

Page 3 of 3
Form: 8703 Rev. 0



240 HENRY STREET, P.O. BOX 296, BRANTFORD, ONTARIO N7T 2S7
PHONE: (519) 756-8100

URS # 928
929
930

CUSTOMER: PATRIOT FORGE BRANTFORD

CUSTOMER P.O.: QUALIF. TEST

MATERIAL/SPECIFICATION: AISI 4130 EPVD PER API 6A/16A 17TH ED., DES 75K, CL.K, PSL 3
EXCEPTIONS TO PARA 7.5.2.2.8 & 7.5.2.3.8, NACE MR-0175-97
MILL: STANDARD STEEL

NO. OF PCS.: 1 DESCRIPTION: QUENCHED & TEMPERED

PART NO.:

15.500

SHOP ORDER: 66647-1

CERTIFIED MATERIAL TEST REPORT

CHEMICAL ANALYSIS

HEAT NO.	C	MN	P	S	SI	CR	MO	NI	V	AL	TI	CU
LV5180	.31	.59	.005	.008	.22	1.09	.19	.04	.02	.005	.003	.08

MECHANICAL PROPERTIES

YIELD STRENGTH F.S.I. (0.2% OFFSET)	TENSILE STRENGTH F.S.I.	ELONG. % IN 2"	RED. OF AREA
80000	102000	22.0	67.0

HEAT TREATMENT

- HOLD 1580F/5.30 HRS WATER QUENCH
- HOLD 1225F/11.20 HRS AIR COOL

BRINELL HARDNESS = 212/217

GRAIN SIZE = 8.0

CHARPY V NOTCH IMPACT TEST #1 AT -75 F

	IMPACT TEST FT. LBS	LATERAL EXPANSION MILS	SEAR FRACTURE %
1.	21.0	12.0	10
2.	25.0	15.0	10
3.	27.0	17.0	10

MECHANICAL PROPERTIES BASED ON 5" MAX ER PER API 6A SEC. 8.0
17TH ED. PGS. R/2. CAPABLE OF AMS 2301

WATER QUENCH START = 50 DEG. F
FINISH = 52 DEG. F

SPECIMEN SIZES: TENSILE = .503" CHARPY = 10MM X 10MM

QTC = 4 X 4 X 4

CRC WELLHEAD SUPPLY LTD.
Q.A. APPROVAL

DATE: *Ray 5/00*
NO WELDING/WELD REPAIR DONE ON PARTS

COMMENTS

REF: P.O. # 24665-2 ITEM # 005
S.O. # 64144-3
25954

USED FOR: P.O. #

THESE FORINGS HAVE NOT COME INTO DIRECT CONTACT
WITH MERCURY OR ANY OF ITS COMPONENTS, NOR WITH
ANY MERCURY CONTAINING DEVICES DURING
MANUFACTURING, TESTING, INSPECTION OR STORAGE.

DATE: March 29 2000

WE HEREBY CERTIFY THAT WE OBTAINED THE ABOVE RESULTS
UPON TESTING SAMPLES OF STEEL TAKEN AT RANDOM FROM THIS
ORDER OR THIS HEAT OR AS DICTATED BY NOTED SPECIFICATION
WHICHEVER IS APPLICABLE. MATERIAL PRODUCED ACCORDING TO
OUR Q.A. MANUAL.

PATRIOT FORGE
QUALITY ASSURANCE

[Signature]
Q.A. ASSISTANT