

MILL TEST CERTIFICATE



Contract No.	
Customer	DUFERCO
L/C No.	
P/O No.	32201207CF03
Commodity	H-BEAM
Specification	ASTM A36/A572 G50/A992/ CSA350W

Head Office	1, Songhyeon-dong, Dong-gu, Incheon, 401-712, S. Korea
Certificate No.	IH20121000314 - 1
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				
8X4X10 40.00 FT	D 110081	132 23,892	14	15	60	31	13	24 10	1 12	3 23			12	29	523.7 529.6	391.3 388.3	26.0 25.0	0.75 0.73					
8X4X10 40.00 FT	D 110082	132 23,892	16	17	61	33	17	27 9	1 12	3 22			18	31	523.7 529.6	376.6 378.5	26.0 25.5	0.72 0.72					
8X4X13 40.00 FT	D 110091	132 31,152	18	15	61	33	16	22 11	1 10	4 22			11	33	534.5 531.5	381.5 378.5	27.0 26.5	0.71 0.71					
8X4X15 40.00 FT	D 110078	164 44,608	17	17	60	28	17	24 8	1 10	3 22			15	31	519.8 524.7	392.3 394.2	25.5 25.0	0.76 0.75					
14X8X43 40.00 FT	D 109895	1 780	16	14	61	31	14	26 9	1 11	3 20			12	31	528.6 521.7	394.2 392.3	26.5 27.0	0.75 0.75					
TOTAL		561 124,324												===== E N D =====									

(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

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