



 <b>STAHLWERK THÜRINGEN</b>		A02 Certificate No. 2003/6-2018 Advice No. A180619048		1/3						
A01 Stahlwerk Thüringen GmbH A05 Quality Assurance Department Kronacher Straße 6 07333 Unterwellenborn Germany		A02 Test Report  according to ASTM A6								
A06 Our Order No.: 2075397118 A07 Your Order No.: 001-000564-1		A04 Ferre Barniedo S.A. de C.V. Col. san Cristóbal Av. Revolucion N°81 55024 Ecatepec MEXICO								
B02 Quality: A992 according to: ASTM A992										
Pos.	Heat No.	Dimension	Length	Pieces	Theoretical Weight					
A10	B07	B01	B09	B06	B12					
001	13470	C 12X20,7	480 in	160	60 096 kg					
001	13471	C 12X20,7	480 in	110	41 316 kg					
002	13466	C 12X25	480 in	80	36 288 kg					
002	13467	C 12X25	480 in	145	65 772 kg					
003	13464	C 12X30	480 in	126	68 586 kg					
003	13465	C 12X30	480 in	61	33 204 kg					
004	14090	C 15X33,9	480 in	63	38 754 kg					
004	14091	C 15X33,9	480 in	84	51 672 kg					
005	14087	C 15X40	480 in	55	39 919 kg					
005	14088	C 15X40	480 in	85	61 693 kg					
005	14089	C 15X40	480 in	11	7 983 kg					
006	14084	C 15X50	480 in	40	36 288 kg					
006	14085	C 15X50	480 in	60	54 432 kg					
006	14086	C 15X50	480 in	19	17 237 kg					
Heat Analysis [%]										
Heat No.	C	Si	Mn	P	S	N	Al	Nb	V	Cr
B07	C71	C72	C73	C74	C75	C76	C77	C78	C79	C80
max	0.23	0.40	1.50	0.035	0.045	0.012		0.040	0.110	0.35
min		0.10	0.50							
13464	0.08	0.19	0.94	0.022	0.029	0.009	0.003	0.019	0.006	0.10
13465	0.08	0.19	0.94	0.021	0.027	0.008	0.002	0.020	0.006	0.06
13466	0.08	0.19	0.92	0.018	0.029	0.008	0.002	0.018	0.005	0.12
13467	0.08	0.19	0.92	0.018	0.029	0.008	0.002	0.018	0.005	0.12
13470	0.09	0.19	0.94	0.021	0.030	0.009	0.002	0.018	0.005	0.11
13471	0.08	0.18	0.94	0.017	0.032	0.009	0.001	0.018	0.005	0.11
14084	0.08	0.17	0.90	0.019	0.025	0.010	0.003	0.017	0.006	0.10
14085	0.09	0.20	0.91	0.019	0.023	0.009	0.002	0.018	0.006	0.11
14086	0.08	0.20	0.93	0.027	0.025	0.009	0.003	0.019	0.006	0.11
14087	0.09	0.19	0.95	0.023	0.027	0.009	0.003	0.016	0.007	0.10
14088	0.08	0.19	0.93	0.021	0.030	0.008	0.002	0.019	0.006	0.10
14089	0.08	0.19	0.93	0.019	0.023	0.009	0.003	0.021	0.007	0.10
14090	0.09	0.18	0.92	0.019	0.026	0.009	0.002	0.019	0.006	0.10
14091	0.08	0.17	0.95	0.018	0.025	0.008	0.002	0.020	0.006	0.09
Z03 Works Inspector René Merbach 										
Z02 Jun 19, 2018										

ORIGINAL CERTIFICADO DE NUESTROS PRODUCTOS  
 REMISION DE NUESTROS PRODUCTOS  
 COPIA DE FERRE BARNIEDO, S.A. DE C.V.  
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 <b>STAHLWERK THÜRINGEN</b>		A03 Certificate No. 2003/6-2018 Advice No. A180619048 2/3
A01 Stahlwerk Thüringen GmbH A05 Quality Assurance Department Kronacher Straße 6 07333 Unterwellenborn Germany		A02 Test Report according to ASTM A6  
A08 Our Order No.: 2075397118 A07 Your Order No.: 001-000564-1		Ferre Barniedo S.A. de C.V. Col. san Cristóbal Av. Revolucion N°81 55024 Ecatepec MEXICO
B02 Quality: A992 according to: ASTM A992		

Heat Analysis [%]						
Heat No.	Cu	Ni	Mo	CEV1	Sn	Nb+V
[b07]	[c71]	[c72]	[c73]	[c93]	[c74]	[c94]
max	0.60	0.45	0.15	0.45		0.080
min						
13464	0.30	0.14	0.04	0.30	0.012	0.025
13465	0.29	0.20	0.05	0.29	0.016	0.026
13466	0.39	0.15	0.04	0.30	0.013	0.023
13467	0.39	0.15	0.04	0.30	0.013	0.023
13470	0.32	0.13	0.03	0.31	0.017	0.023
13471	0.31	0.13	0.03	0.30	0.014	0.023
14084	0.36	0.17	0.04	0.29	0.014	0.023
14085	0.32	0.15	0.04	0.30	0.014	0.024
14086	0.33	0.16	0.04	0.29	0.015	0.025
14087	0.34	0.13	0.03	0.30	0.016	0.023
14088	0.35	0.12	0.03	0.30	0.016	0.025
14089	0.33	0.15	0.04	0.29	0.013	0.023
14090	0.30	0.14	0.03	0.30	0.014	0.025
14091	0.30	0.14	0.04	0.29	0.013	0.025

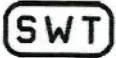


Tensile test				
Heat No.	Yield stress [PSI]	Tensile strength [PSI]	Elongation 2 in [%]	Ys/Ts
[b07]	[c11]	[c12]	[c13]	[c14]
max	65000	65000	21.0	0.85
min	50600			
13464/1	57710	73225	40.9	0.79
13464/2	55535	72210	40.9	0.77
13465/1	59015	74965	39.6	0.79
13465/2	55825	72210	40.9	0.77
13466/1	56550	73900	35.6	0.72
13466/2	54955	72065	40.9	0.76
13467/1	58290	74385	38.3	0.78
13467/2	54955	72065	40.9	0.76
13470/1	56550	73080	35.6	0.77
13470/2	55390	72645	40.9	0.76
13471/1	56840	73805	33.0	0.77
13471/2	55245	72065	40.9	0.77

Z03 Works inspector  
René Merbach



Z02 Jun 19, 2018

FERRE BARNIEDO S.A. DE C.V.  
 ORIGINAL CERTIFICADO  
 LA REMISION DE NUESTROS ARCHIVOS  
 VERIFICARLOS EN: [verifs@ferrebarniedo.com.mx](mailto:verifs@ferrebarniedo.com.mx)

 <b>STAHLWERK THÜRINGEN</b>		A03] Certificate No. 2003/6-2018 Advice No. A180619048 <span style="float: right;">3/3</span>
A01] Stahlwerk Thüringen GmbH A05] Quality Assurance Department Kronacher Straße 6 07333 Unterwellenborn Germany		A02] Test Report according to ASTM A6  
A06] Our Order No.: 2075397118 A07] Your Order No.: 001-000564-1		A04]  A05] Ferre Barniedo S.A. de C.V. Col. san Cristóbal Av. Revolucion N°81 55024 Ecatepec MEXICO
B02] Quality: A992 according to: ASTM A992		

Heat No.	Yield stress [PSI]	Tensile strength [PSI]	Elongation 2 in [%]	Ys/Ts
	[C11]	[C12]	[C13]	[C14]
max	65000	65000		0.85
min	50000			
14084/1	57275	73515	21.0	0.78
14084/2	54840	71775	37.0	0.76
14085/1	57130	72210	41.6	0.79
14085/2	55390	72355	37.0	0.77
14086/1	56115	70905	40.9	0.79
14086/2	55390	72210	39.6	0.77
14087/1	55970	72210	40.9	0.78
14087/2	55100	72210	39.6	0.76
14088/1	56550	71775	41.6	0.79
14088/2	55245	72065	39.6	0.77
14089	56405	71340	40.3	0.79
14090/1	56550	72210	38.3	0.78
14090/2	55390	72210	37.0	0.77
14091/1	56550	71630	40.3	0.79
14091/2	55390	72065	39.6	0.77

Z01] HOT ROLLED, NON-ALLOYED CARBON STEEL PROFILES  
 - electric arc melting  
 - Melted & Manufactured in Germany  
 - fine grain silicon killed

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

Z03] Works inspector  
 René Merbach  


Z02] Jun 19, 2018

ESTERRE BARNIEDO, S.A. DE C.V.  
 DEL ESTERRE BARNIEDO, S.A. DE C.V.  
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 TEL 55024-10-00 REMISION NUESTROS ARCHIVOS,  
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