K4F3 - 5.25

METALLURGICAL TEST REPORT

NORTH AMERICAN STAINLESS
6870 HIGHWAY 42 EAST
GHENT, KY 41045

6870 HIGHWAY 42 EAST

Certificate: 912777 1
Customer: 007050 001

Mail To:
ROLARK STAINLESS STEEL, INC.
71 CONAIR PARKWAY
WOODBRIDGE, ON L4H0S4

Ship To:
ROLARK STAINLESS STEEL, INC.
71 CONAIR PARKWAY
WOODBRIDGE, ON L4H0S4

Date: 3/21/2014 Page: 1

Steel: 316/316L
Finish: ST

Your Order: 56345
NAS Order: PN 0034686 14
Corrosion: ASTM A262 Prac E OK

PRODUCT DESCRIPTION:

Round Bar, Annealed, Smooth Turned, Cold Finished
UNS 31600/31603, EN 10204 3.1, ASTM A484/13a
ASTM A276/10, ASTM A479/13a, ASTM A182/13 CHEM ONLY,
ASME SA479/10a, ASME SA182/10 CHEM ONLY, ASTM F899/11
AMS 5648L/AMS 5653G, AMS QQS-763B, QQS 763F
NACE MR0175/MR0103-07(MID RADIUS ONLY),
SOLUTION ANNEAL TEMP 1900F MIN, ASTM A320/08 CL 1 GR B8M
ASTM A193/10A-ASME SA193/10 CL 1 GR B8M(EXC PAR 7.2)

REMARKS:

COMPLIES W/REQUIREMENTS OF DFAR 252.225-7008 EU DIRECTIVE
2011/65/EU.RoHS. EAF+AOD+CC. NO WELD REPAIR. MELTED AND MFG
IN USA FREE FROM MERCURY AND LOW MELTING ALLOY CONTAMINATION

Product Id	Skid #	Diameter	Size	Weight	-------Length------	Mark	Pieces	Commodity Code
BF9665 6		5.2500		872	144.00	11	1	

CHEMICAL ANALYSIS

CM(Country of Melt) ES(Spain) US(United States) ZA(South Africa) JP(Japan)

Chemical Analysis per ASTM A751/08

HEAT	CM	C %	CO %	CR %	CU %	MN %	MO %	N %	NI %	P %
K4F3	US	.0216	.2950	16.7495	.3905	1.3795	2.0380	.0368	10.5350	.0315

S %	SI %
.0235	.2345

MECHANICAL PROPERTIES

Product Id	loc	did r	HB No.	.2YS KSI	UTS - KSI	RA %	Elng % 4D
BF9665 6	R	L	143.00	39.00	81.00	70.00	61.00

NAS hereby certifies that the analysis on this certification is correct. Based upon the results and the accuracy of the test methods used, the material meets the specifications stated. These results relate only to the items tested and this report cannot be reproduced, except in its entirety, without the written approval of NAS.

Technical Dept. Mgr. ERIC HESS 3/21/2014