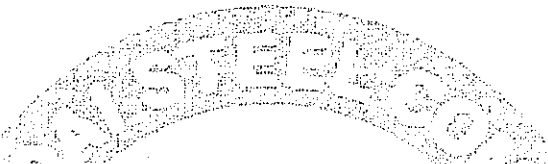


Contract No.	
Customer	DUFERCO
L/C No.	
P/O No.	32201310CM01
Commodity	H-BEAM
Specification	ASTM A572 G50/A992/ CSA 350W

MILL TEST CERTIFICATE



H HYUNDAI STEEL	
Head Office	H, Songhyeon-dong, Dong-gu, Incheon, 401-712, S. Korea
Certificate No.	IH20131101824 - 4
Class Cert. No.	
Date of Issue	2013-11-11

Dimensions & Length	Heat No.	Pieces Weights (kg)	Chemical Composition (%)											Tensile Test			Yield Ratio	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⁾		AVG	1	2	3	
			x100			x1000			x100			x1000		x100	N/mm ²			%	()	C		
10X10X49 40.00 FT	E 169687	2 1,778	18	18	89	19	17	30	2	2	7	12	38	520.0	375.0	27.0	0.72					
10X10X49 40.00 FT	E 169688	3 2,667	18	17	96	18	21	27	2	3	7	16	39	530.0	392.0	26.0	0.74					
10X10X49 40.00 FT	E 170241	5 4,445	17	16	73	15	15	30	2	3	8	18	34	555.0	406.0	25.0	0.73					
10X10X49 40.00 FT	E 170289	1 889	15	19	97	21	9	26	2	4	9	12	37	546.0	404.0	24.0	0.74					
10X10X49 40.00 FT	E 170297	1 889	16	15	64	33	20	27	2	3	9	12	34	533.0	389.0	26.5	0.73					
12X4X14 40.00 FT	D 117133	24 6,096	17	14	58	28	7	24	2	5	9	16	32	526.0	411.0	24.5	0.78					
12X4X14 40.00 FT	D 117134	68 17,272	17	15	58	26	3	24	2	5	9	16	32	526.0	412.0	24.6	0.78					
12X4X22 40.00 FT	D 117139	10 3,990	16	14	58	26	6	24	3	4	9	16	31	534.0	390.0	24.0	0.73					
12X6-1/2X26 40.00 FT	D 117322	56 26,432	17	15	57	28	4	28	2	5	9	14	32	538.0	389.0	26.1	0.72					
SUB TOTAL		170 64,458																				

(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

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

HMS 1102(A)-3a ※ 현대제철은 검사증명서를 사본으로 제출하지 않습니다, 사본일 경우, 현대제철 각 영업소로 확인하시기 바랍니다. 문의)02-772-2125

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