

M45N5BG

HUNTINGTON ALLOYS CORPORATION
A Special Metals Company
HUNTINGTON, WEST VIRGINIA 25705-1771

NOTE: THE RECORDING OF FALSE, FICTITIOUS OR FRAUDULENT STATEMENTS OR ENTRIES ON THIS DOCUMENT MAY BE PUNISHABLE AS A FELONY UNDER FEDERAL STATUTE.

SOUTHERN U.S.

CORROSION MATERIALS
5092 STEADMONT
HOUSTON TX 77040

ATT: MARGARET WRIGHT
CORROSION MATERIALS INC
2262 GROOM RD
BAKER LA 70714

CERTIFIED MATERIAL TEST REPORT		No. 71012	
HA ORDER NO./ITEM	DATE	PAGE	OF
100038098 1	11/02/08	1	2
QUANTITY	INSPECTED BY		
1166 LBS	HA/SMC		
CHARGE ORDER NO	MARK ORDER NO		
80375X	80375X 5-051754000		
DESCRIPTION OF MATERIAL SHIPPED	HONEL ALLOY 400 HOT FIN RND ROUGH T STR REL		
	4.0000 IN 120-168 IN NOM		

THIS IS TO CERTIFY THAT ALL REQUIRED SAMPLINGS INSPECTIONS AND TESTS HAVE BEEN PERFORMED IN ACCORDANCE WITH THE ORDER AND SPECIFICATION REQUIREMENTS. THE TEST REPORT REPRESENTS THE ACTUAL ATTRIBUTES OF THE MATERIAL FURNISHED AND THE VALUES SHOWN ARE CORRECT AND TRUE. THE MATERIAL DESCRIBED BY THIS CERTIFICATE IS IN FULL COMPLIANCE WITH ALL ORDER AND INSPECTION REQUIREMENTS. WE HEREBY CERTIFY THAT THE BELOW FIGURES ARE IN ACCORDANCE WITH THE SPECIFIED CONTRACT REQUIREMENTS.
REV. 808

*****THIS REPORT RELATES ONLY TO THE ITEM(S) TESTED AND MAY NOT BE REPRODUCED EXCEPT IN FULL.*****

SPECIFICATIONS: ASTM B 164-03 (2008)\ASME SB-164 2007 EDITION 08 ADDENDA \ UNS: N04400
ASTM B 564-06 CHEMISTRY ONLY
ASME SB-564 2007 EDITION 08 ADDENDA CHEMISTRY ONLY
US FED QQ-N-281D AM 2 CL A FM 1 MARKING WAIVED.
QUALITY SYSTEM CERTIFICATION: ISO 9001:2000 (ABS-QE CERT. 30125);
EN 10 204/DIN 50049 (TYPE 3.1)

HEAT#	CHEMICAL ANALYSIS (WT. %)								
	C P	MN PB/PPM	FE SN/PPM	S ZN/PPM	SI NI+CO	CU 1.27	NI	AL	CO
M45N5BG	0.16 0.007	1.01 6.6	1.66 0.7	<0.001 6.7	0.26 64.02	32.83	64.00	0.05	0.02

TO CONVERT PPM TO WT.%, MOVE DECIMAL POINT FOUR PLACES TO THE LEFT.
MELT METHOD: AIR + ELECTROSLAG REMELTED

HEAT/LOT	QUANTITY	HARD NESS	MECHANICAL PROPERTIES			XELC 2"	R/A X	DEG F
			GRAIN SIZE	YIELD .2XPSI X 100 X 100	TENSILE PSI			
M45N5BG 11 PC# 111 & 122 ROOM TEMP-HRB	2 PCS -AS SHIPPED	86.6	0723	1013	31.6	69.9		

ROLLED ALLOYS CANADA
TRACER No
Jm 183491

YIELD STRENGTH WAS DETERMINED USING A STRESS STRAIN CURVE
MILL HEAT TREATMENT: STRESS RELIEVED AT 1000 DEG F 1 HOUR, AIR COOLED
NO WELDING OR WELD REPAIR WAS PERFORMED ON THIS MATERIAL.
COUNTRY OF ORIGIN: MELTED AND MANUFACTURED IN THE USA

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SOUTHERN U.S.

SHIP TO CHARGE TO	CORROSION MATERIALS 5092 STEADMONT HOUSTON TX 77040		CERTIFIED MATERIAL TEST REPORT		No. 71012		THIS IS TO CERTIFY THAT ALL REQUIRED SAMPLINGS INSPECTIONS AND TESTS HAVE BEEN PERFORMED IN ACCORDANCE WITH THE ORDER AND SPECIFICATION REQUIREMENTS. THE TEST REPORT REPRESENTS THE ACTUAL ATTRIBUTES OF THE MATERIAL FURNISHED AND THE VALUES SHOWN ARE CORRECT AND TRUE. THE MATERIAL DESCRIBED BY THIS CERTIFICATE IS IN FULL COMPLIANCE WITH ALL ORDER AND INSPECTION REQUIREMENTS. WE HEREBY CERTIFY THAT THE BLOW HOUSES ARE IN ACCORDANCE WITH THE SPECIFIED CONTRACT REQUIREMENTS. REV. 8/08
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	QUANTITY	INSPECTED BY					
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ATT: MARGARET WRIGHT CORROSION MATERIALS INC 2262 GROOM RD BAKER LA 70714	CHARGE ORDER NO.	MARK ORDER NO.					
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DESCRIPTION OF MATERIAL SHIPPED	MONEL ALLOY 400 HOT FIN RND ROUGH T STR REL 4.0000 IN 120-168 IN NOM						

VISUAL AND DIMENSIONAL EXAMINATION SATISFACTORY.
 MATERIAL, WHEN SHIPPED, IS FREE FROM CONTAMINATION BY MERCURY, RADIUM, ALPHA SOURCE, & LOW MELTING ELEMENTS.
 "CHEMICAL ANALYSIS AS REQUIRED FOR CARBON, SULFUR, NITROGEN OR OXYGEN IS PERFORMED BY COMBUSTION TECHNIQUES. ALL OTHER REPORTED ELEMENTS ARE ANALYZED BY X-RAY AND/OR EMISSION SPECTROSCOPY."
 "QUALITY SYSTEM MEETS REQUIREMENTS OF DIRECTIVE 97/23/EC (PRESSURE EQUIPMENT DIRECTIVE), ANNEX 1, CHAPTER 4.3 PER ABS GROUP LTD CERTIFICATE 41734 (EXPIRES JULY 31, 2011)."

AUTHORIZED QUALITY CERTIFICATION REPRESENTATIVES :
 W. E. BOLEN, P. D. CUSTER, M. A. MORRISON, P. WAUGH

[Handwritten Signature]

ROLLED ALLOYS CANADA
 TRACER No
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