



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.: P11079375

PO Number: 114688-00

PO Date: 08/15/11

JSW #: SAW1348

Date: 09/26/11

Diameter (In): 30

Wall (In): 0.500

Grade: B PSL1/X42M PSL2

Heat No: S14093

Comments: Meets "NACE MR0175 Section 3.2" and "NACE MR0103 Section 2.1"

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 (Longitudinal and Transverse)

API 5L October 2008 44th Ed

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

**Customer**

TEXAS PIPE  
2330 HOLMES ROAD  
HOUSTON, TEXAS 77051

**Ship To**

TEXAS PIPE  
2330 HOLMES ROAD  
HOUSTON, TEXAS 77051

Type	C	Mn	P	S	Si	Cu	Ni	Cr	Chemical		Analysis				Nb	Ca	Zr	V +Nb +Ti	CE (0.43)	Pcm
									Mo	Ti	Al	N	V	B						
Ladle	0.11	1.03	0.013	0.012	0.29	0.060	0.030	0.030	0.004	0.003	0.030	0.006	0.004	0.0010	0.003	0.0010	0.000	0.01	0.30	0.18
Prod1	0.12	0.98	0.015	0.009	0.32	0.060	0.050	0.040	0.002	0.006	0.031	0.000	0.004	0.0002	0.001	0.0010	0.000	0.01	0.30	0.19
Prod2	0.12	1.04	0.013	0.009	0.29	0.060	0.030	0.040	0.000	0.006	0.029	0.000	0.002	0.0003	0.001	0.0002	0.000	0.01	0.31	0.19

**Mechanical Testing**

Orientation	Cwidth (Inch)	Yield (PSI)	Tensile (PSI)	Elong (%)	Y/T Ratio
1T180	1.50	60300	72800	35	0.83
1W	1.49	0	74100	0	

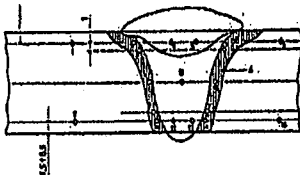
<b>Weld Tensile Fracture Location:</b>		
BASE METAL		
<b>Guided Bend</b>		
Orientation	Root	Face
2W	OK	OK

**Hydrostatic Test**

TEST PRESS. PSI	HOLDING TIME (sec)
1370	20

**Hardness Tests**

Orientation: 1W



1:167	7:178	13:192	19:183
2:172	8:172	14:182	
3:179	9:177	15:178	
4:189	10:178	16:181	
5:193	11:181	17:183	
6:182	12:191	18:193	

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	218	239	198	218	100	100	100	100
3W	10x10 mm	32 F	83	75	92	83	0	0	0	0
3HAZ	10x10 mm	32 F	210	190	239	213	0	0	0	0

#### Pipes Certified For This HEAT

P11079375 P11079413 P11079421 P11079499 P11079502 P11079618

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.

*Jode L Lemelle*  
QA ENGINEER

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Rev:	2
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