

Contract No.	
Customer	COUTINHO&FERROSTAAL
L/C No.	
P/O No.	32201207CV02
Commodity	H-BEAM
Specification	ASTM A36/A572 G50/A992/ CSA350W

MILL TEST CERTIFICATES

HYUNDAI STEEL	
Head Office	444, Songnae-dong, Nam-gu, Pohang, S. Korea
Certificate No.	IH20120800845 - 1
Class Cert. No.	
Date of Issue	2012-08-07

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	Mo	Al	Nb	Sn	CE ⁽¹⁾	Tensile Strength	Yield point	Elongation ⁽²⁾	Yield Ratio	AVG	1	2		3
			×100			×10000		×100		×10000			×100		N/mm ²		%		()	C		
30X10-1/2X99 40.00 FT	3D0567	3 5,388	18	14	99	31	12	23	2	3	1	21	39	538.0	416.0	26.5	0.77					
30X10-1/2X99 40.00 FT	3D0568	1 1,796	18	15	101	29	4	21	8	25	1	13	40	536.0	422.0	25.8	0.79					
30X10-1/2X99 40.00 FT	3D1685	17 30,532	18	16	101	27	9	26	10	25	1	13	40	539.0	418.0	25.9	0.79					
30X10-1/2X116 40.00 FT	3D1682	37 77,848	18	13	98	27	13	25	10	25	1	21	40	539.0	415.0	29.2	0.77					
30X10-1/2X132 40.00 FT	3D1680	18 43,092	17	15	99	31	11	28	9	25	1	13	39	539.0	417.0	28.7	0.77					
33X11-1/2X118 40.00 FT	3D1913	1 2,141	18	14	96	28	15	25	10	25	1	12	40	539.0	393.0	32.5	0.73					
33X11-1/2X118 40.00 FT	3D1914	2 4,282	18	15	98	29	13	22	11	22	1	11	39	543.0	399.0	32.8	0.74					
33X11-1/2X130 40.00 FT	3D1910	14 33,026	17	15	96	24	16	24	9	15	1	18	33	537.0	396.0	30.1	0.74					
33X11-1/2X130 40.00 FT	3D1911	2 4,718	17	15	99	28	14	28	11	23	1	16	39	539.0	396.0	29.4	0.74					
SUB TOTAL		95 202,823												542.0	403.0	32.3	0.74					

(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

Conditions of supply : As Rolled

<i>[Signature]</i>	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	