



PB \*

SERIAL NUMBER: XI-091

MOLD SIZE \_\_\_\_\_ BY \_\_\_\_\_

DATE FURNACED \_\_\_\_\_

ORDER DATE 04 APR 18 SHIP DATE: 18 APR 18 PO NNMA00897Z

FOR SLB SIZE 2.240 TYPE SI-Flat

THREAD 1" MT OTHER Wpdrill

MATRIX (H) \_\_\_\_\_ WEIGHT \_\_\_\_\_

MATRIX (S) \_\_\_\_\_ WEIGHT \_\_\_\_\_

BINDER \_\_\_\_\_ WEIGHT \_\_\_\_\_

BLANK \_\_\_\_\_ TJ \_\_\_\_\_

BILLET 53161113 TUBE \_\_\_\_\_

WELD BY [initials] MPI BY [initials] MPI PIC \_\_\_\_\_

THREAD GAGE 48401 STAND OFF \_\_\_\_\_

FINAL DIAMOND GRIND SIZE 2 240

LENGTH TO WELD \_\_\_\_\_

FINISHED PIC UC SHIPPED BY AH DATE 4-13-18

SHORT BIT & TOOL CO  
225 GOLD STREET  
GARLAND TX 75042  
972-205-1011  
main@shortbits.com



# Certificate of Conformance

Serial Number	Size	Type	Steel or Matrix	Shank Diameter	Bore
N-091	2.24	SJ Flat	Steel		
Component	Material	Vender	Lot or Heat Number		
Blank	4140 Steel	RHW	53161113		
Hard Powder					
Soft Capping Powder					
Tool Joint					
MIG Weld					
WP Tube					
Inspection					
Diamond Grinding To Size	2.24				
Weld MPI					
Thread Gaging	48401				

Signed By: *Whangst* date: 4-17-18



# CERTIFICATE OF TEST

Certification Date  
15-SEP-2014

**CUSTOMER ORDER NUMBER**

HEH 3540

EARLE M. JORGENSEN COMPANY  
6201 LUMBERDALE  
HOUSTON TX 77092

Invoice Number  
S293689

**CUSTOMER PART NUMBER**

533460

<b>SOLD TO:</b>	H E HALFORD JR WELDING SERVICE	<b>SHIP TO:</b>	H E HALFORD JR WELDING SERVICE
	PO BOX 2181		6661 AMIE
	PEARLAND TX 77588		PEARLAND TX 77584

Description: 4140/42 HR Q&T SR/SF BAR 285/341 BHN ASTM A  
 2-3/4 RD X 20' R/L Line Total: 23 FT  
 HEAT: 53161113 ITEM: 533460

**Specifications:**

ASTM A29 12	ASTM A255 10	ASTM A304 11
ASTM A322 07	ASTM A434 06	

CHEMICAL ANALYSIS

C	MN	SI	P	S	CR	NI	MO
0.42	0.93	0.24	0.017	0.023	0.95	0.11	0.18
AL	CU	SN	V				
0.025	0.23	0.016	0.001				

RCPT: R424947  
 VENDOR: MAGELLAN/ SIMEC COUNTRY OF ORIGIN : ITALY

MECHANICAL PROPERTIES

DESCRIPTION	YLD STR	ULT TEN	%ELONG	%RED	HARDNESS
MID RADIUS	KSI	KSI	IN 02 IN	IN AREA	BHN
	119.5	140.7	22.7	50.15	312
DESCRIPTION	YLD STR	ULT TEN	%ELONG	%RED	HARDNESS
SURFACE				IN AREA	BHN
					320

GRAIN SIZE :6 - 8

The above data were transcribed from the manufacturer's Certificate of Test after verification for completeness and specification requirements of the information on the certificate. All test results remain on file subject to examination.

We hereby certify that the material covered by this report will meet the applicable requirements described herein, including any specification forming a part of the description.

The willful recording of false, fictitious, or fraudulent statements in connection with test results may be punishable as a felony under federal statutes.

Material did not come in contact with mercury while in our possession.

MICHAEL BOSCH

MANAGER, QUALITY ASSURANCE

2.245J (L) 11091

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IMPACT TEST		UOM ft-lbs			% LAT		DESCRIPTION
TYPE	TEMP	ORNT	SMPL#1	#2	#3	AVG	
CHARPY	32 F	LONG	45.0	43.0	40.0	42.7	10MM X 10MM
CHARPY	-20 F	LONG	30.4	32.6	29.2	30.7	10MM X 10MM

VACUUM DEGASSED MATERIAL IS FREE FROM MERCURY CONTAMINATION  
NO WELD REPAIR PERFORMED ON MATERIAL  
ULTRASONIC: YES  
THERMAL TREATMENT: OK  
MACRO: OK

**COMMENTS**

REDUCTION RATIO 6.68  
TENSILE PIECE IS A PROLONGATION OF BAR  
TENSILE SPECIMAN SIZE .500"  
HEAT TREATMENT  
AUSTENITIZED AT 1598 DEG F BY 90 MIN  
QUENCHED IN WATER START AT 85 DEG F FINISH AT 102 DEG F  
TEMPERED AT 1121 DEG F BY 106.5 MIN.  
COLLED IN AIR AT TEMP ROOM  
LAT EXP 05/05/06  
SHEAR 54/56/50

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MANAGER, QUALITY ASSURANCE

2.24 SJ (2)