	C14-C15 A % L0=2IN
05	351661	33863		K1	Q	RT		50,5	74,5		27	
05	351661	34106		K1	Q	RT		49,9	74,2		28	
05	351664	32679		K1	Q	RT		47,9	72,8		28	
05	351664	32686		K1	Q	RT		48,3	72,8		28	
05	351664	32697		K1	Q	RT		48,6	72,8		28	
05	351664	32700		K1	Q	RT		48,4	73,2		28	
05	351664	32701		K1	Q	RT		48,3	73,5		28	
05	351664	32814		K1	Q	RT		47,9	73,5		29	
06	351663	33457		K1	Q	RT		48,1	73,7		27	
07	351659	34697		K1	Q	RT		49,4	73,8		30	
07	351659	34764		K1	Q	RT		48,7	73,8		27	
07	351659	34779		K1	Q	RT		48,6	73,7		28	
07	351659	34780		K1	Q	RT		47,6	73,7		29	
07	351659	34827		K1	Q	RT		48,1	74,0		31	
08	351664	32678		K1	QV	RT		47,7	74,0			38
09	351663	33459		K1	QV	RT		50,6	75,4			37
09	351663	33460		K1	QV	RT		52,1	75,5			36
09	351663	33690		K1	QV	RT		47,6	74,7			35
09	351663	33768		K1	QV	RT		49,3	75,3			35
09	351663	33771		K1	QV	RT		48,6	74,8			35

A04 D H Manufacturer's mark

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

QM-System: Certification as per ISO 9001

B. BALDAUF
Test House Manager

A H B Inspector's stamp

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

Date 05.11.10 PP 1

DILLINGER HÜTTE

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

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

A10 Advice of dispatch No./ Date of dispatch: 372664-05.11.10

A08/ Manufacturer's order/ A03 Certificate No.: 359527-001 Sheet: 9/...

A05 Established Inspecting body: DH

A06 Purchaser: EDMONTON STEEL,EDMON A07.1 No. ED10553-J1010-ER

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

B01 Product: HOT ROLLED PLATES

B02/ Steel design. SA516-70 SA20-S5

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

C30-C39 Hardness test

B14 Item. No.	B07.2 Heat No.	B07.1 Rol.plate/ Test No.	B05 Reference (heat) treatment	C01	C02/C01	C03 Temp. GR.F	C30 Method of test	C35	C31 Individual values			C32 Mean value
01	351660	34359		K1	O	RT	HBW 10/3000	HB	149	150	149	149
01	351660	34482		K1	O	RT	HBW 10/3000	HB	149	149	149	149
01	351660	34532		K1	O	RT	HBW 10/3000	HB	150	150	150	150
01	351660	34572		K1	O	RT	HBW 10/3000	HB	150	151	149	150
01	351660	34692		K1	O	RT	HBW 10/3000	HB	150	151	150	150
01	351661	34107		K1	O	RT	HBW 10/3000	HB	149	149	148	149
01	351661	34287		K1	O	RT	HBW 10/3000	HB	150	150	150	150
01	351661	34331		K1	O	RT	HBW 10/3000	HB	148	149	148	148
02	351660	34360		K1	O	RT	HBW 10/3000	HB	149	149	149	149
02	351660	34479		K1	O	RT	HBW 10/3000	HB	150	151	151	151
02	351660	34507		K1	O	RT	HBW 10/3000	HB	151	151	150	151
02	351660	34541		K1	O	RT	HBW 10/3000	HB	148	149	148	148
02	351660	34646		K1	O	RT	HBW 10/3000	HB	149	149	149	149
02	351660	34695		K1	O	RT	HBW 10/3000	HB	150	149	149	149
02	351661	34129		K1	O	RT	HBW 10/3000	HB	149	150	148	149
02	351661	34269		K1	O	RT	HBW 10/3000	HB	149	149	149	149
02	351661	34342		K1	O	RT	HBW 10/3000	HB	149	148	148	148
03	351658	35146		K1	O	RT	HBW 10/3000	HB	149	149	148	149
03	351658	35147		K1	O	RT	HBW 10/3000	HB	151	150	149	150
03	351658	35193		K1	O	RT	HBW 10/3000	HB	147	147	146	147
03	351658	35239		K1	O	RT	HBW 10/3000	HB	150	149	149	149
03	351658	35350		K1	O	RT	HBW 10/3000	HB	148	149	148	148
03	351659	34829		K1	O	RT	HBW 10/3000	HB	147	147	146	147
03	351659	34831		K1	O	RT	HBW 10/3000	HB	152	149	149	150

A04 D H Manufacturer's mark

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

QM-System: Certification as per ISO 9001

B. BALDAUF
Test House Manager

A H B Inspector's stamp

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

Date 05.11.10 PP 1

DILLINGER HÜTTE

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

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

A10 Advice of dispatch No./ Date of dispatch: 372664-05.11.10

A08/ Manufacturer's order/ A03 Certificate No.: 359527-001 Sheet: 10/...

A05 Established inspecting body: DH

A06 Purchaser: EDMONTON STEEL,EDMON A07.1 No. ED10553-J1010-ER

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

B01 Product: HOT ROLLED PLATES

B02/ Steel design. SA516-70 SA20-S5

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

C30-C39 Hardness test

B14 Item. No.	B07.2 Heat No.	B07.1 Rol.plate/ Test No.	B05 Reference (heat) treatment	C01	C02/C01	C03 Temp. GR.F	C30 Method of test	C35 C31 Individual values			C32 Mean value
03	351659	34851		K1	O	RT	HBW 10/3000	HB 148	147	148	148
03	351659	34997		K1	O	RT	HBW 10/3000	HB 146	146	146	146
03	351659	35145		K1	O	RT	HBW 10/3000	HB 147	148	146	147
04	351658	35403		K1	O	RT	HBW 10/3000	HB 149	149	146	148
04	351658	35450		K1	O	RT	HBW 10/3000	HB 147	148	146	147
04	351658	35453		K1	O	RT	HBW 10/3000	HB 147	146	145	146
04	351658	35458		K1	O	RT	HBW 10/3000	HB 149	150	149	149
04	351658	35463		K1	O	RT	HBW 10/3000	HB 151	151	151	151
05	351661	33863		K1	O	RT	HBW 10/3000	HB 148	148	148	148
05	351661	34106		K1	O	RT	HBW 10/3000	HB 148	148	148	148
05	351664	32679		K1	O	RT	HBW 10/3000	HB 145	145	145	145
05	351664	32686		K1	O	RT	HBW 10/3000	HB 145	144	145	145
05	351664	32697		K1	O	RT	HBW 10/3000	HB 147	146	146	146
05	351664	32700		K1	O	RT	HBW 10/3000	HB 145	146	145	145
05	351664	32701		K1	O	RT	HBW 10/3000	HB 146	146	145	146
05	351664	32814		K1	O	RT	HBW 10/3000	HB 145	148	148	147
06	351663	33457		K1	O	RT	HBW 10/3000	HB 146	146	145	146
07	351659	34697		K1	O	RT	HBW 10/3000	HB 145	146	145	145
07	351659	34764		K1	O	RT	HBW 10/3000	HB 146	146	147	146
07	351659	34779		K1	O	RT	HBW 10/3000	HB 146	146	146	146
07	351659	34780		K1	O	RT	HBW 10/3000	HB 145	145	144	145
07	351659	34827		K1	O	RT	HBW 10/3000	HB 145	145	145	145
08	351664	32678		K1	O	RT	HBW 10/3000	HB 146	145	145	145
09	351663	33459		K1	O	RT	HBW 10/3000	HB 150	150	154	151

A04 D H Manufacturer's mark

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

QM-System: Certification as per ISO 9001

B. BALDAUF
Test House Manager

A H B Inspector's stamp

Date 05.11.10

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

PP 1

DILLINGER HÜTTE

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

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

A10 Advice of dispatch No./ Date of dispatch: 372664-05.11.10

A08/ Manufacturer's order/ A03 Certificate No.: 359527-001 Sheet: 11/...

A05 Established inspecting body: DH

A06 Purchaser: EDMONTON STEEL,EDMON A07.1 No. ED10553-J1010-ER

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

B01 Product: HOT ROLLED PLATES

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

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

C30-C39 Hardness test

B14 Item No.	B07.2 Heat No.	B07.1 Rol.plate/ Test No.	B05 Reference (heat) treatment	C01	C02/C01	C03 Temp. GR.F	C30 Method of test	C35 C31 Individual values			C32 Mean value
09	351663	33460		K1	O	RT	HBW 10/3000	HB 150	150	149	150
09	351663	33690		K1	O	RT	HBW 10/3000	HB 150	148	147	148
09	351663	33768		K1	O	RT	HBW 10/3000	HB 148	149	149	149
09	351663	33771		K1	O	RT	HBW 10/3000	HB 148	149	148	148

C40-C49 Impact test

B14 Item No.	B07.2 Heat No.	B07.1 Rol.plate/ Test No.	B05 Reference (heat) treatment	C01	C02/ C01	C03 Temp. GR.F	C41 Width of test piece	C40 Type of test piece	C44 Testing method	C46 Energy	C45 C42 Individual values AV=FT.LBF			C43 Mean value
01	351660	34359		K1	LV	-51		CHP-V			AV 132	130	139	134
01	351660	34482		K1	LV	-51		CHP-V			AV 140	204	201	182
01	351660	34532		K1	LV	-51		CHP-V			AV 113	122	111	115
01	351660	34572		K1	LV	-51		CHP-V			AV 131	209	122	154
01	351660	34692		K1	LV	-51		CHP-V			AV 163	197	131	164
01	351661	34107		K1	LV	-51		CHP-V			AV 164	209	204	192
01	351661	34287		K1	LV	-51		CHP-V			AV 159	122	218	166
01	351661	34331		K1	LV	-51		CHP-V			AV 209	128	200	179
02	351660	34360		K1	LV	-51		CHP-V			AV 111	209	92	137
02	351660	34479		K1	LV	-51		CHP-V			AV 187	196	131	171
02	351660	34507		K1	LV	-51		CHP-V			AV 197	159	148	168
02	351660	34541		K1	LV	-51		CHP-V			AV 154	147	206	169
02	351660	34646		K1	LV	-51		CHP-V			AV 198	130	191	173
02	351660	34695		K1	LV	-51		CHP-V			AV 110	190	191	164
02	351661	34129		K1	LV	-51		CHP-V			AV 192	104	143	146
02	351661	34269		K1	LV	-51		CHP-V			AV 189	96	98	128
02	351661	34342		K1	LV	-51		CHP-V			AV 171	215	195	194

A04 Manufacturer's mark: D H

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

QM-System: Certification as per ISO 9001

B. BALDAUF
Test House Manager

A H B
Inspector's stamp

Date 05.11.10

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

PP 1

DILLINGER HÜTTE

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

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

A10 Advice of dispatch No./ Date of dispatch: 372664-05.11.10

A08/ Manufacturer's order/ A03 Certificate No.: 359527-001 Sheet: 12/...

A05 Established Inspecting body: DH

A06 Purchaser: EDMONTON STEEL,EDMON A07.1 No.: ED10553-J1010-ER

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

B01 Product: HOT ROLLED PLATES

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

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

C40-C49 Impact test

B14 Item No.	B07.2 Heat No.	B07.1 Rol.plate/ Test No.	B05 Reference (heat) treatment	C01	C02/ C01	C03 Temp. GR.F	C41 Width of test piece	C40 Type of test piece	C44 Testing method	C46 Energy	C45	C42 Individual values AV=FT.LBF			C43 Mean value
03	351658	35146		K1	LV	-51		CHP-V			AV	200	128	114	147
03	351658	35147		K1	LV	-51		CHP-V			AV	140	195	112	149
03	351658	35193		K1	LV	-51		CHP-V			AV	200	51	92	114
03	351658	35239		K1	LV	-51		CHP-V			AV	130	151	120	134
03	351658	35350		K1	LV	-51		CHP-V			AV	170	203	202	192
03	351659	34829		K1	LV	-51		CHP-V			AV	119	200	122	147
03	351659	34831		K1	LV	-51		CHP-V			AV	116	201	129	149
03	351659	34851		K1	LV	-51		CHP-V			AV	89	209	188	162
03	351659	34997		K1	LV	-51		CHP-V			AV	193	162	104	153
03	351659	35145		K1	LV	-51		CHP-V			AV	92	198	209	166
04	351658	35403		K1	LV	-51		CHP-V			AV	124	207	190	174
04	351658	35450		K1	LV	-51		CHP-V			AV	165	109	124	133
04	351658	35453		K1	LV	-51		CHP-V			AV	103	135	116	118
04	351658	35458		K1	LV	-51		CHP-V			AV	115	116	102	111
04	351658	35463		K1	LV	-51		CHP-V			AV	127	104	75	102
05	351661	33863		K1	LV	-51		CHP-V			AV	76	132	205	138
05	351661	34106		K1	LV	-51		CHP-V			AV	202	107	120	143
05	351664	32679		K1	LV	-51		CHP-V			AV	105	205	204	171
05	351664	32686		K1	LV	-51		CHP-V			AV	197	222	204	208
05	351664	32697		K1	LV	-51		CHP-V			AV	128	117	208	151
05	351664	32700		K1	LV	-51		CHP-V			AV	115	116	125	119
05	351664	32701		K1	LV	-51		CHP-V			AV	119	103	116	113
05	351664	32814		K1	LV	-51		CHP-V			AV	91	92	164	116
06	351663	33457		K1	LV	-51		CHP-V			AV	131	126	204	154

A04 Manufacturer's mark: D H

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

QM-System: Certification as per ISO 9001

B. BALDAUF
Test House Manager

Inspector's stamp: A H B

Date 05.11.10

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

PP 1

DILLINGER HÜTTE

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

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

A10 Advice of dispatch No./ Date of dispatch: 372664-05.11.10

A08/ Manufacturer's order/ A03 Certificate No.: 359527-001 Sheet: 13/...

A05 Established Inspecting body: DH

A06 Purchaser: EDMONTON STEEL,EDMON A07.1 No. ED10553-J1010-ER

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

B01 Product: HOT ROLLED PLATES

B02/ Steel design. SA516-70 SA20-S5

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

C40-C49 Impact test

B14 Item No.	B07.2 Heat No.	B07.1 Rol.plate/ Test No.	B05 Reference (heat) treatment	C01	C02/ C01	C03 Temp. GR.F	C41 Width of test piece	C40 Type of test piece	C44 Testing method	C46 Energy	C45 C42 Individual values AV=FT.LBF			C43 Mean value
07	351659	34697		K1	LV	-51		CHP-V			AV	100	72	101	91
07	351659	34764		K1	LV	-51		CHP-V			AV	119	87	114	107
07	351659	34779		K1	LV	-51		CHP-V			AV	80	102	184	122
07	351659	34780		K1	LV	-51		CHP-V			AV	92	80	109	94
07	351659	34827		K1	LV	-51		CHP-V			AV	120	128	93	114
08	351664	32678		K1	LV	-51		CHP-V			AV	164	102	102	123
09	351663	33459		K1	LV	-51		CHP-V			AV	128	193	150	157
09	351663	33460		K1	LV	-51		CHP-V			AV	108	136	93	112
09	351663	33690		K1	LV	-51		CHP-V			AV	103	190	111	135
09	351663	33768		K1	LV	-51		CHP-V			AV	116	194	114	141
09	351663	33771		K1	LV	-51		CHP-V			AV	103	115	100	106

C70-C99 Chemical composition % - Heat analysis

B07.2 Heat	C70	C	SI	MN	P	S	N	CU	MO	NI	CR	V	NB	SN	TI
351658	Y	0,172	0,372	1,20	0,011	0,0006	0,0067	0,019	0,005	0,022	0,020	0,000	0,000	0,001	0,002
351659	Y	0,177	0,375	1,19	0,010	0,0007	0,0059	0,034	0,010	0,034	0,026	0,000	0,000	0,001	0,002
351660	Y	0,177	0,372	1,18	0,010	0,0008	0,0070	0,025	0,008	0,032	0,023	0,001	0,000	0,001	0,002
351661	Y	0,171	0,380	1,18	0,011	0,0009	0,0067	0,033	0,009	0,039	0,026	0,000	0,000	0,001	0,002
351663	Y	0,173	0,376	1,19	0,012	0,0011	0,0082	0,027	0,016	0,036	0,041	0,001	0,001	0,001	0,002
351664	Y	0,165	0,355	1,17	0,011	0,0009	0,0055	0,054	0,011	0,053	0,039	0,000	0,000	0,003	0,002

A04 Manufacturer's mark

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

QM-System: Certification as per ISO 9001

B. BALDAUF
Test House Manager

Inspector's stamp

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

Date 05.11.10 PP 1

DILLINGER HÜTTE

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

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

A10 Advice of dispatch No./ Date of dispatch: 372664-05.11.10

A08/ Manufacturer's order/ A03 Certificate No.: 359527-001 Sheet: 14/...

A05 Established Inspecting body: DH

A06 Purchaser: EDMONTON STEEL,EDMON A07.1 No. ED10553-J1010-ER
Final receiver: EDMONTON STEEL,EDMON A07.2 No.

B01 Product: HOT ROLLED PLATES

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

C70-C99 Chemical composition % - Heat analysis

B07.2 Heat	C70	B	CA	AL-T
351658	Y	0,0002	0,0011	0,031
351659	Y	0,0002	0,0018	0,033
351660	Y	0,0001	0,0019	0,032
351661	Y	0,0002	0,0018	0,037
351663	Y	0,0002	0,0016	0,037
351664	Y	0,0002	0,0015	0,033

C94 Heat analysis Carbon equivalent / Alloying restrictions

B07.2 Heat										
351658	FO-02=	0,38	FO-51=	0,000	FO-55=	0,07	FO-78=	0,03	FO-91=	7,0
351659	FO-02=	0,39	FO-51=	0,000	FO-55=	0,10	FO-78=	0,04	FO-91=	6,7
351660	FO-02=	0,38	FO-51=	0,001	FO-55=	0,09	FO-78=	0,03	FO-91=	6,7
351661	FO-02=	0,38	FO-51=	0,000	FO-55=	0,11	FO-78=	0,04	FO-91=	6,9
351663	FO-02=	0,39	FO-51=	0,002	FO-55=	0,12	FO-78=	0,06	FO-91=	6,9
351664	FO-02=	0,38	FO-51=	0,000	FO-55=	0,16	FO-78=	0,05	FO-91=	7,1

C95 Ladle treatment

ITEM NO.: 01-09
HEAT OF THE INDICATED ITEM: VACUUM DEGASSED / SULPHIDE SHAPE CONTROL

C95 Further information about ladle treatment

ITEM NO.: 01-09
CALCIUM TREATED

A04 Manufacturer's mark

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

QM-System: Certification as per ISO 9001

B. BALDAUF
Test House Manager

Inspector's stamp

Date 05.11.10

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

PP 1

DILLINGER HÜTTE

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

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

A10 Advice of dispatch No./ Date of dispatch: 372664-05.11.10

A08/ Manufacturer's order/ A03 Certificate No.: 359527-001 Sheet: 15/...

A05 Established inspecting body: DH

A06 Purchaser: EDMONTON STEEL, EDMON A07.1 No. ED10553-J1010-ER

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

B01 Product: HOT ROLLED PLATES

B02/ Steel design. SA516-70 SA20-S5

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

C70-C99 Chemical composition % - Product analysis

B07.2 Heat	B07.1 Test No.	C01	C	SI	MN	P	S	N	CU	MO	NI	CR	V	NB	SN	TI
351658	35350	K1	0,171	0,373	1,20	0,010	0,0007	0,0064	0,020	0,004	0,022	0,020	0,000	0,000	0,000	0,003
351658	35463	K1	0,177	0,362	1,19	0,011	0,0008	0,0086	0,020	0,004	0,022	0,020	0,000	0,000	0,000	0,002
351659	34696	K1	0,172	0,371	1,16	0,009	0,0010	0,0065	0,035	0,010	0,037	0,026	0,000	0,000	0,001	0,002
351659	34764	K1	0,169	0,367	1,17	0,010	0,0007	0,0061	0,035	0,010	0,037	0,026	0,000	0,000	0,001	0,002
351659	34851	K1	0,169	0,372	1,19	0,010	0,0009	0,0060	0,025	0,006	0,026	0,023	0,000	0,000	0,000	0,002
351660	34482	K1	0,171	0,368	1,16	0,009	0,0010	0,0065	0,025	0,007	0,031	0,023	0,001	0,000	0,001	0,002
351660	34646	K1	0,173	0,370	1,16	0,009	0,0008	0,0066	0,031	0,008	0,034	0,026	0,000	0,000	0,000	0,002
351661	34106	K1	0,172	0,380	1,16	0,010	0,0008	0,0068	0,032	0,011	0,040	0,026	0,000	0,001	0,001	0,002
351661	34287	K1	0,169	0,369	1,15	0,010	0,0012	0,0068	0,032	0,009	0,041	0,026	0,000	0,000	0,001	0,002
351661	34310	K1	0,173	0,372	1,15	0,010	0,0009	0,0070	0,030	0,010	0,039	0,025	0,001	0,000	0,001	0,002
351663	33457	K1	0,169	0,369	1,18	0,011	0,0009	0,0085	0,025	0,016	0,037	0,041	0,000	0,001	0,001	0,002
351663	33690	K1	0,169	0,372	1,18	0,012	0,0014	0,0085	0,027	0,015	0,036	0,041	0,000	0,001	0,001	0,002
351664	32678	K1	0,171	0,359	1,15	0,011	0,0010	0,0052	0,054	0,011	0,053	0,037	0,001	0,000	0,002	0,001
351664	32686	K1	0,167	0,350	1,13	0,010	0,0011	0,0054	0,054	0,012	0,053	0,038	0,001	0,000	0,002	0,001

B07.2 Heat	B07.1 Test No.	C01	B	CA	AL-T
351658	35350	K1	0,0001	0,0012	0,031
351658	35463	K1	0,0001	0,0012	0,027
351659	34696	K1	0,0001	0,0020	0,033
351659	34764	K1	0,0001	0,0019	0,033
351659	34851	K1	0,0001	0,0016	0,032
351660	34482	K1	0,0000	0,0018	0,033
351660	34646	K1	0,0001	0,0020	0,032
351661	34106	K1	0,0002	0,0019	0,033
351661	34287	K1	0,0001	0,0020	0,034

A04 Manufacturer's mark: D H

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

QM-System: Certification as per ISO 9001

B. BALDAUF
Test House Manager

A H B
Inspector's stamp

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

Date 05.11.10 PP 1

DILLINGER HÜTTE

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

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

A10 Advice of dispatch No./ Date of dispatch: 372664-05.11.10

A08/ Manufacturer's order/ A03 Certificate No.: 359527-001 Sheet: 16/...

A05 Established inspecting body: DH

A06 Purchaser: EDMONTON STEEL,EDMON A07.1 No. ED10553-J1010-ER

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

B01 Product: HOT ROLLED PLATES

B02/ Steel design. SA516-70 SA20-S5

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

C70-C99 Chemical composition % - Product analysis

B07.2 Heat	B07.1 Test No.	C01	B	CA	AL-T
351661	34310	K1	0,0002	0,0019	0,033
351663	33457	K1	0,0002	0,0017	0,036
351663	33690	K1	0,0000	0,0016	0,037
351664	32678	K1	0,0002	0,0015	0,032
351664	32686	K1	0,0002	0,0015	0,032

C94 Product analysis Carbon equivalent / Alloying restrictions

B07.2 Heat	B07.1 Test No.	C01						
351658	35350	K1	FO-02=	0,38	FO-51=	0,000	FO-55=	0,07
351658	35463	K1	FO-02=	0,38	FO-51=	0,000	FO-55=	0,07
351659	34696	K1	FO-02=	0,38	FO-51=	0,000	FO-55=	0,11
351659	34764	K1	FO-02=	0,38	FO-51=	0,000	FO-55=	0,11
351659	34851	K1	FO-02=	0,38	FO-51=	0,000	FO-55=	0,08
351660	34482	K1	FO-02=	0,37	FO-51=	0,001	FO-55=	0,09
351660	34646	K1	FO-02=	0,38	FO-51=	0,000	FO-55=	0,10
351661	34106	K1	FO-02=	0,38	FO-51=	0,001	FO-55=	0,11
351661	34287	K1	FO-02=	0,37	FO-51=	0,000	FO-55=	0,11
351661	34310	K1	FO-02=	0,38	FO-51=	0,001	FO-55=	0,10
351663	33457	K1	FO-02=	0,38	FO-51=	0,001	FO-55=	0,12
351663	33690	K1	FO-02=	0,38	FO-51=	0,001	FO-55=	0,12
351664	32678	K1	FO-02=	0,38	FO-51=	0,001	FO-55=	0,16
351664	32686	K1	FO-02=	0,37	FO-51=	0,001	FO-55=	0,16

A04 D H Manufacturer's mark

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

QM-System: Certification as per ISO 9001

B. BALDAUF
Test House Manager

A H B Inspector's stamp

Date 05.11.10

PP 1

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

DILLINGER HÜTTE

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

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

A10 Advice of dispatch No./ Date of dispatch: 372664-05.11.10

A08/ Manufacturer's order/ A03 Certificate No.: 359527-001 Sheet: 17

B01 Product: HOT ROLLED PLATES

A05 Established Inspecting body: DH

A06 Purchaser: EDMONTON STEEL,EDMON A07.1 No.: ED10553-J1010-ER

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

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

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

C94 Carbon equivalent formula / Alloying restrictions

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

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

ITEM NO.: 01-09
RESULT OF MARKING, SURFACE, SHAPE AND DIMENSIONS: NO REMARKS

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

MTR APPROVED EDMONTON EXCHANGER

A04 D H Manufacturer's mark

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

QM-System: Certification as per ISO 9001

B. BALDAUF
Test House Manager

A H B Inspector's stamp

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

Date 05.11.10 PP 1

HUSKY TANK COMBO

16"x7'6"x.844 WALL SIS 3phase 3" INLOUT

SERIAL#

12094

T - 344393 - 71994
B - 344396 - 71801
Shell - 6304295

12095

T - 344393 - 71994
B - 344396 - 71801
Shell - 6704635

12096

T - 344396 - 71801
B - 344396 - 71801
Shell - 6704635

SA·106·B

Internals SA·36 (white)

RJV GAS FIELD SERVICES

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

PURCHASE ORDER #	**2704**
DATE	March 19,2011
VENDOR	V.E.G. Oilfield Supply
CONTACT	ALL
DATE REQUIRED	16" 3 Phase Separator
JOB NUMBERS	Separators 12079 to 12084

Item	Quantity	Material Spec.	Description	Nom. Thickness	Min. Head	Mill Test	Q.C. Check	Price
1	12	SA-105	2" #600 ANSI RFWN	Sch 160	-	yes	✓	
2	90	SA-106-B	16" SMLS Pipe	.844"	-	Yes	✓	
3	48	SA-105	2" N.P.T. Full Cplg.	#6000	-	-		
4	6	SA-105	1" N.P.T. Full Cplg.	#6000	-	-		
5	30	SA-105	3/4" N.P.T. Full Cplg.	#6000	-	-		
6	6	SA-105	1/2" N.P.T. Full Cplg.	#6000	-	-		
7	6	SA-105	2" 90° Weld elbow	sch. 160	-	-		

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

W

RT-2

Certified By

Vegreville, Alberta
Phone (780)632-7774

A#607778

UNIT NAME

Vert. 3 Phase Separator

M.A.W.P. Internal	HYDRO TEST	DESIGN TEMP.
1480 p.s.i. 10205 Kpa.	2220 p.s.i. 15307 Kpa.	100 °F 38 °C

C.R. NUMBER	SERIAL NO.
P7217.231	12095

CORR. ALLOW.	HEAT TREATMENT	SIZE
1.6 mm	Nil	406 X 2285 mm

SHELL MAT'L	HEAD MAT'L	WEIGHT
SA-106-B	Top- SA-516-70 Bottom- SA-516-70	685 Kg.

SHELL THICK.

21.44 mm

HEAD THICK.

Top-20.63 mm
Bottom-20.63 mm

MIN. DESIGN METAL TEMPERATURE

TEMPERATURE	@	PRESSSURE
-20 °F	@	1480 p.s.i.
-29 °C	@	10205 Kpa.

DATE MFG. April 2011

ISO 9001:2000

RADIOGRAPHIC TESTING REPORT

R-218175

ACUREN

PAGE 1 OF 1

CLIENT: RJV
ATTENTION:
ADDRESS: Dave
PROJECT: Vessel- Spot
WORK LOCATION: Vegreville

DATE: April 28/11
ACUREN JOB #: 231-56647-84
PO/WO #: Serial# 12095
PROCEDURE #: RT-0016
ACCEPTANCE: ASME SEC VIII
STANDARD: DIV I UW52 2010

MATERIAL TYPE: P1
FILM BRAND: Agfa
RADIATION SOURCE: ☑ IR 192 ☐ Co 60 ☐ X-RAY
48 (CI) KV
FOCAL SPOT: 0.14" MM/(IN)

Legend 1. Accept 2. Moderate 3. Reject * Welder Symbol

	IDENTIFICATION	PIPE DIA.	PIPE SCH	FILM TYPE	REIN.	TECH #	SOD (D)	OFD (t)	# OF EXP	CRK	LF	IP	P	S	UC	CR	EP		*	DEFECT LOCATION & REMARKS	ACC	REJ
1	SP1 0-6	16"	80	D5	1/8"	2	8"	.844"	1										M,K		✓	
2																						
3																						
4																						
5																						
6																						
7																						
8																						
9																						
10																						
11																						
12																						
13																						
14																						
15																						
16																						
17																						
18																						
19																						
20																						

REFER TO OPPOSITE SIDE FOR SCOPE OF SERVICES AND STANDARD OF CARE

SIGNATURES

CLIENT REPRESENTATIVE: [illegible] (PRINT) _____ (SIGNATURE)

TECHNICIAN (SIGN): B. Osmond

PRINT NAME: Brad Osmond (1ST TECHNICIAN) M. Lodderer (2ND TECHNICIAN/ASSISTANT)

*Please note: Film that is not accepted by the client when the report is issued will be disposed of by Acuren unless otherwise notified and acknowledged in writing.

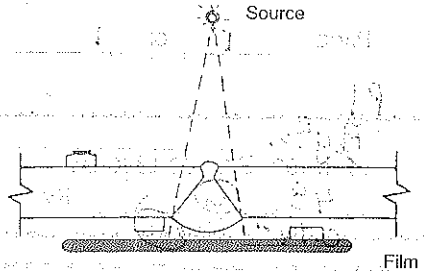
CGSB LEVEL II SNT LEVEL II CGSB REGISTRATION # 3161

CGSB LEVEL _____ SNT LEVEL _____ CGSB REGISTRATION # _____

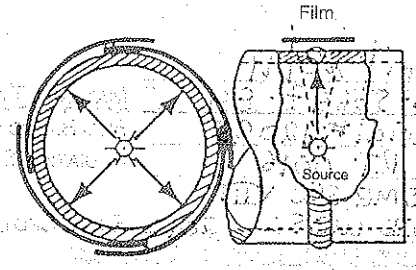
FILM USED	FILM SIZE
1	PCS 4½ x 8½
	PCS
	PCS
	PCS
	PCS
	PCS

DTR # A351182

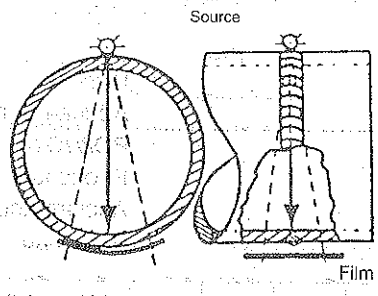
White – Client Copy | Canary – Office Copy | Pink - Technician Copy | Golden Rod - Office Copy



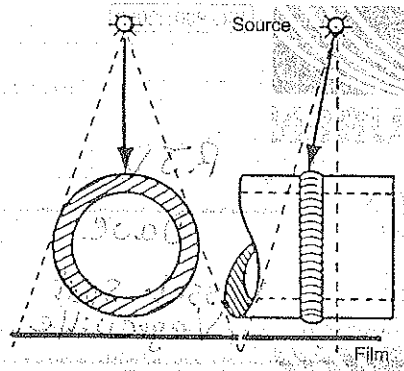
Technique "1"
SWE-SWV



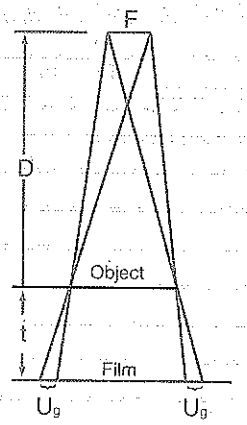
Technique "2"
SWE-SWV



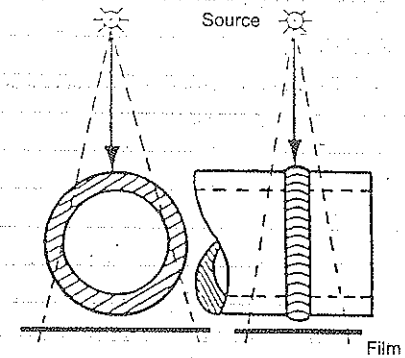
Technique "3"
DWE-SWV



Technique "4"
DWE-DWV



DEFECT LEGEND		OTHER LEGENDS	
CRK	Crack	SWE	Single Wall Exposure
LF	Lack of Fusion	DWE	Double Wall Exposure
IP	Incomplete Penetration	SWV	Single Wall Viewing
P	Porosity	DWV	Double Wall Viewing
S	Slag	EXP	Exposures
UC	Undercut	REIN	Reinforcement
CR	Concave Root	DIA	Diameter
EP	Excessive Penetration	SOD	Source Object Distance
BT	Burn Through	OFD	Object to Film Distance
HB	Hollow Bead		
PH	Pinhole		



Technique "5"
DWE-DWV

U_g = Geometric Unsharpness
D = source to object distance
t = object to film distance
F = Focal Spot Size

$$U_g = Ft/D$$

**Note:If t is omitted from this report, the Pipe Schedule shall apply as t.*

DISCLAIMERS

SCOPE OF SERVICE

The agreement of Acuren to perform the Services extends only to those Services provided for in writing. Under no circumstances shall such Services extend beyond the performance of the requested Services provided for in writing and the preparation of reports or similar documents reflecting the data obtained or the opinion formulated on the basis of such Services. It is expressly understood that all descriptions, comments and expressions of opinion reflect the opinion or observations of the examiner/engineer and are not intended, nor can they be construed, as representations or warranties as to the actual circumstances. Acuren does not assume any responsibilities of the owner/operator and the owner/operator retains complete responsibility for the engineering, repair and use decisions as a result of the data or other information provided by Acuren. In no event shall Acuren's liability in respect of the Services referred to herein exceed the amount paid for such Services.

STANDARD OF CARE

In performing the Services provided, Acuren uses the degree of care and skill ordinarily exercised under similar circumstances by others performing such Services in the same or similar locality. If at any time during the performance of the Services or within one (1) year thereafter, Purchaser discovers that the Services do not conform to the warranty, Acuren shall, upon receipt of written notice from Purchaser, promptly provide technicians/engineers to reperform the Services to the extent necessary to conform to the warranty and Acuren shall have no other liability whatsoever. No other warranty, expressed or implied, is made or intended by Acuren.

LIMITATIONS OF LIABILITY

Nothing in this Agreement shall be construed to mean that Acuren assumes any liability on account of injury to persons or property, including death, except those directly caused by negligent acts of Acuren or its employees and that Purchaser's own responsibility for injury to persons or properties while on or about Purchaser's property or equipment is in no way affected by this Agreement. Acuren shall not be held responsible or liable for any loss, damage, detention or delay caused by accidents, strikes, labour shortages, lock-outs, fire, flood, severe weather conditions, acts of civil or military authorities, or by insurrection or riot, or by any other cause that is unavoidable or beyond Acuren's control or in any event for consequential damages including, without limitation, downtime, loss of use or loss of profits.

A607778

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

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

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

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

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

Pressure vessel/ *Appareil*

Type/ *Genre*	Overall Length/*Longeur totale*	Serial No./ *N° de série*	Year built/Année de fabrication
Vertical 3 Phase Separator	**2285 mm sm/sm**	**12095**	**2011**
Provincial Registration No. – C.R.N./N° d'enregistrement provincial - N.E.C. **P7217.231**		National Board No./ *N° National Board* **N/A**	Drawing No./ *N° de dessin* **V01-381**

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

The design, construction and workmanship conform to CSA B51. *La conception, la construction et la façon sont conformes à ACNOR B51.*	ASME	Division	Addenda/*Supplément*	Code case No. *N ° de cas*
	Section VIII 2007 Edition	**1**	**2009b**	**N/A**

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

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

Shell/ *Virole*

Description	Material *Matériau*	Thickness *Épaisseur*	Corr. Allow. *Surépais. de corr.*	Diameter *Diamètre*	Longitudinal Joints *Joints longitudinaux*			P.W.H.T. *Traitement therm*		Girth Joints *Joints de circonférence*		Number of courses *Nombre de sections*
					Type	R.T. *Radiog.*	Efficiency *Efficacité*	Temp.	Time *Durée*	Type	R.T. *Radiog.*	
Shell	**SA-106-B**	**21.44 mm**	**1.6mm**	**406mm**	**Sml's**	**N/A**	**100%**	**N/A**	**N/A**	**1**	**Spot**	**1**
											70%	

Heads/ *Tetes*

Description	Material *Matériau*	Min. Thickn. *Épals minim.*	Corr. Allow *Surép. Corr.*	Crown. Radius *Rayon couron.*	Knuckle Radius *Petit rayon*	Ellipse Ratio *Rapp. ellipse*	Conical Apex Angle *Angle conique*	Hemisph. Radius *Ray. Hémisph*	Flat Diameter *Diam.plat*	Side to pressure *Côte sous pression*
Top	**SA-516-70**	**20.63mm**	**1.6mm**	----------	----------	**2.1**	----------	----------	----------	**Concave**
Bottom	**SA-516-70**	**20.63mm**	**1.6mm**	----------	--------	**2.1**	----------	----------	----------	**Concave**

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

Pressure - Temperature/ *Pression - température*

Pressure Vessel Part *Partie de l'appareil*	Constructed for max. allowable working pressure *Construit pour une pression maximale de marche permise*	At max. temp. *A une temp. max.*	Min. Temp. (when less than -29°C) *Temp. min. (inférieure à -29°C)*	Test pressure (hydro-pneumatic or combination) *Pression d'épreuvre (hydro-pneumatique ou combinaison)*
Vessel	10,205 Kpa	38°C	-29°C	15,307 Kpa

Tube Section/ *Faisceau tubulaire*

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

Jacket/ *Chemise*

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

Safety Valve Outlets/ *Soupapes de sûreté*

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

Nozzles and Openings/ *Tubulures et ouvertures*

Purpose/ *But*	Number *Nombre*	Dimension	Type	Material *Matériau*	Nominal Thickness *Épaisseur nominale*	Reinforcement material *Matériau de renfort*	How attached *Genre d'attaches*	Location/ *Endroit*
Inlet/Outlet	2	88.9mm	CL600	SA-105/SA-106-B	15.24mm	N/A	UW16.1{c}	Shell/Top Head
(2)L.L.C. /H.L.S.D./L.L.S.D./ Drain	5	60.3mm	Coupling	SA-105	CL6000	N/A	UW16.1{c}	Shell/Bottom Head
P.S.V.	1	33.4mm	Coupling	SA-105	CL6000	N/A	UW16.1{c}	Shell
(2) Sight Glass /Temp.Indicator	5	26.7mm	Coupling	SA-105	CL6000	N/A	UW16.1{c}	Shell
Pressure Indicator	1	21.4mm	Coupling	SA-105	CL6000	N/A	UW16.1{c}	Shell
(2) Liquid Out	2	33.4mm	Coupling	SA-105	CL6000	N/A	UW16.1{c}	Shell

Supports/ *Supports*

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

Remarks/ *Observations* (Cubical capacity/ Volume)

Volume-(.262 Cubic meters)
Except from impact test requirements as per UG 20(f) 1 to 5
Hydrostatically tested in the Vertical Position
Nozzel to shell weld is full penetration

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 P7217.231

Manufacturer
Constructeur RJV Gasfield Services

Signature _____ Date 05-10-11

Certificate of Compliance - Field Work/ *Certificat de conformité - Installation au chantier*

We certify that the field installation of all parts of the vessel conforms with the requirements of Provincial Regulations.

Nous certifions que l'installation au chantier de toutes les composantes de l'appareil est conforme aux règlements provinciaux.

Installer's Name
Nom de l'installateur _____

Signature _____

Date _____

Certificate of Shop Inspection/ *Certificat d'inspecton en usine*

I, the undersigned, a duly authorized Boiler and Pressure Vessel Inspector
Je, soussigné, inspecteur autorisé de chaudières et appareil sous pression
employed by
employé par ABSA

of/ *de* Alberta
have inspected the above vessel and state that to the best of my knowledge and belief, the manufacturer has constructed the vessel in accordance with the Provincial registration CRN P7217.231
and the requirements of standard CSA B51.
ai inspecté l'appareil précité et autant que je sache, crois que le constructeur a construit l'appareil en accord avec l'enregistrement provincial NEC _____
et les exigences de la norme ACNOR B51.

Inspector's Name NB12899A
Nom de l'inspecteur JASON REINHART AB298A

Signature _____ Date 11/10/11

Certificate of Field Inspection/ *Certificat d'inspection - Installation au chantier*

I, the undersigned, a duly authorized Boiler and Pressure Vessel Inspector
Je, soussigné, inspecteur autorisé de chaudières et appareil sous pression
employed by
employé par _____
have inspected the items not covered by the Shop Inspection Certificate and the installation of the items and state that to the best of my knowledge and belief the construction and assembly of the items are in accordance with the Provincial Regulations.
ai inspecté les composantes non couvertes par le certificat d'inspection en usine et l'installation de l'appareil et, autant que je sache, la construction et l'assemblage de l'appareil sont en accord avec les règlements provinciaux.

Inspector's Name
Nom de l'inspecteur _____

Signature _____ Date _____