

QM-System: Certification as per ISO 9001



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A02 INSPECTION CERTIFICATE 3.1 AS PER EN 10204:2004 INSPECTION CERTIFICATE 3.1 AS PER ISO 10474:2013 MATERIAL TEST REPORT (MTR)		A10 Advice of dispatch No./ Date of dispatch 586492-24.11.16	A08/ Manufacturer's order/ A03 Certificate No. 419107-001	Sheet 1/...
A05 Established inspecting body DH	A06 Purchaser EDMONTON STEEL, EDMON Final receiver EDMONTON STEEL, EDMON	A07.1 No. ED10692-J1010ER A07.2 No.	B01 Product HEAVY PLATES	
B02/ Steel design. SA516-70	SA20-S5			
B03 Any suppl. requirements	ASME-IIA:2015 DIL-HUE-16:R24-2016-08-19			

A01-A99 Further commercial information

B14 Item No.	B07.2 Heat No.	B07.1 Rol.plate / Test No.	B16 Agreed order amendment Document No.	Date
02	438468	34223-01	T-1-2DGKCN	03.11.16

B01-B99 Description of the product

B14 Item No.	B08 Number of pieces	B09 Thickness	B10 Width	B11 Length	B12 Theoretical mass	B04 Product delivery condition	B07.2 Heat No.	B07.1 Rolled plate No./ Test No.	A09 Purchaser article number
			INCH		KG				
01	1	2,5000 x	97,00000 x	482,00000	15036	N	432448	14576-01	ITEM011
01	1	2,5000 x	97,00000 x	482,00000	15036	N	438468	34216-01	ITEM011
**	2				30072				
02	1	2,5000 x	121,00000 x	482,00000	18756	N	438468	34219-01	ITEM012
02	1	2,5000 x	121,00000 x	482,00000	18756	N	438468	34223-01	ITEM012
02	1	2,5000 x	121,00000 x	482,00000	18756	N	438468	34224-01	ITEM012
02	1	2,5000 x	121,00000 x	482,00000	18756	N	438468	34225-01	ITEM012
**	4				75024				
***	6				105096				

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	Z01/Z02/Z03 We hereby certify, that the above mentioned materials have been delivered in accordance with the terms of order.			AG der Dillinger Hüttenwerke Postfach 1580, D-66748 Dillingen/Saar Inspection department	A01
		DR. CH. KÖNIG Test House Manager	Inspector's stamp	Date 24.11.16	PP 1

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B02/ Steel design. SA516-70		SA20-S5							
B03 Any suppl. ASME-IIA:2015									
requirements DIL-HUE-16:R24-2016-08-19									

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

B07-B99 Further information about the product

ITEM NO.: 01-02
THICKNESS REDUCTION RATIO >= 3,0 IS FULFILLED - CF. A/SA20(M) PAR. 5.3

C10-C29 Tensile test

B14	B07.2	B07.1	B05	C01	C02/	C03	C10	C11	C12	C13	C14-C15
Item	Heat No.	Rol.plate/ Test No.	Reference (heat) treatment	C01	C02/	C03	C10	C11	RM	A	
No.					GR.F	Temp.		KSI		%	
						GR.F		RP02		L0=2IN	
01	432448	14576		K1	QV	RT		44,8	73,7	36	
01	438468	34216		K1	QV	RT		45,8	73,4	36	
02	438468	34219		K1	QV	RT		46,8	73,5	35	
02	438468	34223		K1	QV	RT		47,3	73,4	37	
02	438468	34224		K1	QV	RT		46,4	73,7	36	
02	438468	34225		K1	QV	RT		46,7	73,7	37	

C30-C39 Hardness test

B14	B07.2	B07.1	B05	C01	C02/C01	C03	C30	C35	C31	C32	
Item	Heat No.	Rol.plate/ Test No.	Reference (heat) treatment	C01	C02/C01	Temp.	Method of test	C35 C31 Individual values			Mean value
No.						GR.F		HB	HB	HB	
01	432448	14576		K1	O	RT	HBW 10/3000	133	133	134	133
01	438468	34216		K1	O	RT	HBW 10/3000	132	132	133	132
02	438468	34219		K1	O	RT	HBW 10/3000	137	138	137	137
02	438468	34223		K1	O	RT	HBW 10/3000	138	137	136	137
02	438468	34224		K1	O	RT	HBW 10/3000	138	139	138	138

A04 Z01/Z02/Z03 We hereby certify, that the above mentioned materials have been delivered in accordance with the terms of order.



Manufacturer's mark

Ch König

DR. CH. KÖNIG
Test House Manager



Inspector's stamp

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

Date 24.11.16

PP 1

A01

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B02/ Steel design. SA516-70		SA20-S5							
B03 Any suppl. ASME-IIA:2015									
requirements DIL-HUE-16:R24-2016-08-19									

C30-C39 Hardness test

B14 Item No.	B07.2 Heat No.	B07.1 Rol.plate/ Test No.	B05 Reference (heat) treatment	C01	C02/C01	C03 Temp. GR.F	C30 Method of test	C35	C31 Individual values	C32 Mean value
02	438468	34225		K1	O		RT HBW 10/3000	HB	138 138 138	138




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	432448	14576		K1	LV	-51		CHP-V			AV 8	95 107 82	95
01	438468	34216		K1	LV	-51		CHP-V			AV 8	69 208 108	128
02	438468	34219		K1	LV	-51		CHP-V			AV 8	93 91 75	86
02	438468	34223		K1	LV	-51		CHP-V			AV 8	96 103 158	119
02	438468	34224		K1	LV	-51		CHP-V			AV 8	98 116 123	112
02	438468	34225		K1	LV	-51		CHP-V			AV 8	201 209 121	177

C70-C99 Chemical composition % - Heat analysis

B07.2 Heat	C70	C	SI	MN	P	S	N	CU	MO	NI	CR	V	NB	SN	TI
432448	Y	0,170	0,374	1,18	0,009	0,0010	0,0075	0,025	0,009	0,028	0,183	0,001	0,000	0,001	0,002
438468	Y	0,168	0,369	1,17	0,009	0,0007	0,0068	0,026	0,007	0,026	0,220	0,001	0,001	0,001	0,002

B07.2 Heat	C70	B	CA	AL-T
432448	Y	0,0001	0,0019	0,038
438468	Y	0,0000	0,0012	0,037

 Manufacturer's mark	Z01/Z02/Z03 We hereby certify, that the above mentioned materials have been delivered in accordance with the terms of order.	 DR. CH. KÖNIG Test House Manager	 Inspector's stamp	AG der Dillinger Hüttenwerke Postfach 1580, D-66748 Dillingen/Saar Inspection department	Date 24.11.16	PP 1	A04	A01

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B02/ Steel design.	SA516-70	SA20-S5		
B03 Any suppl. requirements	ASME-IIA:2015 DIL-HUE-16:R24-2016-08-19			

C94 Heat analysis Carbon equivalent / Alloying restrictions

B07.2 Heat	FO-02=	0,41	FO-51=	0,001	FO-55=	0,25	FO-78=	0,19	FO-91=	6,9
432448	FO-02=	0,41	FO-51=	0,001	FO-55=	0,25	FO-78=	0,19	FO-91=	6,9
438468	FO-02=	0,41	FO-51=	0,002	FO-55=	0,28	FO-78=	0,23	FO-91=	7,0

C95 Ladle treatment

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

C95 Further information about ladle treatment

ITEM NO.: 01-02
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
432448	14576	K1	0,176	0,372	1,17	0,008	0,0008	0,0067	0,019	0,007	0,026	0,073	0,000	0,000	0,000	0,001
438468	34216	K1	0,168	0,358	1,15	0,008	0,0009	0,0060	0,024	0,005	0,025	0,216	0,000	0,000	0,001	0,001

B07.2 Heat	B07.1 Test No.	C01	B	CA	AL-T
432448	14576	K1	0,0000	0,0013	0,035
438468	34216	K1	0,0000	0,0012	0,035

C94 Product analysis Carbon equivalent / Alloying restrictions

B07.2 Heat	B07.1 Test No.	C01	FO-02=	0,39	FO-55=	0,13
432448	14576	K1	FO-02=	0,39	FO-55=	0,13
438468	34216	K1	FO-02=	0,41	FO-55=	0,27

A04 Z01/Z02/Z03 We hereby certify, that the above mentioned materials have been delivered in accordance with the terms of order.



Ch König
DR. CH. KÖNIG
Test House Manager



Inspector's stamp

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

Date 24.11.16

PP 1

A01

QM-System: Certification as per ISO 9001

DILLINGER 

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B02/ Steel design. SA516-70	SA20-S5			
B03 Any suppl. requirements	ASME-IIA:2015 DIL-HUE-16:R24-2016-08-19			

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.: 01-02
 EXAMINATION OF MARKING, SURFACE, SHAPE AND DIMENSIONS: THE RESULTS MEET THE REQUIREMENTS.
 SURFACE AS PER ASME-SA20
 THICKNESS AS PER ASME-SA20
 LENGTH AND WIDTH AS PER ASME-SA20
 FLATNESS AS PER 1/2-ASME-SA20



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Ch König
 DR. CH. KÖNIG
 Test House Manager



Inspector's stamp Date 24.11.16

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

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