

PROCEDURE QUALIFICATION RECORD (PQR)

TEST RESULTS

PQR No. 231 Rev. No. 0

TESTS

√	Type of Test	Clause / Figure(s) Reference	Acceptance Criteria	Result	Remarks
√	Visual Inspection	4.9.1	4.9.1	Acceptable	Witness: D. Davis
√	Radiographic Examination	4.9.2.1	4.9.2.2	Acceptable	D231
	Ultrasonic Testing	4.9.2.1	4.9.2.2		
	2 Transverse Root Bends	4.9.3.1 / Fig. 4.12	4.9.3.3		
	2 Transverse Face Bends	4.9.3.1 / Fig. 4.12	4.9.3.3		
	2 Longitudinal Root Bends	4.9.3.1 / Fig. 4.12	4.9.3.3		
	2 Longitudinal Face Bends	4.9.3.1 / Fig. 4.12	4.9.3.3		
	2 Side Bends	4.9.3.1 / Fig. 4.13	4.9.3.3		
√	4 Side Bends	4.9.3.1 / Fig. 4.13	4.9.3.3	Acceptable	<1/16" opening
√	2 Tensile Test	4.9.3.4 / Fig. 4.14	4.9.3.5	Acceptable	
√	All-Weld-Metal Tension	4.9.3.6 / Fig. 4.18 & 4.23	4.18.2	Acceptable	* see note
	3 Macroetch	4.9.4	4.9.4.1		
	4 Macroetch	4.9.4	4.9.4.1		
√	CVN Test	4 Part D	4.37	Acceptable	

Notes: *All-Weld-Metal Tension: T/Y: 83,100/72,600 psi, Elongation in 2": 28%, Laboratory test no. PW 231

TENSILE TEST DETAILS

Specimen Number	Width	Thickness	Area	Ultimate Tensile Load	Ultimate Unit Stress	Type of Failure and Location
231-1	0.75 in.	1.00 in.	0.75 in ²	52 500 lb	70 000 psi	Ductile - BM
231-3	0.75 in.	1.00 in.	0.75 in ²	52 275 lb	69 700 psi	Ductile - BM

TOUGHNESS TEST DETAILS

Specimen Number	Notch Location	Specimen Size	Test Temperature	Absorbed Energy	Percent Shear	Lateral Expansion	Average
231-7	BM	10 x 10 mm	-20 F°	126 ft lb	50 %	45 mils	125 / 50 / 45
231-8	BM	10 x 10 mm	-20 F°	124 ft lb	50 %	45 mils	
231-9	BM	10 x 10 mm	-20 F°	125 ft lb	50 %	45 mils	
231-10	HAZ	10 x 10 mm	-20 F°	86 ft lb	50 %	45 mils	85 ft lb 50% 45 mils
231-11	HAZ	10 x 10 mm	-20 F°	84 ft lb	50 %	45 mils	
231-12	HAZ	10 x 10 mm	-20 F°	85 ft lb	50 %	45 mils	
231-13	WM	10 x 10 mm	-20 F°	27 ft lb	50 %	45 mils	28 ft lb 50% 45 mils
231-14	WM	10 x 10 mm	-20 F°	29 ft lb	50 %	45 mils	
231-15	WM	10 x 10 mm	-20 F°	28 ft lb	50 %	45 mils	

CERTIFICATION

Welder's Name	ID number	Stamp Number
W.T. Williams	261	-

Test Conducted by	
Laboratory	RED Inc. & ABC Testing
Test number	PQR 231 (per D. Miller)
File number	WeldingForms/PQR231.pdf

We, the undersigned, certify that the statements in this record are correct and that the test welds were prepared, welded, and tested in accordance with the requirements of Clause 4 of AWS D1.1/D1.1M (2002) Structural Welding Code-Steel.

Title	
Q.C. Mgr.	
Name	Signature
R. M. Boncrack	
Date	
12-15-2002	

