



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.: T11119555

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: S14180

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 (Longitudinal and Transverse)

API 5L October 2008 44th Ed

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

<b>Customer</b>
TEXAS PIPE 2330 HOLMES ROAD HOUSTON, TEXAS 77051

<b>Ship To</b>
TEXAS PIPE 2330 HOLMES ROAD HOUSTON, TEXAS 77051

Type	C	Mn	P	S	SI	Cu	NI	Cr	Chemical		Analysis								V +Nb +Ti	CE (0.43)	Pcm
									Mo	Ti	Al	N	V	B	Nb	Ca	Zr				
Ladle	0.10	1.00	0.018	0.008	0.29	0.040	0.030	0.050	0.005	0.003	0.040	0.005	0.005	0.0004	0.003	0.0010	0.000	0.01	0.28	0.17	
Prod1	0.10	0.95	0.009	0.006	0.30	0.070	0.040	0.030	0.006	0.006	0.039	0.004	0.002	0.0002	0.001	0.0010	0.000	0.01	0.27	0.16	
Prod2	0.10	0.94	0.009	0.006	0.30	0.070	0.040	0.030	0.004	0.006	0.041	0.007	0.002	0.0002	0.001	0.0010	0.000	0.01	0.27	0.16	

### Mechanical Testing

### Hydrostatic Test

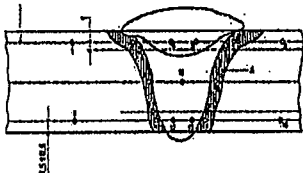
Orientation	Cwidth (Inch)	Yield (PSI)	Tensile (PSI)	Elong (%)	Y/T Ratio
1T180	1.46	62400	75700	33	0.82
1W	1.47	0	77100	0	

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

TEST PRESS. PSI	HOLDING TIME (sec)
1370	20

### Hardness Tests

Orientation: 1W	1:160	7:165	13:182	19:165
	2:170	8:160	14:164	
	3:167	9:165	15:160	
	4:181	10:168	16:161	
	5:181	11:166	17:172	
	6:171	12:181	18:181	



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	68	61	77	69	95	95	95	95
3W	10x10 mm	32 F	38	31	39	36	0	0	0	0
3HAZ	10x10 mm	32 F	44	40	42	42	0	0	0	0

### Pipes Certified For This HEAT

T11119555 T11119563 T11119571 T11119581 T11119598 T11119601

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.

*Jade R Lemelle*  
 QA ENGINEER

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