

Contract No.	
Customer	HYUNDAI CORPORATION
L/C No.	
P/O No.	32201601C121
Commodity	H-BEAM
Specification	ASTM A572 G50/A992/CSA G 40.21-13 50WM(345WM)

# INSPECTION CERTIFICATE



Head Office	63, Jungbong-daero, Dong-gu, Incheon, 401-712, S. Korea
Certificate No.	IH20160201769 - 3
Class Cert. No.	
Date of Issue	2016-02-16

EN 10204(2004) TYPE 3.1

Dimensions & Length	Heat No.	Pieces Weights (kg)	Chemical Composition (%)											Tensile Test			Yield Ratio	Impact Test (V-notch)				Remarks (Impact Specimen Size)
			C	Si	Mn	P	S	Cu Ni	Mo Cr	Al V	Nb	Sn	CE <sup>(1)</sup>	Tensile Strength	Yield point	Elongation <sup>(2)</sup>		AVG	1	2	3	
			×100			×1000			×100			×1000		×100	N/mm <sup>2</sup>			%	(°)	°C		
10X5-3/4X30 40.00 FT	D 132304	24 13,056	17	16	59	22	4	24 9	2 14	3 2	17	11	32	525 534	393 398	26.5 26.0	0.75 0.74					
10X8X39 40.00 FT	D 132364	18 12,744	16	15	58	27	3	28 9	2 17	3 2	14	12	32	521 524	411 414	24.5 24.0	0.79 0.79					
12X8X40 40.00 FT	E 187571	20 14,520	18	14	64	22	9	22 7	2 13	2 13	1	8	34	523 516	391 392	26.0 26.5	0.75 0.76					
12X8X40 40.00 FT	E 187572	8 5,808	18	19	66	21	6	24 9	2 15	3 14	1	13	35	526 527	418 422	25.5 26.0	0.80 0.80					
12X8X45 40.00 FT	D 131665	1 816	16	14	59	24	5	23 8	2 16	3 3	16	10	32	513 520	382 383	26.5 26.0	0.74 0.74					
12X8X45 40.00 FT	E 187576	37 30,192	18	16	64	22	11	18 8	2 20	2 14	1	9	35	567 561	440 437	23.0 22.5	0.78 0.78					
12X8X45 40.00 FT	E 187577	10 8,160	18	16	67	23	8	21 10	2 17	4 14	1	16	35	576 574	443 442	22.5 22.0	0.77 0.77					
12X8X50 40.00 FT	E 187579	16 14,512	18	14	69	30	10	19 8	2 17	2 15	2	10	35	528 524	382 378	25.0 25.5	0.72 0.72					
12X8X50 40.00 FT	E 187580	7 6,349	19	15	65	25	9	19 10	2 14	3 15	1	11	35	518 514	378 374	25.5 26.0	0.73 0.73					
SUB TOTAL		141 106,157																				

(Note) (1) Ceq: (CE=C+Mn/6+Cr/5+V/5+Mo/5+Ni/15+Cu/15)

(2) Gauge length : 200 mm

(3) Yield Ratio = YP/TS

**J. C. Ahn**  
General Manager of Q.A Team

WE HEREBY CERTIFY THAT THE MATERIAL HAS BEEN MADE AND TESTED IN ACCORDANCE WITH THE ABOVE SPECIFICATION AND ALSO WITH THE REQUIREMENTS CALLED FOR THE ABOVE ORDER