



JSW STEEL (USA) INC.  
5200 E. McKinney Rd  
Baytown, TX 77520  
Phone: (281) 383-3300  
Fax: (281) 303-0473

# Metallurgical and Pipe Test Report

MTR No.:

Sample No.: T11119652

PO Number: 116119-00

PO Date: 10/27/11 JSW #: SAW1425

Date: 11/16/11

Diameter (In): 30

Wall (in): 0.500

Grade: B PSL1/X42M PSL2

Heat No: S14085

Comments: EN 10204 3.1 Meets "NACE MR0175" and "NACE MR0103" (Hardness Only)"

Pipe Manufactured in USA

**SAWL MATERIAL**  
**THERMO MECHANICAL**  
**ROLLED**

INSPECTION CERTIFICATE: 3.1 B PER ISO 10474: 1991.  
100% Weld seam inspection by ultrasonic testing method;  
Calibration standard: N5 notches inside and outside (Longitunal and Transverse)

API 5L October 2008 44th Ed

END X-RAY: 8" (ASTM - B PENETRAMEETER)

**Customer**  
TEXAS PIPE  
2330 HOLMES ROAD  
HOUSTON, TEXAS 77051

**Ship To**  
TEXAS PIPE  
2330 HOLMES ROAD  
HOUSTON, TEXAS 77051

Type	Chemical										Analysis				V	B	Nb	Ca	Zr	V +Nb +Ti	CE (0.43)	Pcm
	C	Mn	P	S	SI	Cu	NI	Cr	Mo	TI	Al	N										
Ladle	0.15	1.05	0.010	0.002	0.28	0.010	0.010	0.010	0.002	0.001	0.031	0.004	0.002	0.0000	0.002	0.0030	0.000	0.01	0.33	0.21		
Prod1	0.14	1.07	0.011	0.002	0.28	0.010	0.010	0.010	0.002	0.005	0.032	0.000	0.002	0.0002	0.001	0.0020	0.000	0.01	0.32	0.21		
Prod2	0.15	1.05	0.009	0.002	0.27	0.010	0.010	0.010	0.001	0.005	0.030	0.005	0.001	0.0003	0.000	0.0021	0.000	0.01	0.33	0.21		

## Mechanical Testing

Orientation	Cwidth (Inch)	Yield (PSI)	Tensile (PSI)	Elong (%)	Y/T Ratio
1T180	1.52	63100	77800	39	0.81
1W	1.44	0	79700	0	

Weld Tensile Fracture Location:  
BASE METAL

**Guided Bend**

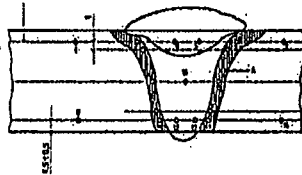
Orientation	Root	Face
2W	OK	OK

## Hydrostatic Test

TEST PRESS. PSI	HOLDING TIME (sec)
1370	20

## Hardness Tests

Orientation: 1W



1:172	7:174	13:188	19:172
2:172	8:174	14:182	
3:172	9:166	15:177	
4:193	10:171	16:169	
5:186	11:172	17:166	
6:182	12:188	18:199	

MACRO OK

Form # ML-014  
Rev: 2  
Date: 07/05/11



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### Charpy Impact Analysis

Orientation	Spec Size	Temp	Ft lb1	Ft lb2	Ft lb3	Ft lb avg	Shear1 (%)	Shear2 (%)	Shear3 (%)	Shear Avg (%)
3T90	10x10 mm	32 F	98	116	107	107	95	95	95	95
3W	10x10 mm	32 F	77	88	89	85	0	0	0	0
3HAZ	10x10 mm	32 F	110	100	104	105	0	0	0	0

**Pipes Certified For This HEAT**

T11119644 T11119652

The material has been manufactured, sampled, tested, and inspected in accordance with this spec (API 5L) and has been found to meet the requirements. We certify the above to be correct as contained in the records of the company.

QA ENGINEER

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