


Contract No.	
Customer	DUFERCO
L/C No.	
P/C No.	32201305C100
Commodity	H-BEAM
Specification	ASTM A572 G50/A992/ CSA 350W

MILL TEST CERTIFICATE

	
Head Office	1, Songhyeon-dong, Dong-gu, Incheon, 401-712, S. Korea
Certificate No.	IH20130701409 - 6
Class Cert. No.	
Date of Issue	2013-07-09

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	
			x100	x100	x100	x100	x100	x100	x100	x100	x100	x100	x100	N/mm ²	N/mm ²	%		()	C			
18X7X36 40.00 FT	D 114463	28 18,284	16	13	59	30	17	33	2	4	18	14	32	513.9	376.6	26.5	0.73					
16X7X50 40.00 FT	D 114389	19 17,239	18	18	58	26	21	24	2	3	14	14	32	512.9	376.6	26.5	0.73					
16X7X50 40.00 FT	D 114469	16 14,512	20	16	67	33	20	26	2	6	19	14	37	533.5	387.4	24.5	0.73					
18X6X35 40.00 FT	E 167451	5 3,175	17	10	89	26	13	22	2	3	12	12	36	547.2	406.0	24.0	0.74					
18X6X35 40.00 FT	E 167452	13 8,255	17	10	67	28	19	27	2	11	12	12	34	527.6	407.0	25.0	0.77					
18X6X35 40.00 FT	E 167453	14 8,890	18	11	65	24	17	31	2	11	11	11	34	521.7	399.1	26.0	0.76					
18X6X35 40.00 FT	E 167456	20 12,700	18	12	66	22	25	28	2	13	18	18	32	513.9	392.3	25.5	0.76					
18X11X76 40.00 FT	N 019781	4 5,516	19	15	66	17	14	21	2	3	16	12	34	532.5	395.2	25.5	0.74					
18X11X76 40.00 FT	N 019785	2 2,758	19	15	64	31	17	20	2	4	15	12	34	520.7	393.2	26.0	0.76					
SUB TOTAL		121 91,323																				

(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/YS

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