



T-279

SERIAL NUMBER: T-280

COOK DATE:

27 Jun 23

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

BY \_\_\_\_\_

PO Harris

#4005332

ORDER DATE 26 JUN 23 SHIP DATE: 29 JUN 23

FOR: WFR

SIZE 2.725 2.7

TYPE MKT-5 (Concave)

THREAD 1 1/2 MT

OTHER with STAB 2 DB To Center

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

WEIGHT \_\_\_\_\_

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

WEIGHT \_\_\_\_\_

BINDER \_\_\_\_\_

WEIGHT \_\_\_\_\_

BLANK M40933

TJ \_\_\_\_\_

BILLET 5341641

TUBE \_\_\_\_\_

WELD R0 MPI Rene

MPI PIC Rene BRAZE S.M.

THREAD GAGE \_\_\_\_\_

STAND OFF .375

FINAL DIAMOND GRIND SIZE

2.7

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

FINISHED PIC TAKEN BY Rene CRATED BY Rene DATE: 6/29/23

International \_\_\_\_\_

domestic

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



# Certificate of Conformance

Serial Number	Size	Type	Steel or Matrix	Shank Diameter	Bore
T-279, T-280	2.70	MXT-S (concave)	Matrix		

Component	Material	Vender	Lot or Heat Number
Blank	8620	RHW	M40933
Hard Powder			
Soft Capping Powder			
Billett	4140	RHW	5394891
MIG Weld			
Tubing			

Inspection	
Diamond Grinding To Size	
Weld MPI	
Thread Gaging	1 1/2" MT

Signed By: *P. Bess* date: *6/30/2023*



**GERDAU MACSTEEL**

5591 MORRILL ROAD  
JACKSON, MICHIGAN 49201

**CERTIFIED MATERIAL TEST REPORT**

<b>CUSTOMER ORDER NUMBER</b> P348192-453	<b>CUSTOMER PART NUMBER</b> 507008	<b>HEAT NUMBER</b> M40933	<b>WORK ORDER NUMBER</b> 250376 101	<b>DATE</b> 4/11/11
---	---------------------------------------	------------------------------	--	------------------------

REPORT TO  
MET DEPT

SHIP TO

**ORDERED**

<b>GRADE</b> 8620H	<b>SIZE</b> 2 1/2" RND	<b>LENGTH</b> 24'
<b>CUSTOMER SPECIFICATIONS</b> ASTM A322-07; ASTM A304-05		

**CHEMICAL ANALYSIS**

C	Mn	P	S	Si	Ni	Cr	Mo	Cu	Sn	Al
0.22	0.84	0.016	0.021	0.26	0.50	0.50	0.20	0.21	0.009	0.030
V	Nb									
0.006	0.002									

GRAIN SIZE

SPECIFICATION ASTM E112

FINE GRAIN 5-8

HARDENABILITY

SPECIFICATION ASTM A255/A304

**THEORETICAL**

J1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	18	20	22	24	26	28	30	32	34
46	46	43	39	33	29	27	26	25	24		22		21		20									

REDUCTION RATIO

RATIO= 7.3 TO 1.0

\*\* MATERIAL 100% MELTED AND MANUFACTURED IN THE U.S.A. BY THE ELECTRIC ARC FURNACE AND CONTINUOUS CASTING METHOD. THE PRODUCT HAS NOT

PAGE 1

We certify that these data are correct and in compliance with specified requirements.

Gerdau MacSteel Monroe  
3000 East Front Street  
Monroe, MI 48161

*Wendy J. Craig*  
Wendy J. Craig  
Quality Assurance Representative

CONTINUED ON PAGE 2

4/18/11  
507008  
M40933  
K419867


**GERDAU MACSTEEL**

 5591 MORRILL ROAD  
 JACKSON, MICHIGAN 49201

**CERTIFIED MATERIAL TEST REPORT**

CUSTOMER ORDER NUMBER	CUSTOMER PART NUMBER	HEAT NUMBER	WORK ORDER NUMBER	DATE
P348192-453	507008	M40933	250376 101	4/11/11

 REPORT TO  
 MET DEPT

SHIP TO

**ORDERED**

GRADE	SIZE	LENGTH
8620H	2 1/2" RND	24'
CUSTOMER SPECIFICATIONS		
ASTM A322-07; ASTM A304-05		

BEEN REPAIRED BY WELDING AND THIS MATERIAL HAS NOT BEEN EXPOSED TO MERCURY OR TO ANY OTHER METAL ALLOY THAT IS LIQUID AT AMBIENT TEMPERATURES DURING PROCESSING OR WHILE IN OUR POSSESSION. GERDAU MACSTEEL MONITORS ALL INCOMING SCRAP AND ALL HEATS OF STEEL TO ENSURE THAT PRODUCTS SHIPPED ARE FREE OF RADIOACTIVE MATERIAL.

PAGE 2 OF 2

We certify that these data are correct and in compliance with specified requirements.

 Gerdau MacSteel Monroe  
 3000 East Front Street  
 Monroe, MI 48161

Wendy J. Craig

Quality Assurance Representative



TC Industries - Mill Products Division  
 3703 S. Route 31  
 Crystal Lake, IL 60012  
 Tel 815-459-2400  
 Fax 815-333-8367

# Material Testing Report

## TC Industries Test Center, 3703 S. Route 31, Crystal Lake, IL 60012

<b>Report No</b> 33578		<b>Report Date</b> 9/29/2022				
<b>Customer Code</b> Capital	<b>Bill Customer Address Code</b> DeWitt	<b>Bill Address</b> 240 S. Bridge Street 3rd Floor	<b>Bill City</b> DeWitt	<b>Bill State</b> MI	<b>Bill Zip</b> 48820	<b>Bill Country</b> USA
<b>Heat Treat Process Parameters</b>			<b>Value</b>	<b>Unit</b>		
Austenitizing Temperature (F)			1600	Degrees F		
Austenitizing Time (minutes)			92	minutes		
Tempering Temperature (F)			1200	Degrees F		
Tempering Time (minutes)			140	minutes		
<b>Part No</b> RD 2.750 x 288 RL 4140 110Y B7 BC 354BC F1554 CVN@-20F			<b>Part Description</b> ASTM A193B7 A434BC A354BC F1554 GR105 110Y 31 ft-lbs@-20F			
<b>Job No</b> 33578	<b>PO No</b> 025417	<b>Customer Part No</b> WQTS-R2	<b>Customer Part Revision</b>	<b>Process</b> WATER QUENCH TEMPER STRAIGHTEN	<b>Heat No</b> 5394891	<b>Grade</b> 4140



*Karen Puff*  
 Karen Puff  
 Test Center Supervisor

All test results reported below were performed by an A2LA accredited lab

### Cert Note

Control No	Specification Description	Unit	Lower Limit	Upper Limit	Value	Result	Gage/Outside Lab				
672269	Midradius Brinell Hardness	HBW	255	321	295	PASS	Boss Brinell Scope L802P				
	Surface Brinell Hardness				298	PASS		Brinell Tester R62			
	672582				Charpy Impact (CVN ft-lb) 10x10mm	Ft Pound	31		-18	62	PASS
								Charpy Impact Minimum Average (CVN ft-lb)		67	PASS
Charpy Impact Minimum Single Value (CVN ft-lb)		72	PASS								
Charpy Testing Temperature		67	PASS								
	Tensile Strength (Ultimate ksi)	ksi	125	150	62	PASS	CVN Therm (Chiller) 42158 Tensile Machine 1041				
					136	PASS					
	141				PASS						
	Yield Strength (0.2% offset)				116	PASS					
					117	PASS					
					118	PASS					
	Elongation (%)				%	16		20	PASS		
								20	PASS		
								20	PASS		
	Reduction of Area (%)				%	50		58	PASS		
63		PASS									
64		PASS									

Sampling is in accordance with FC 4.10.03 (Sampling Plans and Test Methods). This sampling plan is used unless other plans are indicated by the customer's standard or specification. Test results and process information listed on this report are limited to the processes performed by TC Industries or its subcontractors. No representation is made that TC Industries certifies conformance to specification requirements relating to processes not performed by TC Industries or its subcontractors. Results apply to the sample as received. Results relate to the items tested. TC Industries Test Center decision rule is: Simple Acceptance, Pass/Fail, to the published criteria contained in the Purchase Order or specification.

FC 4.12.16F 01/07/2014

Job No	Heat No	Grade	Part No	Serial No	Mill Tag No	Pieces	Quantity	Net Weight	Flat Thickness/ Round Diameter	Length	Width/ Thickness
33578	5394891	4140	RD 2.750 x 288 RL 4140 110Y B7 BC 354BC F1554 CVN@-20F	MPD184923	A1546V	9	4500	4,500	2.75	292	0
			RD 2.750 x 288 RL 4140 110Y B7 BC 354BC F1554 CVN@-20F	MPD184924	A1547V	9	4500	4,500	2.75	292	0
			RD 2.750 x 288 RL 4140 110Y B7 BC 354BC F1554 CVN@-20F	MPD184925	A1548V	9	4500	4,500	2.75	292	0
			RD 2.750 x 288 RL 4140 110Y B7 BC 354BC F1554 CVN@-20F	MPD187103	A1546V	9	4500	4,500	2.75	292	0
			RD 2.750 x 288 RL 4140 110Y B7 BC 354BC F1554 CVN@-20F	MPD187104	A1547V	8	4000	4,000	2.75	292	0
<b>Job Totals</b>				<b>5</b>	<b>5</b>	<b>44</b>	<b>22000</b>	<b>22,000</b>			



2.75MX1-8  
T 280

