

Contract No.	
Customer	DUFERCO
L/C No.	
P/O No.	32201411C321
Commodity	H-BEAM
Specification	ASTM A572 G50/A992/ CSA 350W

# MILL TEST CERTIFICATE



Head Office	63, Jungbong-daero, Dong-gu, Incheon, 401-712, S. Korea
Certificate No.	IH20141103208 - 1
Class Cert. No.	
Date of Issue	2014-11-17

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 <sup>(1)</sup>	Tensile Strength	Yield point	Elongation <sup>(2)</sup>	Yield Ratio	AVG	1	2		3		
			×100	×1000	×100	×1000	×100	×1000	×100	×1000	×100	×1000	×100	N/mm <sup>2</sup>	%	%								
18X7-1/2X50 40.00 FT	E 177708	1 907	17	17	63	27	7	29	2	5					529	405	26.0	0.77						
18X7-1/2X50 40.00 FT	E 177713	2 1,814	17	16	65	21	6	29	2	3					530	410	26.5	0.77						
18X7-1/2X50 40.00 FT	E 177714	1 907	18	16	61	22	8	25	2	7					524	401	27.5	0.76						
18X7-1/2X50 40.00 FT	E 178218	39 35,373	16	16	54	13	6	29	2	8					520	407	25.0	0.78						
18X7-1/2X50 40.00 FT	E 178219	33 29,931	15	13	50	13	8	29	2	5					504	396	27.5	0.79						
18X7-1/2X50 40.00 FT	E 178220	24 21,768	16	14	52	11	6	26	2	5					488	370	28.0	0.76						
18X7-1/2X50 40.00 FT	E 178221	20 18,140	15	13	54	14	8	27	2	4					487	370	26.5	0.76						
18X7-1/2X55 40.00 FT	E 177705	12 11,976	17	17	62	25	9	26	3	4					548	430	24.0	0.78						
18X7-1/2X55 40.00 FT	E 178168	20 19,960	17	12	53	33	9	30	2	5					519	382	28.0	0.74						
SUB TOTAL		152 140,776																						

(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

**J. C. Ahn**  
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

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