



A01 Tata Steel IJmuiden BV Nenckebachstraat 1 1951 JZ Velsen Noord Postbus 10000 1970 CA IJmuiden The Netherlands Telephone: 0251-492110 Company Trade Register 34040331 E-mail : info.testing@tatasteel.com		A07.A09 Reference ST#34866										A02 Inspection certificate 3.1, EN10204. B01.B02.B03.B04.B15										TATA STEEL																	
A03 Doc. nr 2016063087 00										Hot rolled dry, Coil, S355MC, YMPRESS WG S:01-2010. Mill edges. Impact test. Suitable for: Cutting into sheet.																													
A06 Customer/Consignee OY ALUSTEEL AB TELAKKATIE 4 23500 UUSIKAUPUNKI FINLAND										Tolerance EN 10051 : 2010 (E) (Width tolerance +20/-0 mm) Dev.Tol. (Thickness tolerance +0.24/-0.24 mm). PRODUCE AND TEST ACCORDING TO EN 10149-2										Z04																			
A08 Order nr. 50893 E										A11 Dispatch note 55581										A10 Transport ROBIJN																			
B09.B10.B11 Dimensions 1500 mm X 20 mm										C10-C29 TENSILE TEST										C32 HARDNESS										C40.C60.C65 IMPACT TEST AND OTHER TESTS									
B07 PROD.-IDENT	B15 MASS kg	B08 NR	B07 CAST NR.	C01	C01/C02	C10	B05	C05 Temp °C	C11 ReH MPa	C11 ReL MPa	C11 Rp MPa	C12 Rm MPa	C13 A %	C13 A %	C16 ReH/Rm %	C17 r-value	C18 n-value	C32	C01/C02	C10	B05	C41 mm	C40.C60.C65	C05 Temp °C	C44	C42 ind.	C42 ind.	C42 ind.	C43 mean	C95 ASTM E-112									
3066068	28300	1	S6363	32	1L	P		+ 20	361			515	30.4		70				1L	P	0	10.0	ISO-V	- 20	2	253	303	307	288										
3066069	28280	1	"	32	1L	P		+ 20	366			518	28.5		71				1L	P	0	10.0	ISO-V	- 20	2	299	315	296	303										
3066070	28300	1	"	32	1L	P		+ 20	375			506	30.2		74				1L	P	0	10.0	ISO-V	- 20	2	313	308	332	318										
3066071	28240	1	"	32	1L	P		+ 20	366			510	28.5		72				1L	P	0	10.0	ISO-V	- 20	2	286	292	229	269										
3066072	28320	1	"	32	1L	P		+ 20	372			515	29.4		72				1L	P	0	10.0	ISO-V	- 20	2	300	302	310	304										
3066073	28300	1	"	32	1L	P		+ 20	362			520	27.8		70				1L	P	0	10.0	ISO-V	- 20	2	276	254	274	268										
3119079	28180	1	S7012	32	1L	P		+ 20	371			509	29.3		73				1L	P	0	10.0	ISO-V	- 20	2	324	324	318	322										
3119080	28180	1	"	32	1L	P		+ 20	381			509	28.5		75				1L	P	0	10.0	ISO-V	- 20	2	264	260	311	278										
3119078	28180	1	S7014	32	1L	P		+ 20	382			511	27.7		75				1L	P	0	10.0	ISO-V	- 20	2	260	286	263	270										
3119081	28180	1	"	32	1L	P		+ 20	391			516	26.6		76				1L	P	0	10.0	ISO-V	- 20	2	284	309	315	303										
SUBTOTAL		282460	10																																				
C71-C92 CHEMICAL COMPOSITION in %																				C44 1: J/cm ² 2: J 3: Later. exp. (mm) 4: Contraction (%) 5: Shear area (%)																			
B07 CAST NR.	B07 PROD.-IDENT	C71 C	C72 Mn	C73 P	C74 S	C75 Si	C76 Al	C77 Cu	C78 Cr	C79 Ni	C80 Mo	C81 Nb	C82 V	C83 N	C84 B	C85 C-eq	C86 Al-ZO	C87 Sn	C88 Ti	C89 C-eq	C01 1:Top 2:Middle 3:Bottom	C01 1:Surface 2:Centre 3=Surface	C02 L=Longitudinal T=Transverse Z=in thickn dir	C10 P=prismatical C=cylindrical															
S6363		.064	1.311	.014	.004	0.013	0.030	.011	0.014	0.017	.003	.033	.003	.0040	.0000		0.029	.002	.001	.288																			
S7012		.060	1.322	.012	.003	0.016	0.032	.009	0.022	0.016	.003	.034	.003	.0036	.0000		0.030	.002	.002	.288																			
S7014		.066	1.347	.015	.003	0.015	0.032	.011	0.023	0.016	.002	.032	.003	.0035	.0000		0.031	.002	.002	.298																			
C-eq1: C + Mn/6 + (Cr + Mo + V)/5 + (Ni + Cu)/15																																							
Z05 Stamp of the expert :										Z02 Tata Steel IJmuiden BV Test House, IJmuiden SIMON BRAAM MANAGER TESTING IJMUIDEN, 12 JUNI 2016																													
Z05										Z06										Z04																			
Z01 We certify that the delivery complies with the order prescriptions.																																							

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		A08 Order nr. 50893 E	

B09.B10.B11 Dimensions				C10-C29 TENSILE TEST														HARD-NESS	C40..C60..C65 IMPACT TEST AND OTHER TESTS																	
1500 mm X		20 mm																																		
B07 PROD.-IDENT	B15 MASS kg	B08 NR	B07 CAST NR.	C01	C01/C02	C10	B05	C03 Temp °C	C11 ReH MPa	C11 ReL MPa	C11 Rp MPa	C12 Rm MPa	C13 A %	C13 A %	C16 ReH/Rm	C17 r-value	C18 n-value	C32	C01/C02	C10	B05	C41 mm	C40..C60..C65		C03 Temp °C	C44	C42 ind.	C42 ind.	C42 ind.	C43 mean	C95 ASTM E-112					
3119082	28180	1	S7014	32	1L	P		+ 20	360			506	30.7		71				1L	P	0	10.0	ISO-V		- 20	2	30	193	45	89						
3119083	28200	1	"	32	1L	P		+ 20	374			509	28.2		73				1L	P	0	10.0	ISO-V		- 20	2	320	267	307	298						
3119076	28120	1	S7016	32	1L	P		+ 20	389			520	27.0		75				1L	P	0	10.0	ISO-V		- 20	2	233	316	264	271						
3119077	28180	1	"	32	1L	P		+ 20	383			517	27.5		74				1L	P	0	10.0	ISO-V		- 20	2	310	308	307	308						
3121136	28180	1	S7018	32	1L	P		+ 20	372			508	28.9		73				1L	P	0	10.0	ISO-V		- 20	2	153	167	277	199						
3119075	28240	1	S7020	32	1L	P		+ 20	379			513	27.8		74				1L	P	0	10.0	ISO-V		- 20	2	342	327	322	330						
3119089	28220	1	"	32	1L	P		+ 20	365			504	28.9		72				1L	P	0	10.0	ISO-V		- 20	2	317	328	335	327						
3119084	28200	1	S7022	32	1L	P		+ 20	370			508	29.0		73				1L	P	0	10.0	ISO-V		- 20	2	319	316	256	297						
3119087	28260	1	"	32	1L	P		+ 20	386			514	28.3		75				1L	P	0	10.0	ISO-V		- 20	2	316	272	319	302						
3119088	28240	1	"	32	1L	P		+ 20	376			510	29.4		74				1L	P	0	10.0	ISO-V		- 20	2	309	323	320	317						
3119085	28460	1	S7024	32	1L	P		+ 20	381			508	29.1		75				1L	P	0	10.0	ISO-V		- 20	2	356	362	345	354						
3119086	28220	1	"	32	1L	P		+ 20	375			509	30.3		74				1L	P	0	10.0	ISO-V		- 20	2	322	306	307	312						
TOTAL	621160	22																																		

C71-C92 CHEMICAL COMPOSITION in %																				C44					
B07 CAST NR.	B07 PROD.-IDENT	C71 C	C72 Mn	C73 P	C74 S	C75 Si	C76 Al	C77 Cu	C78 Cr	C79 Ni	C80 Mo	C81 Nb	C82 V	C83 N	C84 B	C85 C-eq	C86 Al-ZO	C87 Sn	C88 Ti	C89 C-eql	1: J/cm ² 2: J 3: Later. exp. (mm) 4: Contraction (%) 5: Shear area (%)				
S7014		.066	1.347	.015	.003	0.015	0.032	.011	0.023	0.016	.002	.032	.003	.0035	.0000		0.031	.002	.002	.29	C01 1=Top 2=Edge 3=Bottom C02 L=Longitudinal 1=Surface 2=Middle 3=Centre C=prismatical P=prismatical C=cylindrical				
S7016		.069	1.340	.016	.002	0.019	0.033	.011	0.021	0.017	.003	.035	.004	.0037	.0000		0.031	.003	.002	.300	C-eql: C + Mn/6 + (Cr + Mo + V)/5 + (Ni + Cu)/15				
S7018		.061	1.335	.014	.004	0.015	0.040	.010	0.018	0.017	.003	.035	.003	.0037	.0000		0.038	.002	.002	.290	C70				
S7020		.062	1.338	.012	.003	0.016	0.038	.010	0.018	0.016	.002	.035	.003	.0042	.0000		0.037	.002	.002	.291	STEELMAKING PROCESS: B0 Page 2 of 2				
S7022		.060	1.317	.014	.002	0.018	0.031	.010	0.018	0.017	.003	.035	.003	.0037	.0000		0.030	.002	.002	.286	Z05				
S7024		.060	1.318	.013	.003	0.017	0.035	.011	0.018	0.018	.004	.036	.003	.0036	.0000		0.034	.002	.002	.287	Z06				

Z05										Z06									
Stamp of the expert :										Tata Steel IJmuiden BV Test House, IJmuiden SIMON BRAAM MANAGER TESTING 									
Z01										Z02									
We certify that the delivery complies with the order prescriptions.										IJMUIDEN, 12 JUNI 2016									