



A03 Certificate No. 2368/1-2013
Advice No. A130125003

A02 Test Report
according to ASTM A6

A04 (SWT)

A06 Ferre Barniedo S.A. de C.V.
Col. san Cristóbal
Av. Revolucion N°81
55024 Ecatepec
MEXICO

48671

A01 Stahlwerk Thüringen GmbH
A05 Quality Assurance Department
Kronacher Straße 6
07333 Unterwellenborn
Germany

A06 Our Order No.: 2033525112
A07 Your Order No.: # 6500549


B02 Quality: A36/A572 DUAL
according to PROPOSED TO ASTM A36
AND ASTM A572 GRADE 50

TEL. 52-55-8310-09 Ventas@ferrebarniedo.com
 ORIGINAL CERTIFICADO DE NUESTROS ESTADOS UNIDOS S.A. DE C.V.
 LA PREMISION DE NUESTROS ESTADOS UNIDOS S.A. DE C.V.

Pos.	Heat No.	Dimension	Length	Pieces	Theoretical Weight
[A10]	[B04]	[B09]	[B08]	[B08]	[B12]
001	29780	C 10X15,3	480 in	162	44 973 kg
001	29751	C 10X15,3	480 in	169	46 916 kg
001	29752	C 10X15,3	480 in	18	4 997 kg
002	29735	C 10X20	480 in	40	14 516 kg
002	29736	C 10X20	480 in	110	39 919 kg
003	29732	C 10X25	480 in	60	27 216 kg
003	29733	C 10X25	480 in	50	22 680 kg
004	29729	C 10X30	480 in	21	11 430 kg
004	29730	C 10X30	480 in	84	45 720 kg
004	29731	C 10X30	480 in	28	15 240 kg
005	29911	C 12X20,7	480 in	90	33 804 kg
005	29912	C 12X20,7	480 in	80	30 048 kg
005	29913	C 12X20,7	480 in	80	30 048 kg
005	29914	C 12X20,7	480 in	150	56 340 kg
005	29915	C 12X20,7	480 in	35	13 146 kg
006	29871	C 15X33,9	480 in	28	17 224 kg
006	29872	C 15X33,9	480 in	77	47 366 kg
006	29873	C 15X33,9	480 in	79	11 687 kg

Heat Analysis [%]									
Heat No.	C	Si	Mn	S	N	Nb	V		
[B07]	[C71]	[C72]	[C73]	[C74]	[C75]	[C76]	[C77]	[C78]	
max		0.40		0.040	0.050			0.050	
min								0.005	
29729	0.08	0.21	1.15	0.023	0.023	0.008	0.015	0.007	
29730	0.08	0.21	1.13	0.020	0.022	0.008	0.015	0.007	
29731	0.07	0.20	1.13	0.020	0.022	0.008	0.015	0.007	
29732	0.08	0.21	1.15	0.018	0.022	0.008	0.015	0.007	
29733	0.07	0.20	1.13	0.017	0.021	0.008	0.013	0.007	
29735	0.07	0.19	1.11	0.018	0.021	0.005	0.011	0.006	
29736	0.08	0.18	1.14	0.018	0.018	0.007	0.014	0.006	
29750	0.07	0.19	1.12	0.021	0.023	0.008	0.011	0.006	
29751	0.08	0.20	1.13	0.021	0.024	0.007	0.012	0.006	
29752	0.08	0.20	1.13	0.020	0.020	0.007	0.011	0.006	
29871	0.08	0.21	1.11	0.020	0.021	0.007	0.013	0.006	

Z03 Works inspector
René Merbach



Z02 Jan 25, 2013



**STAHLWERK
THÜRINGEN**

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AND ASTM A572 GRADE 50

Heat No.	C	Si	Mn	P	S	N	Nb	V
	[C71]	[C72]	[C73]	[C74]	[C75]	[C76]	[C77]	[C78]
max		0.40		0.040	0.050		0.050	
min							0.005	
29872	0.08	0.21	1.10	0.022	0.024	0.009	0.015	0.006
29873	0.08	0.20	1.13	0.021	0.023	0.009	0.012	0.006
29911	0.08	0.21	1.14	0.021	0.022	0.008	0.015	0.006
29912	0.08	0.19	1.14	0.024	0.024	0.007	0.014	0.006
29913	0.08	0.19	1.14	0.024	0.022	0.007	0.014	0.006
29914	0.08	0.21	1.14	0.023	0.023	0.008	0.011	0.006
29915	0.08	0.21	1.14	0.023	0.023	0.008	0.012	0.007

Heat No.	Yield stress [PSI]	Tensile strength [PSI]	Elongation 2 in [%]	Ys/Ts
	[C11]	[C12]	[C13]	[C14]
max		80500	21.0	
min	50000	66000	34.3	0.74
29729/1	55390	75110	42.2	0.76
29729/2	55390	72645	39.0	0.73
29730/1	54810	75110	42.2	0.77
29730/2	55680	72355	30.4	0.75
29731/1	53940	70180	42.2	0.73
29731/2	54810	72790	42.2	0.75
29732/1	53795	73225	37.0	0.73
29732/2	54955	72790	42.2	0.75
29733/1	52490	69890	42.9	0.73
29733/2	53795	72355	37.0	0.73
29735/1	54230	74095	43.6	0.74
29735/2	52780	71340	35.6	0.72
29736/1	53940	74965	43.6	0.74
29736/2	53505	72210	31.7	0.70
29750/1	50605	72355	43.6	0.76
29750/2	53940	71340	34.3	0.71
29751/1	51040	72065	43.6	0.76
29751/2	54665	72065	30.4	
29752	51620	71775		

FERRE BARNIEDO S.A. DE C.V.
ESTE ES NUESTRO ORIGINAL
LA COPIA DE ESTE CERTIFICADO
NO TIENE VALOR ORIGINAL
TEL: 55-36-10-00
VENTAS@ferrebarniedo.com.mx
ARCHIVOS

Z03 Works inspector
René Merbach

Z02 Jan 25, 2013



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Tensile test Heat No.	Yield stress [PSI]	Tensile strength [PSI]	Elongation 2 in [%]	Ys/Ts
	C11	C12	C13	C14
max	50000	80000		
min	52780	65000	21.0	
29871/1	52780	73660	42.2	0.72
29871/2	55100	72500	42.9	0.76
29872/1	52490	71050	43.6	0.74
29872/2	55535	72065	42.9	0.77
29873/1	51620	71920	44.9	0.72
29873/2	54520	71495	43.6	0.77
29911/1	52780	72500	42.2	0.73
29911/2	55100	72500	42.9	0.76
29912/1	51330	69890	43.6	0.73
29912/2	54520	72210	42.9	0.76
29913/1	52345	71050	42.2	0.74
29913/2	54665	72500	42.9	0.75
29914/1	51910	68295	46.2	0.76
29914/2	53795	71920	43.6	0.75
29915/1	54085	69890	42.2	0.77
29915/2	54665	72210	42.2	0.76

- Z01
- electric arc melting
 - controlled rolled
 - surface condition without complaint

We confirm herewith that the delivered material complies with the terms of the order.

Z03 Works inspector
René Merbach

Z02 Jan 25, 2013

FERRE BARNIEDO, S.A. DE C.V.
 ORIGINAL DE NUESTROS ARCHIVOS
 LA REMISION NO. 2368-10-00
 ventas@ferrebarniedo.com.mx