

MILL TEST CERTIFICATE

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

H HYUNDAI STEEL	
Head Office	1, Songhyeon-dong, Dong-gu, Incheon, 401-712, S. Korea
Certificate No.	IH20120901288 - 15
Class Cert. No.	
Date of Issue	2012-09-11

Dimensions & Length	Heat No.	Pieces Weights (kg)	Chemical Composition (%)											Tensile Test			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⁾	Yield Ratio	AVG	1	2		3
			×100		×1000		×100		×1000		×100		N/mm ²		%		()	°C				
24X9X76 40.00 FT	N 017293	11 15,169	19	16	65	33	17	28 9	1 17	3	14	13	36	537.4	413.8	25.5	0.77					
24X9X76 40.00 FT	N 017294	4 5,516	18	18	67	29	20	28 9	3 14	4	15	14	35	549.2	431.5	25.0	0.79					
24X9X84 40.00 FT	N 017257	3 4,572	19	20	68	26	19	24 12	2 9	4	15	12	35	522.7	387.4	27.0	0.74					
24X9X84 40.00 FT	N 017258	13 19,812	18	18	81	24	20	20 10	2 14	3	20	10	37	541.3	396.2	25.0	0.73					
24X9X84 40.00 FT	N 017259	5 7,620	18	15	69	25	16	24 10	3 11	2	15	14	35	543.3	402.1	24.5	0.74					
24X9X84 40.00 FT	N 017267	5 7,620	18	18	67	33	17	25 10	2 10	3	14	12	34	523.7	381.5	24.5	0.73					
24X9X84 40.00 FT	N 017268	25 38,100	19	20	64	25	17	24 10	2 13	2	16	11	35	526.6	382.5	25.0	0.73					
24X9X84 40.00 FT	N 017269	12 18,288	18	19	69	26	19	23 11	2 11	2	14	12	34	530.5	389.3	25.5	0.73					
24X9X103 40.00 FT	N 017256	22 41,030	20	21	70	27	20	25 10	2 11	3	18	12	37	529.6	388.3	25.5	0.73					
SUB TOTAL		100 157,727																				

(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	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
General Manager of Q.A Team	