



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.: 109969-00-2662

Sample No.: V10186597

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: S12662

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 PENETRAMEETER)

**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		V	B	Nb	Ca	Zr	V +Nb +Ti	CE	Pcm
									Mo	Ti	Al	N								
Ladle	0.15	1.11	0.017	0.005	0.32	0.010	0.010	0.010	0.001	0.001	0.035	0.004	0.001	0.0002	0.001	0.0000	0.000	0.00	0.34	0.22
Prod1	0.16	1.07	0.013	0.008	0.30	0.010	0.010	0.010	0.001	0.006	0.032	0.000	0.001	0.0002	0.001	0.0000	0.000	0.01	0.34	0.23
Prod2	0.15	1.09	0.013	0.007	0.28	0.010	0.010	0.010	0.001	0.006	0.031	0.000	0.001	0.0002	0.001	0.0000	0.000	0.01	0.34	0.23

**Mechanical Testing**

	Cwidth (Inch)	Yield (PSI)	Tensile (PSI)	Elong (%)	YT Ratio
TBT	1.46	61132	80583	38	0.76
TWT	1.46	0	85911	0	

**Weld Tensile Fracture Location:**

BASE METAL  
Guided Bend (WELD)  
Root Face  
OK OK

**Hydrostatic Test**

HYDRO PSI	HYDRO TIME (sec)
1370	20

**Hardness Tests**



(HV10 - Scale)

1:170	7:168	13:189	19:173	25:168
2:168	8:163	14:187	20:168	26:171
3:161	9:169	15:182	21:161	
4:167	10:172	16:188	22:169	
5:172	11:183	17:181	23:167	
6:169	12:181	18:171	24:162	

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	131	137	142	137	90	95	95	93
	<b>Full Size Values:</b>		175	183	189	183	90	95	95	93
THC	10x7.5 mm	32 F	109	113	107	110	0	0	0	0
	<b>Full Size Values:</b>		145	151	143	147	0	0	0	0
TWC	10x7.5 mm	32 F	87	86	92	88	0	0	0	0
	<b>Full Size Values:</b>		116	115	123	117	0	0	0	0

#### Pipes Certified For This HEAT

V10186597 V10186716

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