




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.	IH20141202930 - 1	
Class Cert. No.		
Date of Issue	2014-12-16	

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 <sup>(1)</sup>	Tensile Strength	Yield point	Elongation <sup>(2)</sup>	Yield Ratio	AVG	1	2		3		
			×100		×1000		×100		×1000		×100	N/mm <sup>2</sup>		%	( )	C								
14X10X68 40.00 FT	E 179388	10 12,340	17	15	97	24	10	24 8	2 16	5 17		6	17	39	565 561	432 428	24.5 25.0	0.76 0.76					ORIGINAL	
14X10X68 40.00 FT	E 179389	10 12,340	18	17	98	29	10	32 10	2 14	8 16		7	14	41	571 567	432 427	24.5 25.0	0.76 0.75						
14X10X68 40.00 FT	E 179390	8 9,872	17	14	96	21	10	29 11	2 11	4 14		6	15	39	542 538	423 419	26.0 26.5	0.78 0.78						
16X7X36 40.00 FT	D 123658	4 2,612	16	16	58	27	5	29 9	2 14	6 2		19	17	31	519 520	377 379	24.5 25.5	0.73 0.73						
16X7X36 40.00 FT	D 124160	40 26,120	16	18	58	23	5	31 9	1 16	5 1		16	14	32	527 525	380 379	25.0 26.0	0.72 0.72						
16X7X36 40.00 FT	D 124161	36 23,508	17	17	57	27	4	35 10	2 14	6 1		15	13	33	530 527	384 381	23.5 24.0	0.72 0.72						
16X7X36 40.00 FT	D 124170	4 2,612	16	16	58	22	6	36 9	2 18	6 1		15	18	33	521 518	379 377	25.0 24.5	0.73 0.73						
16X7X50 40.00 FT	D 123647	4 3,628	16	16	106	32	10	33 10	2 18	7 27		7	24	41	566 562	370 375	24.5 24.0	0.65 0.67						
16X7X50 40.00 FT	D 123648	36 32,652	19	16	100	31	9	30 9	3 17	12 27		6	18	43	554 550	374 377	24.0 23.5	0.68 0.68						
SUB TOTAL		152 125,684																						

(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

<p><b>J. C. Ahn</b> General Manager of Q.A Team</p>	<p>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</p>	<p></p> <p><i>B.H. Lee</i></p> <p>B. H. LEE / GENERAL MANAGER OVERSEAS SALES TEAM</p>