



# Test Certificate

12400 Highway 43 North, Axis, Alabama 36505, US

**WARNING:** This product can expose you to chemicals including nickel and nickel compounds, which are known to the State of California to cause cancer. For more information go to [www.P65Warnings.ca.gov](http://www.P65Warnings.ca.gov).

Form TC1: Revision 4: Date 6 Feb 2019

<b>Customer:</b> SSAB MEXICO BATALLON SAN PATRICIO 109 LOCAL 403 VALLE OTE SAN PEDRO GARZA GARCIA 66269	<b>Customer P.O.No.:</b> M2172	<b>Mill Order No.</b> 41-539122-01	<b>Shipping Manifest:</b> UR162589A
	<b>Product Description:</b> HARDOX 450 ABRASION RESISTANT STEEL PLATE		<b>Ship Date:</b> 20 Oct 18 <b>Cert Date:</b> 20 Oct18
	<b>Size:</b> 4.80 X 2438 X 7315 (MM)		<b>Cert No:</b> 850193524 (Page 1 of 1)
<b>Heat Treat Type:</b> QUENCHED			

Tested Pieces:				Tensiles:					Charpy Impact Tests							BDWTT Tmp %Shr				
Heat Id	Piece Id	Piece Dimensions	Tst Loc	YS (MPA)	UTS (MPA)	%RA	Elong % 50 200 (mm)	Tst Dir	Hardness	Abs. Energy(J) 1 2 3 Avg				% Shear 1 2 3 Avg			Tst Tmp	Tst Dir	Tst Siz (mm)	
E8J075	C14	4.87 (DISCRT)	C						456 HBW											
E8J075	C15	4.90 (DISCRT)	C						450 HBW											
E8J075	C16	4.90 (DISCRT)	C						457 HBW											
W8J593	C08	4.90 (DISCRT)	C						454 HBW											

Heat Id	Chemical Analysis																			ORGN
	C	Mn	P	S	Si	Tot Al	Sol Al	Cu	Ni	Cr	Mo	Cb	V	Ti	Sn	B	N	Ca	IIW	
E8J075	.18	1.38	.008	.0002	.26	.050	.049	.12	.06	.14	.01	.013	.008	.012	.007	.0014	.0043	.0015	.45	USA
W8J593	.18	1.38	.009	.0004	.24	.057	.055	.12	.06	.14	.03	.014	.006	.012	.005	.0015	.0037	.0017	.46	USA

KILLED HOT ROLLED ALLOY STEEL PLATE QUENCHED  
 FINISH: PRIMER PAINT  
 ACCESSORIES: NONE  
 MERCURY IS NOT A METALLURGICAL COMPONENT OF THE STEEL AND NO MERCURY WAS INTENTIONALLY ADDED DURING THE MANUFACTURE OF THIS PRODUCT.  
 $CEV (IIW) = C + MN/6 + (CR+MO+V)/5 + (NI+CU)/15$   
 MTR EN 10204:2004 INSPECTION CERTIFICATE 3.1 COMPLIANT  
 NO WELD REPAIR HAS BEEN PERFORMED ON THIS MATERIAL.  
 THE E-MAIL ADDRESS FOR MEXICO IMPORT PURPOSES IS MEXICO.CERTIFICATES@SSAB.COM.  
 MATERIAL MARKED BELOW WITH AN ASTERISK IS PRODUCED FROM COIL

PRODUCTS SHIPPED:

E8J075 C15	5903547	PCES:	1, KGS:	671.78	E8J075 C15	5903548	PCES:	1, KGS:	671.78
E8J075 C15	5903546	PCES:	1, KGS:	671.78	E8J075 C15	5903509	PCES:	1, KGS:	671.78
E8J075 C15	5903545	PCES:	1, KGS:	671.78	E8J075 C15	5903510	PCES:	1, KGS:	671.78
E8J075 C16	5903563	PCES:	1, KGS:	671.78	W8J593 C08	5905085	PCES:	1, KGS:	671.78
W8J593 C08	5905086	PCES:	1, KGS:	671.78	W8J593 C08	5905081	PCES:	1, KGS:	671.78
W8J593 C08	5905091	PCES:	1, KGS:	671.78	W8J593 C08	5905092	PCES:	1, KGS:	671.78
E8J075 C16	5903564	PCES:	1, KGS:	671.78	W8J593 C08	5905082	PCES:	1, KGS:	671.78
W8J593 C08	5905095	PCES:	1, KGS:	671.78	W8J593 C08	5905096	PCES:	1, KGS:	671.78
W8J593 C08	5905090	PCES:	1, KGS:	671.78	W8J593 C08	5905083	PCES:	1, KGS:	671.78
E8J075 C15	5903889	PCES:	1, KGS:	671.78	W8J593 C08	5905089	PCES:	1, KGS:	671.78
W8J593 C08	5905084	PCES:	1, KGS:	671.78	E8J075 C14	5903647	PCES:	1, KGS:	671.78

(P)	Cust Part #: 1757	WE HEREBY CERTIFY THAT THIS MATERIAL WAS TESTED IN ACCORDANCE WITH, AND MEETS THE REQUIREMENTS OF, THE APPROPRIATE SPECIFICATION	Justin Ward +1 251 662 4400 SENIOR METALLURGIST - PRODUCT
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