

# Mill Test Certificate

Order No. : Q8S1025865

PO No. : HS-SZ-220331-02

Supplier : HYOSUNG TNC CORPORATION

Commodity : HOT ROLLED PLATE

Customer : SMID

Spec & Type : EN10025-2 S355K2 N(NR) GA

Size	Product No.	Quantity	Weight (kg)	Heat No.	Position	Tensile Test			Impact Test		U.S.T	Division	Chemical Composition												
						YP (MPa)	TS (%)	EL (%)	V Notch -20 °C Energy (Joule)	C (%)			Si (%)	Mn (%)	P (%)	S (%)	Cr (%)	Ni (%)	Cu (%)	Mo (%)	N (ppm)	Nb (%)	Ti (%)	V (%)	
30x2000x6000	PK96887003	1	2,826	SK80738	T	396	537	28	1: 237	Good	L	0.1565	0.202	1.541	0.0124	0.0039	0.013	0.005	0.013	0.002	29	0.029	0.0128	0.005	
									2: 209			P	0.1523	0.204	1.551	0.0126	0.0041	0.013	0.005	0.013	0.002	37	0.029	0.0130	0.005
30x2000x6000	PK96887901	1	2,826	SK80739	T	396	538	27	1: 137	Good	L	0.1548	0.210	1.552	0.0127	0.0034	0.014	0.005	0.013	0.002	32	0.030	0.0133	0.005	
									2: 169			P	0.1579	0.208	1.556	0.0119	0.0040	0.014	0.005	0.013	0.002	37	0.028	0.0128	0.005
30x2000x6000	PK96887903	1	2,826	SK80739	T	396	538	27	1: 137	Good	L	0.1548	0.210	1.552	0.0127	0.0034	0.014	0.005	0.013	0.002	32	0.030	0.0133	0.005	
									2: 169			P	0.1579	0.208	1.556	0.0119	0.0040	0.014	0.005	0.013	0.002	37	0.028	0.0128	0.005
30x2000x6000	PK96888001	1	2,826	SK80739	T	396	538	27	1: 137	Good	L	0.1548	0.210	1.552	0.0127	0.0034	0.014	0.005	0.013	0.002	32	0.030	0.0133	0.005	
									2: 169			P	0.1579	0.208	1.556	0.0119	0.0040	0.014	0.005	0.013	0.002	37	0.028	0.0128	0.005
30x2000x6000	PK96888003	1	2,826	SK80739	T	396	538	27	1: 137	Good	L	0.1548	0.210	1.552	0.0127	0.0034	0.014	0.005	0.013	0.002	32	0.030	0.0133	0.005	
									2: 169			P	0.1579	0.208	1.556	0.0119	0.0040	0.014	0.005	0.013	0.002	37	0.028	0.0128	0.005
30x2000x6000	PK96888201	1	2,826	SK80739	T	396	538	27	1: 137	Good	L	0.1548	0.210	1.552	0.0127	0.0034	0.014	0.005	0.013	0.002	32	0.030	0.0133	0.005	
									2: 169			P	0.1579	0.208	1.556	0.0119	0.0040	0.014	0.005	0.013	0.002	37	0.028	0.0128	0.005
30x2000x6000	PK96888203	1	2,826	SK80739	T	396	538	27	1: 137	Good	L	0.1548	0.210	1.552	0.0127	0.0034	0.014	0.005	0.013	0.002	32	0.030	0.0133	0.005	
									2: 169			P	0.1579	0.208	1.556	0.0119	0.0040	0.014	0.005	0.013	0.002	37	0.028	0.0128	0.005

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

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

\* Impact Test. Direction : Surface Longitudinal, Full-Size : 10 mmX10 mm

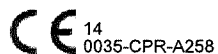
\* U.S.T : Ultrasonic Test.

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

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

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 ISO 10474/EN 10204 3.1. We hereby certify that the material herein has been made in accordance with PED2014/68/EU and AD2000-W0 / AD2000-W1:2006 (Certificate No. 01 202 ROK/Q-16 0081).

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



Surveyor To :

KP001 Choi Jong Seog



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Supplier : HYOSUNG TNC CORPORATION

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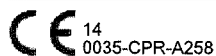
Customer : SMID

Spec & Type : EN10025-2 S355K2 N(NR) GA

Product No.	Division	Sol-Al	Total-Al	CEQ
		(%)	(%)	(%)
PK96887003	L	0.043	0.045	0.42
	P	0.042	0.043	
PK96887901	L	0.036	0.038	0.42
	P	0.036	0.037	
PK96887903	L	0.036	0.038	0.42
	P	0.036	0.037	
PK96888001	L	0.036	0.038	0.42
	P	0.036	0.037	
PK96888003	L	0.036	0.038	0.42
	P	0.036	0.037	
PK96888201	L	0.036	0.038	0.42
	P	0.036	0.037	
PK96888203	L	0.036	0.038	0.42
	P	0.036	0.037	

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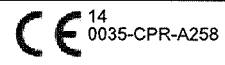
Spec & Type : EN10025-2 S355K2 N(NR) GA

Product No.	Ultrasonic Test						Remarks
	Examination Method	Apparatus	Transducer	Frequency (MHz)	Sensitivity	Test Result	
PK96887003	2	1	1	5	H	1	1. Application Spec. : EN10160(1999) S1/E1  2. We hereby certify that the material described herein has been examined in accordance with above ultrasonic specification and fully conformed thereto.
PK96887901	2	1	1	5	H	1	
PK96887903	2	1	1	5	H	1	
PK96888001	2	1	1	5	H	1	
PK96888003	2	1	1	5	H	1	
PK96888201	2	1	1	5	H	1	
PK96888203	2	1	1	5	H	1	

\* Couplant : Water  
 \* Examination method(1:Direct straight Beam, 2:Direct double beam, 3:Others)  
 \* Apparatus(1 : Digital Flaw Detector, 2: Others)  
 \* Transducer(1: φ 20 mm, 2: φ 24 mm, 3: φ 25 mm or 25 mm square, 4: φ 30 mm, 5:8~12.5 mm, 9:others)  
 \* Sensitivity(A:RB-D-1<sub>0</sub>=50 %+10DB, B:STB-N<sub>1</sub>=50 %, C:STB-N<sub>1</sub>=70 %, D:STB-G.V<sub>1.5-4.0</sub>=50 %, E:STB-G.V<sub>1.5-4.0</sub>=80 %, F:STB-G.V<sub>1.5-2.8</sub>=50 %, G:BG=75±5 %, H: φ 5.0 mmDAC, I: φ 11.0 mmDAC, J: φ 8.0 mmDAC, K:GB-T2970 Sensitivity, L:B<sub>G</sub>=100 %, M: φ 5.0 mmFBH=60 %, N:Soviet 75ATM Sens., O:BS5996-93 Sens, P: φ 6.0 mmDAC, X:Others)  
 \* Test Result ( 1: Good, 2: Acceptable )

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 ISO 10474/EN 10204 3.1. We hereby certify that the material herein has been made in accordance with PED2014/68/EU and AD2000-W0 / AD2000-W1:2006 (Certificate No. 01 202 ROK/Q-16 0081).

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