



Test Report

Attn: Carter Glidewell
 G&G Fabrication and Machining
 Inc.
 2605 S Highway 66
 Claremore, OK 74019

Lab Number: 22040226
Date Received: 04/14/2022
Date Reported: 04/18/2022
PO Number: Verbal - C.
 Glidewell

| | | | |
|----------------------------|------------------|----------------------|------------------|
| Coupon Description: | 3/4" Thick Plate | Welder Name: | Donnell Williams |
| Base Material 1: | SA-516, Grade 70 | WPS: | GG-FCAW-1 |
| Base Material 2: | SA-516, Grade 70 | PQR: | GG-FCAW-1c |
| | | Process: | FCAW |
| | | Position: | 4G |
| | | Filler Metal: | E71T-1M |

Tensile Test per ASTM A370-21 / ASTM E8-21, Transverse Across the Weld, As Received
Weld Code: AWS D1.1/D1.1M:2020

| | Results |
|------------------------|------------|
| Original Width, in | 0.752 |
| Original Thickness, in | 0.623 |
| Original Area, sq in | 0.4685 |
| Maximum Load, lbf | 38677 |
| Tensile Strength, psi | 82600 |
| Location of Fracture | Base Metal |

Fracture Type: Ductile

Tensile Test per ASTM A370-21 / ASTM E8-21, Transverse Across the Weld, As Received
Weld Code: AWS D1.1/D1.1M:2020

| | Results |
|------------------------|------------|
| Original Width, in | 0.753 |
| Original Thickness, in | 0.652 |
| Original Area, sq in | 0.4910 |
| Maximum Load, lbf | 40323 |
| Tensile Strength, psi | 82100 |
| Location of Fracture | Base Metal |

Fracture Type: Ductile

*Test results relate only to the items tested. This document shall not be reproduced, except in full, without the written approval of American Piping Inspection, Inc. Metallurgical Laboratory.
 Conformance statements are based on the Simple Acceptance Rule for measurement of uncertainty.



Test Report

Lab Number: 22040226

Visual Examination

Weld Code: AWS D1.1/D1.1M:2020

| | |
|---------|--------------|
| Results | Satisfactory |
|---------|--------------|

Radiography (RT) per ASTM E94-17

Weld Code: AWS D1.1/D1.1M:2020

| | |
|---------|--------------|
| Results | Satisfactory |
|---------|--------------|

Guided Bend Test, Transverse Across the Weld, As Received

Weld Code: AWS D1.1/D1.1M:2020

Bend Width: 0.375"

Bend Radius: 0.750"

| Measurement | Result |
|--------------------|--------------|
| Side Bend Number 1 | Satisfactory |
| Side Bend Number 2 | Satisfactory |
| Side Bend Number 3 | Satisfactory |
| Side Bend Number 4 | Satisfactory |

Approved By: Brent Fowler Title: Log-In Specialist

Signature: *BT Fu*

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Conformance statements are based on the Simple Acceptance Rule for measurement of uncertainty.



TECHNIQUE/INSPECTION REPORT

| CUSTOMER DATA | |
|----------------|--|
| NAME: | G&G Fabrication and Machining Inc. |
| ADDRESS: | 2605 S Highway 66, Claremore, OK 74019 |
| PHONE: | (717)-597-1748 |
| ATTN: | Carter Glidewell |
| WO: | |
| PO: | Verbal - C. Glidewell |
| JOB LOCATION: | API Shop |
| DESCRIPTION: | Procedure Qualification |
| MATERIAL TYPE: | SA-516, Gr 70 |

DATE 4/14/2022 DAY Thursday

DEFECT CODE

ABBREVIATED TERMS

| | | | |
|-------------------------|--------------------------------|------------------------|--|
| BT - BURN THROUGH | IF - INCOMPLETE FUSION | EU - EXTERNAL UNDERCUT | SOD - SOURCE TO OBJECT DISTANCE |
| EC - EXTERNAL CONCAVITY | IP - INADEQUATE PENETRATION | IU - INTERNAL UNDERCUT | OFD - SOURCE SIDE OF OBJECT TO FILM DISTANCE |
| IC - INTERNAL CONCAVITY | POR - POROSITY | | OD - OUTER DIAMETER |
| | ESI - ELONGATED SLAG INCLUSION | | WT - WELD THICKNESS |
| HB - HOLLOW BEAD | ISI - ISOLATED SLAG INCLUSION | | WR - WELD REINFORCEMENT |
| | | | BM - BASE MATERIAL |

| WELD/FILM NUMBER | Sta. NO / Stencil | OD | BM | WR | WT | WITHIN STD'S | | # FILM | FILM SIZE/MFG/TYPE | SOD | OFD | IQI S-F | #EXP | DEFECT LOCATION |
|------------------|---------------------------------------|-----|-------|-------|-------|--------------|----|--------|--------------------|-----|-------|---------|------|-----------------|
| | | | | | | YES | NO | | | | | | | |
| 1 | 22040226 D. Williams GG-FCAW-1c | 1-2 | 0.750 | 0.125 | 0.875 | X | | 1 | 4.5X17 F80 | 24" | 0.875 | B | 1 | |
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|------------------------|--------------|-------------------|-------|-------------|----------------|--------------|----|-------------|------|--------------|--------------------|-------------|---------|
| METHOD | RT | SOURCE SIZE DIAG. | 0.144 | ISOTOPE | IR 192 | NO. CURIES | 76 | DEV. TIME | Auto | DEV. TEMP | Auto | DENSITY | 2.0-4.0 |
| NO. OF WELDS | 1 | FT. LONG SEAMS | | STANDARDS | AWS D1.1 | PER DIEM | | NO. OF FILM | 1 | EXPOSURE: | DBL WALL X S. WALL | R Factor | SCREEN |
| | | | | | | | | | | VIEWING: | DBL WALL S. WALL X | 2.6 | PB |
| TRUCK NO. | API Shop | REPORT NUMBER | 1 | PAGE NUMBER | 1 | TECH HOURS | | ASST. HOURS | | TRAVEL HOURS | | TOTAL HOURS | MILEAGE |
| FILM INTERPRETER | Seth Stotler | | | | ASSISTANT NAME | Zach Baumert | | | | ASNT LEVEL | II | | |
| COMPANY REPRESENTATIVE | | | | | NDT TECHNICIAN | Seth Stotler | | | | ASNT LEVEL | II | | |

SIGNATURE CERTIFIES TIME AND MATERIALS CORRECT - AMERICAN PIPING INSPECTION, INC ASSUMES NO RESPONSIBILITY FOR LOSSES OF ANY KIND DUE TO INTERPRETATION

G&G Fabrication & Machining

AWS D1.1 Procedure Qualification Record (PQR)

PQR No. GG-FCAW-1c

Test Results

Tensile Test

| Specimen No. | Width (in.) | Thickness (in.) | Area (in ²) | Ultimate Tensile Load (lb) | Ultimate Unit Stress (PSI) | Character of Failure and Location |
|--------------|-------------|-----------------|-------------------------|----------------------------|----------------------------|-----------------------------------|
| Flat 1 | 0.752 | 0.623 | 0.4685 | 38677 | 82600 | Ductile - BM |
| Flat 2 | 0.753 | 0.652 | 0.4910 | 40323 | 82100 | Ductile - BM |

Guided Bend Test

| Specimen No. | Type of Bend | Result | Remarks |
|--------------|--------------|--------------|---------|
| 1 | Side Bend 4G | Satisfactory | |
| 2 | Side Bend 4G | Satisfactory | |
| 3 | Side Bend 4G | Satisfactory | |
| 4 | Side Bend 4G | Satisfactory | |

Visual Inspection

Appearance: Satisfactory Undercut: None Piping Porosity: None
 Concavity: None Inspected By: Gerit Smith Date: 4/18/2022

Radiographic - Ultrasonic Examination

RT Report No.: 22040226 Result: Satisfactory UT Report No.: N/A Result: N/A

Welder's Name: Williams, Donnell I.D.: _____ Stamp No.: _____

Test conducted by: American Piping Inspection, Inc. Test No.: 22040226

Welding of coupon was witnessed by: G&G Fabrication & Machining, Inc.

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

Approved By: _____ Date _____