



575 STATE FAIR BLVD.
SOLVAY, NY 13209

Certificate of Test

Cert Date: 09/04/19



SOLD TO
FRY STEEL COMPANY
13325 MOLETTE ST
SANTA FE SPRINGS, CA 90670

SHIP TO
FRY STEEL COMPANY
13325 MOLETTE ST
SANTA FE SPRINGS, CA 90670

CIL ORDER NO.
P5-11378-9-01

HEAT NO.
A13714

CIL INSIDE SALES REP.
L HINMAN

SHIPPED FROM
SOLVAY, NY USA

CUSTOMER P.O.
49653-19/S68560

CUSTOMER PART NO.
S68560

QUANTITY SHIPPED 2150 LBS. 1 BDL

ALL MELTING DONE IN USA.

DESCRIPTION OF MATERIAL

SIZE

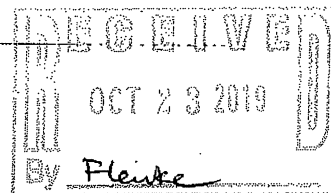
CRU 422 CGA 2.750 RD
AMS-5655-E (CAPABLE OF) ASTM-A565-10 (GRADE 616) DOD-F-24669/7-7 (CHEM ONLY)
GE B50A125E-B (CAPABLE OF) GE B50A951A1-A (CAPABLE OF) UNS S42200

CHEMICAL ANALYSIS *

C	MN	P	S	SI	NI	CR	V	W	MO	CO	CU	AL
.220	.68	.015	.007	.30	.93	12.12	.23	.96	.99	.04	.14	.001
SN	N	TI	CB									
.0010	.049	.001	.021									

AS SHIPPED PROPERTIES

HARDNESS
BHN 235/240
DECARB ACCEPTABLE



HEAT CHARACTERISTICS

CHARPY V NOTCH AT ROOM TEMP 16.9-18.3-17.0 = 17.4 AVG FT LBS

HT CAPABILITY TENSILES AFTER 1900 DEG. F. OIL QUENCHED THEN TEMPERED AT 1200 DEG. F. 2 HRS AIR:

HARDNESS	TENSILE PSI
BHN 333	165,100
	YLD.2%PSI 135,320
	%ELONG4D 13.3
	RED/AREA% 46.3

MACRO TEST
ACCEPTABLE

FERRITE
<1%

FRY STEEL CO. CERTIFIES THAT THIS IS
A TRUE COPY OF THE ORIGINAL MILL TEST
REPORT NOW ON FILE
RECEIVED AND INSPECTED

SEP 09 2019

AS SHIPPED MATERIAL CONDITION

STRESS RUPTURE AT 1200 DEG. F. 26,000 PSI - 25 HRS - NO RUPTURE.

BY *Chip Sandoval*
CHIP SANDOVAL - Q.C. MANAGER

THANK YOU FOR SELECTING A QUALITY PRODUCT OF NAFTA ORIGIN MANUFACTURED WITH PRIDE AT CRUCIBLE INDUSTRIES, LLC LOCATED IN SOLVAY, NY USA IN COMPLIANCE WITH FAR 52.255-1 AND FAR 52.225-5. WE PROVIDE MATERIAL FREE OF MERCURY CONTAMINATION AND RATIONS. NO WELD REPAIR IS DONE. CRUCIBLE INDUSTRIES LLC HOLD A CERTIFICATE OF REGISTRATION TO AS9100D/EN 9100:2016 / JISQ 9100:2016, ISO 9001:2015 - ANSI/ISO/ASQ Q9001-2015, PRESSURE EQUIPMENT DIRECTIVE (PED) ANNEX I, PARAGRAPH 4.3 of 2014/68/EU or 97/23/EC 7/2. WE WORK UNDER THE GUIDELINES OF ASME SECTION III SUBSECTION NCA-3850. WE ARE COMPLIANT WITH ROHS DIRECTIVE 2011/65/EU, REACH (EC 1907/2006), EN 10204:2004 3.1, AND DFARS 252.225.7001, 7002, 7008, 7009, 7014 ALTERNATE 1. MATERIAL TESTING IS PERFORMED ON A PROLONGATION OF THE BAR IN COMPLIANCE WITH INDUSTRY STANDARDS ASTM A370, E8, E10, E18, E23, E45, E112, E381, E804. *ACCREDITED CHEMICAL TESTING IS PERFORMED IN COMPLIANCE WITH INDUSTRY STANDARDS ASTM E572, E1019, E1086, E322, E415 AND E1085. THE RECORDING OF FALSE, FICTITIOUS OR FRAUDULENT STATEMENTS ON THIS DOCUMENT MAY BE PUBLISHED AS A FELONY UNDER FEDERAL STATUTES, INCLUDING FEDERAL LAW TITLE 18, CHAPTER 47. PRODUCTS, TECHNICAL DATA, TECHNOLOGY AND SERVICES OF CRUCIBLE INDUSTRIES LLC ARE SUBJECT TO US EXPORT CONTROLS UNDER THE APPLICABLE LAWS AND REGULATIONS OF THE UNITED STATES.

Page 1 of 1

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

ROBERT TSCHERNJAWSKI - SPECIFICATION EXAMINER

WILLIAM MASTROE - MANAGER OF QUALITY AND PROCESS ENGINEERING