



# Pullman Power Products

PQR No. 047B

DOCUMENT NO.

PREPARED BY: G.L. Martin

APPROVED BY: K.J. Freed

ISSUE DATE: 2/13/81

PROCEDURE  
QUALIFICATION RECORDTO BE USED  
ONLY ON JOB #

7035

PAGE  
NO. 1 of 4

LATEST REV. DATE

4/13/81

PROCEDURE QUALIFICATION RECORD

047B-1-KI-A1

SIDESS RELIEVED

Copyright 1981

PULLMAN POWER PRODUCTS

HEADQUARTERS AT

WILLIAMSPORT, PENNSYLVANIA

UE&C  
CODE

01

REVISION	PREPARED BY	APPROVED BY	INITIALS	DESCRIPTION
00 2/13/81	G.L. Martin	K.J. Freed	Kmf	Original Qualification
01 4/13/81	G.L. Martin	K.J. Freed	Kmf	Corrected Preheat, Position, and Gas

RECEIVED  
U.E. & C. INC.

MAY 01 1981

SEABROOK  
STATION



# Pullman Power Products

PQR No. 047B  
DOCUMENT NO.

PREPARED BY: G.L. Martin

APPROVED BY: K.J. Freed

DATE: 2/13/81

PROCEDURE  
QUALIFICATION RECORD (PQR)

TO BE USED  
ONLY ON JOB #

1 7035

PAGE 2 of 4  
NO.

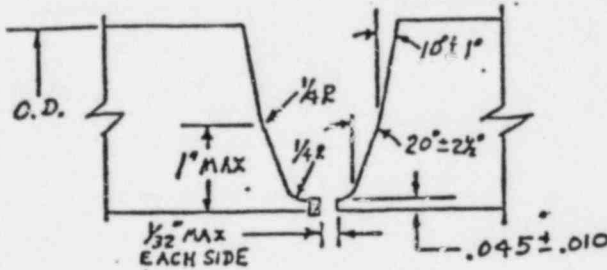
WPS NO. 150-1-KI-A1 X  
WELDING PROCESS (ES) GTAW

WPS DATE 2/13/81

TYPES Automatic

(MANUAL, AUTOMATIC, SEMI-AUTO)

COMPOUND BEVEL  
"U" GROOVE



BASE METAL (QW-403)

MATERIAL SPEC. SA 333

TYPE OR GRADE Gr 6

OF P NO. 1 Gr 1 TO P NO. 1 Gr 1

THICKNESS (IF PIPE, DIAMETER AND WALL  
THICKNESS) 24" Dia. 1.565" Wall

POSITION (QW-405)

POSITION OF GROOVE 6G

WELD PROGRESSION Uphill & Downhill  
(UPHILL - DOWNHILL)

PREHEAT (QW-406)

PREHEAT TEMP. 50°F Min.

INTERPASS TEMP. 200°F Max.

OTHER

GAS (QW-408)

TYPE OF GAS OR GASES 25-40 CFH Argon

COMPOSITION OF GAS MIXTURE 100% Argon

OTHER

TECHNIQUE PROCEDURES (QW-410)

STRING OR WEAVE BEAD Both

OSCILLATION See pg. 4

MULTIPASS OR SINGLE PASS Multiple

(PER SIDE) Single

SINGLE OR MULTIPLE ELECTRODES

Type EWT-2

5.20

POSTWELD HEAT TREATMENT (QW-407)

TEMPERATURE 1150 ± 25°F

TIME 8 hrs.

OTHER

ELECTRICAL CHARACTERISTICS (QW-409)

See pg 4

WELDING PROCESS	ELECTRODE DIA.	BARE FILLER WIRE DIA.	CURRENT (AMPS)	VOLTS	AC/DC POLARITY	TRAVEL SPEED	COMMENTS
					DCSP		



# Pullman Power Products

PQR No. 047B

DOCUMENT NO.

PREPARED BY: G.L. Martin

APPROVED BY: K.J. Freed

DATE: 2/13/81

PROCEDURE  
QUALIFICATION RECORD (PQR)TO BE USED  
ONLY ON JOB #

7035

PAGE  
NO. 3 of 4

## TENSILE TEST (QW-150) 462.1(B)

SPECIMEN NO.	WIDTH	THICKNESS	AREA	ULTIMATE TOTAL LOAD LB.	ULTIMATE UNIT STRESS PSI	CHARACTER OF FAILURE & LOCATION
T1 - PW	.742	.579	.430	30,170	70,163	Base Metal
T2 - PW	.749	.580	.434	30,420	70,092	Base Metal
T3 - PW	.742	.572	.424	30,140	71,085	Base Metal
T4 - PW	.745	.577	.430	30,380	70,651	Base Metal

## GUIDED BEND TESTS (QW-160) QW-462.2(A)

TYPE AND FIGURE NO.	RESULTS	TYPE AND FIGURE NO.	RESULTS
b5 - PW	Bent 180°, acceptable		
b6 - PW	Bent 180°, acceptable		
b7 - PW	Bent 180°, acceptable		
b8 - PW	Bent 180°, acceptable		

## TOUGHNESS TESTS (QW -170) N/A

SPECIMEN NO.	NOTCH LOCATION	NOTCH TYPE	TEST TEMP.	IMPACT VALUES	AVE	LATERAL EXP.		
						Z SHEAR	MILS	

Welder's Name K. V. Fluck Clock No. N/A Badge No. 6568  
Test Conducted by: MSI Testing, Inc. Laboratory Test No. 81-075  
Per: B. Mockli

We 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 Section IX of the ASME Code.

Signed Pullman Power ProductsDate 3/20/81By G. L. Martin  
G. L. Martin



# Pullman Power Products

PQR No. 047B

DOCUMENT NO.

PREPARED BY: G.L. Martin

APPROVED BY: K.J. Freed

bvk

ISSUE DATE: 2/13/81

PROCEDURE  
QUALIFICATION RECORDTO BE USED  
ONLY ON JOB #

7035

PAGE  
NO. 4 of 4

## SUPPLEMENTAL PROCEDURE QUALIFICATION RECORD FORM FOR AUTOMATIC GTAW WELDING

Filler Metal  
Diameter Filler  
Pass TypeE70S-3  
1/8" x 1/16"  
Root (K-Insert)E70S-3  
.035"  
Hot & FillE70S -3  
.045"  
Fill & Cap

1st Level Weld Current  
Low Pulse  
Low Pulse Frequency  
Low Pulse Width  
Background Current  
Out Dwell  
Excursion Time  
In Dwell  
Oscillator Amplitude  
Primary Wire Speed  
Background Wire Speed  
1st Level Travel Speed  
Primary Arc Volts  
Background Arc Volts

115 Amps  
P.A.  
1.1 P.P.S.  
50%  
60 Amps  
.1 Sec.  
.1 Sec.  
.1 Sec.  
0  
0  
0  
3.2 Ipm  
9.3v  
7.8v

160-285 Amps  
Sync-Pulse  
0  
0  
65-184 Amps  
.3-.6 Sec.  
.3-.4 Sec.  
.3-.6 Sec.  
.16"-.27"  
40-80 Ipm  
30-70 Ipm  
3.2 Ipm  
9.2-10.0v  
7.4-8.0v

265-299 Amps  
Sync-Pulse  
0  
0  
190-195 Amps  
.4-.6 Sec.  
.3-.5 Sec.  
.2-.6 Sec.  
.18"-.20"  
40-65 Ipm  
30-50 Ipm  
3.2-4.0 Ipm  
10.2-10.6v  
8.6-8.8v

Gas Cup Size  
Torch Lead  
Torch Side Tilt  
Wire Block

#8  
----  
----  
----

#8  
50-100  
0-70  
300

#8, #10  
70-100  
50-100  
300

No. of Passes

1

11

28

QW-256  
GAS TUNGSTEN-ARC WELDING (GTAW)

	256.1 Essential Variables	256.1(a) Supplementary Essential Variables — Notch Toughness	256.2 Nonessential Variables
QW-402 Joints	...	...	402.1 ✓ 402.5 ✓ 402.10 ✓ 402.11 NA
QW-403 Base Metals	403.7 ✓ 403.8 ✓ 403.9 ✓ 403.11 ✓ 403.13 NA	403.5 NA 403.6 NA ... ... ...	... ... ... ... ...
QW-404 Filler Metals	404.4 ✓ 404.5 ✓ 404.13 ✓ 404.14 ✓	... ... 404.12 404.24	404.3 ✓ ... 404.12 ✓ ... ...
QW-405 Positions	...	405.2	405.1 ✓ 405.3 ✓
QW-406 Preheat	406.1 ✓	406.3	...
QW-407 Postweld Heat Treatment	407.1 ✓ 407.3 ✓ 407.4 ✓	407.2 ... ...	... ... ...
QW-408 Gas	408.2 ✓ 408.9 NA	...	408.1 NA 408.3 ✓ 408.5
QW-409 Electrical Characteristics	...	409.1	409.3 ✓ 409.8 ✓ 409.12 ✓
QW-410 Technique	410.11 NA	410.7 410.9 410.10	410.1 ✓ 410.3 ✓ 410.5 410.6 NA 410.7 ✓ 410.9 ✓ 410.10 ✓ 410.15 NA ... 410.25 ✓ MACHINE 410.26 NA