



P.O. BOX 977  
SYRACUSE  
NEW YORK 13201

# CERTIFICATE OF TEST

S H I P T O	A M CASTLE, INC 3400 N WOLF RD FRANKLIN PARK, IL 60131	A M CASTLE, INC 3400 N WOLF RD FRANKLIN PARK, IL 60131	OUR ORDER NO P5-10883-7--
	03		DATE 06/21/07

CUSTOMER ORDER # & DATE 01-28548	CUSTOMER REQ. #	DISTRICT B PARSONS	SHIPPED FROM SYRACUSE
-------------------------------------	-----------------	-----------------------	--------------------------

DESCRIPTION OF MATERIAL

SIZE

CRU 304/304L RT A IAC 31015 11 RD  
 AMC-3304-98 REV 29 ASME-SA182-04ED (CHEM & MECH) ASME-SA193-04ED B B  
 (EX PAR 6.3) ASME-SA479-04ED (CHEM & MECH) ASTM-A276-06 ASTM-A479-06A  
 ASTM-A182-06 (CHEM & MECH) A484-06B A193-06A B8 (EXCEPT PAR 6.3) AMS 5639H  
 AMS-5647H AISI-304/304L UNS# S30400/S30403

HEAT NO.

CHEMICAL ANALYSIS

A19031

C	MN	P	S	SI	NI	CR	MO	CO	CU	N
.017	1.65	.029	.027	.39	8.29	18.47	.36	.12	.32	.084

CASTLE METALS CORP.  
 DATE RCVD 6/26/07  
 IAC 31015  
 APPROVED BY [Signature]

QUANTITY

HEAT NO.

MECHANICAL PROPERTIES

4214 # A19031	TENSILE PSI 80,860	YLD.2%PSI 35,770	%ELONG4D 59.8	RED/AREA% 62.3	HARDNESS BHN 142
---------------	-----------------------	---------------------	------------------	-------------------	---------------------

MACRO TEST OK  
 - GRAIN SIZE # 4.5  
 INTERGRANULAR CORROSION TEST OK.  
 MATERIAL ANNEALED AT 1900 DEG. F. - WATER QUENCHED.

CRUCIBLE MATERIALS CORP. VENDOR #18610.  
 MATERIAL INGOT CAST.

NAFTA - YES

CORRECTED COPY - ORIGINAL CERT DTD 06/18/07

MATERIAL FREE FROM MERCURY CONTAMINATION AT TIME OF SHIPMENT  
 NO WELD REPAIR PERFORMED  
 MATERIAL MELTED IN U.S.A.

THANK YOU FOR SELECTING A QUALITY PRODUCT  
 MANUFACTURED BY THE EMPLOYEES OF CRUCIBLE SPECIALTY METALS JW

SWORN TO AND SUBSCRIBED BEFORE ME THIS

\_\_\_\_\_ DAY OF \_\_\_\_\_, 20

NOTARY PUBLIC

THE ABOVE MATERIAL WAS MANUFACTURED AND TESTED IN ACCORDANCE WITH ABOVE SPECIFICATIONS AND IS IN CONFORMANCE WITH THE SPECIFICATION REQUIREMENTS.

CRUCIBLE MATERIALS CORPORATION  
 ACTING BY AND THROUGH ITS SPECIALTY METALS DIVISION

CERTIFIED BY:

[Signature]  
 QUALITY ASSURANCE REPRESENTATIVE

# NORTH AMERICAN STAINLESS INSPECTION CERTIFICATE



**North American Stainless**  
 6870 Highway 42 East  
 Ghent, Kentucky 41045-9615  
 Telephone: (502) 347-6000  
 FAX: (502) 347-6001

Email: customerservice@northamericanstainless.com

2007 / 6474	DATE 2/09/2007
PACKING LIST # 2007 /72978	NUMBER 1
GRADE NAS-143 P.O.# :02-26390	
AISI (304L/304)	Item Code:48926

CUSTOMER A.M. CASTLE & COMPANY	TOLERANCE A484 Rough Turn	PRODUCT Round bar, hot rolled, rough turned.
-----------------------------------	------------------------------	---

ORDER NUMBER	MARK# / PROD ID	HEAT NUM	WEIGHT
LN32112	12003/BB34957	1WK1	1046
CASTLE METALS-LA			
DATE REC'D <u>2-22-07</u>			
REC'D FROM <u>North American</u>			
APPROVED BY <u>[Signature]</u>			
IAC <u>48926</u>			

REQUIREMENTS AISI	LENGTH 12.00 ft SIZE 4.0000 Inches							
MECHANICAL PROPERTIES								
HEAT NUM	Rm UTS KSI	Rp 0.2 YS sst	Rp 1.0 YS RST	Z% RA	ELONG A % L4d	HARDNESS HB	RESILIENCE J	A% %Ld 5
1WK1	83	39	43	70	57	148		
Required Values	75 115	30 100		50 100		140 223		000000

SURFACE AND DIMENSION CONTROL  WITHOUT OBJECTIONS
INTERGRANULAR CORROSION  ASTM A262-02a PRACTICE "E"  SATISFACTORY

CHEMICAL COMPOSITION %		CM(Country of Melt) ES(Spain) US(United States)													
CM	HEAT	C	P	S	Si	Mn	Cr	Ni	Mo	Ti	N	Cu	Co	Al	
US	1WK1	.0226	.0307	.0253	.2923	1.3963	18.2643	8.7011	.3538	.0043	.0772	.4385	.1436	.0023	
REQUIRED VALUES		.0300	.0450	.0300	1.0000	2.0000	18.0000 20.0000	8.0000 12.0000			.1000				

STEELMAKING PROCESS  EAF+AOD+CC
---------------------------------------

**OBSERVATIONS/SPECIFICATIONS**

UNS-S30400, UNS-S30403, PEELED, ASTM A276-04, ASTM A479-04, ASTM A484-03, ASTM A193-03(EXC PAR 6.3)  
 AMS 5639B, AMS 5647H, AMS-QQ-S-763A, ASME SA479-04, ASME SA193-04(EXC PAR 6.3), EN 10204 3.1B,  
 Macro and micro test: Satisfactory. GRAIN SIZE = 6-8

ASTM A182-02(CHEM ONLY), ASME SA182-04(CHEM ONLY)  
 Product complies w/ requirements of EU directive 2002.95.EC.ROHS. Material Free from Mercury contamination.  
 No weld repair. NAS certifies the analysis on certification is correct & the material meets specs stated.

QUALITY INSPECTOR

*[Signature]*

Eric Hess  
Quality Control Representative

T-453 P030/031 F-131 5626343485 02-26-07 03:44 FROM-CastleMetalSLA