

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

MILL TEST CERTIFICATE



Head Office	1, Songhyeon-dong, Dong-gu, Incheon, 401-712, S. Korea
Certificate No.	IH20121000313 - 2
Class Cert. No.	
Date of issue	2012-10-05

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					
21X12-1/4X101 40.00 FT	N 017626	15 27,480	18	15	70	31	17	25	2	8	8	11		14	12	34	521.7	367.7	26.5	0.70					
21X12-1/4X111 40.00 FT	N 017623	13 26,182	18	15	66	31	18	24						14	13	34	529.6	364.8	26.0	0.69					
21X12-1/4X122 40.00 FT	N 017622	12 26,568	19	15	66	32	18	22						17	13	34	546.2	382.5	25.0	0.70					
21X12-1/4X122 40.00 FT	N 017623	3 6,642	18	15	66	31	18	24						14	13	34	543.3	378.5	25.5	0.70					
TOTAL		186 236,033															538.4	363.8	26.0	0.68					
																	535.4	367.7	25.5	0.69					
																	512.9	394.2	26.0	0.77					
																	518.8	400.1	25.5	0.77					
===== E N D =====																									

(Note) (1) Ceq: (CE=C+Mn/6+Cr/5+V/50+Mo/5+Ni/15+Cu/15) (2) Gauge length: 200mm (3) Yield Ratio = YP/TS

K. S. Shim
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