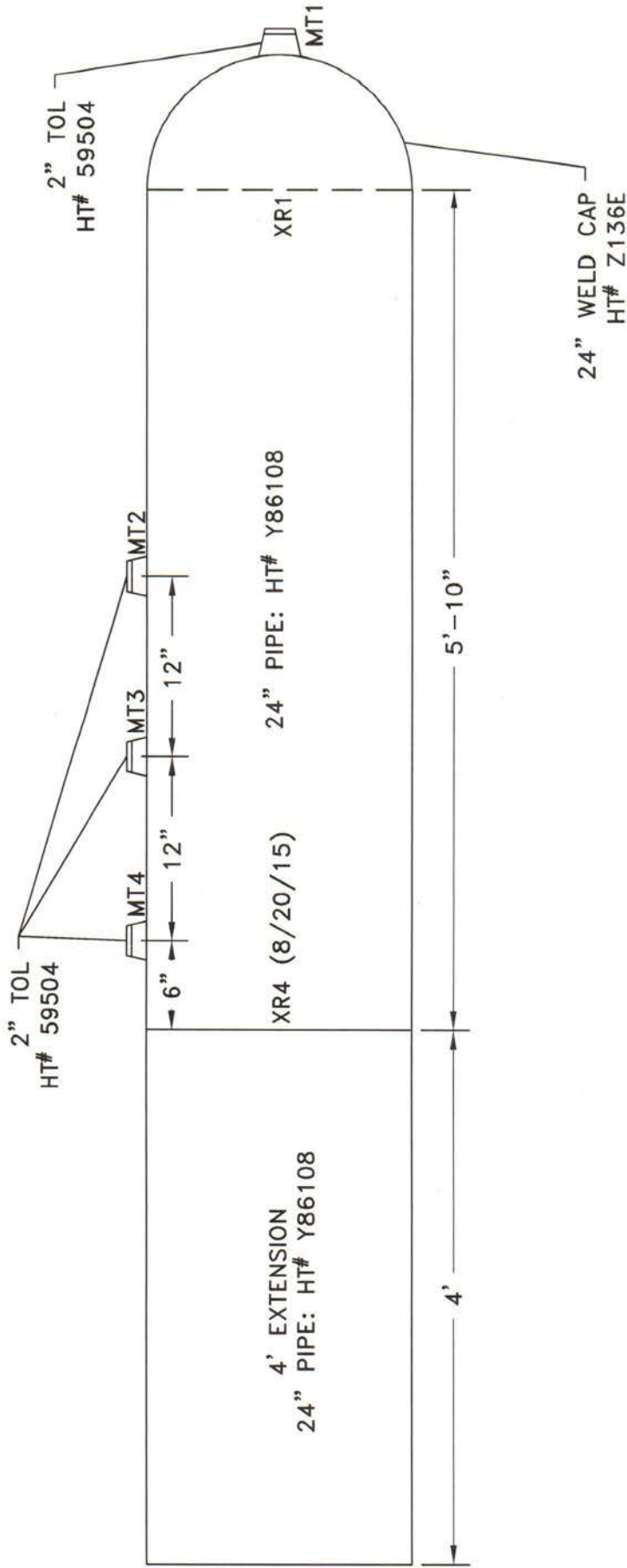


SN# 24TEST04



PIPE OD: 24.00"
 PIPE WALL THICKNESS: 0.500"
 PIPE GRADE: X-65

| | | | | |
|--------------------------------|-----------|-----------------|---------------------------------|----------|
| 01 | 8/20/2015 | EXTENSION ADDED | | WFH |
| 00 | 5/26/2015 | INITIAL RELEASE | | WFH |
| REV. | DATE | DESCRIPTION | | APPROVED |
| WELD-ON TEST HEADER | | | | |
| RIDGE RUNNER REFERENCE DRAWING | | | | |
| | | | DESIGN FACTOR: | 95% SMYS |
| | | | MAX. HYDROSTATIC TEST PRESSURE: | 2570 PSI |
| | | | SCALE: | N.T.S. |
| | | | SHEET | 1 OF 1 |

THIS DRAWING CANNOT BE REPRODUCED WITHOUT PRIOR CONSENT OF RIDGE RUNNER PIPELINE SERVICES, LLC

24" PIPE



Certificate of Tests

STUPP JOB NUMBER: ER 9462 REVISION: 0 HEAT #: Y86108

12555 Renaldson Rd, Baton Rouge, LA

| | | | | |
|--|--|--|---|--|
| CUSTOMER McJunkin Red Man Corporation CUSTOMER ORDER S7K5682926 | | TEST PARAMETERS HYDROSTATIC PRESSURE 2,720 PSI DURATION 10 Seconds DRILL HOLE 0.125 In MATCH 1:10 SEAM ANNEALED TEMP. MINIMUM 1,650° F | | |
| ORDER DESCRIPTION HPFW / Fine Grained Steel / Aluminum Killed / Continuously Cast / Melted and Manufactured in U.S.A. OD 24.000 Inches WALL 0.500 Inch GRADE AP5SL-X65M-PSL2 SPEC API-5L VERSION 45th December 2012 QUANTITY STEEL PO 6721-14 | | FRACTURE TOUGHNESS CRITERIA CVN-20-32F (20 ft.lb. minimum per Full-size). Flattening tests acceptable per specifications. CHEMICAL FORMULA CE=C+Mn/6+Cr/5+Mo/5+V/5+Ni/15+Cu/15 Pcm=C+Si/30+Mn/20+Cu/20+Cr/20+Ni/60+Mo/10+V/10+5B CE Max=0.42% ; Pcm Max=0.25% ; Pipe manufactured, sampled, tested, and inspected in accordance with the specification(s) and meets requirements. Steel made and cold rolled at US Steel, Gary, IN. Pipe manufactured at Stupp Corporation, Baton Rouge, LA. | | |
| TENSILE TESTS (in PSI) SPECIMEN SIZE 12.0 In X 2" (1.5" X 1") | | HARDNESS SURVEY | | |
| COIL PIPE TEST TYPE YIELD TENSILE ELONG% Y/T Ratio | 961 7 TRANS PIPE 72,100 90,700 35 0.79 | COIL PIPE TEST TYPE BM HAZ WELD HAZ BM | 961 7 VICKERS 10 KGF 211 74 190 183 198 | 961 7 VICKERS 10 KGF 209 100 202 211 197 |
| 961 7 TRANS PIPE WELD 87,300 | | 961 7 VICKERS 10 KGF 205 110 200 216 183 | | |
| CHARPY TESTS | | DROP WEIGHT TESTS - TRANSVERSE FULL SIZE | | |
| COIL PIPE ORIENTATION LOCATION SIZE TEMP | SHEAR PERCENT: 1 2 3 AVG | ENERGY IN FT-POUNDS: 1 2 3 AVG | | |
| 961 7 TRANSVERSE BODY FULL 32°F | 100 100 100 100 | 197 206 199 200.7 | | |
| 961 7 TRANSVERSE WELD FULL 32°F | 40 50 50 47 | 68 94 91 84.3 | | |
| CHEMICAL TESTS | | | | |
| COIL PIPE CE Pcm TYPE C Mn P S Si Al Cu Nb N Ti Mo Cu Ni B Pb Sn | 961 1 0.296 0.125 PROD 0.044 1.250 0.006 0.000 0.193 0.034 0.068 0.001 0.017 0.004 0.205 0.003 0.023 0.009 0.0000 0.0034 0.004 | | | |
| 961 7 0.299 0.129 PROD 0.048 1.240 0.006 0.001 0.195 0.034 0.068 0.001 0.017 0.007 0.205 0.003 0.024 0.009 0.0000 0.0035 0.004 | | | | |

The undersigned, on behalf of Stupp Corporation, hereby certifies that the above materials have been inspected and tested in accordance with the methods prescribed in the applicable specifications, and the results of such inspection and tests are shown above. In determining properties or characteristics for which no methods of inspection or testing are prescribed by said specification, the standard mill inspection and testing practices of Stupp Corporation have been applied. Unless it appears otherwise in the results of such inspection and tests shown above, the undersigned employee of Stupp Corporation believes that said materials conform to said specification.

Jeff Jones

Stupp Corporation, Authorized Insp. Rep

4/3/2014

Appr: *[Signature]*



24" CAP

CERTIFIED MATERIAL TEST REPORT
CERTIFICATE OF COMPLIANCE
CERTIFICATE # 22042

Tube Forgings of America, Inc.
5200 N.W. Front Avenue
Portland, OR 97210
ISO 9001 Certified
1/30/2015

Sold To: McJunkin Red Man Corp #8ZF
224 North Main Street
Horseheads, NY 14845
Customer ID: 24655HY2
TFA Sales Order : 305003\33-1
Customer PO Reference: S8ZF785465

Ship To: McJunkin Red Man #022
1000 Maronda Way
Monessen, PA 15062

TFA Part ID: 90120
Description: 24 XH CAP Y-65
Quantity: 10
Customer Part ID: 1688-0701

Heat Code: Z136E
Grade: Y65
Mill: EVRAZ
Mill Heat : NW9741
Process: Y65-7

Heat Analysis Chemistry

| C | Mn | P | S | Si | Mo | Cr | Ni | Cu | V | Cb | B | Ti | Al | N | Co | Ca | C.E. |
|------|------|-------|-------|------|------|------|------|------|------|-------|---|------|----|---|----|----|------|
| 0.16 | 1.30 | 0.013 | 0.004 | 0.32 | 0.00 | 0.00 | 0.05 | 0.01 | 0.07 | 0.005 | | 0.00 | | | | | 0.39 |

Product Analysis Chemistry

| C | Mn | P | S | Si | Mo | Cr | Ni | Cu | V | Cb | B | Ti | Al | N | Co | Ca | C.E. |
|------|------|-------|-------|------|------|------|------|------|------|-------|---|------|----|---|----|----|------|
| 0.15 | 1.30 | 0.013 | 0.003 | 0.33 | 0.02 | 0.02 | 0.05 | 0.01 | 0.07 | 0.010 | | 0.01 | | | | | 0.39 |

Physical

| ID | Type | Yield | Tensile | % Elong | Length | BHN | In-Process Test 1 Test 2 | Tensile Orientation | Test Bar Type |
|----|------|--------|---------|---------|--------|-----|-----------------------------|---------------------|---------------|
| 1 | PSI | 67,600 | 81,900 | 32.50 | 2" | 182 | | LONGITUDINAL | FLAT |

Charpy Test Results

| | Impacts | | | | Lateral Expansion | | | % Shear | | | | V notch test at degrees F | Coupon Size | Charpy Orientation |
|---------|---------|--------|--------|--------|-------------------|---|---|---------|-------|-------|-------|---------------------------------|----------------|-----------------------|
| | 1 | 2 | 3 | Avg | 1 | 2 | 3 | 1 | 2 | 3 | Avg | | | |
| I FtLbs | 142.00 | 252.50 | 206.00 | 200.17 | | | | 70.00 | 85.00 | 85.00 | 80.00 | +20F | 10X10MM | TRANSVERSE |

Notes/Comments

1. THIS MATERIAL WAS AUSTENITIZED AT 1650F, OIL QUENCHED, AND TEMPERED AT 1200F. 2. THIS MATERIAL IS OF SEAMLESS MANUFACTURE.

1) MATERIAL MEETS MSS-SP-75 - 2008. 2) MATERIAL MEETS NACE MR-01-75/ISO 15156, REGIONS 1, 2 AND 3 -2009 EDITION. ALSO MEETS NACE MR 0103-2010 EDITION 3) MANUFACTURED IN AN ISO 9001 CERTIFIED FACILITY-CERTIFICATE #30248 4) MATERIAL MEETS THE FOLLOWING ADDITIONAL SPECS: - ENERGY TRANSFER ETC-HY-WELD-FIT REV 0, DATED 1/14/2005- KINDER MORGAN 8120 REV 6-1-2010.- SEMPRA ENERGY (SOUTHERN CALIFORNIA GAS) SDGE 52-96 REV 10/01/2010.- WILLIAMS GAS 50.1207 DATED 6/1/2006.5) EXCEPTIONS: - CE TO BE .43% MAX. BEVELS PER MSS SP-75 AT 37.5 DEGREES - REFERENCE WILLIAMS GAS 50.1207.- FITTINGS ARE FULLY PAINTED AND WILL NOT HAVE THE SERVICE TEMPERATURE STAMPED ON THEM AS REQUIRED BY ENERGY TRANSFER.- FITTINGS WILL NOT HAVE THE STENCILING REQUIRED BY KINDER MORGAN 8120.- MATERIAL UNDER 16 NPS IS NOT IMPACT TESTED UNLESS REQUIRED BY MSS SP-75 (Y65 AND HIGHER YIELDS) . MATERIAL UNDER 16 NPS USES SAME TFA GRADES AND IMPACTS ARE GUARANTEED TO MEET MSS SP-75-ID AT ENDS TO MSS NOT +/- .060 AS REQUIRED BY ENERGY TRANSFER ETC HY WELD FIT REV 0 DATED 1-14-2005 PARA 6.0

Heat Code: Z136E Grade Y65
Page 1 of 2

John Beachey, Mgr. Quality Assurance

The recording of fictitious entries on this document and or its fraudulent misuse may be punishable as a felony under Federal Statute.



MILL TEST REPORTS

Bonney Forge
 14496 Croghan Pike
 Mt. Union, PA 17066

CERTIFIED MILL TEST REPORT

MRC 5/18/2015

LOT NO.
 59504

CHEMICAL ANALYSIS, PHYSICAL PROPERTIES, REMARKS
 36-20 X 2" 3M A105 Thredolet™ Threaded

| | | | | | | | | | |
|---|-------|----|-------|----|-------|----|-------|----|-------|
| C | 0.210 | MN | 0.970 | P | 0.011 | S | 0.024 | SI | 0.200 |
| NI | 0.030 | CR | 0.040 | MO | 0.004 | CU | 0.060 | CO | 0.003 |
| V | 0.004 | AL | 0.030 | N | 0.004 | Nb | 0.014 | | |
| CE(LONG FORMULA) = 0.387 | | | | | | | | | |
| T/S(PSI) 76021 Y/S(PSI) 49988 EL(%) 34.150 RA(%) 62.020 | | | | | | | | | |
| BRINELL HARDNESS 139, 139 | | | | | | | | | |

[Click here for Original Steel Mill Certification](#)

1. CERTIFYING ASTM A105-14 / ASME SA105-13 EDITION.
2. THE MATERIAL SUPPLIED MEETS THE REQUIREMENTS OF NACE MRO175/ISO 15156-2.
3. THE MATERIAL SUPPLIED WAS INSPECTED AND MANUFACTURED IN ACCORDANCE WITH EN DIN 10204:2004 EDITION TYPE 3.1 INSPECTION DOCUMENT.
4. THE ELONGATION TEST RESULTS ARE OBTAINED USING STANDARD ROUND SPECIMEN, 2 INCH OR 50 MM GAGE LENGTH.

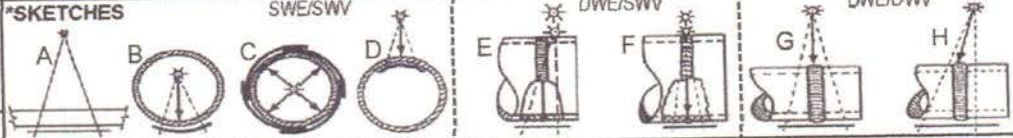
THIS DOCUMENT HAS BEEN ELECTRONICALLY SUBMITTED.



DATE: **1/4/2016** CLIENT: **RIDGE RUNNER**
 REPORT No: **1 of 2** JOB LOCALE- CITY, STATE: **MAIDSVILLE, WV**
 CLIENT PO No: JANX JOB No: **0207**
 CLIENT W/O No: JANX PROCEDURE No: **JX RT 1 REV 1**
 CLIENT JOB No: **TEST HEADERS** ACCEPTANCE CRITERIA: **API 1104 20TH ED.**

| Proc. # | Sketch* | Material | Pipe Dia. or Other | Object Thickness + Reinf. | Source to Object (SOD) | Object to Film (OFD) | IQI Note** | IQI Group Number & Size or Set | Essential Hole or Wire | IQI Side S / F | Shim Material & Thickness | Heat Shield Used | Film Brand & Type | Exp. Time (min) | Density | |
|---------|---------|----------|--------------------|---------------------------|------------------------|----------------------|------------|--------------------------------|------------------------|----------------|---------------------------|------------------|-------------------|-----------------|---------|------|
| | | | | | | | | | | | | | | | Min. | Max. |
| 1 | C | C/S | 24" | .562 | 11.5" | .600 | B | ASTM B | .016 | F | N/A | N/A | AGFA D-5 | 50 SEC | 2.3 | 3.8 |

**IQI Note:
 A- 1 IQI, in center of Readable Area (Area)
 B- 2 IQIs, 1 within 1" of Area end & 1 at center
 C- 4 IQIs, equally spaced around circumference
 D- _____



Heat Shield Detail:

Source: Ir 192 Focal Spot: .120 Films per Cassette: 1
 Co 60 Curies / kV: 59
 X-ray milliamps: _____

Screen Material: Pb
 Processing: Manual Automatic
 Drying: Manual Automatic
 Develop Stop Fixing Rinse
 Time (min.): 5 MIN | 1 | 3 | 20
 Temp. °F.: 68 | 68 | 68 | 68

Densitometer Serial No.: 32099
 Expire Date: 12/29/2016
 Verification Checks: Daily & Periodic Completed

| ITEM ID | VIEW | No. EXP. | No. FILM | PIPE DIA. | WALL THICK. | IN CODE | | DEFECT EVALUATION KEY | WELDER ID, OTHER ID, REMARKS | Proc. # |
|---------------|---------|----------|----------|-----------|-------------|---------|---|-----------------------|------------------------------|---------|
| | | | | | | Y | N | | | |
| 24TEST04 XR-7 | 0-1-2-0 | 1 | 3 | 24 | .500 | X | | | | 1 |
| 24TEST04 XR-8 | 0-1-2-0 | 1 | 3 | 24 | .500 | X | | | | 1 |

EVALUATION KEY

| | | | | |
|--|------------------------|------------------------------|-------------------------|-------------------|
| 1 - INADEQUATE PENETRATION | 4 - SLAG INCLUSION | 8 - POROSITY | 12 - CRACK | 16 - HOLLOW BEAD |
| 2 - INADEQUATE PENETRATION DUE TO HIGH-LOW | 5 - INTERNAL UNDERCUT | 9 - SCATTERED POROSITY | 13 - LINEAR INDICATION | 17 - ACCUMULATION |
| 3 - INCOMPLETE FUSION | 6 - EXTERNAL UNDERCUT | 10 - CLUSTER POROSITY | 14 - ROUNDED INDICATION | 18 - BURN THROUGH |
| | 7 - INTERNAL CONCAVITY | 11 - PIPINGWORMHOLE POROSITY | 15 - ARC BURN | 19 - LOW CAP |

BILLING ADDRESS: **RIDGE RUNNER PIPELINE SERVICES 51 SCOTTS RUN ROAD MAIDSVILLE, WV 26541**

FILM SHEETS: 3.5"x10" 4.5"x10" 5" x 7" 7" x 17"
 3.5"x17" 4.5"x17" 8" x 10" 14" x 17"

CLIENT SIGNATURE: _____ JANX LEVEL II SIGNATURE: *Bryan Watson II* LEVEL II TECHNICIAN: **BRYAN WATSON II** OTHER EMPLOYEES & LEVEL: **AARON STILES I**

CLIENT REP NAME & PHONE NUMBER: _____ TRAVEL MILES: **N/A** TOTAL HOURS INCLUDING TRAVEL AND WORK: **2** PER DIEM APPLICABLE: **N/A** TOTAL ITEMS INSPECTED: **2**

Form: RT Report 14-05 CLIENT'S SIGNATURE CERTIFIES THAT TIME AND MILEAGE ARE CORRECT AND MATERIALS AND INTERPRETATION ARE ACCEPTED. JANX (517) 531-8210 P.O. Box 190 Parma, MI 49269

