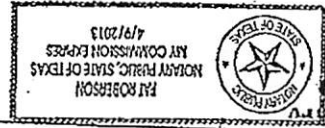


M. B. P. O. No. 100		
BE 2 NIB. 128 P. 10		
Belom	Prilozhenie	Date
M. B. P. O. No. 100		



Pat Robertson
Notary Public, State of Texas

Sworn & Subscribed before me this
11TH Day of February, 2011

By Pat Robertson
Representative

We hereby certify that the above is the same as
the data furnished us by our suppliers or resulting
from tests performed in a recognized laboratory.
Material meets all of the requirements of the
specifications listed above.

Unless otherwise stated, yield stress is .2% stress is .2% offset. Gauge length is 2" for 1/2" specimen or 1" for 1/4" specimen.

TEST BAR: Size: 4 X 6 X 7"

HARDNESS: 149-156 HBW CHECKED IN 2 PLACES)

PRODUCT:

QUENCH AT 1650 DEG F FOR 6.25 HOURS, WATER COOLED STRT 75 END 80
TEMPER AT 1100 DEG F FOR 8.25 HOURS, AIR COOLED

HEAT TREATMENT

Review	Signature	Date
Brakken MTR Review	<i>[Signature]</i>	4-11-11
PS & MTR to PO, MTR to AML		
MTR to Drawing BOM		

ENCORE METALS
APPROVED

FEB 15 2011

BY: *[Signature]*

GRAIN:

YIELD ST: 48,000
TENSILE ST: 71,500
EL %: 37
RED OF AREA: 75
HARDNESS: 156-179 HBW

CHARPES: -50 DEG. F LCVN 96/87/100 FT.LBS.
LATERAL EXPANSION: 47/43/48
SHEAR FRACTURE: 80/80/80

Unless otherwise stated, specimens are full size: 10mm x 10 mm

MECHANICAL PROPERTIES

Al.	.032	Nb.	.002	Sn.	.0086
C.	.17	V.	.001	S.	.018
Mn.	.80	P.	.012	Si.	.25
Cr.	.16	Ni.	.10	Mo.	.03
Cu.	.23				

CHEMICAL PROPERTIES

FINISH: H.T.
NACE MR01-75 & EN10204.3.1
SPEC.: ASTM A350 LF-2/A-105 PER
GRADE: ASTM A350 LF-2/A-105

HEAT NO: R2194
MILL: TIMKEN
QTY: 1 PC
SIZE: 8" OD X 15 1/2" LG

DESCRIPTION

DATE: 2/11/11
CUSTOMER PO #: B10158
CUSTOMER PART #:

ENCORE METALS
9810 39TH AVE
EDMONTON, AB CANADA T6B 0A1

CERTIFICATE OF ANALYSIS & TESTS

F2194

6" NOZLE

M12452