

REPORT OF CHEMICAL/PHYSICAL TESTS

CERTIFICATE NO.	DATE	PAGE
1592586	Feb 19, 2018	1
MILL ORDER NO.	DATE	
319505		
CUSTOMER ORDER NO.		
298397		
JOB/REQ. NO.		
SHIPPING NO.	DATE	
1592586	02/19/2018	
CARRIER		
UNION PACIFIC		
CAR/TRUCK NO.		
TTPX804249		

ISO 9001 REGISTERED
U.S. PLATE PRODUCER

SOLD TO

NORTH SHORE SUPPLY COMPANY
PO BOX 9940
HOUSTON, TX 77213
USA

NORTH SHORE SUPPLY COMPANY
PO BOX 9940
HOUSTON, TX 77213
USA

THIS MATERIAL HAS BEEN MANUFACTURED, TESTED AND FOUND TO MEET THE SPECIFICATIONS AND PURCHASE ORDER REQUIREMENTS
CARBON STRUCTURAL QUALITY PLATE ABS GRADE A/B KILLED FINE GRAIN ASTM A131 GRADE
A/B ASTM A36-14 ASME SA36-17 NO WELD REPAIR. KILLED FINE GRAIN PRACTICE. .80
MIN MN, 1.20 MAX MN, .

PHYSICAL PROPERTIES

ITEM NO	DESCRIPTION	HEAT NO.	SLAB	YIELD PSI X 100	TENSILE PSI X 100	% ELONG 8" 2"	% RA	HARDNESS BHN	BEND TEST	IMPACTS
4	WE HEREBY CERTIFY THAT THE MATERIAL DESCRIBED HEREIN HAS BEEN MANUFACTURED TO THE APPLICABLE SPECIFICATION AND TESTED IN ACCORDANCE WITH THE REQUIREMENTS OF THE AMERICAN BUREAU OF SHIPPING RULES WITH SATISFACTORY RESULTS. 0.4375 X 120.000ME X 480.000 3 PCS 21441 LBS 3 PCS 21441 LBS TOTALS	N17251		396 460	630 650	32 30				



CHEMICAL ANALYSIS

HEAT NO.	C	Mn	P	S	Si	Cu	Ni	V	Cb	Al	Cr	Mo	Ti	B	N	Ca	CE	McQuaid Ehn Grain Size
N17251	.14	.86	.015	.007	.22	.01	.05	.005	.000	.036	.02	.00						
HEATS INDICATED WITH (+) WERE MELTED & MANUFACTURED IN THE USA. HEATS INDICATED WITH (^) WERE ROLLED IN THE USA.																		
..... END OF REPORT																		

Charles D. [Signature]

I certify the above to be correct as contained in the records of EVRAZ INC. NA By _____

Quality Coordinator

SSAB

Test Certificate

Form TC1: Revision 3: Date 7 Feb 2018

13609 Industrial Road, Houston, TX 77015, US

Customer: NORTH SHORE STEEL CO, INC 1566 MILES STREET VENDOR 52155 HOUSTON TX 77015	Customer P.O. No.: 305129	Mill Order No.: 41-545966-05	Shipping Manifest : HT117417
	Product Description: ASTM A36(14)/A709(17)36/ASME SA36(17) AASHTO M270(15)36, 0.80-1.20 MN		Ship Date: 09 Jul 18 Cert Date: 09 Jul 18
	Size: 0.375 X 96.00 X 480.0 (IN)		

Tested Pieces			Tensiles						Charpy Impact Tests															
Heat Id	Piece Id	Tested Thickness	Tst Loc	YS	UTS	%RA	Elong %		Tst Dir	Hardness	Abs. Energy(FTLB)				% Shear				Tst Tmp	Tst Dir	Tst Siz (mm)	BDWTT		
				(KSI)	(KSI)		2in	8in			1	2	3	Avg	1	2	3	Avg				Tmp	%Shr	
B8R4510	8E2448	0.375 (T.L.C)	L	53	69		31		T															
			C	49	69		31		T															

Heat Id	Chemical Analysis																	ORGN
	C	Mn	P	S	Si	Tot Al	Cu	Ni	Cr	Mo	Cb	V	Ti	B	N	IIW		
B8R4510	.18	.85	.008	.007	.04	.023	.14	.05	.06	.02	.003	.005	.001	.0002	.0080	.35	USA	

KILLED STEEL
 $CEV (IIW) = C + MN/6 + (CR+MO+V)/5 + (NI+CU)/15$
 MTR EN 10204:2004 INSPECTION CERTIFICATE 3.1 COMPLIANT
 MATERIAL MARKED BELOW WITH AN ASTERISK IS PRODUCED FROM COIL
 PRODUCTS SHIPPED:
 * B8R4510 8E2448 PCES: 9, LBS: 44109

(U) Cust Part # :	WE HEREBY CERTIFY THAT THIS MATERIAL WAS TESTED IN ACCORDANCE WITH, AND MEETS THE REQUIREMENTS OF, THE APPROPRIATE SPECIFICATION	Justin Ward SENIOR METALLURGIST - PRODUCT
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