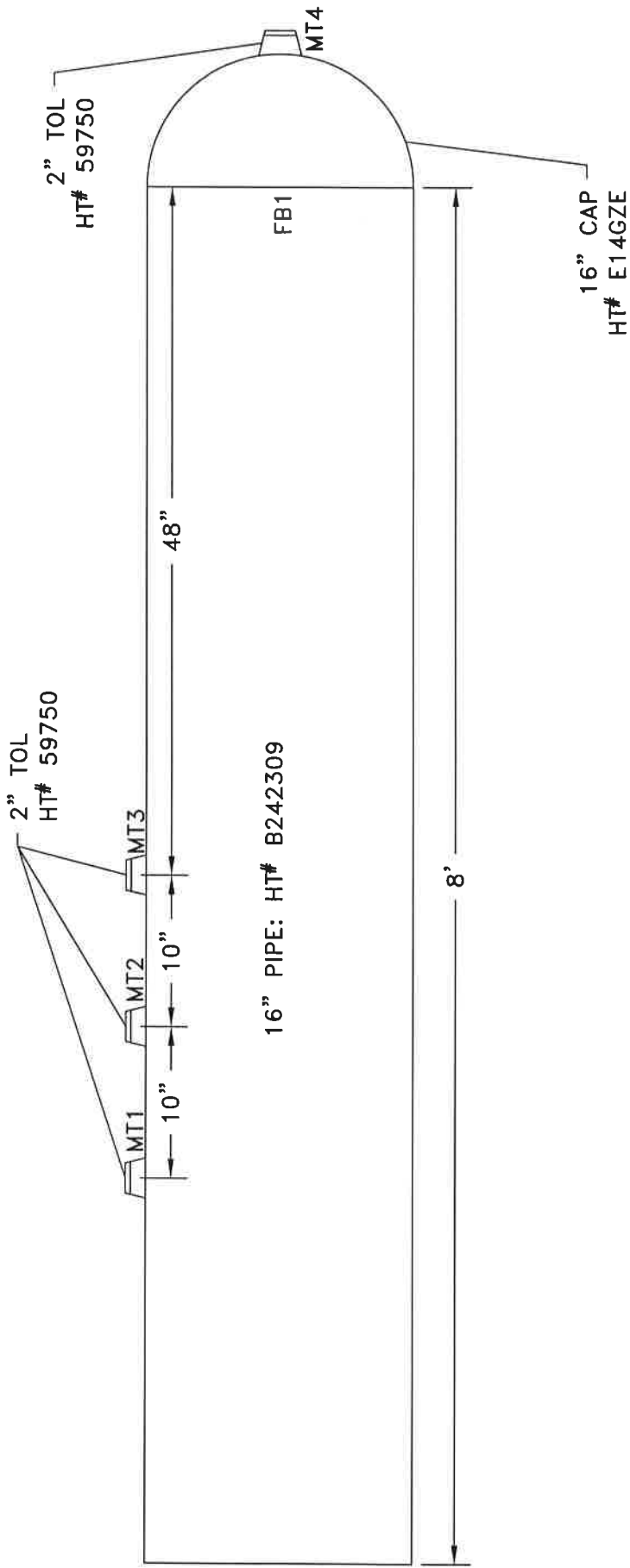


# SN# 16TEST05



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

00	5/1/2015	INITIAL RELEASE	WJH
REV	DATE	DESCRIPTION	APPROVED
WELD-ON TEST HEADER			
RIDGE RUNNER REFERENCE DRAWING			
		DESIGN FACTOR:	95% SMYS
		MAX. HYDROSTATIC TEST PRESSURE:	3085 PSI
		SCALE:	N.T.S.
		SHEET	1 OF 1

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



# CERTIFICATE OF TESTING IPSCO TUBULARS (KY) INC

Certificate Number: **281367-2**  
Thursday, September 11, 2014 1:25:54 PM

Bill of Lading: **00284787**      Diameter: **16.00 in**      Gauge: **0.500 in**      Grade: **X52M**      Mill 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:	Cu	Ni	Cr	Mo	Sn	A:	V		Cb	Tr
B242307	WL-S69	539 MILL CONTROL	PIPE TPA					1.515		68100		75400		44.0		0.90		
	WL-S69	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
	WL-S69	539 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
	WL-S69	539B Product	0.03	1.10	0.009	0.003	0.22	0.06	0.03	0.03	0.010	0.004	0.024	0.002	0.035	0.009	0.0006	0.10
B242308	WL-S69	540 MILL CONTROL	PIPE TPA					1.512		88800		73800		40.0		0.90		
	WL-S69	540W MILL CONTROL	PIPE TWA					1.516		78500		75400		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
	WL-S69	540 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
	WL-S69	540B Product	0.03	1.12	0.008	0.004	0.23	0.06	0.03	0.03	0.010	0.004	0.025	0.002	0.035	0.010	0.0007	0.10
B242309	WL-S69	532 MILL CONTROL	PIPE TPA					1.524		68000		75400		41.0		0.90		
	WL-S69	532W MILL CONTROL	PIPE TWA					1.526		79000		75400		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
	WL-S69	532B 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 Face Axis  
 PA - Longitudinal Face Axis  
 W - Width  
 TWA - Transverse Weld Axis  
 FT - Full Section Test Rig  
 CN - Full Body Normal Axis  
 Q&T - Quenched and Tempered  
 SR - Stress Relieve  
 ORN - CR 2000

Milled and Manufactured in the USA  
 Fillet Weld Test Acceptable  
 Ultrasonic Weld Line Inspection Acceptable  
 Maximum Allowable PCM 0.25  
 JT Cal to N10 ID/DD Noles  
 TYPE HFV  
 Hydrostatic Test Pressure 3000 Psi for 5 sec  
 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 Frischbach*  
 Andrew Frischbach

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	Material Order No	065926
Diameter: 16.00 in		Gage: 0.500 in	
Grade: X52M		Customer PO: S044772079	

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 314 Crawfordsville, IN 47933

TPA - Transverse Pipe Axis  
 PA - Longitudinal Pipe Axis  
 WMAZ - Weld Metal Zone  
 HAZ - Heat Affected Zone  
 90 - 90 Degree  
 180 - 180 Degree  
 PS - Full Size  
 FWA - Transverse Weld Axis  
 FST - Full Section Testing  
 FBM - Full Body Nondestructive  
 QAT - Quenched and Tempered  
 SR - Stress Relieved  
 form CRYR3004

Melted and Manufactured in the USA  
 Filletting Test Acceptable  
 Ultrasonic Weld Line Inspection Acceptable  
 Maximum allowable PCMO 25  
 UT Cal. to N10 ID100 Notches  
 TYPE HFW  
 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

Minimum Energy 20  
 FSE Acceptance Criteria: Body 20 WMAZ 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: 58ZF770394

Date: 09/04/14

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

Ship to:

Heat Code Description / Specifications

Heat Code	Description / Specifications	MSS SP-75- 08	WPHY 65
M13GME10	16 X 8 STD CON Y65 A516 243 S213022910A	Q&T 1650 1200	NACE MR0175
E14GZE	16 XH CAP Y52 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	.0200
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-11753-2007-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.

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.	
<b>1</b>		<b>F</b>	<b>C/S</b>	<b>16</b>	<b>.562</b>	<b>15.875</b>	<b>.600</b>	<b>B</b>	<b>ASTM B</b>	<b>.016</b>	<b>F</b>	<b>N/A</b>	<b>N/A</b>	<b>AGFA D-5</b>	<b>2.30 SEC</b>	<b>2.3</b>	<b>3.8</b>

\*\*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: \_\_\_\_\_

\*SKETCHES SWE/SWV DWE/SWV DWE/DWV

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  
 Front Thick.: .005 Back Thick.: .005 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			
<b>16TEST05 XR-6</b>	<b>0-1-2-0</b>	<b>3</b>	<b>3</b>	<b>16</b>	<b>.500</b>	<b>X</b>				<b>1</b>

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 - PIPING/WORMHOLE 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: **0.14** 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**

Yoke Mfg: PARKER Yoke Model: DA 400  
 Serial No: 20834 Expire Date: 12/29/2016  
 Leg Spacing: 3-6" Coverage: 100%  
 AC  DC Two Opposing 90° Fields:  Yes  No  
 Contrast Paint, Mfg & Product: MAGNAVIS  
 Wet  Dry  Non-Fluorescent  Fluorescent  
 Wet Particle Suspension:  Oil Base  Water Base  
 Particle Mfg / Batch: MAGNAVIS Color: BLACK  
 Particles Applied by:  
 Blowing (Dry only) with excess removed by gentle air stream while maintaining the magnetizing current  
 Spraying  Flowing  
 Procedure Demonstration Not Required by Customer  
 Procedure Adequacy Demonstrated by:  
 Lift Test of:        lbs.  Field Indicator  
 Other:         
 Post Test Demag  Demag Not Required

**LIQUID PENETRANT TECHNIQUE**

Mfg. / Product	Batch No.	Temperature
Penetrant: _____	_____	_____ °F
Developer: _____	_____	_____ °F
Remover: _____	_____	_____ °F

Visible Dye  Solvent Removable  
 Fluorescent Dye  Water Washable

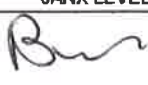
Extent of Test: \_\_\_\_\_

Precleaning Method:  Spray  Dip  Brush  
 Penetrant Application:  Spray  Dip  Brush  
 Developer Application:  Spray  Dip  Brush  
 Excess Penetrant Removal:  Water Wash  Damp Towel  
 Preclean Dry Time: \_\_\_\_\_ minutes  
 Penetrant Dwell Time: \_\_\_\_\_ minutes  
 Dry Time After Penetrant Removal: \_\_\_\_\_ minutes  
 Developer Time: \_\_\_\_\_ minutes  
 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 TEST05 MT-13	2" TOL	X			
16TEST05 MT-14	2" TOL	X			
16 TEST05MT-15	2" TOL	X			
16 TEST05MT-16	2" TOL	X			

**BILLING**  
 ADDRESS: **SEE PAGE 1**

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