MILL TEST CERTIFICATE

Contract No.	
Customer	DUFERCO
L/C No.	
P/O No.	32201308C100
Commodity	H-BEAM
Specification	ASTM A572 G50/A992/ CSA 350W

HYUNDAI STEEL

Head Office	1, Songhyeon-dong, Dong-gu, Incheon, 401-712, S. Korea
Certificate No.	IH20131001430 - 1
Class Cert. No.	
Date of Issue	2013-10-10

Dimensions & Length	Heat No.	Pieces / Weights (kg)	Chemical Composition (%) C	Si	Mn	P	S	Cu / Ni	Mo / Cr	Al / V	Nb	Sn	CE(1)	Tensile Test: Tensile Strength	Yield point	Elongation(2)	Yield Ratio	Impact Test (V-notch) AVG	1	2	3	Remarks (Impact Specimen Size)
			×100		×1000			×100			×1000		×100	N/mm²		%		(°)	°C			
18X11X97 40.00 FT	E 169890	3 5,280	17	15	89	82	11	32 9	2 10	3 15	5	13	37	541.3 539.4	409.9 405.0	26.0 26.0	0.76 0.75					
18X11X97 40.00 FT	E 169891	24 42,240	18	15	73	33	15	26 8	2 16	3 15	7	12	36	515.8 519.8	377.6 374.6	26.5 26.0	0.73 0.72					
18X11X97 40.00 FT	E 169892	9 15,840	17	18	75	33	11	25 7	2 11	4 17	7	10	35	522.7 526.6	393.2 390.3	26.0 25.5	0.75 0.74					
TOTAL		36 63,360	====== E N D ======																			

(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

K. S. Shim

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