

CERTIFIED MILL TEST REPORT

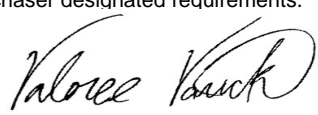
Quality Steel 100% EAF Melted and Manufactured in the USA n: ece v ng
ISO 9001:2015 and ABS Certified
CMTR complies with EN 10204 3.1.

GENERAL INFORMATION		SPECIFICATIONS		SHIPMENT DETAILS		BOL # 0000743878 - 7680.00 lbs					
Product	Size	Standards		Grades*		Bundle / ASN #	Length	pcs	Cust PO	Job/Ref	Part/Ref
Heat Number Condition(s)	Wide Flange Beam	ASTM A6/A6M - 21		A992 / A992M		023205664	40' 0"	2	4500539342		
	W12X96	» ASTM A992/A992M - 20		A992 / A992M							
	W310X143	ASTM A572/A572M - 21		A572 gr50/gr345							
		ASTM A709/A709M - 21		A709 gr50/gr345							
	B219968	AASHTO M270M/M270 - 20		M270 gr345/gr50							
	As-Rolled	CSA G40.21-13		50WM/345WM							
	Fine Grained	ASTM A36/A36M - 19		A36 / A36M							
		*SDI-MULTI meets the requirements of ASTM A992, A572-50, A709-50, A529-50, A36 and A709-36; AASHTO M270-50 and M270-36; CSA 300W, 345W and 350W.									

CHEMICAL ANALYSIS (weight percent)															Analysis Type
C	Mn	P	S	Si	Cu	Ni	Cr	Mo	Sn	V	Nb/Cb	Al	N	B	
.08	1.36	.008	.018	.22	.22	.12	.10	.03	.008	.042	<.001	.003	.0069	.0004	Heat

MECHANICAL TESTING					CHARPY IMPACT TESTS (available only when specified at time of order)						
	Yield (fy) Strength	Tensile (fu) Strength	fy / fu ratio	% Elong. {8" gage}	Temp	Absorbed Energy		ft-lbf / J			
Test	ksi / MPa	ksi / MPa			Test	F / C	Specimen 1	Specimen 2	Specimen 3	Average	Minimum
1	57 / 395	72 / 495	.79	27	1						
2	57 / 395	74 / 510	.77	24	2						
3					3						
4					4						
					5						
					6						
					7						

Notes: *Calculated Chemistry Values: Carbon Equivalents (C1, C2, C3, PC), Corrosion Index (I) {ASTM G101}= 26.01(Cu)+3.88(Ni)+1.20(Cr)+1.49(Si)+17.29(P)-7.29(Cu)(Ni)-9.10(Ni)(P)-33.39(Cu²)
CE1 {IIW}=C+Mn/6+(Cr+Mo+V)/5+(Ni+Cu)/15 CE2 {AWS}=C+(Mn+Si)/6+(Cr+Mo+V)/5+(Ni+Cu)/15 CE3 {CET}= C + (Mn/6) + (Si/24) + (Cr/5) + (Ni/40) +(Mo/4) + (V/14)

I hereby certify that the material described herein has been made to the applicable specification by the electric arc furnace/continuous cast process and tested in accordance with the requirements of American Bureau of Shipping Rules with satisfactory results. Signed:	ABS CERTIFICATION
I hereby certify that the content of this report are accurate and correct. All tests and operations performed by this material manufacturer are in compliance with the requirements of the material specifications and applicable purchaser designated requirements. Signed: Valoree Varick 	State of Indiana, County of Whitley Sworn to and subscribed before me this _____ day of _____ Signed: _____ My commission expires: _____ Notary Public