

MILL TEST CERTIFICATE



Contract No.	
Customer	GERDAU GTL MEXICO SA DE CV
L/C No.	DPCMXH403842
P/O No.	32201410C221
Commodity	HOT ROLLED WIDE FLANGE BEAMS
Specification	ASTM A572 G50/A992/CSA 350W

Head Office	63, Jungbong-daero, Dong-gu, Incheon, 401-712, S. Korea
Certificate No.	IH20141103199 - 9
Class Cert. No.	
Date of Issue	2014-11-17

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			x100	N/mm ²		%		()	C		
16X10-1/4X77 40.00 FT	E 177499	2 2,794	18	14	66	23	10	28 9	2 12	5 19	5 13	35	541 537	399 395	23.5 24.5	0.74 0.74						
16X10-1/4X77 40.00 FT	E 178000	4 5,588	17	13	58	24	11	30 8	2 10	6 15	6 13	32	552 545	376 372	26.0 26.5	0.68 0.68						
16X10-1/4X77 40.00 FT	E 178006	3 4,191	17	14	51	21	7	25 7	2 10	7 12	5 11	30	550 546	374 370	25.0 25.5	0.68 0.68						
16X10-1/4X77 40.00 FT	E 178007	28 39,116	16	13	53	26	8	28 8	2 13	5 13	5 12	30	557 553	430 426	24.0 24.5	0.77 0.77						
16X10-1/4X77 40.00 FT	E 178008	55 76,835	16	15	54	29	8	28 8	3 19	6 15	6 13	32	576 567	438 433	23.0 23.5	0.77 0.76						
18X11X76 40.00 FT	E 177996	62 85,498	18	13	65	20	10	30 8	2 11	5 15	5 12	34	521 532	387 412	25.5 25.0	0.74 0.77						
18X11X76 40.00 FT	E 177997	41 56,539	18	12	65	20	10	28 9	2 9	5 15	6 12	34	512 520	384 387	26.5 26.0	0.75 0.74						
18X11X76 40.00 FT	E 177998	63 86,877	19	14	67	26	9	33 8	2 9	5 14	6 14	35	518 524	383 391	26.5 25.0	0.74 0.75						
18X11X76 40.00 FT	E 177999	48 66,192	19	15	67	30	6	33 8	2 11	5 14	5 14	36	526 521	400 397	25.5 26.0	0.76 0.76						
SUB TOTAL		306 423,630																				

(Note) (1) Ceq: (CE=C+Mn/8+Cr/5+V/5+Mo/5+Ni/15+Cu/15) (2) Gauge length: 200 mm (3) Yield Ratio = YP/TS

J. C. Ahn
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