

Material Certificate List

Shipping Address		Information	
Ship-to-party	TAMMINIITY OY KETJUTIE 4 27710 KUYLIJ FINLAND	Document Number	80483135
		Delivery Date	12.05.2021
		Sales Order Number	153396
		Sales Order Date	11.05.2021
		Purchase Order Number	006573
		Customer Number	201512
Buyer		Mode of Transportation	
Sold to Party	TAMMINIITY OY KETJUTIE 4 27710 KUYLIJ FINLAND	Delivery Term	DAP EURA
		Country of Origin	FI
		Country of Destination	FI
		From/Via	35A1
		Route	R00000
Weight-Volume		Delivery Plant	35A1
Total Gross Weight	17,139,00 KG	Certificate Receiver	myynti@tamminiity.fi
Total Net Weight	17,139,00 KG		
Total Packages	7		

Shipping Details					
Item	Material Description	Cust. Prod Code	Ordered Quantity	Delivered Quantity	Weight
10	13002041 HRP,SHEET, 5.00X1500.00X3000.00	4010500	7.600,00	0,00	0,00 KG
Steel Grade	YMPRESS S355 MC				
Batch		Material ID			
20	13001616 Hot Rolled Pickled,Sheet, 8.00X1500.00X3000.00	4010800	2.550,00	2.543,00	2.543,00 KG
Steel Grade	S355				
Batch	0001208844	Material ID	607359		
30	13001617 HRP,SHEET, 10.00X1500.00X3000.00	4011000	5.000,00	0,00	0,00 KG
Steel Grade	S355				
Batch		Material ID			
40	13001619 Hot Rolled Dry,Sheet, 15.00X1500.00X3000.00	4511500	2.120,00	2.120,00	2.120,00 KG
Steel Grade	S355				
Batch	0001191713	Material ID	2957029		
900001	13002041 Hot Rolled Pickled,Sheet, 5.00X1500.00X3000.00	4010500	7.600,00	2.510,00	2.510,00 KG

Material Certificate List

Information	
Document Number	80483135
Delivery Date	12.05.2021

Item	Material Description	Cust. Prod Code	Ordered Quantity	Delivered Quantity	Weight
Steel Grade Batch	YMPRESS S355 MC 0001237693	Material ID	821542		
900002	13002041 Hot Rolled Pickled,Sheet, 5.00X1500.00X3000.00	4010500	7.600,00	2.510,00	2.510,00 KG
Steel Grade Batch	YMPRESS S355 MC 0001237271	Material ID	821538		
900003	13002041 Hot Rolled Pickled,Sheet, 5.00X1500.00X3000.00	4010500	7.600,00	2.510,00	2.510,00 KG
Steel Grade Batch	YMPRESS S355 MC 0001237695	Material ID	821542		
900004	13001617 Hot Rolled Pickled,Sheet, 10.00X1500.00X3000.00	4011000	5.000,00	2.473,00	2.473,00 KG
Steel Grade Batch	S355 0001216506	Material ID	6068601		
900005	13001617 Hot Rolled Pickled,Sheet, 10.00X1500.00X3000.00	4011000	5.000,00	2.473,00	2.473,00 KG
Steel Grade Batch	S355 0001216513	Material ID	6068601		

TATA STEEL
 Inspection certificate 3.1, EN10204.
 5500001080/00
 001.002.005.104.1015
 5500001080
 MAANTALI
 2021013505 00
 001.002.005.104.1015
 Hot rolled pickled, Coil, S555MC, YMPRESS WG S:01-2010.
 1.00 G/M2/Side oiled.
 Mill edges.
 Impact test.
 Suitable for: Part galvanising, Cutting into sheet.
 Tolerance EN 10051 : 2010 (E) (Width tolerance +20/-0 mm) Dev.Tol. (Thickness tolerance +0.18/-0.18 mm).
 PRODUCE AND TEST ACCORDING TO EN 10149-2
 Country of melt and pour : The Netherlands.
 SERVICE CENTRE MAASTRICHT B.V.
 B.U. FEIJEN
 POSTBUS 10.000
 1970 CA IJMUIDEN
 NOORDHOLLAND
 57737 A
 74813
 ALL Dispatch note
 VAGRANT
 1500 mm X 6.00 mm
 1 S0092
 1 S0094
 1 S0096
 31880
 31860
 31920
 95660
 3
 IMPACT TEST AND OTHER TESTS
 TENSILE TEST
 CHEMICAL COMPOSITION in %
 STEELMAKING PROCESS: B0 Page 1 of 1
 Tata Steel IJmuiden BV
 JEFFREY FLEMING
 MGR. MECH. TESTING
 IJMUIDEN, 2 FEBRUARI 2021

IMP. REFERENCE	TENSILE TEST			IMPACT TEST AND OTHER TESTS							
	MPa	MPa	MPa	mm	Temp °C	mm	Temp °C	mm	Temp °C	mm	Temp °C
607362	478	29.0	83	0	5.0 ISO-V	20	2	114	116	124	118
607360	489	28.5	81	0	5.0 ISO-V	20	2	113	135	114	121
607359	476	31.5	81	0	5.0 ISO-V	20	2	117	112	123	117

IMP. REFERENCE	CHEMICAL COMPOSITION in %																		
	C	Mn	P	S	Si	Al	Cu	Cr	Ni	Mo	Nb	V	N	B	C-eq	Al-ZO	Sn	Ti	C-eq1
S0092	0.074	0.987	0.010	0.030	0.007	0.022	0.019	0.002	0.026	0.002	0.026	0.002	0.0039	0.000	0.028	0.001	0.001	0.001	0.245
S0094	0.071	1.009	0.011	0.037	0.006	0.022	0.019	0.002	0.026	0.002	0.026	0.002	0.0040	0.000	0.036	0.001	0.001	0.001	0.246
S0096	0.064	0.979	0.014	0.029	0.008	0.024	0.016	0.002	0.021	0.003	0.028	0.003	0.0038	0.000	0.028	0.002	0.001	0.001	0.235

350 Buigproef/Bend test/Diagversuch/Test de flexion : goed/good/gut/concluant
 Stamp of the expert :
 Tata Steel IJmuiden BV
 JEFFREY FLEMING
 MGR. MECH. TESTING
 IJMUIDEN, 2 FEBRUARI 2021

Z01 We hereby confirm that we comply to the terms of our order
 acknowledgement and any agreed concessions
 D1906/75E D1906/71S

TATA STEEL
 Inspection certificate 3.1, EN10204.
 5500001080/00
 001.002.005.104.1015
 5500001080
 MAANTALI
 2021013505 00
 001.002.005.104.1015
 Hot rolled pickled, Coil, S555MC, YMPRESS WG S:01-2010.
 1.00 G/M2/Side oiled.
 Mill edges.
 Impact test.
 Suitable for: Part galvanising, Cutting into sheet.
 Tolerance EN 10051 : 2010 (E) (Width tolerance +20/-0 mm) Dev.Tol. (Thickness tolerance +0.18/-0.18 mm).
 PRODUCE AND TEST ACCORDING TO EN 10149-2
 Country of melt and pour : The Netherlands.
 SERVICE CENTRE MAASTRICHT B.V.
 B.U. FEIJEN
 POSTBUS 10.000
 1970 CA IJMUIDEN
 NOORDHOLLAND
 57737 A
 74813
 ALL Dispatch note
 VAGRANT
 1500 mm X 6.00 mm
 1 S0092
 1 S0094
 1 S0096
 31880
 31860
 31920
 95660
 3
 IMPACT TEST AND OTHER TESTS
 TENSILE TEST
 CHEMICAL COMPOSITION in %
 STEELMAKING PROCESS: B0 Page 1 of 1
 Tata Steel IJmuiden BV
 JEFFREY FLEMING
 MGR. MECH. TESTING
 IJMUIDEN, 2 FEBRUARI 2021

A01 Tata Steel IJmuiden BV Wenkebachstraat 1 1951 JZ Velsen Noord Postbus 10000 1970 CA IJmuiden The Netherlands Telephone: 0251-492110 Company Trade Register 34040331 E-mail: info.testing@tatasteeleurope.com	A03 Doc nr. 2021014277 00	A04 TATA STEEL
	A02 Inspection certificate 3.1, EN10204.	
A06 Customer/Consignee SERVICE CENTRE MAASTRICHT B.V. B.V. FEIJEN POSTBUS 10.000 1970 CA IJMUIDEN NOORDHOLLAND	A07, A09 Reference 4500035562 NAANTALI 11009846 00030	A08 Order nr. 57493 C
	A01, B02, B03, B04, B15 Hot rolled dry, Coil, S355MC, YMPRESS WG S:01-2010. Mill edges. Inspect test. Suitable for: Part galvanizing, Cutting into sheet. Tolerance EN 10051 : 2010 (E) (Width tolerance +20/-0 mm) Dev.Tol. (Thickness tolerance +0.22/-0.22 mm). PRODUCE AND TEST ACCORDING TO EN 10149-2 Country of melt and pour: The Netherlands	
C70 STEEL MAKING PROCESS: BO		B09, B10, B11 Dimensions 1500 mm X 15 mm
B13 Total Mass KG 31640		B08 Total NR. 1
All Dispatch Nota 75974		A10 Transport ROSALIE

Buigproef/Bend test/Biegeversuch/Test de flexion : 'goed/good/gut/concluant' C50

PROD-IDENT: 2957029 MASS KG: 31640 NR: 1 CAST NR: S0505 B07, B08, B13

TENSILE TEST C10-29

C01	C01/C02	C10	C03 Temp (°C)	C11 Rp0.2 (MPa)	C12 Rm (MPa)	C13 A (%)	C16 Rp0.2/Rm (%)
Bottom Middle	Surface Longitudinal	Prismatical	+20	395	529	27.0	75

IMPACT TEST AND OTHER TESTS C40, C60, C65

C01	C01/C02	C10	C03 Temp °C	B05	C41 mm	C40, C60, C65	C44	C42 ind.	C42 ind.	C42 ind.	C43 mean
Bottom Middle	Surface Longitudinal	Prismatical	-20	0	10.0	ISO-V	J	319	315	335	323

CHEMICAL COMPOSITION (in %)

B07 CAST NR.	C71 C	C72 Mn	C73 P	C74 S	C75 Si	C76 Al	C77 Cu	C78 Cr	C79 Ni	C80 Mo	C81 Nb
S0505	0.057	1.315	0.013	0.004	0.011	0.040	0.008	0.021	0.018	0.003	0.034
CAST NR.	C82 V	C83 N	C84 B	C85 Ti	C86 Sn	C87 Al_2O	C88 C-eq1				
S0505	0.002	.0041	.0000	0.001	0.001	0.037	.283				

C-eq1: C + Mn/6 + (Cr + Mo + V)/5 + (Ni + Cu)/15

We hereby confirm that we comply to the terms of our order acknowledgement and any agreed concessions.

Tata Steel IJmuiden BV

Jeffrey Flemming
Manager Mechanical Testing
IJmuiden, 4 February 2021

Jeffrey Flemming

Page 1 of 1 201.202

A01 Tata Steel IJmuiden BV Wenckebachstraat 1 1951 JZ Velsen Noord Postbus 10000 1970 CA IJmuiden The Netherlands Telephone: 0251-492110 Company Trade Register 34040331 E-mail: info.testing@tatasteeleurope.com	A03 Doc nr. 2021027660 00		A04 TATA STEEL
	A02 Inspection certificate 3.1, EN10204.		
	A07, A09 Reference 4500035855 11001475 00010	A08 Order nr. 57614 A	
A06 Customer/Consignee NAANTALI STEEL SERVICE CENTRE OY RAUTAKATU 5 21110 NAANTALI FINLAND	B01,B02,B03,B04,B15 Hot rolled pickled, Coil, S355MC, YMPRESS WG S:01-2010, 1.00 G/M2/Side oiled, Mill edges, Tolerance EN 10051 : 2010 (E) (Width tolerance +20/-0 mm) Dev.Tol. (Thickness tolerance +0.15/-0.15 mm). Country of melt and pour: The Netherlands		C70 STEEL MAKING PROCESS: BO
	B09,B10,B11 Dimensions 1500 mm X 5 mm		B13 Total Mass KG 108005
			B08 Total NR. 10
			A10 Transport LINDBERG

Buigproef/Bend test/Biegeversuch/Test de flexion : 'goed/good/gut/concluant' C50

PROD-IDENT: 828163 MASS KG: 10301 NR: 1 CAST NR: S2659 B07,B08,B13

TENSILE TEST								C10-29
C01	C01/C02	C10	C03	C11	C12	C13	C16	
			Temp (°C)	ReH (MPa)	Rm (MPa)	A (%)	ReH/Rm (%)	
Bottom Middle	Surface Longitudinal	Prismatical	+20	396	476	34.5	83	

PROD-IDENT: 828162 MASS KG: 10311 NR: 1 CAST NR: S2659 B07,B08,B13

TENSILE TEST								C10-29
C01	C01/C02	C10	C03	C11	C12	C13	C16	
			Temp (°C)	ReH (MPa)	Rm (MPa)	A (%)	ReH/Rm (%)	
Bottom Middle	Surface Longitudinal	Prismatical	+20	396	476	34.5	83	

PROD-IDENT: 828161 MASS KG: 10051 NR: 1 CAST NR: S2659 B07,B08,B13

TENSILE TEST								C10-29
C01	C01/C02	C10	C03	C11	C12	C13	C16	
			Temp (°C)	ReH (MPa)	Rm (MPa)	A (%)	ReH/Rm (%)	
Bottom Middle	Surface Longitudinal	Prismatical	+20	391	473	34.5	83	

PROD-IDENT: 828160 MASS KG: 10291 NR: 1 CAST NR: S2659 B07,B08,B13

TENSILE TEST								C10-29
C01	C01/C02	C10	C03	C11	C12	C13	C16	
			Temp (°C)	ReH (MPa)	Rm (MPa)	A (%)	ReH/Rm (%)	
Bottom Middle	Surface Longitudinal	Prismatical	+20	391	473	34.5	83	

PROD-IDENT: 828159 MASS KG: 10301 NR: 1 CAST NR: S2659 B07,B08,B13

TENSILE TEST								C10-29
C01	C01/C02	C10	C03	C11	C12	C13	C16	
			Temp (°C)	ReH (MPa)	Rm (MPa)	A (%)	ReH/Rm (%)	
Bottom Middle	Surface Longitudinal	Prismatical	+20	391	473	34.5	83	

We hereby confirm that we comply to the terms of our order acknowledgement and any agreed concessions.

Tata Steel IJmuiden BV

Jeffrey Flemming
Manager Mechanical Testing
IJmuiden, 6 March 2021



A01 Tata Steel IJmuiden BV Wenckebachstraat 1 1951 JZ Velsen Noord Postbus 10000 1970 CA IJmuiden The Netherlands Telephone: 0251-492110 Company Trade Register 34040331 E-mail: info.testing@tatasteleurope.com	A03 Doc nr. 2021027660 00		A04 TATA STEEL
	A02 Inspection certificate 3.1, EN10204.		
	A07, A09 Reference 4500035855 11001475 00010	A08 Order nr. 57614 A	

PROD-IDENT: 828158		MASS KG: 10041		NR: 1		CAST NR: S2657		B07,B08,B13	
TENSILE TEST									C10-29
C01	C01/C02	C10	C03	C11	C12	C13	C16		
			Temp (°C)	ReH (MPa)	Rm (MPa)	A (%)	ReH/Rm (%)		
Bottom Middle	Surface Longitudinal	Prismatical	+20	370	461	35.5	80		

PROD-IDENT: 828157		MASS KG: 10291		NR: 1		CAST NR: S2657		B07,B08,B13	
TENSILE TEST									C10-29
C01	C01/C02	C10	C03	C11	C12	C13	C16		
			Temp (°C)	ReH (MPa)	Rm (MPa)	A (%)	ReH/Rm (%)		
Bottom Middle	Surface Longitudinal	Prismatical	+20	370	461	35.5	80		

PROD-IDENT: 828155		MASS KG: 10301		NR: 1		CAST NR: S2657		B07,B08,B13	
TENSILE TEST									C10-29
C01	C01/C02	C10	C03	C11	C12	C13	C16		
			Temp (°C)	ReH (MPa)	Rm (MPa)	A (%)	ReH/Rm (%)		
Bottom Middle	Surface Longitudinal	Prismatical	+20	370	461	35.5	80		

PROD-IDENT: 821543		MASS KG: 12869		NR: 1		CAST NR: S0538		B07,B08,B13	
TENSILE TEST									C10-29
C01	C01/C02	C10	C03	C11	C12	C13	C16		
			Temp (°C)	ReH (MPa)	Rm (MPa)	A (%)	ReH/Rm (%)		
Bottom Middle	Surface Longitudinal	Prismatical	+20	382	468	35.0	82		

PROD-IDENT: 821542		MASS KG: 13248		NR: 1		CAST NR: S0538		B07,B08,B13	
TENSILE TEST									C10-29
C01	C01/C02	C10	C03	C11	C12	C13	C16		
			Temp (°C)	ReH (MPa)	Rm (MPa)	A (%)	ReH/Rm (%)		
Bottom Middle	Surface Longitudinal	Prismatical	+20	382	468	35.0	82		


CHEMICAL COMPOSITION in %											
B07 CAST NR.	C71 C	C72 Mn	C73 P	C74 S	C75 Si	C76 Al	C77 Cu	C78 Cr	C79 Ni	C80 Mo	C81 Nb
S2659	0.069	0.490	0.010	0.006	0.007	0.033	0.005	0.017	0.017	0.001	0.027
S2657	0.070	0.492	0.015	0.006	0.006	0.033	0.005	0.021	0.016	0.001	0.023
S0538	0.080	0.509	0.012	0.006	0.008	0.029	0.006	0.026	0.017	0.002	0.024
CAST NR.	C82 V	C83 N	C84 B	C85 Ti	C86 Sn	C87 Al_ZO	C88 C-eq1				
S2659	0.002	.0028	.0000	0.001	0.000	0.032	.156				
S2657	0.002	.0025	.0000	0.001	0.001	0.031	.158				
S0538	0.002	.0032	.0001	0.001	0.001	0.027	.172				

C-eq1: C + Mn/6 + (Cr + Mo + V)/5 + (Ni + Cu)/15

We hereby confirm that we comply to the terms of our order acknowledgement and any agreed concessions.

Tata Steel IJmuiden BV

Jeffrey Flemming
Manager Mechanical Testing



IJmuiden, 6 March 2021

A01 Tata Steel IJmuiden BV Wenckebachstraat 1 1951 JZ Velsen Noord Postbus 10000 1970 CA IJmuiden The Netherlands Telephone: 0251-492110 Company Trade Register 34040331 E-mail: info.testing@tatasteeleurope.com	A03 Doc nr. 2021027657 00	A04 TATA STEEL
	A02 Inspection certificate 3,1, EN10204.	
A06 Customer/Consignee NAANTALI STEEL SERVICE CENTRE OY RAUTAKATU 5 21110 NAANTALI FINLAND	A07, A09 Reference 4500034290 11001475 00010	A08 Order nr. 56496 A
	B01,B02,B03,B04,B15 Hot rolled pickled, Coil, S355MC, YMPRESS WG S:01-2010, 1.00 G/M2/Side oiled, Mill edges. Tolerance EN 10051 : 2010 (E) (Width tolerance +20/-0 mm) Dev.Tol. (Thickness tolerance +0.15/-0.15 mm), Country of melt and pour: The Netherlands	
		C70 STEEL MAKING PROCESS: BO
		B09,B10,B11 Dimensions 1500 mm X 5 mm
		B13 Total Mass KG 55551
		B08 Total NR. 4
		A11 Dispatch Note 85051
		A10 Transport LINDBERG

Buigproef/Bend test/Biegeversuch/Test de flexion : 'goed/good/gut/concluant' C50

PROD-IDENT: 821538	MASS KG: 12849	NR: 1	CAST NR: S0538	B07,B08,B13
TENSILE TEST				C10-29
C01	C01/C02	C10	C03	C11
			Temp (°C)	ReH (MPa)
Bottom Middle	Surface Longitudinal	Prismatical	+20	388
				C12
				Rm (MPa)
				465
				C13
				A (%)
				28.5
				C16
				ReH/Rm (%)
				83

PROD-IDENT: 821537	MASS KG: 13208	NR: 1	CAST NR: S0538	B07,B08,B13
TENSILE TEST				C10-29
C01	C01/C02	C10	C03	C11
			Temp (°C)	ReH (MPa)
Bottom Middle	Surface Longitudinal	Prismatical	+20	388
				C12
				Rm (MPa)
				465
				C13
				A (%)
				28.5
				C16
				ReH/Rm (%)
				83

PROD-IDENT: 821536	MASS KG: 14697	NR: 1	CAST NR: S0530	B07,B08,B13
TENSILE TEST				C10-29
C01	C01/C02	C10	C03	C11
			Temp (°C)	ReH (MPa)
Bottom Middle	Surface Longitudinal	Prismatical	+20	396
				C12
				Rm (MPa)
				474
				C13
				A (%)
				34.0
				C16
				ReH/Rm (%)
				84

PROD-IDENT: 819275	MASS KG: 14797	NR: 1	CAST NR: S1177	B07,B08,B13
TENSILE TEST				C10-29
C01	C01/C02	C10	C03	C11
			Temp (°C)	ReH (MPa)
Bottom Middle	Surface Longitudinal	Prismatical	+20	389
				C12
				Rm (MPa)
				469
				C13
				A (%)
				34.5
				C16
				ReH/Rm (%)
				83

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Tata Steel IJmuiden BV

Jeffrey Flemming
Manager Mechanical Testing

Jeffrey Flemming

IJmuiden, 6 March 2021

A01 Tata Steel IJmuiden BV Wenckebachstraat 1 1951 JZ Velsen Noord Postbus 10000 1970 CA IJmuiden The Netherlands Telephone: 0251-492110 Company Trade Register 34040331 E-mail: info.testing@tatasteeleurope.com	A03 Doc nr. 2021027657 00		A04 TATA STEEL
	A02 Inspection certificate 3.1, EN10204.		
	A07, A09 Reference 4500034290 11001475 00010	A08 Order nr. 56496 A	

CHEMICAL COMPOSITION in %												
B07 CAST NR.	C71 C	C72 Mn	C73 P	C74 S	C75 Si	C76 Al	C77 Cu	C78 Cr	C79 Ni	C80 Mo	C81 Nb	
S0538	0.080	0.509	0.012	0.006	0.008	0.029	0.006	0.026	0.017	0.002	0.024	
S0530	0.074	0.512	0.012	0.007	0.008	0.036	0.009	0.022	0.016	0.001	0.026	
S1177	0.070	0.487	0.019	0.006	0.006	0.025	0.005	0.021	0.018	0.001	0.025	
CAST NR.	C82 V	C83 N	C84 B	C85 Ti	C86 Sn	C87 Al_ZO	C88 C-eq1					
S0538	0.002	.0032	.0001	0.001	0.001	0.027	.172					
S0530	0.002	.0031	.0000	0.001	0.001	0.035	.166					
S1177	0.003	.0022	.0000	0.001	0.001	0.024	.158					
C-eq1: C + Mn/6 + (Cr + Mo + V) / 5 + (Ni + Cu) / 15												

We hereby confirm that we comply to the terms of our order acknowledgement and any agreed concessions.

Tata Steel IJmuiden BV

Jeffrey Flemming
Manager Mechanical Testing



IJmuiden, 6 March 2021

TATA STEEL
 ZIM
 Inspection certificate 3.1, EN10204.
 45000033649
 MDA
 550001067
 11008864
 407.407 Reference
 405 Doc. nr
 2021009575 00
 Hot rolled pickled, Coil, S355MC, YMPRESS WG S:01-2010.
 1.00 G/M2/Side oiled.
 Mill edges.
 Impact test.
 Suitable for: Part galvanising, Cutting into sheet.
 Tolerance EN 10051 : 2010 (E) (Width tolerance +20/-0 mm) Dev.Tol. (Thickness tolerance +0.19/-0.19 mm).
 PRODUCE AND TEST ACCORDING TO EN 10149-2
 Country of melt and pour : The Netherlands.

408 Order nr. 56525 A
 411 Dispatch note 70387
 410 Transport SEMPOST
 412 Customer/Compliment
 SERVICE CENTRE MAASTRICHT B.V.
 B.U. FEIJEN
 POSTBUS 10.000
 1970 CA IJMUIDEN
 NOORDHOLLAND

413 Dispatch note 70387
 414 Reference
 415 Dimensions
 1500 mm X 10.00 mm

TENSILE TEST										IMPACT TEST AND OTHER TESTS														
PROB. IDENT	PROD. IDENT	MASS kg	NR	CAST NR.	SA1	SA2	SA3	SA4	SA5	SA6	SA7	SA8	SA9	SA10	SA11	SA12	SA13	SA14	SA15					
6068591	R7788	28040	1	R7788	32	1L	P	32	1L	P	490	30.5	81	1L	P	0	7.5	ISO-V	-20	2	195	201	195	197
6068882	R7794	31820	1	R7794	32	1L	P	32	1L	P	481	30.0	79	1L	P	0	7.5	ISO-V	-20	2	211	188	212	204
6068601	R7799	27700	1	R7799	32	1L	P	32	1L	P	484	30.5	80	1L	P	0	7.5	ISO-V	-20	2	207	211	150	189
TOTAL		87560	3																					

416 1: J/cm²
 417 2: J
 418 3: Later. exp. (mm)
 419 4: Contraction (%)
 420 5: Shear area (%)

CHEMICAL COMPOSITION in %												
CAST NR	PROD. IDENT	C	Mn	P	S	Si	Al	Cu	Cr	Ni	Mo	Nb
R7788		0.078	0.985	0.012	0.005	0.010	0.032	0.008	0.020	0.017	0.002	0.023
R7794		0.076	1.040	0.013	0.006	0.008	0.029	0.008	0.020	0.016	0.003	0.023
R7799		0.074	1.018	0.015	0.004	0.009	0.033	0.007	0.031	0.016	0.002	0.023

421 Ti
 422 Al-Zn
 423 Sn
 424 C-eq
 425 N
 426 B
 427 C-eq
 428 A1-Zn
 429 Sn
 430 Ti
 431 C-eq

432 Stamp of the expert :
 433 Tata Steel IJmuiden BV
 434 JEFFREY FLEMING
 435 MGR. MECH. TESTING
 436 JEFFREY FLEMING
 437 IJMUIDEN, 25 JANUARI 2021
 438 STEELMAKING PROCESS: 80 Page 1 of 1
 439 We hereby confirm that we comply to the terms of our order acknowledgement and any agreed concessions
 440 0149975E