IP 425, 50-A

Crucible Specialty Metals
A Division of Crucible Materials Corporation

P.O. BOX 977
SYRACUSE
NEW YORK 13201

A 16042

# CERTIFICATE OF TEST

44776

| | | |
|---|---|---|
| ALLOYS INC<br>81 STEINWAY BLVD<br>ETOBICOKE ONTARIO M9W6H6 | SHIP TO: ASA ALLOYS INC<br>81 STEINWAY BLVD<br>ETOBICOKE ONTARIO M9W6H6 07 | OUR ORDER NO. P5-15451-4-0<br>DATE 01/19/05 |

| CUSTOMER ORDER # & DATE | CUSTOMER REQ. # | DISTRICT | SHIPPED FROM |
|---|---|---|---|
| 044660-CV | | B PARSONS | SYRACUSE |

ESCRIPTION OF MATERIAL

SIZE
5.250 RD

CRU 316/316L RTA
AMS-5653F AMS-5648K AMS-QQS-763 ASTM-A276-04 ASTM-A193-03
ASTM-A479-04 ASTM-A182-04 (CHEM & MECH) ASME-SA182-04ED (CHEM & MECH)
ASME-SA479-04ED ASME-SA193-04ED MIL-S-7720A NACE-MR-01-75-01
EN 10204 3.1B

CHEMICAL ANALYSIS

| EAT NO. | C | MN | P | S | SI | NI | CR | MO | CO | CU | N |
|---|---|---|---|---|---|---|---|---|---|---|---|
| A16042 | .021 | 1.76 | .026 | .023 | .70 | 10.12 | 16.45 | 2.07 | .097 | .33 | .076 |

MECHANICAL PROPERTIES

| UANTITY | HEAT NO. | TENSILE PSI | YLD.2%PSI | %ELONG2IN | RED/AREA% | HARDNESS |
|---|---|---|---|---|---|---|
| 3150 # | A16042 | 82,760 | 35,800 | 55.0 | 78.8 | BHN 153 |

MACRO TEST OK
INTERGRANULAR CORROSION TEST OK.
GRAIN SIZE # 6.0
MATERIAL ANNEALED AT 1900 DEG. F. - WATER QUENCHED.

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

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

SWORN TO AND SUBSCRIBED BEFORE ME THIS

_____ DAY OF _____, 20

_____
NOTARY PUBLIC

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

CRUCIBLE MATERIALS CORPORATION
ACTING BY AND THROUGH ITS SPECIALTY METALS DIVISION

CERTIFIED BY: William P. Mastroe
QUALITY ASSURANCE REPRESENTATIVE