



Contract No.	
Customer	COUTINHO&FERROSTAAL
L/C No.	
P/O No.	32201501C41P
Commodity	H-BEAM
Specification	ASTM A572 G50/A992/ CSA 350W

MILL TEST CERTIFICATE

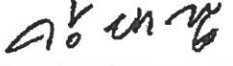
EN 10204(2004) TYPE 3.1

		
Head Office	6363, Donghaean-ro, Nam-gu, Pohang, 790-707, S. Korea	
Certificate No.	IH20150105278 - 2	
Class Cert. No.		
Date of Issue	2015-02-09	

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
			x100		x1000		x100		x1000		x1000		x100	N/mm ²		%	()	C				
14X16X176 40.00 FT	3E8225	8 25,544	8	16	135	14	8	20 7	2 7	22 94	1	13	36	529 533	397 401	23.8 23.4	0.75 0.75					
14X16X176 40.00 FT	3E8226	13 41,509	18	16	109	15	6	19 7	2 8	5 57	3	12	41	570 574	402 406	22.9 22.7	0.70 0.71					
14X16X176 40.00 FT	3E8227	15 47,895	18	14	106	15	15	19 7	2 7	3 59	2	15	40	580 577	416 413	23.2 23.5	0.72 0.72					
14X16X193 40.00 FT	3E7598	2 7,002	17	15	130	17	3	21 9	3 13	5 51	1	18	45	590 587	424 422	25.0 25.4	0.72 0.72					
14X16X193 40.00 FT	3E7599	4 14,004	18	17	134	16	4	19 9	2 13	6 52	1	11	46	601 598	428 425	23.6 24.1	0.71 0.71					
14X16X193 40.00 FT	3E8217	25 87,525	17	16	134	22	10	24 8	2 11	4 51	3	21	45	609 605	442 439	21.3 21.8	0.73 0.73					
14X16X193 40.00 FT	3E8218	5 17,505	17	18	132	16	13	20 7	3 11	3 51	3	13	45	567 564	427 425	24.3 24.5	0.75 0.75					
30X10-1/2X99 40.00 FT	3E7749	6 10,776	17	15	102	12	7	17 8	1 8	3 30	1	11	38	563 564	415 418	25.0 24.4	0.74 0.74					
30X10-1/2X99 40.00 FT	3E7750	52 93,392	17	15	99	20	12	21 8	1 12	3 31	3	15	39	560 563	426 430	23.4 24.0	0.76 0.76					
SUB TOTAL		130 345,152																				

(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

Conditions of supply : As Rolled

	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
General Manager of Q.A Team	