MILL TEST CERTIFICATE

Contract No.	
Customer	DUFERCO
L/C No.	
P/O No.	32201207CF02
Commodity	H-BEAM
Specification	ASTM A36/A572 G50/A992/ CSA350W

HYUNDAI STEEL

Head Office	1, Songhyeon-dong, Dong-gu, Incheon, 401-712, S. Korea
Certificate No.	IH20120901288 - 17
Class Cert. No.	
Date of Issue	2012-09-11

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(1)	Tensile Strength	Yield point	Elongation(2)		AVG	1	2	3	
			×100			×1000		×100		×1000			×100	N/mm²		%		(°)	°C			
24X7X55 40.00 FT	E 161548	2 1,996	17	16	62	29	12	22 9	2 11	4	12	15	32	547.2 543.3	429.5 425.6	24.5 24.0	0.78 0.78					
24X7X55 40.00 FT	E 161553	1 998	17	14	67	30	15	26 10	2 12	5	11	11	33	534.5 538.4	401.1 404.0	26.0 25.5	0.75 0.75					
24X7X62 40.00 FT	E 161550	28 31,500	19	14	62	30	13	25 10	2 11	4	11	13	34	546.2 541.3	418.7 413.8	24.5 25.0	0.77 0.76					
24X7X62 40.00 FT	E 161551	16 18,000	19	17	66	29	13	29 9	2 10	5	14	14	35	545.2 541.3	427.6 424.6	25.0 24.5	0.78 0.78					
24X7X62 40.00 FT	E 161552	12 13,500	18	15	62	32	14	26 10	2 9	4	13	11	33	544.3 539.4	422.7 419.7	25.0 25.5	0.78 0.78					
TOTAL		5,134 2,653,411												======END======								

(Note) (1) Ceq: (CE=C+Mn/6+Cr/5+V/50+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