



Homebuilding Division
Welding Certification Letter

March 28, 2025

Permit# 20245069

PERMIT Address: 2615 SW FIREFLY LN

HOOK FARMS #166

LEES SUMMIT MO 64082

Welded connections for: WALKER CUSTOM HOMES

Welding rod 7018, per industry standards was used by our certified welder, contracted employee through Royal Metal Industries.

Welder: DAN BROWN

Welder Certification attached.

Best Regards,

Dora Turner

Homebuilding Inside Sales Representative

Royal Metal Industries

913-829-3000 x2

ROYAL METALS INDUSTRIES

Welding Operator Qualification Test Record

WQTR No. RMI-SMAW-OH-DB Welder Name DAN BROWN Welder Id DB

WPS No. RMI-SMAW Revision _____ Date 2/27/2018

Variables Record Actual Values Used In Qualification

Process (Table 4.10, Item (1)) SMAW

Transfer Mode (GMAW): Short-Cir. Globular Spray

Type Manual Machine Semi-Auto Auto

Number of Electrodes Single Multiple

Current/Polarity AC DCEP DCEN Pulsed

Position (Table 4.10, Item (4)) Overhead

Weld Progression: (Table 4.10, Item (6)) Up Down

Backing [Table 4.10, Item (7)] Use Backing

Consumable Insert (GTAW) Use Insert

Material/Spec. A-36 to A-36

Thickness (Plate): Groove (in) .375

Fillet (in) .375

Thickness (Pipe/tube): Groove () _____

Fillet () _____

Diameter(Pipe): Groove () _____

Fillet () _____

Notes _____

Filler Metal (Table 10, Item (2))

Spec. 5.1

Class. E-7018 LH

F-No. 4

Gas/Flux Type (Table 4.10, Item (3)) _____

Other _____

Qualification Range

SMAW-MILD STEEL GROUPS

Short-Circuiting Globular Spray

Manual Machine Semi-Auto Auto

Single Multiple

AC DCEP DCEN Pulsed

Flat, Overhead, Horizontal, 4G

Up Down

With Backing Without Backing

With Insert Without Insert

MILD STEEL GROUPS

.125 - .750 in

Any - Any in

_____ - _____ in

_____ - _____ in

_____ - _____ in

_____ - _____ in

_____ - _____ in

_____ - _____ in

VISUAL INSPECTION (4.8.1) Acceptable Yes

GUIDED BEND TEST RESULTS (4.30.5)

Type	Result	Type	Result
ROOT	PASSED	FACE	PASSED
ROOT	PASSED	FACE	PASSED

Fillet Test Results (4.30.2.3 and 4.30.4.1)

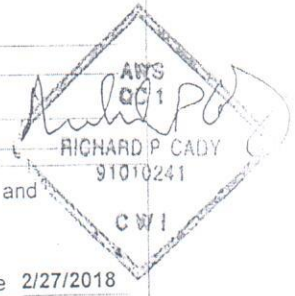
Appearance GOOD Fillet Size .340" Macroetch SOUND

Fracture Test Root Penetration COMPLETE Description PASSED

Inspected By _____ Test No. RMI Organization A-Z WELDER Date 2/27/2018

RADIOGRAPHIC TEST RESULTS (4.30.3.1)

Film Identification No.	Result	Remark	Interpreted By



We, the undersigned, certify that the statements in this record are correct and that the test welds were prepared, welded, and tested in accordance with the requirements of section 4 of ANSI/AWS D1.1, (2015) Structural Welding Code-Steel.

Manufacturer ROYAL METALS INDUSTRIES Authorized By _____ Date 2/27/2018

ROYAL METALS INDUSTRIES

Procedure Qualification Record

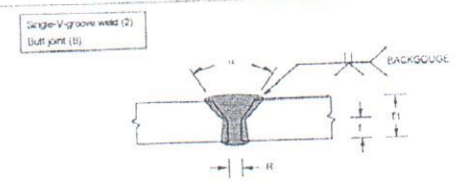
RMI-SMAW

PQR No. RMI-SMAW Revision _____ Date _____ By _____

Authorized By _____ Date _____ Type Manual Machine

Welding Process(es) SMAW Reference WPS No. RMI-SMAW Semi-Auto Auto

JOINT
 Type Butt
 Backing Yes No Single Weld Double Weld
 Backing Material BACK WELD
 Root Opening 3/32" Root Face Dimension 3/32"
 Groove Angle 60 Radius (J-U) _____
 Back Gouging Yes No
 Method GRIND AND BRUSH



Welding Process	Joint Configuration	Base Metal Thickness (Unlimited)		Groove Preparation			Permitted Backing Positions	Notes
		T1	T2	Root Opening	Root Face	Groove Angle		
SMAW	B-122	U		R = 0 to 1/8 F = 0 to 1/8 H = 60°	+1/16, 0 +1/16, 0 +10°, 4°	+1/16, -1/8 Face limited +10°, -5°	A-1	(C, D, E)

BASE METALS
 Material Spec A-36 to A-36
 Type or Grade _____ to _____
 Thickness: Groove (in) .375 Fillet (in) .375
 Diameter (Pipe,) _____

POSITION
 Position of Groove Vertical Fillet Vertical
 Vertical Progression: Up Down

FILLER METALS
 AWS Specification 5.1
 AWS Classification E-7018 LH

ELECTRICAL CHARACTERISTICS
 Transfer Mode (GMAW):
 Short-Circuiting Globular Spray
 Current: AC DCEP DCEN Pulsed
 Other _____
 Tungsten Electrode (GTAW):
 Size _____ Type _____

SHIELDING
 Flux _____ Gas _____
 Composition _____
 Electrode-Flux (Class) _____ Flow Rate _____
 Gas Cup Size _____

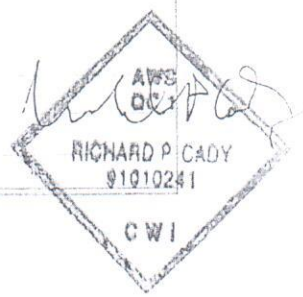
TECHNIQUE
 Stringer or Weave Bead Both
 Multi-pass or Single Pass (per side) Both
 Number of Electrodes 1
 Electrode Spacing: Longitudinal _____
 Lateral _____ Angle _____
 Contact Tube to Work Distance _____
 Peening _____
 Interpass Cleaning GRIND-BRUSH

PREHEAT
 Preheat Temp., Min. 50 F
 Interpass Temp., Min. 50 F Max. 450 F

POSTWELD HEAT TREATMENT Required
 Temp. _____
 Time _____

WELDING PROCEDURE

Layer/Pass	Process	Filler Metal Class	Diameter	Cur. Type	Amps or WFS	Volts	Travel Speed	Other Notes
1-n	SMAW	E-7018 LH	5/32"	DCEP	130 A	20 V	7IPM	BACK GOUGE BACK WELD



ROYAL METALS INDUSTRIES

Procedure Qualification Record

RMI-SMAW

TEST RESULTS

TENSILE TEST

Specimen no.	Width	Thickness	Area	Ultimate tensile load, lb	Ultimate unit stress, psi	Character of failure and location

GUIDED BEND TEST

Specimen no.	Type of bend	Result	Remark
1	ROOT	PASSED	
2	FACE	PASSED	
3	ROOT	PASSED	
4	FACE	PASSED	

VISUAL INSPECTION

Appearance GOOD
 Undercut NONE
 Piping porosity NONE
 Convexity SLIGHT
 Test date 2/27/2018
 Witnessed by _____

Radiographic-ultrasonic examination

RT report no: _____ Result _____
 UT report no: _____ Result _____

FILLET WELD TEST RESULTS

Minimum size multiple pass _____ Maximum size single pass _____
 Macroetch
 1. _____ 3. _____ 1. .295" 3. PASSED
 2. _____ 2. .310"

Other Test

GROOVES AND FILLETS AWS D1.1 STRUCTURAL CODE

All-weld-metal tension test

Tensile strength, psi _____
 Yield point/strength, psi _____
 Elongation in 2 in., % _____
 Laboratory test no. _____

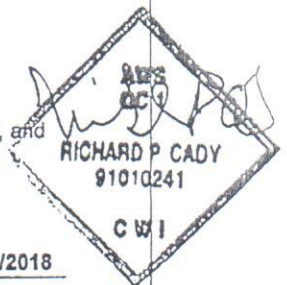
Welder's name DAN BROWN Clock no. _____ Stamp no. DB

Test conducted by A-Z WELDER Laboratory _____

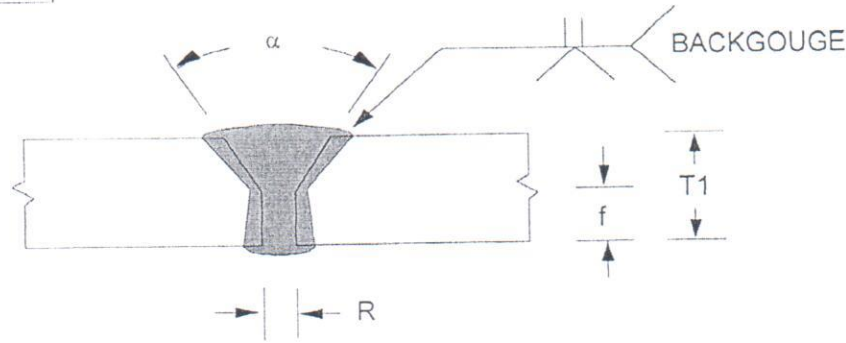
Test number RMI Per AWS D1.1

We, the undersigned, certify that the statements in this record are correct and that the test welds were prepared, welded, and tested in accordance with the requirements of section 4 of ANSI/AWS D1.1, 2015) Structural Welding Code-Steel.

Manufacturer ROYAL METALS INDUSTRIES By _____ Date 2/27/2018
 Title _____



Single-V-groove weld (2)
Butt joint (B)



Welding Process	Joint Designation	Base Metal Thickness (U=unlimited)		Groove Preparation			Permitted Welding Positions	Notes
				Root Opening Root Face Groove Angle	Tolerances			
					As Detailed (see 3.13.1)	As Fit Up (see 3.13.1)		
SMAW	B-U2	U	-	R = 0 to 1/8 f = 0 to 1/8 α = 60°	+1/16, -0 +1/16, -0 +10°, -0°	+1/16, -1/8 Not limited +10°, -5°	All	C, D, N

MEMO

AWS D1.1 STRUCTURAL CODE- GROOVES AND FILLETS



ROYAL METALS INDUSTRIES

Welding Operator Qualification Test Record

WQTR No. <u>RMI-SMAW-V-DB</u>	Welder Name <u>DAN BROWN</u>	Welder Id _____
WPS No. <u>RMI-SMAW</u>	Revision _____	Date <u>2/27/2018</u>

Variables	Record Actual Values Used In Qualification
Process (Table 4.10, Item (1))	<u>SMAW</u>
Transfer Mode (GMAW): Short-Cir. <input type="checkbox"/> Globular <input type="checkbox"/> Spray <input type="checkbox"/>	
Type Manual <input checked="" type="checkbox"/> Machine <input type="checkbox"/> Semi-Auto <input type="checkbox"/> Auto <input type="checkbox"/>	
Number of Electrodes Single <input type="checkbox"/> Multiple <input type="checkbox"/>	
Current/Polarity AC <input type="checkbox"/> DCEP <input checked="" type="checkbox"/> DCEN <input type="checkbox"/> Pulsed <input type="checkbox"/>	
Position (Table 4.10, Item (4))	<u>Vertical</u>
Weld Progression: (Table 4.10, Item (6)) Up <input checked="" type="checkbox"/> Down <input type="checkbox"/>	
Backing [Table 4.10, Item (7)] Use Backing <input checked="" type="checkbox"/>	
Consumable Insert (GTAW) Use Insert <input type="checkbox"/>	
Material/Spec. <u>A-36</u> to <u>A-36</u>	
Thickness (Plate): Groove (in) _____	<u>.375</u>
Fillet (in) _____	<u>.375</u>
Thickness (Pipe/tube): Groove () _____	
Fillet () _____	
Diameter(Pipe): Groove () _____	
Fillet () _____	
Notes _____	
Filler Metal (Table 10, Item (2))	
Spec. <u>5.1</u>	
Class. <u>E-7018 LH</u>	
F-No. <u>4</u>	
Gas/Flux Type (Table 4.10, Item (3)) _____	
Other _____	

Qualification Range	
<u>SMAW-MILD STEEL GROUPS</u>	
Short-Circuiting <input type="checkbox"/> Globular <input type="checkbox"/> Spray <input type="checkbox"/>	
Manual <input checked="" type="checkbox"/> Machine <input type="checkbox"/> Semi-Auto <input type="checkbox"/> Auto <input type="checkbox"/>	
Single <input type="checkbox"/> Multiple <input type="checkbox"/>	
AC <input type="checkbox"/> DCEP <input checked="" type="checkbox"/> DCEN <input type="checkbox"/> Pulsed <input type="checkbox"/>	
<u>Flat, Vertical, Horizontal, 3G</u>	
Up <input checked="" type="checkbox"/> Down <input type="checkbox"/>	
With Backing <input checked="" type="checkbox"/> Without Backing <input checked="" type="checkbox"/>	
With Insert <input type="checkbox"/> Without Insert <input type="checkbox"/>	
<u>MILD STEEL GROUPS</u>	
<u>.125</u> - <u>.750</u> in	
<u>Any</u> - <u>Any</u> in	
_____ - _____ in	
_____ - _____ in	
_____ - _____ in	
_____ - _____ in	
_____ - _____ in	

VISUAL INSPECTION (4.8.1) Acceptable Yes
GUIDED BEND TEST RESULTS (4.30.5)

Type	Result	Type	Result
ROOT	PASSED	FACE	PASSED
ROOT	PASSED	FACE	PASSED

Fillet Test Results (4.30.2.3 and 4.30.4.1)

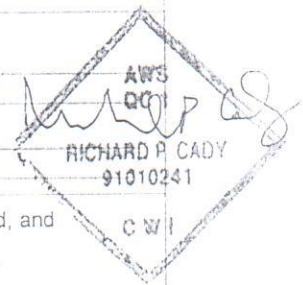
Appearance GOOD Fillet Size .310" Macroetch SOUND

Fracture Test Root Penetration COMPLETE Description PASSED

Inspected By _____ Test No. RMI Organization A-Z WELDER Date 2/27/2018

RADIOGRAPHIC TEST RESULTS (4.30.3.1)

Film Identification No.	Result	Remark	Interpreted By _____
			Organization _____
			Test No. _____
			Date _____



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Manufacturer ROYAL METALS INDUSTRIES Authorized By _____ Date 2/27/2018