

SO No., Item & Date.: 8070420 000040 2018/12/03	Shipment No. & Date.: 1200014337 2018/12/04	TC No., Date & Time : ASI-533052 2018/12/04 - 13:23:09														
Sold to Customer Name and Address : SAMUEL SON AND COMPANY LTD 15TH AVENUE 701 NISKU, Alberta, Canada T2C 2A1	Ship to Customer Name and Address: SAMUEL, SON & CO. LIMITED 15TH AVENUE 701 NISKU, Alberta, Canada T9E 7L5	Customer PO NO./item: U03568 / 4 BOL NO.: 1200014337 Cust.Part No.: Carrier : C P RAIL (CAD FUNDS) - CP 317404														
Customer Specification : HR STEEL PLATE Carbon Multi Cert ASTM A516 GR 70 (R 2015) / ASME SA516 GR 70 (2017) Meets NACE MR 0103 latest Ed., NACE MR 0175/ISO15156 latest Ed., BHN 200Max Normalized Normalize Temp 1670 °F 34 min CVNL Req. 20 / 16 FT-LBF at -50.0 F Std Thickness To PVQ Top and Bottom Standard Surface Flatness 1/2 A20H Fine Grain Fully Killed																
Supplementary Instructions : Test Cert 1:heather.tattie@samuel.com Test Cert 2: rgraves@wilkinsonsteel.com		E														
Insp T/R : Test Report As Per Spec		Cust Use : PVQ														
ALGOMA STEEL INC. HEREBY CERTIFIES THAT THE MATERIAL HEREIN DESCRIBED WAS MADE AND TESTED IN ACCORDANCE WITH THE RULES OF THE SPECIFICATION SHOWN. ALL RESULTS ARE RETAINED IN ACCORDANCE WITH THE COMPANY'S STANDARD RECORD KEEPING PRACTICES. THIS MILL TEST REPORT MAY NOT BE REPRODUCED EXCEPT IN FULL WITHOUT WRITTEN APPROVAL OF ALGOMA STEEL INC. IF YOU RECEIVE THIS DOCUMENT AND ARE NOT THE INTENDED RECEIVER, PLEASE CALL (705)945-4095 FOR INSTRUCTIONS ON METHOD OF DISPOSAL OF DOCUMENT. THIS TEST REPORT HAS BEEN GENERATED BY A COMPUTERIZED SYSTEM AND IS VALID WITHOUT A PHYSICAL SIGNATURE.																
MEETS EN 10204:2004 TYPE 3.1 ISO QUALITY AND ENVIRONMENTAL CERTIFICATES AVAILABLE AT WWW.ALGOMA.COM																
ALL HEATS FULLY KILLED. HEATS INDICATED WITH (*) FINE GRAINED. HEATS INDICATED WITH (+) Made In Canada for NAFTA duty preference and NAFTA marking purposes																
Dimensions (T x W x L)	Batch No.	Heat No-MS	Quantity	Pcs												
1,0000 " x 96.000 " x 480.00 "	BL0096	5120E4-02	13,068 LB	1												
*****CHEMICAL PROPERTIES*****																
Heat No. (wt%)	C	Mn	P	S	SI	Cr	Ni	Cu	Mo	Al	Nb	V	B	Ti	Ca	DO
5120E4*	0.20	1.07	0.013	0.002	0.336	0.09	0.03	0.04	0.01	0.027	0.000	0.014	0.0001	0.004	0.00370	0.40
*****MECHANICAL PROPERTIES*****																
Hardness Tests																
Heat No.	Batch No.	SRCE	LAB	GAUGE	COND	LOC	MTHD	HARDNESS								
5120E4	BL0096	166"	ALG	1.0000	N	B	HBW	156								

KASHIF REHMAN
MANAGER METALLURGICAL SERVICES

****WARNING**** THE TEST RESULTS AND VALUES REPORTED HEREIN INDICATE ONLY THAT (1) THE PARTICULAR STEEL FOR WHICH THIS CERTIFICATE IS ISSUED MEETS THE MINIMUM SPECIFIED YIELD STRENGTH AND (2) THE ANALYSIS AND PHYSICAL PROPERTIES OF SUCH STEEL ARE IN CONFORMANCE WITH THE REQUIREMENTS OF THE SPECIFICATION INDICATED. THE RESULTS OR VALUES REPORTED HEREIN CAN NOT BE USED TO QUALIFY THE STEEL FOR ANY SPECIFICATION OTHER THAN THE ONE INDICATED AND CAN NOT BE RELIED UPON FOR ANY PURPOSE (INCLUDING DESIGN OR CALCULATIONS) AS REPRESENTING THE ACTUAL STRENGTH OF SUCH STEEL.

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ALGOMA STEEL INC., 105 West Street, Sault Ste. Marie, Ontario, Canada P6A 7B4ALGOMA

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***** MECHANICAL PROPERTIES *****												
Impact Tests												
Heat No.	Batch No.	SRCE	LAB	GAUGE	COND	METH	DIR	LOC	SIZE	TEMP(°F)	FULLENERGY(ft-lbf)	FULL AVG(ft-lbf)
5120E4	BL0096	166"	ALG	1.0000	N	CVN	L	B	FULL	-50	81 92 57	77
Tensile Tests												
Heat No.	Batch No.	SRCE	LAB	GAUGE	COND	METH	DIR	LOC	YIELD(KSI)	TENSILE(KSI)	EL SCALE	ELONG(%)
5120E4	BL0096	166"	ALG	1.0000	N	.2	T	B	50.0	78.0	2"	32

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