



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.: 109969-00-1432

Sample No.: V10186406

PO Number: 109969-00

PO Date: 11/09/10

JSW #: SAW1152

Date: 01/10/11

Diameter (In): 30

Wall (In): 0.500

Grade: BM/X42M PSL2

Heat No: S11432

Comments: Meets "NACE MR0175" Section 3.2 (Hardness Only) and MR103 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	Chemical										Analysis				V	Nb	Ca	Zr	V +Nb +Ti	CE	Pcm
	C	Mn	P	S	Si	Cu	Ni	Cr	Mo	Ti	Al	N	B								
Ladle	0.16	1.06	0.012	0.001	0.29	0.010	0.010	0.010	0.003	0.002	0.030	0.003	0.001	0.0001	0.001	0.0030	0.000	0.00	0.34	0.22	
Prod1	0.16	1.10	0.009	0.001	0.29	0.010	0.010	0.020	0.002	0.006	0.028	0.000	0.002	0.0002	0.001	0.0020	0.000	0.01	0.35	0.23	
Prod2	0.16	1.10	0.009	0.001	0.29	0.010	0.010	0.020	0.002	0.006	0.028	0.000	0.002	0.0002	0.001	0.0020	0.000	0.01	0.35	0.23	

### Mechanical Testing

	Cwidth (inch)	Yield (PSI)	Tensile (PSI)	Elong (%)	YT Ratio
TBT	1.46	63960	79624	40	0.80
TWT	1.51	0	81332	0	

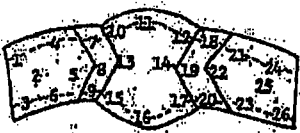
Weld Tensile Fracture Location:  
BASE METAL

Guided Bend (WELD)

Root OK      Face OK

Hydrostatic Test	HYDRO PSI	HYDRO TIME (sec)
	1370	20

### Hardness Tests



(HV10 - Scale)

1:172	7:170	13:181	19:168	25:160
2:168	8:171	14:182	20:160	26:162
3:161	9:173	15:187	21:169	
4:169	10:172	16:183	22:161	
5:163	11:183	17:182	23:167	
6:162	12:189	18:172	24:169	

MACRO OK



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### Charpy Impact Analysis

DirNotch	Spec Size	Temp	Ft lb1	Ft lb2	Ft lb3	Ft lb avg	Shear1 (%)	Shear2 (%)	Shear3 (%)	Shear Avg (%)
TBC	10x7.5 mm	32 F	142	130	148	140	95	95	95	95
	<b>Full Size Values:</b>		189	173	197	187	95	95	95	95
THC	10x7.5 mm	32 F	113	126	117	119	0	0	0	0
	<b>Full Size Values:</b>		151	168	156	159	0	0	0	0
TWC	10x7.5 mm	32 F	88	87	93	89	0	0	0	0
	<b>Full Size Values:</b>		117	116	124	119	0	0	0	0

### Pipes Certified For This HEAT

V10186406

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