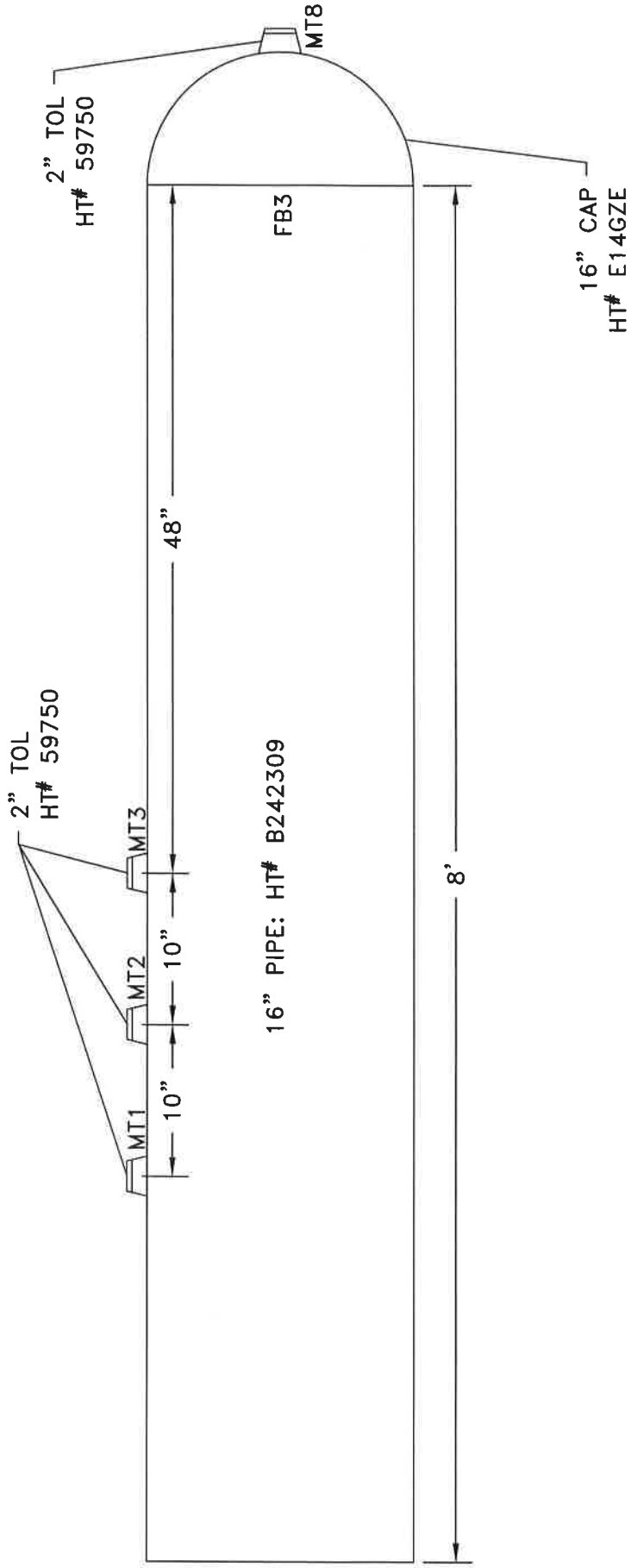


# SN# 16TEST06



PIPE OD: 16.00"  
 PIPE WALL THICKNESS: 0.500"  
 PIPE GRADE: X-52

00	5/1/2015	INITIAL RELEASE	WFJ
REV	DATE	DESCRIPTION	APPROVED
WELD-ON TEST HEADER			
RIDGE RUNNER REFERENCE DRAWING			
THIS DRAWING CANNOT BE REPRODUCED WITHOUT PRIOR CONSENT OF RIDGE RUNNER PIPELINE SERVICES, LLC		DESIGN FACTOR:	95% SMYS
		MAX. HYDROSTATIC TEST PRESSURE:	3045 PSI
		SCALE:	N.T.S.
		SHEET	1 OF 1



# CERTIFICATE OF TESTING IPSCO TUBULARS (KY) INC

Certificate Number: **261367-2**  
Thursday, September 11, 2014 1:25:54 PM

Bill of Lading: **00284787**      Diameter: **16.00 in**      Gage: **0.500 in**      Grade: **X52M**      MFR Order No: **065926**      Customer PO: **S044772979**

Specification: **API 5L FORTY-FIFTH EDITION GRADES X52 PSL2**      Customer: **MCJUNKIN REDMAN CORPORATION**

Heat	Product ID	Test Type	Orientation			Width (in)				YS (psi)		UTS (psi)			Elong%(2 in)		Y/T	
			Wgt (%)	C	Mn	P	S	S <sub>1</sub>	Cu	Ni	Cr	Mo	Sn	A1	V	Cb	Ti	B
B242307	WL-569	539 MILL CONTROL	PIPE TPA			1.515				88100		75400			44.0		0.90	
	WL-569	539W MILL CONTROL	PIPE TWA			1.515				79100		75400			0.0		0.00	
		Heat	0.04	1.08	0.008	0.000	0.24	0.06	0.02	0.03	0.009	0.001	0.024	0.003	0.041	0.010	0.0000	0.11
		Product	0.03	1.10	0.009	0.003	0.22	0.06	0.03	0.03	0.010	0.004	0.025	0.002	0.035	0.009	0.0006	0.10
B242308	WL-569	540 MILL CONTROL	PIPE TPA			1.512				88900		73900			40.0		0.90	
	WL-569	540W MILL CONTROL	PIPE TWA			1.516				78500		78500			0.0		0.00	
		Heat	0.04	1.11	0.007	0.000	0.23	0.06	0.02	0.03	0.009	0.002	0.027	0.003	0.040	0.011	0.0000	0.11
		Product	0.03	1.12	0.008	0.003	0.23	0.06	0.03	0.03	0.010	0.004	0.026	0.002	0.035	0.010	0.0007	0.10
B242309	WL-569	532 MILL CONTROL	PIPE TPA			1.524				68000		75400			41.0		0.90	
	WL-569	532W MILL CONTROL	PIPE TWA			1.526				79000		79000			0.0		0.00	
		Heat	0.04	1.09	0.007	0.000	0.23	0.06	0.02	0.03	0.010	0.002	0.028	0.003	0.042	0.011	0.0000	0.11
		Product	0.03	1.11	0.009	0.004	0.22	0.06	0.03	0.04	0.010	0.004	0.025	0.002	0.035	0.010	0.0008	0.10

Steel Supplier: Nucor Crawfordsville - RR 2 Box 311 Crawfordsville, IN 47933

TPA - Transverse Flange Axis  
 PA - Longitudinal Pipe Axis  
 90° of Flange

FWA - Transverse Flange Axis  
 FST - Full Section Test  
 FSN - Full Section Normalized  
 Q&T - Quenched and Tempered  
 SR - Stress Relieved  
 Form CRY3001

Melted and Manufactured in the USA  
 Flattening Test Acceptable  
 Ultrasonic Weld Line Inspection Acceptable  
 Maximum Allowable PCM 0.25  
 J<sub>T</sub> Cal to N10 IDQD Norms  
 TYPE HFV  
 Hydrostatic Test Pressure: 3000 Psi for 5 secs  
 Minimum Weld Seam Heat Treatment Temperature: 1600 (F) QA Coordinator

We certify that the product described above has been manufactured, sampled, inspected, and tested in accordance to the referenced specification. The product has been found to be in compliance with all requirements.

*Andrew Fischbach*  
 Andrew Fischbach  
 QA Coordinator

Thursday, September 11, 2014 1:25:27

MILL ADDRESS - 100 STEEL PLANT RD | WILDER, KY 41071



# CERTIFICATE OF TESTING

## IPSCO TUBULARS (KY) INC

### Charpy

Certificate Number	261367-1
Thursday, September 11, 2014, 1:25:54 PM	

Bill of Lading	00284787	Grade	X52M	Net Order No.	065926
Specification: API 5L, FORTY-FIFTH EDITION GRADES X52 PSL2			Customer: MCJUNKIN REDMAN CORPORATION		

Heat	Product ID	Test Type	Orientation	Temp °F	Energy (ft lbs)				Percent Shear				Test Position	Size	Flat
					#1	#2	#3	Avg	#1	#2	#3	Avg			
B242307	WL-S69	539	MILL CONTROL	PIPE TPA	32	319	322	321	321	100	100	100	100	90	3/4
B242308	WL-S69	540	MILL CONTROL	PIPE TPA	32	325	320	314	320	100	100	100	100	90	3/4
B242309	WL-S69	532	MILL CONTROL	PIPE TPA	32	314	323	319	319	100	100	100	100	90	3/4

Steel Supplier: Nucor Crawfordsville - RR 2 Box 311 Crawfordsville, IN 47933

TPA - Transverse Pipe Axis  
 PA - Longitudinal Pipe Axis  
 50° of Weld  
 TWA - Transverse Weld Axis  
 FST - Full Section Testing  
 FBN - Full Body Non-destructive  
 Q&T - Quenched and Tempered  
 SR - Stress Relieved  
 form CR7R3004

Melted and Manufactured in the USA  
 Filletting Test Acceptable  
 UNSASNC Weld Line Inspection Acceptable  
 Maximum allowable PCMO 25  
 UT Cal. to N10 ID/OD Notches  
 TYPE HFW  
 Hydrostatic Test Pressure: 3000 PSI for 5 secs  
 Minimum Weld Seam Heat Treatment Temperature: 1600 (F)

We certify that the product described above has been manufactured, sampled, inspected, and tested in accordance to the referenced specification. The product has been found to be in compliance with all requirements.

*Andrew Fischbach*  
 Andrew Fischbach  
 QA Coordinator

Minimum Energy 20  
 FSE Acceptance Criteria Body 20 W/MZ 0 HAZ 0  
 Thursday, September 11, 2014 1:25:27

MILL ADDRESS - 100 STEEL PLANT RD | WILDER, KY 41071

**CERTIFIED MATERIAL TEST REPORT**  
 Hackney Ladish Inc.

708 South Elmira Avenue - Russellville, AR 72802

Phone: (800) 527-4500 Fax: (479) 964-6231

Order Number: SBZF770394

Date: 09/04/14

Sold to: MCJUNKIN / RED MAN  
 33970 0001  
 PO BOX 513  
 CHARLESTON WV 25322

Ship to:

Heat Code Description / Specifications

M13GME10	16 X 8 STD CON Y65	MSS SP-75- 08	WPHY 65
	A516 243 S21302291QA	Q&T 1650 1200	NACE MR0175
E14GZE	16 XH CAP Y52	MSS SP-75- 08	WPHY 52
	A572 154 4503110	Q&T 1650 1200	NACE MR0175

Chemical Analysis

Heat Code	Test	C	Mn	P	S	Si	Cu	Ni	Cr	Mo	Al
M13GME10	M	.150	1.260	.013	.005	.230	.030	.120	.140	.070	.0300
E14GZE	M	.180	.970	.015	.005	.210	.180	.070	.080	.020	.0300

Chemical Analysis (cont.)

Heat Code	N	V	B	Ti	Cb	Sn	W	Pb	Co	CE
M13GME10		.040	<.0005	<.0100	<.010					.42
E14GZE		.030	.0009	<.0100	<.010					.38

Physical Properties

Heat Code	Tensile KSI	Type	Thickness	Yield KSI	% Elong. (4D)	% RA	Hardness HB
M13GME10	98.1	T		77.8	26.0	72.0	219
E14GZE	78.5	T		57.9	34.0	78.0	163

Charpy Results

Heat Code	Size x 10mm	Type	Temp. (F)	Foot Pounds	Later. Expansion	% Shear
M13GME10	10.0	T	20	132, 143, 104	70, 73, 53	100, 100, 90
E14GZE	10.0	T	20	264, 264, 215	70, 52, 77	100, 100, 100

Test: M=Mill Product

Type: T=Transverse

We certify that the material herein described has been manufactured in accordance with the above standards and specifications and satisfies all the requirements of the editions specified. We certify all materials provided comply with EN 10204:2004 type 3.1. Our ISO 9001:2008 certificate number is CERT-11763-2007-USA-RVA/ANAB. We certify all NACE MR0175 certified material complies with MR0175/ISO 15156. We certify these fittings capable of passing hydrostatic test compatible with their rating. The above figures are correct as contained in the records of the Company. This information has been electronically transmitted to our customer.

Stephen Baker / QA Manager



# MILL TEST REPORTS

Bonney Forge  
14496 Croghan Pike  
Mt. Union, PA 17066

## CERTIFIED MILL TEST REPORT

MRC 5/26/2015

LOT NO.  
59750

CHEMICAL ANALYSIS, PHYSICAL PROPERTIES, REMARKS  
18->12 X 2" 3M A105 Thredolet™ Threaded

C	0.220	MN	1.030	P	0.007	S	0.021	SI	0.200
NI	0.030	CR	0.050	MO	0.005	CU	0.070	CO	0.004
V	0.004	AL	0.024	Nb	0.013				
CE(LONG FORMULA) = 0.410									
T/S(PSI) 79777 Y/S(PSI) 50687 EL(%) 33.100 RA(%) 57.130									
BRINELL HARDNESS 147, 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.

Cancel Logout

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**

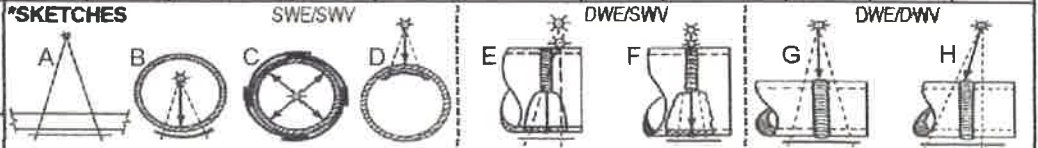
CLIENT W/O No: \_\_\_\_\_ JANX PROCEDURE No: **JX RT 1 REV 1**

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	F	C/S	16	.562	15.875	.600	B	ASTM B	.016	F	N/A	N/A	AGFA D-5	2.30 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  
 Time (min.): Develop 5 Stop 1 Fixing 3 Rinse 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			
16TEST06 XR-5	0-1-2-0	3	3	16	.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:

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: 2.1 PER DIEM APPLICABLE: N/A TOTAL ITEMS INSPECTED: 1

DATE: <b>1/4/2016</b>	CLIENT: <b>RIDGE RUNNER</b>	
REPORT No: <b>2 of 2</b>	JOB LOCALE- CITY, STATE: <b>MAIDSVILLE, WV</b>	

CLIENT PO No:	JANX JOB No: <b>0207</b>
CLIENT W/O No:	JANX PROCEDURE No: <b>JX MT1 REV 0</b>
CLIENT JOB No: <b>TEST HEADERS</b>	ACCEPTANCE CRITERIA: <b>API 1104 20TH ED</b>

MAGNETIC PARTICLE TECHNIQUE - YOKE	LIQUID PENETRANT TECHNIQUE
Yoke Mfg: <u>PARKER</u> Yoke Model: <u>DA 400</u>	Mfg. / Product _____ Batch No. _____ Temperature _____ °F
Serial No: <u>20834</u> Expire Date: <u>12/29/2016</u>	Penetrant: _____ °F
Leg Spacing: <u>3-6"</u> Coverage: <u>100%</u>	Developer: _____ °F
<input checked="" type="checkbox"/> AC <input type="checkbox"/> DC Two Opposing 90° Fields: <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	Remover: _____ °F
<input checked="" type="checkbox"/> Contrast Paint, Mfg & Product: <u>MAGNAVIS</u>	<input type="checkbox"/> Visible Dye <input type="checkbox"/> Solvent Removable
<input checked="" type="checkbox"/> Wet <input type="checkbox"/> Dry <input checked="" type="checkbox"/> Non-Fluorescent <input type="checkbox"/> Fluorescent	<input type="checkbox"/> Fluorescent Dye <input type="checkbox"/> Water Washable
Wet Particle Suspension: <input checked="" type="checkbox"/> Oil Base <input type="checkbox"/> Water Base	Extent of Test: _____
Particle Mfg / Batch: <u>MAGNAVIS</u> Color: <u>BLACK</u>	Precleaning Method: <input type="checkbox"/> Spray <input type="checkbox"/> Dip <input type="checkbox"/> Brush
Particles Applied by:	Penetrant Application: <input type="checkbox"/> Spray <input type="checkbox"/> Dip <input type="checkbox"/> Brush
<input type="checkbox"/> Blowing (Dry only) with excess removed by gentle air stream while maintaining the magnetizing current	Developer Application: <input type="checkbox"/> Spray <input type="checkbox"/> Dip <input type="checkbox"/> Brush
<input checked="" type="checkbox"/> Spraying <input type="checkbox"/> Flowing	Excess Penetrant Removal: <input type="checkbox"/> Water Wash <input type="checkbox"/> Damp Towel
<input type="checkbox"/> Procedure Demonstration Not Required by Customer	Preclean Dry Time: _____ minutes
<input type="checkbox"/> Procedure Adequacy Demonstrated by:	Penetrant Dwell Time: _____ minutes
<input type="checkbox"/> Lift Test of: _____ lbs. <input type="checkbox"/> Field Indicator	Dry Time After Penetrant Removal: _____ minutes
<input type="checkbox"/> Other: _____	Developer Time: _____ minutes
<input type="checkbox"/> Post Test Demag <input checked="" type="checkbox"/> Demag Not Required	Post Cleaning: _____
	Notes: _____

Item Temperature: 50 °F Surface Condition: AS WELDED Surface Prep: POWER BRUSHED

Lighting Equipment: NATURAL

Light Intensity:  > 100 fc White Light  > uW/cm2 Black Light Black Light Warm-Up Time:  > 5 mins.

ITEM ID (Note as MT or PT)	ITEM TYPE / SIZE / THICKNESS / MATERIAL	IN CODE		DEFECT & LOCATION	REMARKS / WELDER ID
		Y	N		
16 TEST06 MT-9	2" TOL	X			
16 TEST06 MT-10	2" TOL	X			
16 TEST06MT-11	2" TOL	X			
16 TEST06MT-12	2" TOL	X			

BILLING					
ADDRESS: <b>SEE PAGE 1</b>					
CLIENT SIGNATURE		JANX LEVEL II SIGNATURE		LEVEL II TECHNICIAN	
				<b>BRYAN WATSON II</b>	
CLIENT REP NAME & PHONE NUMBER		TRAVEL MILES	TOTAL HOURS INCLUDING TRAVEL AND WORK	PER DIEM APPLICABLE	TOTAL ITEMS INSPECTED
		<b>PG 1</b>	<b>SEE PAGE 1</b>	<b>N/A</b>	<b>4</b>
<b>AARON STILES I</b>					