

Order No. : 01S3858620

PO No. : 01S3858620

Supplier : HANWHA CORPORATION

Commodity : PLATE

Customer : DUFERCO S.A.

Spec & Type : EN10025-2 S355J2+N

UT 20.1.00566
GR44921(Su)
ONIRAM, LDA
DEP. QUALIDADE
RECEPÇÃO

Size	Product No.	Quantity	Weight (kg)	Heat No.	Position	Tensile Test			Impact Test		Division	Chemical Composition													
						YP (MPa)	TS (%)	EL (%)	V Notch -20°C Energy (Joule)	C (%)		Si (%)	Mn (%)	P (%)	S (%)	Cr (%)	Ni (%)	B (ppm)	Cu (%)	Mo (%)	N (ppm)	Nb (%)	Ti (%)	V (%)	
15x2500x6000	PP33748001-8008	8	14,136	SB64085	T	461	561	31	1: 256 2: 250 3: 230 A: 245	L	0.1507	0.365	1.392	0.0111	0.0023	0.026	0.008	1	0.009	0.003	36	0.024	0.0135	0.003	
											P	0.1491	0.360	1.391	0.0097	0.0022	0.024	0.007	1	0.009	0.002	32	0.022	0.0130	0.002
15x2500x6000	PP33747901-7905	5	8,835	SB64089	T	454	564	33	1: 293 2: 254 3: 255 A: 267	L	0.1499	0.356	1.391	0.0101	0.0017	0.023	0.010	1	0.010	0.003	41	0.025	0.0132	0.003	
											P	0.1457	0.360	1.412	0.0101	0.0013	0.023	0.011	1	0.010	0.002	33	0.023	0.0134	0.002
15x2500x6000	PP34041601-1608	8	14,136	SU37146	T	456	573	29	1: 167 2: 171 3: 167 A: 168	L	0.1579	0.346	1.400	0.0128	0.0020	0.015	0.007	2	0.017	0.002	31	0.025	0.0122	0.003	
											P	0.1532	0.333	1.373	0.0125	0.0024	0.016	0.008	1	0.016	0.003	27	0.023	0.0116	0.002
*** Sub Total (020) ***		29	51,243 (kg)																						
*** Heat Treatment ==> Normalizing rolling ***												CEQ (G) = C + Mn/6 + (Ni + Cu)/15 + (Cr + Mo + V)/5													
20x2500x12000	PP33612201	1	4,710	SU36129	T	438	546	30	1: 270 2: 287 3: 276 A: 278	L	0.1516	0.343	1.392	0.0076	0.0022	0.013	0.008	3	0.013	0.002	28	0.024	0.0143	0.001	
											P	0.1487	0.342	1.392	0.0086	0.0021	0.015	0.007	2	0.011	0.002	32	0.024	0.0134	0.002
20x2500x12000	PP33612101-2104	4	18,840	SU36333	T	435	555	31	1: 279 2: 264 3: 263 A: 269	L	0.1598	0.353	1.374	0.0147	0.0020	0.015	0.006	4	0.012	0.001	43	0.024	0.0132	0.002	
											P	0.1570	0.349	1.382	0.0142	0.0021	0.014	0.007	1	0.012	0.002	38	0.023	0.0132	0.002
*** Sub Total (030) ***		5	23,550 (kg)																						
*** Heat Treatment ==> Normalizing rolling ***												CEQ (G) = C + Mn/6 + (Ni + Cu)/15 + (Cr + Mo + V)/5													

* Position - T : Top, M : Middle, B : Bottom

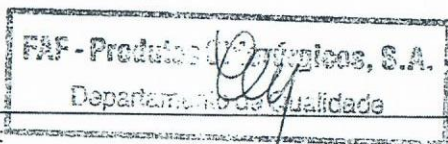
* Tensile Test. Direction : Transversal, Gauge Length : 5.65 √A₀. (Rectangular), YP Method : Upper Point

* Impact Test. Direction : Surface Longitudinal, Full-Size : 10mmX10mm

* Division - L : Ladle Analysis, P : Products Analysis

* Supply Condition : As-Rolled unless otherwise Heat Treated.

We hereby certify that the material herein has been made in accordance with the order and above specification. This material has been fully killed and made by basic oxygen process. This material is fine grained steel. This material has been made by vacuum degassing process. No repair welding was performed to the products. Test Certificate is issued according to EN10204 3.1. Melted and Manufactured in Republic of Korea



Legal sanction can be imposed on forging. Improper use of product can cause safety issues.

CE 0038/CPR/MUM/1210003/1 Surveyor To

Ko Jae Gon

Order No. : 01S3858620

PO No. : 01S3858620

Supplier : HANWHA CORPORATION

Commodity : PLATE

Customer : DUFERCO S.A.

Spec & Type : EN10025-2 S355J2+N

Product No.	Division	Sol-Al	CEQ		
		(%)	(%)		
PP33748001-8008	L	0.033	0.39		
	P	0.033			
PP33747901-7905	L	0.035	0.39		
	P	0.034			
PP34041601-1608	L	0.031	0.40		
	P	0.029			
*** Sub Total (020) ***			29	51,243 (kg)	
$CEQ (G) = C + Mn/6 + (Ni + Cu)/15 + (Cr + Mo + V)/5$					
PP33612201	L	0.029	0.39		
	P	0.027			
PP33612101-2104	L	0.031	0.39		
	P	0.032			
*** Sub Total (030) ***			5	23,550 (kg)	
$CEQ (G) = C + Mn/6 + (Ni + Cu)/15 + (Cr + Mo + V)/5$					



We hereby certify that the material herein has been made in accordance with the order and above specification. This material has been fully killed and made by basic oxygen process. This material is fine grained steel. This material has been made by vacuum degassing process. No repair welding was performed to the products. Test Certificate is issued according to EN10204 3.1. Melted and Manufactured in Republic of Korea

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