

 STAHLWERK THÜRINGEN		A03	Certificate No. 3207/9-2016 Advice No. A160927025		1/2																																										
		A02	Test Report according to ASTM A6																																												
A01	Stahlwerk Thüringen GmbH																																														
A05	Quality Assurance Department Kronacher Straße 6 07333 Unterwellenborn Germany																																														
A08	Our Order No.:	2062512116																																													
A07	Your Order No.:	601544																																													
B02	Quality:	A992 DUAL																																													
	according to:	ASTM A992 - ASTM A572 GR50 FINE GRAIN SILICON KILLED																																													
<table border="1"> <thead> <tr> <th>Pos.</th> <th>Heat No.</th> <th>Dimension</th> <th>Length</th> <th>Pieces</th> <th>Theoretical Weight</th> </tr> <tr> <th>A10</th> <th>B07</th> <th>B01</th> <th>B09</th> <th>B08</th> <th>B12</th> </tr> </thead> <tbody> <tr> <td>001</td> <td>72652</td> <td>C 12X20,7</td> <td>480 in</td> <td>300</td> <td>112 680 kg</td> </tr> <tr> <td>001</td> <td>72653</td> <td>C 12X20,7</td> <td>480 in</td> <td>246</td> <td>92 398 kg</td> </tr> <tr> <td>002</td> <td>72650</td> <td>C 12X25</td> <td>480 in</td> <td>180</td> <td>81 648 kg</td> </tr> <tr> <td>002</td> <td>72654</td> <td>C 12X25</td> <td>480 in</td> <td>47</td> <td>21 319 kg</td> </tr> <tr> <td>003</td> <td>72649</td> <td>C 12X30</td> <td>480 in</td> <td>194</td> <td>105 601 kg</td> </tr> </tbody> </table>						Pos.	Heat No.	Dimension	Length	Pieces	Theoretical Weight	A10	B07	B01	B09	B08	B12	001	72652	C 12X20,7	480 in	300	112 680 kg	001	72653	C 12X20,7	480 in	246	92 398 kg	002	72650	C 12X25	480 in	180	81 648 kg	002	72654	C 12X25	480 in	47	21 319 kg	003	72649	C 12X30	480 in	194	105 601 kg
Pos.	Heat No.	Dimension	Length	Pieces	Theoretical Weight																																										
A10	B07	B01	B09	B08	B12																																										
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Heat Analysis [%]																																															
Heat No.	C	Si	Mn	P	S	N	Nb	V	Cr	Cu																																					
B07	C71	C72	C73	C74	C75	C76	C77	C78	C79	C80																																					
max	0.23	0.40	1.50	0.035	0.045	0.012	0.050	0.110	0.35	0.60																																					
min		0.10	0.50				0.005																																								
72649	0.07	0.19	0.93	0.019	0.019	0.006	0.018	0.006	0.09	0.29																																					
72650	0.08	0.16	0.95	0.019	0.022	0.006	0.017	0.006	0.09	0.29																																					
72652	0.09	0.20	0.94	0.017	0.028	0.009	0.020	0.006	0.11	0.42																																					
72653	0.06	0.19	0.96	0.020	0.020	0.007	0.018	0.006	0.08	0.26																																					
72654	0.06	0.19	0.96	0.020	0.020	0.007	0.018	0.006	0.08	0.26																																					
Heat Analysis [%]																																															
Heat No.	Ni	Mo	CEV1	Sn																																											
B07	C81	C82	C93	C83																																											
max	0.45	0.15	0.45																																												
min																																															
72649	0.15	0.04	0.29	0.012																																											
72650	0.14	0.04	0.29	0.014																																											
72652	0.15	0.04	0.32	0.015																																											
72653	0.12	0.03	0.27	0.012																																											
72654	0.12	0.03	0.27	0.012																																											
Z03	Works inspector René Merbach																																														
Z02	Sep 28, 2016																																														



**STAHLWERK
THÜRINGEN**

A03 Certificate No. 3207/9-2016
Advice No. A160927025

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A02 Test Report

according to ASTM A6



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

A04
A06

A08 Our Order No.: 2062512116
A07 Your Order No.: 601544

B02 Quality: A992 DUAL
according to: ASTM A992 - ASTM A572 GR50
FINE GRAIN SILICON KILLED

Tensile test Heat No.	Yield stress [PSI]	Tensile strength [PSI]	Elongation 2 in [%]	Ys/Ts
B07	C11	C12	C13	C14
max	65000			0.85
min	50000	65000	21.0	
72649/1	54520	68295	42.2	0.80
72649/2	55245	72790	42.9	0.76
72650/1	56405	71050	43.6	0.79
72650/2	54085	72790	43.6	0.74
72652/1	56260	70035	43.6	0.80
72652/2	57855	72790	42.2	0.79
72653/1	57130	72935	39.6	0.78
72653/2	53650	72790	42.2	0.74
72654/1	55245	69310	44.9	0.80
72654/2	53650	72790	42.2	0.74

Z01

- electric arc melting
Melted & Manufactured in Germany

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

Z03 Works inspector
René Merbach

Z02 Sep 28, 2016