



H2D4

METALLURGICAL TEST REPORT

NORTH AMERICAN STAINLESS
6870 HIGHWAY 42 EAST
GHENT, KY 41045

6870 HIGHWAY 42 EAST

ASA PO 78011 WO 5943 CPA 2 FOEL 40 (108")

C082552

Certificate: 842312 7
Customer: 007226 001
Mail To: ASA ALLOYS
20 CHALLENGER CRES
SHERWOOD PARK, AB T8H2R1

Ship To: ASA ALLOYS
20 CHALLENGER CRES.
SHERWOOD PARK, AB T8H2R1

Date: 6/07/2013 Page: 1

Steel: 316/316L

Finish: ST

Your Order: P029779

NAS Order: PN 0027336 07

Corrosion: ASTM A262 Prac E OK

PRODUCT DESCRIPTION:

NACE MR0175-03 (MID RADIUS ONLY)
Round Bar, Annealed, Smooth Turned, Cold Finished
UNS 31600/31603, EN 10204 3.1, ASTM A484/11
ASTM A276/10, ASTM A479/11, ASTM A182/10 CHEM ONLY,
ASME SA479/10a, ASME SA182/10 CHEM ONLY, ASTM F899/11
AMS 5648L/AMS 5653G, AMS QQS-763B, QQS 763F
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 252.225-7014A-1 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

*OK
7/18/13*

Product Id	Skid #	Diameter	Size	Weight	Length	Mark	Pieces	Commodity Code
BF4541 4		3.7500		1,541	240.00	42	1	

CHEMICAL ANALYSIS

HEAT	CM	C %	CO %	CR %	CU %	MN %	MO %	N %	NI %	P %
H2D4	US	.0169	.0915	16.7125	.2615	1.4315	2.0290	.0355	10.6550	.0285
		S %	SI %							
		.0235	.3500							

MECHANICAL PROPERTIES

Product Id	Orientation	HB	.2YS	UTS	RA	Elong
		No.	KSI	KSI	%	% 4D
BF4541 4	R L	141.00	37.00	80.00	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.

ERTC HESS
6/07/2013