Pullman Power Products		X-10 DOCUMENT NO.
PREPARED BY: L.LUNDSTROM	APPROVED BY: H. HINKLEY HH	ISSUE DATE: 11/5/79
SEABROOK PROJECT PROCEDURE	TO BE USED ONLY ON JOB # 7035	PAGE NO. 1 OF 3
		LATEST REV. DATE 8/7/81

WELD MONITORING PROCEDURE

FOR INFORMATION ONLY

SEABROOK STATION

HEADQUARTERS AT

WILLIAMSPORT, PENNSYLVANIA

UE&C CODE
06

REVISION	PREPARED BY	APPROVED BY	INITIALS	DESCRIPTION
00 3/1/79	D. Walker	H. Hinkley	HDH	Initial Issue for Seabrook
01 11/5/79	L.Lundstrom	H. Hinkley	HDH	Extensively Revised
02 3/5/80	C. Gaskell	H. Hinkley	HDH	Revised para. 2.1, 3.1, 4.1, 5.1, 5.3.1A, 5.3.2C, 6.1, Appendix A; Corrected Typo's
03 7/17/80	R. Donald	H. Hinkley	HDH	Revised para. 5.2 and 7.1
04 8/26/80	H. Hinkley	A. Eck	AAE	Revised para. 5.1 and 5.2
05 4/2/81	C. Gaskell	H. Hinkley	HDH	Revised Appendix A; Added Appendix B and para. 4.1.1; Revised para. 5.1 and 5.2
06 8/7/81	G. L. Martin	H. Hinkley	GLM	Revised 5.2, 5.3.1, 6.1

Pullman Power Products Division of Pullman Incorporated		X-10 DOCUMENT NO.
PREPARED BY: L. Lundstrom	APPROVED BY: H. Hinkley	ISSUE DATE: 11/5/79
SEABROOK PROJECT PROCEDURE	TO BE USED ONLY ON JOB # 7035	PAGE NO. 2 of 3

1.0 SCOPE

1.1 The requirements of this document are applicable to all field welding activities performed by the Company (Pullman Power Products).

2.0 PURPOSE

3/5/80 2.1 This document establishes the method by which the parameters and techniques required by a Weld Procedure Specification (WPS) will be monitored and documented during production welding.

2.2 The monitoring program is intended to ensure that the parameters and techniques proven by Procedure and Welder Qualification are carried over into production work.

3.0 RESPONSIBILITY

3/5/80 3.1 The QA Manager shall be responsible for implementing the requirements of this document through QC inspection personnel.

4.0 CALIBRATED EQUIPMENT

3/5/80 4.1 Voltmeters, ampmeters, tong testers, In-Line Volt/AMP Meter, and pyrometers used during weld monitoring shall be calibrated in accordance with Project Procedure XII-2.

4/2/81 4.1.1 Machine settings and meter readings may be used to document parameters when monitoring an Automatic GTAW machine, providing the power source is properly calibrated in accordance with Procedure XII-2.

5.0 MONITORING

4/2/81 5.1 Surveillance activities, on items covered in paragraph 2.0 of this document shall be performed on production welding daily by the responsible QC Welding Inspector. This surveillance need not be documented, except when discrepancies are found in the parameters and techniques used. Then the Weld Monitoring Record in Appendix "A" shall be used to document discrepancies for manual welding. For GTAW Automatic process, the Weld Monitoring Record in Attachment B shall be used to document the discrepancies.

8/7/81 5.2 A documented monitoring activity shall be performed on each welder at a minimum of once each three months. Monitoring shall be documented using the "Weld Monitoring Record" which shall be completed by the responsible Welding Inspector and forwarded to the QC Supervisor for review.

5.0 MONITORING (Cont'd)

5.3 If a parameter or technique is found to be outside the limits prescribed by the WPS, the discrepancy shall be resolved by the QC Supervisor in the following manner.

8/7/81 5.3.1 If it is determined by the QA Welding Engineer that the Discrepancy may have had a detrimental effect on the quality of the weld, such as violation of a procedure or performance essential variable, Procedure XV-2 shall be utilized.

3/5/80 A. A review of the welds made by the welder for whom the discrepancy was found shall be made on welding performed subsequent to the last Weld Monitor Record on file for him. The welds shall be evaluated by any records available or by the appropriate N.D.E. method. Disposition of these welds shall be made by the QA Welding Engineer and a report placed on file of his findings.

5.3.2 If it is determined that the discrepancy had little or no effect upon the quality of the weld, it shall be brought to the attention of the responsible foreman and welder.

A. Corrective action shall be noted in the "Comments" section of the Weld Monitoring Record.

B. The Welding Activity shall be monitored more frequently as required by the QC Supervisor.

3/5/80 C. If a particular welder or piece of equipment is repeatedly found to be out of compliance with the applicable requirements, the QA Manager may, at his option, require that the welder be retested or the equipment be removed from service.

6.0 REVIEW

8/7/81 6.1 Each month the QC Supervisor shall review with the QA Manager the Weld Monitoring Records submitted during the previous month. Documentation of the review shall consist of a brief summary signed by both individuals.

7.0 RECORDS

1/17/80 7.1 Completed Weld Monitoring Records shall be retained by the QA Engineer - Records. At the end of the project these documents shall be destroyed.

Pullman Power Products		X-10 DOCUMENT NO.
PREPARED BY: C.F. GASKELL	APPROVED BY: H. HINKLEY	ISSUE DATE: 11/5/79
SEABROOK PROJECT PROCEDURE	TO BE USED ONLY ON JOB # 7035	PAGE NO. APPENDIX A 1 OF 1

4/2/81

WELD MONITORING RECORD
(MANUAL WELDING)

DATE:_____ _____

WELDER:_____ SYMBOL:_____ WRSR NO.:_____

WPS:_____ PROCESS_____ POLARITY:_____

POWER SOURCE OR RESISTANCE GRID SERIAL NO.:_____

BASE MATERIAL: P_____ TO P_____

FILLER METAL SIZE AND CLASSIFICATION:_____

PREHEAT/INTERPASS TEMP:_____ °F

METHOD OF PREHEAT/INTERPASS VERIFICATION: ☐ PYROMETER S/N_____
CAL. DUE_____
☐ TEMPSTICK_____ °F
☐ OTHER_____

SHIELDING GAS_____ CFH PURGE GAS_____ CFH

VOLTAGE_____ V AMPERAGE_____ a

C/V MONITOR SERIAL NUMBER_____

TRAVEL SPEED_____ IN./MIN.

BEAD WIDTH_____ IN.

COMMENTS:_____

_____

MONITORING PERFORMED BY_____
XXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXX

HEAT INPUT:_____ J/IN.

REVIEW: ACCEPT ☐
REFER TO QAEW ☐

REVIEWED BY:_____ DATE:_____
XXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXX

QAEW DISPOSITION:_____

_____

_____

SIGNED:_____ DATE:_____

SF 1.01A (4-79)

WELD MONITORING RECORD
(AUTOMATIC GTAW ONLY)

DATE:____________________

WELDING OPERATORS:____________________ SYMBOL :__________

____________________ SYMBOL :__________

WPS:____________________ WRSR NO.:__________

PROCESS: GTAW- AUTO MACHINE MODEL: DIMETRICS GOLD TRACK II

POWER SOURCE S/N:____________________ POWER SOURCE CAL. DUE__________

BASE MATERIAL P________ TO P________ FILLER TYPE AND SIZE:__________

PREHEAT/INTERPASS TEMP.__________ °F

METHOD OF PREHEAT/INTERPASS VERIFICATION ☐ PYROMETER S/N AND CAL. DUE__________

☐ TEMPSTICK __________ °F

☐ OTHER:__________

SHIELD GAS __________ CFH PURGE GAS __________

PRIMARY VOLTAGE:__________ V PRIMARY CURRENT:__________ a

PRIMARY WIRE SPEED:__________ IN/MIN.

TRAVEL SPEED:__________ IN/MIN.

BEAD WIDTH:__________ IN..

COMMENTS:____________________

____

____

MONITORING PERFORMED BY:__________

XXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXX XXXXX

HEAT INPUT:__________ J/IN.

REVIEW: ACCEPT ☐

REFER TO QAEW ☐

REVIEWED BY:__________ DATE:__________

XXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXX

QAEW DISPOSITION:__________

____

____

SIGNED:__________ DATE:__________

QUALITY ASSURANCE PROGRAM

EVALUATION 7035-1-82	OBSERVATIONS
X-13 Review weld monitoring records that indicate a deviation from the welding procedure. Verify that appropriate corrective action was taken. Procedure X-10, rev. 8/7/81, para. 5.3.1 & 5.3.2	UNABLE TO VERIFY DUE TO LACK OF TIME
X-14 Review several code data reports to assure they have been filled out per the requirements of para. 5.1 and the attachments, as applicable. Also, verify that code markings have been applied to the appropriate drawings per para. 8.1. Procedure X-21, rev. 8/11/81	N/A NO DATA REPORTS INITIATED TO DATE

EVALUATION 7035-2-81	OBSERVATIONS
X-7 Review the differences of para. 6.6.9 and Procedure JS-IX-14 with a QA Engineer and/or QA Manager. Procedure X-9, rev. 8/7/79, para. 6.6.9	revise to say see JS-IX-14 AAR #23
X-8 Select 4 minimum welders at random and check the weld monitoring records to verify they have been monitored at least twice in the past 6 months. Review the monitoring records to verify they are correctly filled out. Also verify that monitoring records have been reviewed by the QC Supervisor with the QA Manager monthly. Procedure X-10, rev. 8/7/81, para. 5.1 & 6.1 AAR #18 of the 7035-1-81 Audit	no monitoring done for 3 months June-Aug. 1981 new equipment? There has been no CAR or NCR AAR # 24

EVALUATION 7035-1-81

OBSERVATIONS

SECTION X

X-6 Verify how the QC Welding Inspector determines that it is time to perform a documented weld monitoring activity on each welder who has welded at any time during a calendar month. The Procedure does not cover this.

GESKE

Procedure X-10, rev. 8/26/80, para. 5.2

weld inspector keeps track of those in his area whether he has been monitored by the monitoring records acceptable

X-7 Verify that each month the QC Supervisor reviews with the QA Manager, Weld Monitoring Records submitted during the previous month. Is there evidence of this review documented or logged some place?

GESKE

Procedure X-10, rev. 8/26/80, para. 6.1

AAR?

verbal review
no documentation
is doc of QC Super or Weld Eng review of all Weld Monitor records

X-8 Verify that if it was determined by the QA Welding Engineer that discrepancies were found during weld monitoring that may have had a detrimental effect on the quality of the weld, procedure XV-2 was utilized.

CG

Procedure X-10, rev. 8/26/80, para. 5.3.1

never had happen CG

ATTACHMENT
15 of 22
SSCA No. 0558
Report No. SA598CS203
Audit Date: 4/6-23/82
Auditor(s): F. A. Beake

REQUIREMENT:

PPP Procedure X-10, Para. 2.1, establishes the method by which the parameters and techniques required by a Weld Procedure Specification (WPS) will be monitored and documented during production.

DEFICIENCY:

Weld monitoring records reported by QC Technical Technician, William Larken, dated 1/26/82, had volt/ampmeter calibration date, serial no., and monitoring report date missing.

Another weld monitoring record, which had been signed by the QC Supervisor, had the travel speed (1/4") and bead width (4") reversed with no comments indicated on report.

Twelve weld monitoring records indicated that the reqired maximum interpass temperature of 600°F had been exceeded with no evidence of further evaluation by QC/QA personnel as to impact on final weld.

RECOMMENDATION:

Weld monitoring records shall be checked against the applicable WPS to determine whether monitored values are within the variables specified. Review additional weld monitoring records to determine the extent of improperly reported welding parameters, and make necessary evaluations of those not falling within the specified ranges.

PULLMAN-HIGGINS REPLY

Weld Monitoring Records have been properly reviewed. (see attached)

The

(1) Does not describe why the problem occurred

(2) Does not describe method which will prevent recurrence

ATTACHMENT
14 of 22
SSCA No. 0557
Report No. SA598CS203
Audit Date: 4/6-23/82
Auditor(s): F. A. Reake

REQUIREMENT:

Procedure X-10, para. 2.1, states, "This document establishes the method by which the parameters and techniques required by a Weld Procedure Specification (WPS) will be monitored and documented during production welding."

Para. 2.2 states, "The Monitoring Program is intended to ensure that the parameters and techniques proven by procedure and welder qualifications are carried over into production work."

DEFICIENCY:

This procedure has not been implemented in the areas of responsibility, calibrated equipment, monitoring, review, and records. The following paragraphs of the procedure require implementation: 2.1, 3.1, 4.1, 5.2, 5.3, 5.3.1, 5.3.1.A, 5.3.2, 5.3.2.A, 5.3.2.B, and 6.1.

RECOMMENDATION:

Procedure X-10 shall be implemented within 30 days in the areas of responsibility, calibrated equipment, monitoring, review, and records. Implement the following paragraphs: 2.1, 3.1, 4.1, 5.2, 5.3, 5.3.1, 5.3.1.A, 5.3.2, 5.3.2.A, 5.3.2.B, and 6.1.

PULLMAN-HIGGINS REPLY

Pullman Power Products Procedure X-10 has been implemented.

why was X-10 not implemented

The complete reply requires evaluation of SSCA # 0557-15

OFFICE CORRESPONDENCE

DATE May 12, 1982

TO File

FROM R. Wise/R. Davis

SUBJECT Weld Monitoring Records

A re-reivew has been performed on all the Weld Monitoring Records on file. All monitoring records with any variations from the parameters of the applicable WPS were forwarded to the QAEW for further review. (see attachement).

Richard G. Davis
QA Manager

R. G. Wise
QC Supervisor

REVIEW OF WELD MONITORING RECORDS

ing review of the existing records, seven typical discrepancies have been noted. cases were found in one instance only. 1) Excessive weave width and 2) Shielding flow below 90% of that specified on the WPS. The remaining five cases are:

1) Inadequate Review - Numerous records showing discrepancies were signed off as reviewed with no comment.

2) Inspector Error - Many records were incomplete and some entries seem questionable.

3) Travel Speed below procedure specified minimum.

4) Voltage outside the range specified on the WPS.

5) Amperage outside the range specified on the WPS.

RECOMMENDATIONS:

1) & 2) Provide training in the requirements and use of Procedure X-10 to those who use it.

3) Travel speed violations have been evaluated individually. In some cases procedure revisions are in order. Welder monitoring should be increased to assure compliance with the approved procedure. In no case did the travel speed violation affect procedure or performance qualification.

A) T-Gas; WPS: 8-I-1-BR-2; Welder: Curtis, F6; Date: 11/13/80
Calculated Heat Input: 57,960 J/in.; Max. Allowable 184,800 (Ref. PQR 020A)
Temporary Weld (B31.1)

B) T-Gas-1; WPS 8-I-1-BR-2; Welder: Lacopolis, BT; Date: 11/13/80
Calculated Heat Input 87,400 J/in.; Max Qualified 184,800 (Ref. PQR 020A&B)
Temporary Weld (B31.1)

C) WLD-2170-03 F0314; WPS: 27-I-8-OB-12; Welder: Scutra, L6; Date: 11/13/80
Calculated Heat Input 21,685 J/in.; Max. Specified 54,000 (Ref. PQR 109)
B31.1; P8 welds do not require impact qualified WPS.

D) DM-1637-01 F0102; WPS: 27-1-8-OB-12; Welder: Carver, BR Date: 11/13/80
Calculated Heat Input 21,600 J/in.; Max Specified 54,000 (Ref. PQR 109)

E) CBS-1225-01 F0114; WPS: 29-III-8-KI-1 ; Welder: Lobikis, J7; Date: 3/20/81
Calculated Heat Input 19,200 J/in.; Max Specified 43,200 (Ref. PQR 121)
P8 welds do not require impact qualified WPS.

F) CBS-1225-02 F0201; WPS: 24-III-8-KI-12; Welder: Hemand, J5; Date: 3/24/81
Calculated Heat Input 25,200 J/in.; Max. Specified 78,000 (Ref. 104A)
P8 welds do not require impact qualified WPS.

G) CS-360-08 F0801; WPS: 24-III-8-KI-12; Welder: Hebert, GN; Date 3/25/81
Calculated Heat Input 33,750 J/in; Max. Specified 78,000 (Ref. PQR 104A)
P8 welds do not require impact qualified WPS.

H) WLD-2097-02 F0203; WPS: 24-I-8-KI-12; Welder: Birch, GR; Date: 4/8/81
Calculated Heat Input 34,756 J/in.; Max. Specified 55,500 (Ref. PQR 106)
P8 welds do not require impact qualified WPS.

SI-355-01 R/2 F0104; WPS: 24-III-1-KI-12; Welder: Bureau, S8; Date 4/8/81
Calculated Heat 16,800 J/in.; Max. Specified 78,000 (Ref. PQR 104A)
P8 weld.

SL-X60-01 F0104; WPS: 24-III-8-KI-12; Welder: Butler, GD; Date 4/22/81
Calculated Heat 20,727 J/in.; Max. Specified 78,000 (Ref. PQR 104A)
P8 Weld

Travel speed reductions will be requested for:

24-III-8-KI-12 reduce to 2 In/Min.
29-III-8-OB-I reduce to 2 In/Min.
27-I-8-OB-12 reduce to 3 In/Min.

Not consistent with DAN

4) Voltage outside range specified on the WPS.

In 8 of 9 cases the voltage is within one volt of the acceptable range. Procedures could be changed to broaden the voltage ranges. Some question also exists about the accuracy of the readings due to the nature of the instrument. Welder monitoring should be increased to assure that procedure is followed.

5) Amperage outside the range specified in the WPS.

A) Ranges specified for SMAW process do not overlap between rod sizes. Ranges can be made to overlap.

B) For carbon steel SMAW heat input is an essential variable. In no case was a procedure qualification violated. Individual analysis of each discrepancy follows.

C) B31.1 procedures do not have impact requirements.

SECTION III WELDS

1) SI-251-01 F0103; WPS: 24-III-8-KI-12; Welder: Hemond J5;
Calculated Heat Input 14,025 J/in is within specified limits 78,000 J/in max. (Ref. PQR 104A)
P8 base materials do not require impact tested WPS.

2) CBS-1216-4-17 26; WPS: 77-III-8/1-KI-12; Welder: Mulherrin, T2
Calculated Heat Input 21,420 J/in is less than qualified max. 34,500 (Ref. PQR 308)

3) RH-167-01 F0102; WPS: 24-III-8-KI-12; Welder: Guay, K3
Calculated heat input of 15,692 J/in is below specified max. 78,000 J/in. (Ref. PQR 104A)
P8 base materials do not require impact test WPS.

B31.1 WELDS

4) MD-5415-SH3 FW5415; WPS: 8-I-1-BR-2; Welder: Lobikis, J7
Calculated Heat Input 29,900 J/in. is below max. qualified 184,800 J/in. (Ref. PQR 020 A & B)
B31.1 welds do not require impact qualified WPS.

AB-5125-03 F0313; WPS: 10-I-1-OB-1; Welder: McGann, BA
Calculated Heat Input 21,000 J/in is below max. qualified 28,600 J/in.
(Ref. PQR 016 A & B)
B31.1 welds do not require impact qualified WPS.

6) AB-5127-12 F1201; WPS: 10-I-OB-1; Welder Donovan, P5
Calculated Heat Input 26,400 J/in. is below max. qualified 28,600 J/in.
(Ref. PQR 016 A & B)
B31.1 weld.

7) DF-34-R2 F3402; WPS: 1-I-1-KI-12; Welder: Samaras, L8
Calculated Heat input of 33,000 J/in. is below qualified max. of 184,000
(Ref. PQR 019 A & B).
B31.1 Weld.

8) FSKFW; WPS: 8-I-1-BR-2; Welder: Poncia, S5
Calculated Heat Input of 32,200 J/in. is below qualified max. of 184,800
(Ref. PQR 020 A & B)
Temporary Weld

9) T-Att-1; WPS: 8-I-1-BR-2; Welder: Decker, V5
Calculated Heat Input of 21,400 J/in. is below qualified max. of 184,800
(Ref. PQR 020 A & B)
Temporary Weld

10) PAB FSK-FW; WPS: 8-I-1-BR-2; Welder: McCarthy, C2
Calculated Heat Input of 32,200 J/in. is below max. qualified of 184,800
(Ref. PQR 020 A & B)
Temporary Weld

11) Temp-ATT-1 TATT 1; WPS: 8-I-1-BR-2, Welder: Nacauca, T7
Calculated Heat Input of 31,800 J/in. is below qualified max. of 184,800
(Ref. PQR 020 A & B)
Temporary Weld (B31.1)

12) FSK-FW; WPS: 8-I-1-BR-2; Welder: Brochu, B4
Calculated Heat Input of 28,100 J/in is below max. qualified 184,800
(Ref. PQR 020 A & B)
Temporary weld (B31.1)

13) T-Sleeve F1-1; WPS: IT8-III-1-BR-2; Welder: Cochrane, L0
Calculated Heat Input of 35,200 J/in. is below max. qualified of 184,800
(Ref. PQR 020 A & B)

14) FI-1-RO; WPS: IT-8-III-1-BR-2; Welder: Howard, K0
Calculated Heat Input of 38,400 J/in. is below max. qualified 184,800
(Ref. PQR 020 A & B)
Temporary Weld

The two isolated instances of procedure noncompliance, weave width and shielding gas flow, are both violations of non-essential variables. Welders are to be monitored more frequently to assure compliance with approved procedures.

Daryl Kelley
QA Welding-Engineer

Pullman Power Products

DAN NO. 7035-16

DOCUMENT ACTION NOTICE

DATE: 5/28/82

See Reverse for instructions for the completion of this form.

A Document Title: See Item "G" and Attached

Identification Number (if known): Multiple Procedures (see attached)

B Prepared by: D. Kelley

C New Document ☐; Revised Document ☒

D Application: ☐ Corporate ☐ Shop ☒ Project ☐ Staff ☐ Other

E Action Code(s): 3, 4, 5

F Action Required by (Date): 6/11/82

Action Code Legend

1. Review & Offer Comments
2. For Your Information
3. Review & Approve
4. Please Handle
5. Issue for use at: Seabrook

G Remarks: Please revise the attached open butt and consumable insert procedures to reflect a one (1) inch per minute travel speed. ✓

"In response to YAEC SA598CS203, SSAC's: 0557, 0558, 0560, 0561, 0562, & 0563.

H Forwarded to - name(s): H. Hinkley, C. Neary

FOLLOWUP

Date	Action Taken	By
5/28/82	Forwarded to Home Office	E. D. Walker

-OB-12

-1-KI-A1

-8-KI-12

26-I-8-OB-2

27-I-8-OB012 ✓

29-I-8-OB-1

250-I-8-KI-A1

505-I-45-KI-1

510-I-45-OB-1

408-I-CARP-20-OB-1

409-I-34-OB-1

27-A-I-OB-12

29A-I-8-OB-1

I-4-KI-12

48-I-5-KI-12

61-I-5-OB-12

43.1-I-4-OB-12

71-I-4/1-KI-12

73-I-4/1-OB-1

74-I-5/1-KI-12

336-I-4/GE-OB-12

77-I-8/1-KI-12

79-I-8/1-KI-12

80-I-8/1-OB-2

81-I-8/1-OB-12

00-I-8/45-OB-1

T1-III-1-KI-12

IT11-III-1-OB-2

IT12-III-1-OB-12

150-III-1-KI-A1

24-III-8-KI-12 ✓ [illegible]

26-III-8-OB-2

27-III-8-OB-12

29-III-8-OB-1

250-III-8-KI-A1

408-III-CARP-20-OB-1

409-III-34-OB-1

77-III-8/1-KI-12

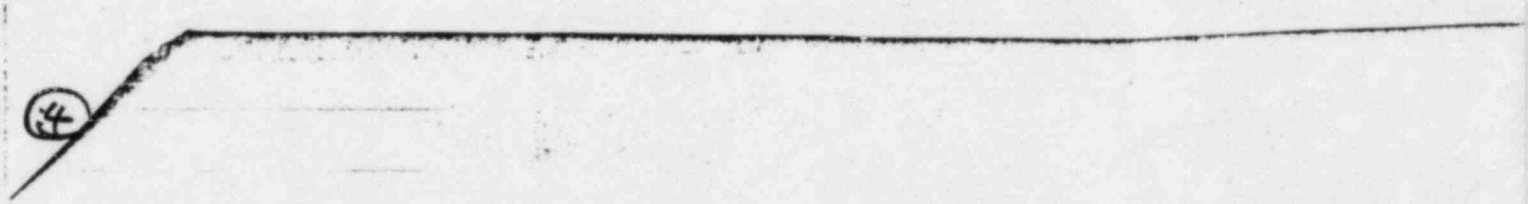
79-III-8/1-OB-12

84-III-8/1-K-12-F43

331-I-1/GE-OB-12

WELD MONITORING

① 10 CFR50 Appendix B



Surveillance Audit Reports 7035-1-81 dated 5/81 and 7035-2-81 dated identified
(Items X-7 and X-8) (Item X-8)

deficiencies in meeting weld Monitoring Requirements stated in Procedure X-10

Audit Report 7035-1-82 Item X-13 also identified weld monitoring as an Audit Check Off Item, but indicated that the auditors failed to make observations of this check off point ("unable to verify due to lack of time") even though this was a recurring deficiency.

ENG-8 3 3-78

MEMORANDUM

QA/QC #963

To R. Davis - QA Manager | Pullman Power (COMPANY OR LOCATION) | August 4, 1981 (DATE)

From D. C. Lambert - FSQA | UE&C (COMPANY OR LOCATION) | File Response Required

Subject X-10; Rev. 05; FP #43428-06

Please review the comments listed below for the subject procedure. Revise the procedure to incorporate the comments or provide written justification as to why they were no incorporated.

R&QA Comments

1. Para. 5.3/5.3.1 - Should be revised to indicate that if it is determined that any one of the essential variables for welder qualification or procedure qualification has been violated, an NCR will be written.

FOR INFORMATION ONLY

D. C. Lambert

DCL/BEO/kjh

cc: RC Lesnefsky - 14U6
MP Hanson
MA Edgar
JW Singleton
File 4.1
Procedure File

MICH. A.

C.C. CFG → REUSE IF NECESSARY
H. HINKLEY

Pullman Power Products

AUDIT ACTION REQUEST

E NO. 5.5.5	ACTIVITY NAME Seabrook Project	AAR NO. 24 of 36
IDENTIFICATION	AUDIT NO. 7035-2-81	AUDIT DATE 11/16-20/81
APPENDIX B NO. X	TITLE Inspection	

FINDING: No weld monitoring was done during the months of June, July, or August, 1981, because of delays in getting new equipment. This was not reported to the customers as a procedure nonconformance.

FOR INFORMATION ONLY

PREP. G. Martin DATE 11/19/81 ACK. BY G. Martin DATE 11/19/81

REQUIREMENTS: Procedure X-10, rev. 8/7/81 and XW-2, rev. 7/1/81; C Q. X-8

[illegible] Nonconformance Report to NE&C on this [illegible].

[illegible] addition on 12-18-81 to report this

DUE DATE [illegible] violation for the customer.

RESPONSE BY: [illegible] RESPONSE DATE 12-16-81

FINDING CLOSED BY MEANS OF EVALUATION AND VERIFICATION BY: [illegible] DATE 1/5/82

ACKNOWLEDGED BY: [illegible] DATE 1/7/82

Pullman Power Products

AUDIT ACTION REQUEST

E NO. 5.5.5 | ACTIVITY NAME Seabrook Project | AAR NO. 24 of 36

IDENTIFICATION | AUDIT NO. 7035-2-81 | AUDIT DATE 11/16-20/81

APPENDIX B NO. X | TITLE Inspection

FINDING | No weld monitoring was done during the months of June, July, or August. 1981, because of delays in getting new equipment. This was not reported to the customers as a procedure nonconformance.

PREP. G. Martin | DATE 11/19/81 | ACK. BY G. Martin | DATE 11/19/81

REQUIREMENTS | Procedure X-10, [illegible]/7/81, and XV-2, rev. 7/1/81; C.Q. X-8

FOR INFORMATION ONLY

RECOMMENDED CORRECTIVE ACTION | Submit a Nonconformance Report to UE&C on this procedure.

FOLLOW-UP

CORRECTIVE ACTION REPLY | NCR 1760 was written on 12-18-81 to report this procedure violation for the customer.

DUE DATE 12/21/81

RESPONSE BY: [signature] | RESPONSE DATE 12-18-81

FINDING CLOSED BY MEANS OF

EVALUATION AND VERIFICATION BY: _____ DATE _____

ACKNOWLEDG BY: _____ DATE _____

SF-15.1 (05-78)

Pullman Power Products
Division of Pullman Incorporated

NONCONFORMANCE REPORT

LINE NO.

NCR	REV.	SHT.	OF	ITEM	IDENT NO.	ITEM NAME	QUANTITY	
7035	1760	0	1	1	See Below	Weld Monitoring	N/A	N/A

2 ISSUED BY — NAME: R. G. Wise — INIT. — ORGANIZATION: Pullman Power Products — DATE: 12 | 18 | 81

3 ITEM / MATERIAL — SOURCE: Pullman Power Products — CURRENT STATUS: N/A — LOCATION: N/A

4 RESPONSIBLE ORGANIZATION — NAME: Pullman Power Products — SPEC. NO.: 248 | 51 | — REV./ECH.: 08

5 NCR TYPE — CATEGORY — POSSIBLE SIGNIF. ☒ NA ☐ PART 21 ☐ 50.55(e)
TYPE ☐ (E) EQUIP./MAT'L. ☐ (I) INSTALLATION ☒ (P) PROGRAM

6 GOVERNING REQUIREMENT (INCLUDE ACCEPTANCE CRITERIA AND DOC'MT. NOS.) Project Procedure X-10

7 DESCRIPTION OF NONCONFORMANCE — NC CODE: 104 — (RELATE TO LINE NO. 6) Weld monitoring, as required per Project Procedure X-10 was not performed during the months of June, July & August of 1981.

FOR INFORMATION ONLY

8 CAUSE OF NONCONFORMANCE — CAUSE CODE — New equipment was on order but was delayed.

9 PROPOSED DISPOSITION — ☐ SCRAP ☐ REPAIR ☒ USE AS IS ☐ OTHER

JUSTIFICATION: Accept as is.

10 STEPS TO PREVENT RECURRANCE: Since receiving weld monitoring equipment ~~a regular monitoring equipment~~ LAD a regular monitoring program has been and will continue to be implemented.

11 RESP. ORG. APPROVAL — ENG./CONST. [signature] 12-18-81 — QA/QC [signature] — AIA [signature] — DATE

12 REVIEW BOARD — REVIEW REQ'D. ☐ YES ☐ NO — DECISION: ☐ ACCEPT ☐ REJECT
ENGINEER — DATE — QA/QC — DATE

13 DISPOSITION VERIFIED — NAME — TITLE — DATE

COPY DISTRIBUTION: WHITE - QA; YELLOW - FIELD ENGINEER; GOLD - YANKEE; PINK - ANI; GREEN - QA

AUDIT ACTION REQUEST

O. 5.5.5 ACTIVITY NAME 7035 QA Program Audit AAR NO. 18 of 28

FI TION | AUDIT NO. 7035-1-81 AUDIT DATE 5/4/81 - 5/8/81

IX B NO. X TITLE Inspection

IG | QC Supervisor is to review results of Weld Monitoring with the QA Manager monthly. is no documentation of this review.

G. Martin Date 5/7/81 Ack. By H. Hinkley Date 5-8-81

EMENTS | Procedure X-10, revision 8/26/80, paragraph 6.1; C.Q. X-7

FOR INFORMATION ONLY

END COR- E ON | Document review in the future.

-UP |

TIVE ACTION REPLY | Summary of review result forwarded to the QA Manager through use of

TE 6/8/81 | speed letter. First summary of review conducted on 6-3-81 for the monitor period of May 1981. Procedure revision requested 6-3-81.

By Donald R. Geske Donald R Geske Response Date 6-[illegible]-81

S CLOSED BY MEANS OF
TION AND VERIFICATION BY: Howard Hinkley DATE 6/9/81

LEDGE BY: Howard Hinkley DATE 6/9/81

INTEROFFICE CORRESPONDENCE

DATE June 3, 1981

TO H. Hinkley

FROM D. Geske

SUBJECT Project Procedure X-10 Revision

In response to Corporate Audit 7035-1-81 AAR 18 of 28 requests the following revision to Project Procedure X-10:

Revise Para. 5.2: "A documented monitoring activity shall be performed on each welder at a minimum of once each three months. Monitoring shall be documented using the "Weld Monitoring Record" which shall be completed by the responsible Welding Inspector and forwarded to the QC Supervisor for review".

Revise Para. 6.1 "Each month the QC Supervisor shall review with the QA Manager the Weld Monitoring Records submitted during the previous month. Documentation of the review shall consist of a brief summary signed by both individuals."

FOR INFORMATION ONLY

Donald R. Geske

Donald R. Geske
QC Supervisor

R. G. DAVIS — FROM: D. R. GEORGE

QA MANAGER — QC SUPERVISOR

SUBJECT: WELDING MONITORING MAY 1981

MESSAGE — Date 6-3 19 81

OF THE 158 WELDERS ON THE QUALIFIED WELDERS LIST DURING MAY 1981, 139 WELDED. OF THESE, 45 RECEIVED A FORMAL MONITOR ER PROJECT PROCEDURE X-10 TWO OF WHICH WERE OUTSIDE WPS PARAMETERS

Z8 - TRAVEL SPEED 2½" PER MIN (3" REQUIRED) = HEAT INPUT ACCEPTABLE.

GN - AMPERAGE 115 (110 MAX) = HEAT INPUT NONESSENTIAL.

WE CONTINUE TO FAIL TO MEET THE REQUIREMENT FOR MONITORING EACH WELDER EACH MONTH. I HAVE PREPARED A RECOMMENDED REVISION TO X-10 TO CHANGE TO READ "A MINIMUM OF ONCE EACH THREE MONTHS".

Signed Donald R. George

REPLY — Date 6-3 19 81

Acknowledged

Since WE CONTINUE TO FAIL TO MEET THE REQUIRED MONITORING, A CAR SHOULD BE WRITTEN.

Audit 7035-1-81
AAR 18 of 28

Signed

Ison Jones Company

RECIPIENT—RETAIN WHITE COPY, RETURN PINK COPY

PIPE INSPECTORS

2d Shift — 2 SUPERS. 16 WELD. 7 HANG. 2 TEST.

R. WISE -

DIESEL GEN.	TERRY G. *	AL SAUCIER (T)
ELECT. PENT	B. McCANN *	DAN TREMAINE (T)
TURB.	V. JACKSON (T)	+ PETE COLLOTTA (T)
ADMIN.	B. KENNEDY (T)	~~TERRY GOULDING~~
WASTE PROCESS	K. METZGER # *	DOUG BARKER
		~~GENE DUBE~~
COOLING TOWER YARD FAB SHOP UNIT #2 TURB. #2		~~[illegible]~~
S.W. PUMPHOUSE RCA TUNNEL PAB MS/FW PENT. FUEL STORAGE RHR VAULT		STEVE VALLIERE * BILL LARKIN * + JOHN MARTIN * GENE DUBE *
CONTAINMENT #1		+ JEFF PELLERIN * TIM ALFORD * MANNY SANTIAGO *
TEST SHOP		~~PETE COLLOTTA~~ ~~JOHN MARTIN~~ DON HARDY - TEST } UA School Insp. DAN DAUBERT } Site Test Shop

7 1/2 * day
2 Night

HANGER INSPECTORS

TURB. ADMIN	JEFF FULLER (T)
DIESEL GEN. COOLING TOWER WASTE PROCESS	CHRIS LUPOLI DON LANDRY
PAB MS/FW PENT. RHR VAULT FUEL STORAGE	DAVE BIRCH *
CONTAINMENT #1	FRED FOSTER * JAY PIERCE *

HANGERS

T
* III work

PULLMAN-HIGGINS
Seabrook, New Hampshire
Manpower Report

DAY Tues

DATE 6/22/81

	SUPERVISION PAYROLL			SUPERVISION WORKING			NO. CRAFT ON PAYROLL			NO. CRAFT ABSENT			NO. CRAFT PRESENT		
	1st	2nd	3rd	1st	2nd	3rd	1st	2nd	3rd	1st	2nd	3rd	1st	2nd	3rd
Project Manager	1			1											
Superintendents	2	1		1	1										
Crft. Supervsrs.	21	4		19	4										
Accounting	5	1		5	1										
Quality Control	101	13	5	100	12	5									
Engineers	35	2		34	2										
Draftsman	47	8		45	7										
Cost & Schedulg.	24	1		22	1										
Safety	3	1		2	1										
Clerical	37	4		34	4										
PIPEFITTERS:															
General Foremen							14	6	.	1			13	6	
Foremen							71	26		2	1		69	25	
Welders							255	78		6	9		249	69	
Pipefitters							385	121		23	11		362	110	
Apprentices							7	1					7	1	
Fore. Welders							12	3					12	3	
Sch. Instrs.							10						10		
Boilermakers							24						24		
Millwrights							17						17		
Sprinklerfitters							23						23		
SUBTOTALS	274	35	5	263	33	5	818	235	1	32	21	1	786	214	1
TOTALS	301									1000					

255
78
12
345

3 on PW HT in Turbine Area

1301

INDEX TO COURSE #'S

FOR INFORMATION ONLY

LESSON PLAN #'S	
001-099	INDOCTRINATION COURSES
100-199	GENERAL CONSTRUCTION/SAFETY
200-299	GENERAL WELDING/FITTING COURSES
300-399	QA ENGINEERING COURSES
400-499	QC INSPECTION COURSES
500-599	NON-DESTRUCTIVE TESTING

LESSON PLAN #	TITLE	TIME	TYPE	DESCRIPTION OF COURSE	PROCEDURES COVERED
001	QA INDOCTRINATION	1 hr.	Video Tape	An explanation of the organization and responsibilities of everyone on site and their involvement with the QA Program.	
002	WELDER QA INDOCTRINATION	1 hr	Video Tape	An explanation of the welders responsibilities to Quality Assurance.	
003	INSPECTION QA INDOCTRINATION	3/4 hr.	Video Tape	An explanation of the responsibilities of the welding inspector.	
004	RADIATION SAFETY INDOCTRINATION	½ hr.	Class Slide	A review of Radiation Safety practice followed by PPP personnel.	
005	SAFETY INDOCTRINATION	1½ hr.	Class	Review of site Safety requirements involving personnel protection and accident prevention	
006	PROJECT RULES INDOCTRINATION	3/4 hr.		Review of the 22 site rules.	

INDOCTRINATION COURSES

LESSON PLAN #	TITLE	TIME	TYPE	DESCRIPTION OF COURSE	PROCEDURES COVERED
101	BASIC RIGGING	2 hr.	Class	A review of basic steps involved in lifting heavy loads safely.	
102	BASIC RIGGING	2 hr.	Slide/ Tape	A general review of rigging practices. Course is self-paced using a manual in conjunction with a slide tape program.	
103	BASIC PLAN READING	2 hr.	Class	Instruction in reading of plans, isometrics. Location of areas within the plant. General blueprint interpretation.	

FOR INFORMATION ONLY

LESSON PLAN #	TITLE	TIME	TYPE	DESCRIPTION OF COURSE	PROCEDURES COVERED
201	WELD SYMBOLS	1 hr.	Class	A review of the basics involved in reading weld symbols combined with practical applications utilizing weld symbols.	
202	WELD SYMBOLS	½ hr.	Class	Abbreviated version of above.	
203	HANGER TOLERANCE	1 hr.	Class	A review of Pullman Procedures IX-6 and IX-63 relating to construction tolerances on pipe hangers (supports).	IX-6 IX-63
204	HANGER TOLERANCE	½ hr.	Class	Abbreviated version of above.	
205	CONCRETE EXPANSION WEDGE ANCHORS	1½ hr	Class	A review of general requirements of Hilti bolt installation and the requirements of Procedure IX-1.	IX-1
206	B31.1 INSP. PROGRAM	2½ hr	Class	A review of B31.1 Field Instruction; GWS-I; PPP Project Procedure XIII-4 Field Cleaning; Isometrics; Qual. Welders sheet; WPS; Weld Rod Stores Requisition.	GWS-I XII-4
207	B31.1 INSP. REVIEW PROGRAM	1½ hr	Class	Review of above.	
208	WELDING DISCONTINUITIES	1 hr.	Class Slide	Visual I.D. of Welding Discontinuities.	
209	POST WELD HEAT TREATMENT	2 hr.	Class	A review of Pullman Power Products IX-43; PWHT Manual.	IX-43

FOR INFORMATION ONLY

GENERAL WELDING/FITTING COURSES

LESSON PLAN #	TITLE	TIME	TYPE	DESCRIPTION OF COURSE	PROCEDURES COVERED
210	QUALIFIED WELDERS SHEET	3/4 hr.	Class	A session explaining how to use the sheet to check welders qualifications.	
211	HYDRO TESTING	1½ hr.	Class	A review of procedure applying to hydro/pneumatic leak testing. Review covers set up, inspection, documentation and review of inspection criteria.	XI-1
212	GAS TUNGSTEN ARC WELD	½ hr.	Video		
213	MATERIAL IDENTIFICATION	1 hr.	Class Slide	Identification and explanation of the use of pipefitting materials.	
214	PIPE & FITTING I.D.	----	Self-Inst.	Programmed learning workbook that reviews piping and fittings with test.	
215	PIPEFITTING MEASUREMENT AND LAYOUT	----	Self-Inst.	Programmed learning workbook that reviews pipefitting layout and measurement with test.	
216	PIPE WHIP RESTRAINT	2 hr.	Class	Training in basic welding requirements and plan reading for whip restraints. Review of project procedures and field instructions.	

GENERAL WELDING/FITTING COURSES

LESSON PLAN #	TITLE	TIME	TYPE	DESCRIPTION OF COURSE	PROCEDURES COVERED
301	ROD ROOM DUTIES	3/4 hr.	Class	A review of the QA responsibilities involved in the issuance of welding rod.	
302	DRAFTSMAN/PROCESS SHEET	1½ hr.	Class	An explanation of the relationship between the draftsman and the use of the process sheet.	
303	FIELD WELD PROCESS SHEET	3/4 hr.	Class	A review of the entire piping and hanger field weld process sheet and the checklist on the back.	
304	WRITING NON-CONFORMANCES	½ hr.	Class	A review of PPP Project Procedure XV-2; steps involved in writing an NCR and the actual writing of one.	XV-2

LESSON PLAN #	TITLE	TIME	TYPE	DESCRIPTION OF COURSE	PROCEDURES COVERED
401	HYDRO/PNEUMATIC TESTING	2½ hr.	Class	A review of the requirements of Project Procedure XI-1, including sample test packages.	XI-1
402	FINAL EXAMINATION	2 hr.	Class	A review of Project Procedure X-4 and related procedures involved with final acceptance of systems prior to turnover.	X-4
403	CONCRETE EXPANSION/ WEDGE ANCHORS INSPECTION	1 hr.	Class	Inspection requirements for expansion/wedge anchors.	IX-1

FOR INFORMATION ONLY

QC INSPECTION COURSES

LESSON PLAN #	TITLE	TIME	TYPE	DESCRIPTION OF COURSE	PROCEDURES COVERED
501	NDT LIQUID PENETRANT TESTING	½ hr.	Video	Introduction and review of PT methods.	
502	NDT LIQUID PENETRANT TESTING	----	Film Strip	Basic principles and equipment, procedures and indications.	
503	NDT MAGNETIC PARTICLE TESTING	1 hr.	Video	Introduction and review of MT methods.	
504	NDT MAGNETIC PARTICLE TESTING	----	Film Strip	Basic principles/equipment/test procedures/indications and special applications.	
505	NDT ULTRASONIC TESTING	2 hr.	Video	Introduction and review of UT methods.	
506	NDT ULTRASONIC TESTING	----	Film Strip	Introduction/fundamentals/properties/wave propagation/coupling methods/pulse echo/through transmission/calibration blocks/special applications.	
507	NDT RADIOGRAPHIC TESTING	3 hr.	Video	Introduction and review of RT methods.	
508	NDT RADIOGRAPHIC TESTING	----	Film Strip	Introduction/penetrating radiation/radiation characteristics/X-ray equipment/gamma sources/radiation safety/recorder image/technique/interpretation/nonfilm testing/special applications.	

B31.1 OPEN BOOK TEST

NAME_____BADGE#_____DATE_____

1. $1/2" < t_n \leq 1"$

   a. wall thickness is less than ½" and less than or equal to 1"
   b. ½" is greater than the wall thickness but less than 1"
   c. wall thickness is greater than ½" but less than or equal to 1"
   d. ½" equals the wall thickness 2 (squared) to the nearest 1"

2. How far is a socket drawn back after it is bottomed out?_____

   _____

   _____

3. How is this drawback verified?_____

   _____

4. Welding a pipe with a wall thickness greater than 1" using a K-insert (KI), what is the fitup gap root requirements?_____

   _____

5. 3/4" thick carbon steel being welded to 3/4" thick carbon steel with an open butt and a 20° bevel angle. What is the root opening?_____

6. Concerning bevel angles on K-insert, open butt and backing ring techniques, all degree measurements of the bevel are + or - _____degrees?

7. When examining fitups, how far on either side of the weld should the metal be smooth, cleaned and free of foreign matter?

   a. ½" each side of the weld on ID and OD
   b. 1" each side of the weld OD only
   c. 1" each side of the weld on ID and OD
   d. 2" each side of the weld OD only

8. If not otherwise established, minimum preheat of all P1 and P8 material is?_____

9. What is the length to offset ratio (slope of weld) for components of different diameters welded together?_____

10. What would the purge time be for a 24" diameter pipe at a flow rate of 50 CFH where the distance between dams is 12"?_____

    _____

11. What is the desired content that oxygen should be reduced to when purging a pipe with argon?_____

_____

12. When welding on a valve, what position should it be in?

a. ½ open ½ closed
b. closed
c. open
d. cracked

13. Excluding clamp and fit-up attachments, what other external mechanical force is permitted to attain alignment?_____

_____

14. If the internal misalignment exceeds 1/16", what must be done?

_____

18. Given the following weld procedure, explain what each part means. 11-I-1-OB-2

11 = _____

I = _____

1 = _____

OB = _____

2 = _____

19. 81-III-1-KI-12

81 = _____

III= _____

1 = _____

KI = _____

12 = _____

20. 100-I-1-BR-2

100= _____

I = _____

1 = _____

BR = _____

2 = _____

QUALITY CONTROL PERSONNEL
QUALIFICATION EXAMINATION

SPECIFIC QUALIFICATION EXAMINATION - LEVEL II

POSITION: QC INSPECTOR - WELDING

FOR INFORMATION ONLY

NAME _____ DATE _____

EMPLOYEE NO. _____ TEST SCORE _____

Circle the letter (A, B, C or D) corresponding to the answer which most accurately completes the following:

1. When performing welding Inspection, the first operation to be performed by the QC Inspector is _____

   A) Check all weld surfaces
   B) Check to assure that welder's symbols have been properly applied.
   C) Check Process Sheet to assure that all prior operations have been signed off.
   D) Check welds for undercutting.

2. For traceability purposes, weld filler material that is incorporated in any weld in a nuclear system, must be recorded on _____

   A) Purchase Order
   B) The Isometric Drawing
   C) The As-built Drawing
   D) Weld Rod Stores Requisition and Process Sheet

3. Welding parameters are incorporated in the _____

   A) Purchase Order
   B) Drawing
   C) Process Sheet
   D) Welding Procedure Specification

4. The Welding Inspector must assure that the welding on a Code assembly is _____

   A) Performed by a qualified welder
   B) Performed to qualified and approved procedures
   C) Performed with currently calibrated welding equipment
   D) All of the above
   E) A and B only

5. Interpass temperature in excess of 350° is prohibited on _____

   A) Carbon steel girth welds
   B) Chrome moly girth welds
   C) Stainless steel welds
   D) All of the above

QUALITY CONTROL PERSONNEL
QUALIFICATION EXAMINATION-QC INSPECTOR - LEVEL II
WELDING

NAME_____

DATE_____

6. Ferrite controls are generally required on _____

(A) Stainless steel welds
(B) Chrome-moly longitudinal welds
(C) Carbon steel girth welds
(D) Welds that are deposited in the overhead position

7. Chrome-Moly welds, less than 3/4" thick, must be pre-heated to a temperature of _____

(A) 100°
(B) 200°
(C) 300°
(D) 400°

8. Visual acceptability of a final weld is determined by_____

(A) Contour
(B) Crown Height
(C) Final surface preperation
(D) All of the above

9. According to the requirements of ASME, Section IX, a welder is considered certified if he has been re-qualified_____

(A) At his previous place of employment
(B) By being transferred from one Pullman location to another
(C) By satisfactorily working with the same welding process within the past 90 days
(D) By his supervisor visually approving his welding performance

10. To determine the measured size of a fillet weld, measure the_____

(A) Throat dimension
(B) Cover pass width
(C) Dimension of leg
(D) Thickness of attachment welded

11. In completed welds, the most serious of all welding defects is_____

(A) Cracks
(B) Slag
(C) Porosity
(D) Undercutting

12. What method is used to assure that construction and inspection operations are accomplished in accordance with the requirements of the Code, PPP and customer procedures and specifications?

(A) System Bills of Material
(B) Purchase Orders
(C) Process Sheets
(D) Job(JS) Specifications

QUALITY CONTROL PERSONNEL
QUALIFICATION EXAMINATION-QC INSPECTOR-LEVEL II
WELDING

NAME_____

DATE_____

13. To determine the acceptability of_____the Visual Examination method may be used.

A) End Dimensional Tolerance
B) Surface Condition and Marking
C) Sub-surface Defects
D) Minimum, Nominal or Average Wall

14. Mandatory inspection operations are designated on the Process Sheet_____

A) As Hold Points
B) With sequence of operation numbers
C) By use of a blue nylon tipped pen
D) By stamping "Hartford" at the top of the Process Sheet

15. When non-conforming conditions are observed, a Non-Conformance Report is initiated and processed in accordance with _____

A) Customer requirements
B) ASME Code requirements
C) Standare Operating Procedure
D) Project Procedure for Non-Conformance

16. When an item does not comply with prescribed requirements, the inspector indicated the status of the item by_____

A) Issuing a Stop Work Order
B) Applying a "Hold" tag to the item
C) Marking the word "Hold" on the item with a paintstick
D) Forwarding a written directive to all shop foremen prohibiting further use of the item until released by the QA Manager.

17. Examination must be made by the inspector to assure that material descriptions comply with the requirements of the _____

A) Purchase Order
B) System Bill of Material
C) Isometric Drawing
D) Receiving Report

18. Items, against which an NCR has been issued, cannot be released until the QC Inspector has verified compliance by reinspection and _____

A) requested a change to the Isometric
B) has signed the NCR and removed the "Hold" tag
C) has informed Engineering of the status.
D) has voided the NCR

19. Traceability of materials to applicable documentation is maintained through application of _____

A) Purchase Order Number

NAME_____

DATE_____

19. (contd.)

B) Item number
C) Heat number
D) None of the above
E) All of the above

20. Direct Visual Examination can normally be made when access is sufficient to place the eye within_____of the surface to be examined and at an angle not less than 30 degrees.

A) close proximity
B) 48 inches
C) 36 inches
D) 24 inches

21. _____shall not exceed 8% after bending of pipe, as calculated using using the formula 100x (D max. - D min.) /Do.

A) Offset
B) Ovality
C) Pipe Diameter
D) Mismatch

22. Tack welds used in fitting and aligning need not be removed providing_____

A) they are subjected to NDE
B) the weld is heat treated
C) the starting and stopping ends are properly prepared for incorporation into the final weld
D) the QC Inspector witnessed the deposition of material

23. Maximum offset of aligned sections welded from two sides for thickness up to 3/4" is _____ where "T" is the nominal thickness of the thinner section

A) 1/4 T
B) 1/2 T
C) 1/8 T
D) 3/16 T

24. Uniform (concentric) mismatch in alignment of joints shall not exceed_____ at any point around the circumference.

A) .050 inch
B) 1/16 inch
C) 1/32 inch
D) 1/4 inch

25. When mismatch is eccentric, the maximum misalignment at any one point shall be _____

A) 1/8 inch
B) 3/32 inch
C) 1/16 inch
D) 1/32 inch

QUALITY CONTROL PERSONNEL
QUALIFICATION EXAMINATION - QC INSPECTOR LEVEL II
WELDING

NAME _____

DATE _____

CLEANING PORTION

26. Stainless steel items shall be maintained in a "metal clean" condition. What is meant by metal clean?

27. The weld preparation and adjacent base metal surfaces are to be smooth, clean and free of any foreign matter on each side of the weld preparation for what distance?

28. May deoxaluminate be welded over directly provided it is sound and rust proof?

29. M-6 oxylene is the approved cleaning agent to remove any contaminants and shall be applied utilizing clean white or near white rags?

TRUE FALSE

30. If wire brushing is necessary on stainless steels, stainless steel brushes not contaminated by use on any other steel shall be used.

TRUE FALSE

PULLMAN POWER PRODUCTS

REQUIRED READING LIST

WELDING INSPECTOR

FOR INFORMATION ONLY

Certification in accordance with Pullman Power Products Procedure II-4

NAME:_____ BADGE#:_____

		REV	INITIAL	DATE
I.	PULLMAN POWER PRODUCTS PROCEDURES:			
1.	II-4 - Insp. & Test, Qual. & Cert.....	____	_____	_____
2.	JS-IX-14 - Defect Removal.....	____	_____	_____
3.	IX-29 - Spec. for Purge Dams.....	____	_____	_____
4.	IX-43 - Preheat, Interpass P.W.H.T.....	____	_____	_____
5.	X-10 - Weld Monitoring.....	____	_____	_____
6.	X-11 - Visual Examination (General).....	____	_____	_____
7.	XIII-4 - Cleaning Procedure (Field).....	____	_____	_____
8.	XIII-11 - Protecting Pipe.....	____	_____	_____
9.	XV-2 - Handling of NCR's (Field).....	____	_____	_____
10.	XV-4 - Hold Tag Usage.....	____	_____	_____
11.	XVI-2 - Corrective Action.....	____	_____	_____
12.	X-9 - In-Process Inspection.....	____	_____	_____
II.	ASME SECTION II, IX.....	____	_____	_____
III.	ANSI B31.1.....	____	_____	_____
IV.	GENERAL WELDING STANDARDS..... GW's I & III	____	_____	_____
V.	INTRODUCTION TO NONDESTRUCTIVE TESTING.....	____	_____	_____

III SFA Spec

COMPLETED REQUIRED READING:_____ _____
TRAINING OFFICER DATE

2 days average reading time ——
Some do it in one day

1.3.30 Chief Field Engineer

The Chief Field Engineer reports to the Resident Construction Manager. He is responsible for administration, coordination, training and supervision of all field engineering activities and personnel. This includes liaison with the Owner regarding drawings, specifications, field change requests, and other technical information and their receipt, interpretation, contro and distribution as needed to implement the work. He cooperates with the QA Manager in resolving non-conformances. He is also responsible for having Process Sheets and Data Reports prepared.

1.3.31 Construction Superintendent

The Construction Superintendent reports to the Resident Construction Manager and is responsible for the installation of the project in accordance with the established QA Program under the direction of the Resident Construction Manager.

1.3.32 Area Superintendent

The Area Superintendent reports to the Construction Superintendent. He is assigned and is responsible for the installation activities for a specific system/building area of the project in accordance with the established QA program.

1.3.33 Field Engineer

The Field Engineer reports to the Chief Field Engineer or Construction Superintendent as assigned. He is responsible for engineering duties as assigned: control of drawings and specifications in his area; installation inspections with the assigned QC Inspector; cooperation in the preparation of Non-Conformance Reports and/or Field Change request, FCR (Form S-3) as may be required; and preparation of Process Sheets and Data Reports when assigned by and under the Direction of the Chief Field Engineer.

1.3.34 Field Drawing Control Clerk

The Field Drawing Control Clerk reports to the Chief Field Engineer and is responsible for implementing the control of

SUPERVISOR	GENERAL FOREMEN	FOREMEN	
		Dave Hallenbeck	7307
Main Steam Feed Water Penetration, Fuel Storage Building		Al Hallenbeck	7309
Mike Saccoccia 6517	Don Welch 6872	Henry Doeck	7297
		Tom Mercier	7655
Ext. 2956		Bill West	6876
		Jean Lefebvre	7500
		Armond Lemire	7330
Sprinklerfitters			
Louis Flagg 6364		Don Gauthier	6978
		Kerry Kellett	6986
Ext. 2704		Norm Small	6980
Boilermakers			
Harry Shea 6529	George Benjamin 6707	Al Haynes	6714
Ext. 2956		John Galanis	6711
Welding Area Coord	Welding Foreman:	Burton Foster	6973
	Welding Foreman:	Tom Ryan	6918
	Welding Foreman:	Bill York	7100
Clyde Daubert 6534	Welding Foreman:	Ken Toy	7591
	Welding Foreman:	Ron Ring	7572
Wayne Prunier 6541	Welding Foreman:	Larry Brochu	6790
Jim Lawson 6528	Welding Foreman:	Larry Carella	6850
Karl Fluck 6569	Welding Foreman:	Doug Johnson	7592
Joe Bouchie 6453	Welding Foreman:	Bill Mildon	7220
Tom Humphrey 6489	ISI Foreman:	Charlie Curcuru	6772
Doug Williams 6473 (Night Shift)	Heat Treat Foreman:	Dick Dawson	7411
Harold Edwards 6558 (Night Shift)	Night Shift Welding Foreman:	Lorne Campbell	7247
Colin Sowerby 6360 (Night Shift)	Night Shift Welding Foreman:	Art Sullivan	7067
Ext. 2926	Heat Treat Foreman:	John Horton	6869
Millwrights			
[illegible]ance 6530		Steve Ramstrom	6661
[illegible] Witt 6504		Gary Varrell	6658
Conrad Borra 6542 Ext. 3199		Dave Carlino	6651
Fred May 6532			
Rich Roberts 6559	Ray Murphy 7087	Steve Schenkel	7015
		Roy Pender	7318
(Second Shift)		Art Robertson	7282
Ext. 2956		Vic Smith	7076
		John Hampton	7600
	Pete Hardwick 7281	Woodrow Bowling	6780
		Stan Miller	7290
Dave Egonis 6528	Red Nicolaisen 7198	Ken Wilson	7408
		Al Pitts	6964
(Second Shift)		Solon Lellos	7559
Ext. 2994	Chris Rasmussen 7261	Bob Mullen	7023
		Ron Fournier	7032
		Milo Herrington	7569
Walter Sadowski 6568	Mark Osborn 6951	Tim Mortimer	7437
		George Dubois	7141
(Second Shift)		Bob Marques	7120
	Bob Latta 7590	Tom Angold	7596
Ext. 2947		Fred Hahnen	6882
		George Reed	7531
		Bill Allen	7348
		Dave Thomas	9982

Unit #1 Day Shift Supervisor	Unit #1 & 2 Night Shift Supervisor
Jim Butler 6567 Ext. 2926	Adrian van den Enden 6552 Ext. 2926

FOR INFORMATION ONLY

SUPERVISOR	GENERAL FOREMEN	FOREMEN 6/23/80	
Fab Shop, Storage Yard			
Don Astheimer 6535	John Trisciani 6778	Walter Zinn	7447
		Ray Gagne	7045
Ext. 2926, 2921		Clark Steere	7099
		Gene Herbert, Jr.	6881
		Byron Carpenter	6927
	Maurice Fortin 6786	Bertrand Baron	6775
		Johns Cousins	6804
		Lionel Dubuc	6787
PAB & RHR Vault			
Jim Hamilton 6514	Dave Robeck 7589	Guy Beaumier	7458
		Jack MacNamara	7240
Ext. 2957		Jim McCoy	7384
		John McCoy	7166
		Al Van Patten	7116
		Tom Burke	6919
Waste Process, Tank Farm, Diesel Generator		Jim Leonard	7586
Danny Evans 6513	Bill Mulvey 6788	Richard Lessard	7051
		Wayne Philbrick	7595
Ext. 2994		Al Monterio	7365
		Monty Bowers	7460
		Dennis Clark	7304
	Alphe Lachance 7409	Winnie Perrone	7470
		Kevin Morgan	7096
		Ron Snow	7049
		Bill Bobek	7632
Yard Trailer, Cooling Tower		Al Plourde	7005
[illegible]k Romania 6513	Oliver Parker 6834	Mike Dipietro	7013
		Richard Bouchie	7256
[illegible] 2704		Paul Richard	6941
Turbine Building	George Butler 6756	Leon Hundley	7364
Pete Gemmell 6573		Lonnie Odom	7110
George Dukes 6505		Jim Griffin	7012
		Bob Morton	7312
Ext. 2947, 2946		Glen McKernon	7480
	Moe Edwards 6806	Henry Keeran	7203
		Clifton Moberg	6806
		Bill Parker	6839
		Norm Seymour	7048
		Tom Soley	7147
	Lane McDuffee 7158	Mike Cousins	7044
		Ronnie Brigham	6863
		Charlie Haggerty	7112
		John Heiss	7629
		Pete Baron	7069
Containment #1		John Garrett	6836
Rick Fultz 6548	Eugene Herbert 6915	Dave Shaw	6859
		Bill MacGown	7335
Ext. 2956		Frank Kurland	7213
		Gerry Waskiewicz	7692
		Steven Scott	7202
		Joe Loviza	7664
II			
[illegible] Chesnut 6555	Ext. 2956	Gene Jasper	7368
Water Pump House			
Larry Beaulieu 6475	Ray Thibeault 6823	Jack Foley	7690
Ext. 2936		Horace Upham	7645

WELD ROD TYPE	PROCESS	POLARITY	SIZE OF ROD	AMPERAGE MIN	AMPERAGE MAX	VOLTAGE MIN	VOLTAGE MAX	TRAVEL SPEED MIN	TRAVEL SPEED MAX
E7018, E8018-B2, & E9018-B3	SMAW	REVERSE	3/32	70	120	20	24	3 INCH/MINUTE	NONE
			1/8	115	165	21	25	4	NONE
			5/32	150	220	22	26	4	NONE
E308, E308L E309, E309L & E316, E316L	SMAW	REVERSE	3/32	55	80	18	24	2.5	NONE
			1/8	80	110	18	25	3	NONE
E70S-2 E70S-6 ER515 ER521 ER308 ER308L ER309 ER309L ER316 ER316L	GTAW	STRAIGHT	ALL SIZE AND RING MUST FALL IN THESE FOUR RANGE	50	100	7	15	3	NONE
				100	150	12	18	4	NONE
				150	200	13	20	5	NONE
				200	250	13	21	5	NONE
ER320	GTAW	STR.	ALL	80	135	9	14	2	NONE
FOR CEMENT-LINED PIPE ONLY									
E7018	SMAW	REVERSE	3/32	65	105	18	23	2.5	8
			1/8	90	165	19	24	2.5	9
			5/32	145	220	20	25	3.5	9.5
FOR WPS AWS-I-1 ONLY E8018-B2	SMAW	REV	3/32	60	120	NONE	27	2	NONE
			1/8	100	165	NONE	31	2	NONE

WHAT DOES THIS MEAN

DATE 6-21-82

PULLMAN POWER PRODUCTS QUALIFIED WELDERS

SOCKET OR FILLET WELDS
Welders qualified for groove welds are also qualified to make fillet welds of any size on all thickness and pipe diameters within the welding variables.

		CARBON AND LOW ALLOY														STAINLESS AND DISS.								
		O.B.		O.B.			O.B.			KI				B.R.			O.B.			O.B.			KI		
		SMAW		GTAW			GTAW-SMAW			GTAW-SMAW				SMAW			GTAW			GTAW-SMAW			GTAW-SMAW		
		CL1-1-OB-2 Bead / IT11-III-1-OB-2 Fillet		10-I-1-OB-1 / 73-I-4/1-OB-1 / IT10-III-1-OB-1			61-1-5-OB-12 / 12-I-1-OB-12 / IT12-III-1-OB-12 / 331-I-1/GE-OB-12			1-I-1-KI-12 / 74-1-5/1-KI-12 / IT1-III-1-KI-12 / 71-I-4-1-KI-12 / 44-I-4-KI-12 / 48-I-5-KI-12				8-I-1-BR-2 / 50-I-5-BR-2 / 59-I-4-BR-2 / IT8-III-1-BR-2 / CL1-1-BR-2			79-I-8/1-OB-1 / 79-III-8/1-OB-1 / 29-III-8-OB-1			27-I-8-OB-12 / 81-I-8/1-OB-12 / 81-III-8/1-OB-12 / 27-III-8-OB-12 / 39-I-8-BR-2			24-I-8-KI-12 / 77-I-8/1-KI-12 / 77-III-8/1-KI-12 / 24-III-8-KI-12 / 39-I-8-BR-2		
WELDER	Purge	SIEN	L	S	XL	L	L	S	H	L	S	H		L	S	H	XL	L	L	S	H	L	S	H
L.A. Brochu		B4		X*			X+	X*		X+	X*			X+	X*					X*		X+	X*	
R.D. Fuller		C2		X*						X+	X*				X*								X*	
L.F. Carrella		D4	X+	X*		X				X+	X*	5		X+	X*	5		X					X*	
N.S. Laplante		F5		X*							X*				X*			4	X*	1		X+	X*	
R.G. Roberts B/		G3		2				X*				5			2					X*	5			
R. L. Paradis		G4		X*							X*				X*								X*	
J. J. Vachon		G8		X*							X*				X*									
B. Foster		H7		X*							X*				X*								X*	
C.L. Floridino		J1	X+	X*						X+	X*				X*								X*	
[illegible] Green		J6		X*							X*				X*								X*	
K.P. Raymont		K4		X*	X	X					X*				X*			X					X*	
P.J. Amoroso		L1		X*							X*				X*								X*	
M. Soutra		L6		X*							X*				X*							X+	X*	
P.H. Neadeau S/T		R3		X*			X+				X*				X*								X*	
J.T. Regas		R4		X*							X*				X*	6								

XL = FROM ½" NPS TO MAX. DIA., 1/16" to 294" WALL

L = FROM 3/4" NPS 1/16" - .436" WALL

S = FROM 2½" NPS to MAX DIA., 1/16" to .864" WALL

H = FROM 2½" NPS to MAX DIA., 3/16" to MAX WALL

NOTE 1: For 408-1-Carp-20-OB-1; 408-III-Carp-20-OB-1 only to .560" WALL
NOTE 2: Plate only: Limited to .750" WALL
NOTE 3: For 39-I-8-BR-2 only
NOTE 4: For 408-I-Carp-20-OB-1; 408-III-Carp-20-OB-1 to .308" wall only
NOTE 5: Qualified for following thickness: GTAW 1/16" to .176" Max. SMAW 3/16" to Max. to be weld
NOTE 6: Plate only 3/16" to max.
NOTE 7: Qualified for 100-1-8/45-OB-1 only.

* = COMBINATION TESTS QUALIFY FOR THE FOLLOWING: GTAW; .176" WALL, SMAW; .688" WALL

+ = COMBINATION TESTS QUALIFY FOR THE FOLLOWING: GTAW; .176" WALL, SMAW; .260" WALL

S = Qualified to weld to qualified WPS without use of backing gas purge.

1/15

Date 6-21-82

PULLMAN POWER PRODUCTS QUALIFIED WELDERS

SOCKET OR FILLET WELDS
Welders qualified for groove welds are also qualified to make fillet welds of any size on all thickness and pipe diameters within the welding variables.

			CARBON AND LOW ALLOY														STAINLESS AND DISS.								
			O.B.		O.B.		O.B.			KI			B.R.				O.B.		O.B.			KI			
			SMAW		GTAW		GTAW-SMAW			GTAW-SMAW			SMAW				GTAW		GTAW-SMAW			GTAW-SMAW			
			CL1-1-OB-2 IT11-III-1-OB-2		10-I-1-OB-1 73-I-4/1-OB-1 IT10-III-1-OB-1		61-1-5-OB-12 12-I-1-OB-12 IT12-III-1-OB-12 331-I-1/GE-OB-12			1-I-1-KI-12 74-1-5/1-KI-12 IT1-III-1-KI-12 71-I-4/1-KI-12 44-I-4-KI-12 48-I-5-KI-12			8-I-1-BR-2 50-I-5-BR-2 59-I-4-BR-2 IT8-III-1-BR-2 CL1-1-BR-2				79-1-8/1-OB-1 79-III-8/1-OB-1 29-III-8-OB-1		27-I-8-OB-12 81-I-8/1-OB-12 81-III-8/1-OB-12 27-III-8-OB-12 39-I-8-BR-2				24-I-8-KI-12 77-I-8/1-KI-12 77-III-8/1-KI-12 24-III-8-KI-12 39-I-8-BR-2		
WELDER	Purge	SIEN	L	S	XL	L	L	S	H	L	S	H	L	S	H	XL	L	L	S	H	L	S	H
D. Regas		R5		X*							X*			X*	6								
C.F. Ball		R6		X*							X*			X*								X*	
R.T. McMahon		R8		X*							X*			X*									
J.L. Bureau		S8		X*		X					X*			X*			X				X+	X*	
G. Lanphier		T6		X*							X*			X*			4/7					X*	
W.E. Mildon		T8	X+	X*						X+	X*	5	X+	X*	5								
W.M. Prunier		T0	X+	X*		X	X+	X*			X*	5		X*	5		X	X+				X*	5
M.L. Carreiro		X1		X*							X*	5		X*	5								
R.C. Griffin		Y8		X*							X*			X*									
W.J. Hutchinson		Z6		X*							X*	5		X*	5								
D. Reilly		Z8		X*							X*			X*									
W. B. York		AC	X+	X*		X				X+	X*	5	X+	X*	5							X*	
E. Gregg		AE	X+	X*						X+	X*		X+	X*									
L.G. Thaxton		AS		X*							X*			X*								X*	

XL = FROM ¼" NPS TO MAX. DIA., 1/16" to 294" WALL

L = FROM 3/4" NPS 1/16" - .436" WALL

S = FROM 2½" NPS to MAX DIA., 1/16" to .864" WALL

H = FROM 2½" NPS to MAX DIA., 3/16" to MAX WALL

NOTE 1: For 408-1-Carp-20-OB-1; 408-III-Carp-20-OB-1 only to .560" WALL
NOTE 2: Plate only: Limited to .750" WALL
NOTE 3: For 39-I-8-BR-2 only
NOTE 4: For 408-I-Carp-20-OB-1; 408-III-Carp-20-OB-1 to .308" wall only
NOTE 5: Qualified for following thickness: GTAW 1/16" to .176" Max. SMAW 3/16" to Max. to be weld
NOTE 6: Plate only 3/16" to max.
NOTE 7: Qualified for 100-1-8/45-OB-1 only.

* = COMBINATION TESTS QUALIFY FOR THE FOLLOWING: GTAW; .176" WALL, SMAW; .688" WALL

+ = COMBINATION TESTS QUALIFY FOR THE FOLLOWING: GTAW; .176" WALL, SMAW; .260" WALL

S = Qualified to weld to qualified WPS without use of backing gas purge.

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Date 6-21-82

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PULLMAN POWER PRODUCTS QUALIFIED WELDERS

SOCKET OR FILLET WELDS
Welders qualified for groove welds are also qualified to make fillet welds of any size on all thickness and pipe diameters within the welding variables.

			CARBON AND LOW ALLOY															STAINLESS AND DISS.								
			O.B.		O.B.		O.B.			KI			B.R.			O.B.		O.B.			KI		
			SMAW		GTAW		GTAW-SMAW			GTAW-SMAW			SMAW			GTAW		GTAW-SMAW			GTAW-SMAW		
			CL1-1-OB-2 IT11-III-1-OB-2		10-I-1-OB-1 73-I-4/1-OB-1 IT10-III-1-OB-1		61-1-5-OB-12 12-I-1-OB-12 IT12-III-1-OB-12 331-I-1/GE-OB-12			1-I-1-KI-12 74-1-5/1-KI-12 IT1-III-1-KI-12 71-I-4/1-KI-12 44-I-4-KI-12 48-I-5-KI-12			8-I-1-BR-2 50-I-5-BR-2 59-I-4-BR-2 IT8-III-1-BR-2 CL1-1-BR-2			79-1-8/1-OB-1 79-III-8/1-OB-1 29-III-8-OB-1		27-I-8-OB-12 81-I-8/1-OB-12 81-III-8/1-OB-12 27-III-8-OB-12 39-I-8-BR-2			24-I-8-KI-12 77-I-8/1-KI-12 77-III-8/1-KI-12 24-III-8-KI-12 39-I-8-BR-2		
WELDER	Purge	SIEN	L	S	XL	L	L	S	H	L	S	H	L	S	H	XL	L	L	S	H	L	S	H
D. Smith M/W		AY		2										2									
E. A. Coulstring	S/F	BG		X			X+						X+	X*									
R.L. Powers B/M		BL		X										X					2			2	
T.M. Jones		BP		X*		X	X+			X*	X*	5		X*	5							X*	
P.A. Lacopolis		BT	X+	X*						X+	X*	5	X+	X*	5								
J.M. Knight		BV		X*							X*			X*	6							X*	
B. Wheeler		BY	X+	X*		X	X+			X+	X*	5	X+	X*	5								
T. A. Metnvin		CA		X*							X*			X*									
Keschenef		CC		X*							X*			X*									
L.F. Martin		CD		X*							X*			X*									
G.J. Nielesen		CH		X*							X*			X*									
H.A. Wvoit		CJ		X*							X*			X*								X*	
J.H. Broderick		CK		X*							X*			X*									
A. E. Mayraen		CL		X*							X*			X*									
R.A. Dickau		DA	X+	X*						X+	X*		X+	X*								X*	

XL = FROM ½" NPS TO MAX. DIA., 1/16" to 294" WALL

L = FROM 3/4" NPS 1/16" - .436" WALL

S = FROM 2½" NPS to MAX DIA., 1/16" to .864" WALL

H = FROM 2½" NPS to MAX DIA., 3/16" to MAX WALL

NOTE 1: For 408-1-Carp-20-OB-1; 408-III-Carp-20-OB-1 only to .560" WALL

NOTE 2: Plate only: Limited to .750" WALL

NOTE 3: For 39-I-8-BR-2 only

NOTE 4: For 408-I-Carp-20-OB-1; 408-III-Carp-20-OB-1 to .308" wall only

NOTE 5: Qualified for following thickness: GTAW 1/16" to .176" Max. SMAW 3/16" to Max. to be weld

NOTE 6: Plate only 3/16" to max.

NOTE 7: Qualified for 100-1-8/45-OB-1 only.

* = COMBINATION TESTS QUALIFY FOR THE FOLLOWING: GTAW; .176" WALL, SMAW; .688" WALL

+ = COMBINATION TESTS QUALIFY FOR THE FOLLOWING: GTAW; .176" WALL, SMAW; .260" WALL

S = Qualified to weld to qualified WPS without use of backing gas purge.

1/15

Date 6-21-82

FULLTON TOWER PRODUCTS QUALIFIED WELDERS

SOCKET OR FILLET WELDS Welders qualified for groove welds are also qualified to make fillet welds of any size on all thickness and pipe diameters within the welding variables.

			CARBON AND LOW ALLOY														STAINLESS AND DISS.								
			O.B.		O.B.		O.B.			KI			B.R.				O.B.		O.B.			KI			
			SMAW		GTAW		GTAW-SMAW			GTAW-SMAW			SMAW				GTAW		GTAW-SMAW			GTAW-SMAW			
			CL1-1-OB-2 IT11-III-1-OB-2		10-I-1-OB-1 73-I-4/1-OB-1 IT10-III-1-OB-1		61-1-5-OB-12 12-I-1-OB-12 IT12-III-1-OB-12 331-I-1/GE-OB-12			I-I-1-KI-12 74-1-5/1-KI-12 IT1-III-1-KI-12 71-I-4/1-KI-12 44-I-4-KI-12 48-I-5-KI-12			8-I-1-BR-2 50-I-5-BR-2 59-I-4-BR-2 IT8-III-1-BR-2 CL1-1-BR-2				79-1-8/1-OB-1 79-III-8/1-OB-1 29-III-8-OB-1		27-I-8-OB-12 81-I-8/1-OB-12 81-III-8/1-OB-12 27-III-8-OB-12 39-I-8-BR-2				24-I-8-KI-12 77-I-8/1-KI-12 77-III-8/1-KI-12 24-III-8-KI-12 39-I-8-BR-2		
WELDER	Purge	STEN	L	S	XL	L	L	S	H	L	S	H	L	S	H		XL	L	L	S	H	L	S	H	
J.W. Clement		DB	X+	X*			X+			X+	X*		X+	X*				X					X*	
R.T. Record		DD		X*							X*			X*	6									
R.T. Handell		EC		X*							X*			X*									X*	
R.R. Ring		ED		X*							X*			X*									X*	
P.L. Reynolds		EG		X*		X	X+			X+	X*			X*	6								X*	
J.M. Voishnis		ES		X*		X				X+	X*	5		X*	5								X*	
M. Ashson		ET		X*							X*			X*	6									
L.A. Calvert		EX		X*							X*			X*									X*	
A. Johnson		EY		X*							X*	5		X*	5			X						5
K.W. Toy		EZ		X*		X					X*			X*					X+				X*	
K.E. Davies		FC		X*							X*			X*				X					X*	5
M.O. Foreman		FE		X*				X*			X*	5		X*	5									
R.W. Wright		FF		X*							X*	5		X*	5									
A.T. Savat		FG		X*							X*			X*	6								X*	
A.D. Raymond		FH		X*							X*			X*										

XL = FROM ½" NPS TO MAX. DIA., 1/16" to 294" WALL

L = FROM 3/4" NPS 1/16" - .436" WALL

S = FROM 2½" NPS to MAX DIA., 1/16" to .864" WALL

H = FROM 2½" NPS to MAX DIA., 3/16" to MAX WALL

NOTE 1: For 408-1-Carp-20-OB-1; 408-III-Carp-20-OB-1 only to .560" WALL

NOTE 2: Plate only: Limited to .750" WALL

NOTE 3: For 39-I-8-BR-2 only

NOTE 4: For 408-I-Carp-20-OB-1; 408-III-Carp-20-OB-1 to .308" wall only

NOTE 5: Qualified for following thickness: GTAW 1/16" to .176" Max. SMAW 3/16" to Max. to be weld

NOTE 6: Plate only 3/16" to max.

NOTE 7: Qualified for 100-1-8/45-OB-1 only.

* = COMBINATION TESTS QUALIFY FOR THE FOLLOWING: GTAW; .176" WALL, SMAW; .688" WALL

+ = COMBINATION TESTS QUALIFY FOR THE FOLLOWING: GTAW; .176" WALL, SMAW; .260" WALL

S = Qualified to weld to qualified WPS without use of backing gas purge.

0/15

Date 6-21-82

PULLMAN POWER PRODUCTS QUALIFIED WELDERS

SOCKET OR FILLET WELDS Welders qualified for groove welds are also qualified to make fillet welds of any size on all thickness and pipe diameters within the welding variables.

	CARBON AND LOW ALLOY															STAINLESS AND DISS.								
	O.B.		O.B.		O.B.			KI			B.R.			O.B.		O.B.			KI		
	SMAW		GTAW		GTAW-SMAW			GTAW-SMAW			SMAW			GTAW		GTAW-SMAW			GTAW-SMAW		
	CL1-1-OB-2 IT11-III-1-OB-2		10-I-1-OB-1 73-I-4/1-OB-1 IT10-III-1-OB-1		61-1-5-OB-12 12-I-1-OB-12 IT12-III-1-OB-12 331-I-1/GE-OB-12			1-I-1-KI-12 74-1-5/1-KI-12 IT1-III-1-KI-12 71-I-4/1-KI-12 44-I-4-KI-12 48-I-5-KI-12			6-I-1-BR-2 50-I-5-BR-2 59-I-4-BR-2 IT8-III-1-BR-2 CL1-1-BR-2			79-1-8/1-OB-1 79-III-8/1-OB-1 29-III-8-OB-1		27-I-8-OB-12 81-I-8/1-OB-12 81-III-8/1-OB-12 27-III-8-OB-12 39-I-8-BR-2			24-I-8-KI-12 77-I-8/1-KI-12 77-III-8/1-KI-12 24-III-8-KI-12 39-I-8-BR-2		
WELDER	STEN	L	S	XL	L	L	S	H	L	S	H	L	S	H	XL	L	L	S	H	L	S	H
B.L. Hedley	FR		X*							X*			X*								X*	
C.D. Steere	FT		X*							X*			X*									
F.E. Whitmore	GA	X+	X*						X+	X*		X+	X*	6								
J.G. Butler	GD		X*							X*	5		X*	5							X*	5
P. Daigle	GF		X*							X*			X*			X					X*	
K.V. Bell	GJ		X*							X*			X*									
R. Mills S/F	GK		X							X												
G. Herbert	GN		X*							X*	5		X*	5		X					X*	5
J. Birch	GR		X*							X*			X*								X*	
R.A. Larkin	GV		X*							X*			X*								X*	
J.J. Diamond	HA		X*							X*			X*	6							X*	
M. Thibaudeau	HE		X*							X*	5		X*	5		X					X*	5
J. Forrin	HF		X*							X*			X*								X*	
D.B. McKee	HH		X*							X*			X*								X*	
P. Arsenault	JC		X*							X*			X*								X*	
C.D. Chevalier S/F	JD		X										X									

XL = FROM ¼" NPS TO MAX. DIA., 1/16" to 294" WALL

L = FROM 3/4" NPS 1/16" - .436" WALL

S = FROM 2½" NPS to MAX DIA., 1/16" to .864" WALL

H = FROM 2½" NPS to MAX DIA., 3/16" to MAX WALL

NOTE 1: For 408-1-Carp-20-OB-1; 408-III-Carp-20-OB-1 only to .560" WALL

NOTE 2: Plate only: Limited to .750" WALL

NOTE 3: For 39-I-8-BR-2 only

NOTE 4: For 408-I-Carp-20-OB-1; 408-III-Carp-20-OB-1 to .308" wall only

NOTE 5: Qualified for following thickness: GTAW 1/16" to .176" Max. SMAW 3/16" to Max. to be wel

NOTE 6: Plate only 3/16" to max.

NOTE 7: Qualified for 100-1-8/45-OB-1 only.

* = COMBINATION TESTS QUALIFY FOR THE FOLLOWING: GTAW; .176" WALL, SMAW; .688" WALL

+ = COMBINATION TESTS QUALIFY FOR THE FOLLOWING: GTAW; .176" WALL, SMAW; .260" WALL

S = Qualified to weld to qualified WPS without use of backing gas purge.

1/16

Date 6-21-82

PULLMAN POWER PRODUCTS QUALIFIED WELDERS

SOCKET OR FILLET WELDS Welders qualified for groove welds are also qualified to make fillet welds of any size on all thickness and pipe diameters within the welding variables.

			CARBON AND LOW ALLOY														STAINLESS AND DISS.								
			O.B.		O.B.		O.B.			KI			B.R.				O.B.		O.B.			KI			
			SMAW		GTAW		GTAW-SMAW			GTAW-SMAW			SMAW				GTAW		GTAW-SMAW			GTAW-SMAW			
			CL1-1-OB-2 IT11-III-1-OB-2		10-I-1-OB-1 73-I-4/1-OB-1 IT10-III-1-OB-1		61-1-5-OB-12 12-I-1-OB-12 IT12-III-1-OB-12 331-I-1/GE-OB-12			1-I-1-KI-12 74-1-5/1-KI-12 IT1-III-1-KI-12 71-I-4/1-KI-12 44-I-4-KI-12 48-I-5-KI-12			8-I-1-BR-2 50-I-5-BR-2 59-I-4-BR-2 IT8-III-1-BR-2 CL1-1-BR-2				79-1-8/1-OB-1 79-III-8/1-OB-1 29-III-8-OB-1		27-I-8-OB-12 81-I-8/1-OB-12 81-III-8/1-OB-12 27-III-8-OB-12 39-I-8-BR-2			24-I-8-KI-12 77-I-8/1-KI-12 77-III-8/1-KI-12 24-III-8-KI-12 39-I-8-BR-2		
WELDER	Purge	STEN	L	S	XL	L	L	S	H	L	S	H	L	S	H	XL	L	L	S	H	L	S	H
W. Deblois		JE	X+	X*						X+	X*		X+	X*								X*	
P.T. Webber		JF		X*		X					X*			X*	6								
W. Morrison		JG	X+	X*						X+	X*		X+	X*									
R.F. Lufkin		JJ		X*							X*			X*									
J.L. Smith		JK		X*							X*			X*									
W.L. Zurvansky		JN		X*		X					X*	5		X*	5							X*	
L.P. Belanger		JR		X*							X*			X*	6								
R. Belanger		JS		X*							X*			X*	6								
[illegible]isson		JX		X*							X*			X*									
D.W. Dow		KB	X+	X*		X				X+	X*		X+	X*							X+	X*	5
M.E. Arsenault		KD		X*							X*			X*									
T.A. Kiodo		KJ		X*							X*	5		X*	5							X*	
W.T. Moore		KK		X*		X					X*			X*									
J.M. Tardy		KL	X+	X*		X				X+	X*	5	X+	X*									
M. Bell		KN		X*		X				X+	X*			X*			X	4/7					
E.H. Harrigan		KR	X+	X*						X+	X*		X+	X*	6							X*	
A.T. Haynes B/M		KS		X										X									

XL = FROM ¼" NPS TO MAX. DIA., 1/16" to 294" WALL

L = FROM 3/4" NPS 1/16" - .436" WALL

S = FROM 2½" NPS to MAX DIA., 1/16" to .864" WALL

H = FROM 2½" NPS to MAX DIA., 3/16" to MAX WALL

NOTE 1: For 408-1-Carp-20-OB-1; 408-III-Carp-20-OB-1 only to .560" WALL

NOTE 2: Plate only: Limited to .750" WALL

NOTE 3: For 39-I-8-BR-2 only

NOTE 4: For 408-I-Carp-20-OB-1; 408-III-Carp-20-OB-1 to .308" wall only

NOTE 5: Qualified for following thickness: GTAW 1/16" to .176" Max. SMAW 3/16" to Max. to be weld

NOTE 6: Plate only 3/16" to max.

NOTE 7: Qualified for 100-1-8/45-OB-1 only.

* = COMBINATION TESTS QUALIFY FOR THE FOLLOWING: GTAW; .176" WALL, SMAW; .688" WALL

+ = COMBINATION TESTS QUALIFY FOR THE FOLLOWING: GTAW; .176" WALL, SMAW; .260" WALL

S = Qualified to weld to qualified WPS without use of backing gas purge.

3/17

Date 6-21-82

PULLMAN POWER PRODUCTS QUALIFIED WELDERS

SOCKET OR FILLET WELDS
Welders qualified for groove welds are also qualified to make fillet welds of any size on all thickness and pipe diameters within the welding variables.

			CARBON AND LOW ALLOY														STAINLESS AND DISS.								
			O.B.		O.B.		O.B.			KI			B.R.				O.B.	O.B.				KI			
			SMAW		GTAW		GTAW-SMAW			GTAW-SMAW			SMAW				GTAW	GTAW-SMAW				GTAW-SMAW			
			CL1-1-OB-2 IT11-III-1-OB-2		10-I-1-OB-1 73-I-4/1-OB-1 IT10-III-1-OB-1		61-1-5-OB-12 12-I-1-OB-12 IT12-III-1-OB-12 331-I-1/GE-OB-12			1-I-1-KI-12 74-1-5/1-KI-12 IT1-III-1-KI-12 71-I-4/1-KI-12 44-I-4-KI-12 48-I-5-KI-12			8-I-1-BR-2 50-I-5-BR-2 59-I-4-BR-2 IT8-III-1-BR-2 CL1-1-BR-2				79-1-8/1-OB-1 79-III-8/1-OB-1 29-III-8-OB-1		27-I-8-OB-12 81-I-8/1-OB-12 81-III-8/1-OB-12 27-III-8-OB-12 39-I-8-BR-2				24-I-8-KI-12 77-I-8/1-KI-12 77-III-8/1-KI-12 24-III-8-KI-12 39-I-8-BR-2		
WELDER	Purge	STEN	L	S	XL	L	L	S	H	L	S	H	L	S	H		XL	L	L	S	H	L	S	H
J.A. Smith		KZ		X*							X*			X*	6									
G. Andronaco		LA	X+	X*						X+	X*		X+	X*				4/X					X*	5
R.C. Martel		LE		X*							X*			X*										
L.D. Campbell		LF		X*							X*			X*	6			X					X*	
J. Bosco		LJ		X*							X*			X*									X*	
M.J. Skvarkz		LL		X*							X*			X*										
P. Forget S/F		LR		X										X										
R. Deschamps		LT		X*							X*			X*									X*	
T.J. Newman		LV		X*							X*			X*									X*	
W.A. Edwards		LY		X*							X*	5		X*	5									
G.D. Coulstring		LZ	X+	X*						X+	X*		X+	X*									X*	
M. Roulich B/M		MA						X*							5									
J.P. Coady		MB		X*							X*			X*										
J.F. Dickenson		MC		X*		X					X*	5		X*	5								X*	
R. Baynton		MD		X*							X*			X*										

XL = FROM ¼" NPS TO MAX. DIA., 1/16" to 294" WALL

L = FROM 3/4" NPS 1/16" - .436" WALL

S = FROM 2½" NPS to MAX DIA., 1/16" to .864" WALL

H = FROM 2½" NPS to MAX DIA., 3/16" to MAX WALL

NOTE 1: For 408-1-Carp-20-OB-1; 408-III-Carp-20-OB-1 only to .560" WALL
NOTE 2: Plate only: Limited to .750" WALL
NOTE 3: For 39-I-8-BR-2 only
NOTE 4: For 408-I-Carp-20-OB-1; 408-III-Carp-20-OB-1 to .308" wall only
NOTE 5: Qualified for following thickness: GTAW 1/16" to .176" Max. SMAW 3/16" to Max. to be weld
NOTE 6: Plate only 3/16" to max.
NOTE 7: Qualified for 100-1-8/45-OB-1 only.

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Date 6-21-82

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PULLMAN POWER PRODUCTS QUALIFIED WELDERS

SOCKET OR FILLET WELDS Welders qualified for groove welds are also qualified to make fillet welds of any size on all thickness and pipe diameters within the welding variables.

			CARBON AND LOW ALLOY															STAINLESS AND DISS.								
			O.B.		O.B.	O.B.			KI			B.R.			O.B.	O.B.			KI							
			SMAW		GTAW	GTAW-SMAW			GTAW-SMAW			SMAW			GTAW	GTAW-SMAW			GTAW-SMAW							
			CL1-1-OB-2 IT11-III-1-OB-2		10-I-1-OB-1 73-I-4/1-OB-1 IT10-II-1-OB-1	61-1-5-OB-12 12-I-1-OB-12 IT12-III-1-OB-12 331-I-1/GE-OB-12			I-1-I-KI-12 74-1-5/1-KI-12 IT1-II-1-KI-12 71-I-4/1-KI-12 44-I-4-KI-12 48-I-5-KI-12			8-I-1-BR-2 50-I-5-BR-2 59-I-4-BR-2 IT8-III-1-BR-2 CL1-1-BR-2			79-1-8/1-OB-1 79-III-8/1-OB-1 29-III-8-OB-1	27-I-8-OB-12 81-I-8/1-OB-12 81-III-8/1-OB-12 27-III-8-OB-12 39-I-8-BR-2				24-I-8-KI-12 77-I-8/1-KI-12 77-III-8/1-KI-12 24-III-8-KI-12 39-I-8-BR-2				
WELDER	Purge	STEN	L	S	XL	L	L	S	H	L	S	H	L	S	H	XL	L	L	S	H	L	S	H
J.A. Roberts		ME		X*		X					X*	5		X*	5								
R.F. MacIntosh		MF		X*							X*	5		X*	5								
R. Miller		MG		X*							X*			X*								X*	
R. Talbot		MJ		X*		X				X+	X*	5		X*	5			X+				X*	
C.A. Bogdan		MK		X*							X*	5		X*	5								
C.S. Lanphier		ML		X*		X					X*			X*	6							X*	
R. Bakeman		MP		X*		X					X*	5		X*	5								
R. Newcomb		MR		X*		X					X*			X*								X*	
[illegible]comber		MT															1/X					X*	
H. Hamond B/M		MY		X		X						5		X	5								
J. Merrill B/M		NA		X					5					Y	5								
R. Copfer		NC	X+	X*		X				X+	X*		X+	X*			X				X+	X*	
D.F. Jacques		ND		X*							X*	5		X*	5		X			5		X*	
T.W. Curran B/M		NG		X										X									
D. Singh		NK		X*		X					X*	5		X*	5							X*	
J. Beaupre B/M		NP		X		X						5		X	5								

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S = FROM 2½" NPS to MAX DIA., 1/16" to .864" WALL

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0/16

Date 6-21-82

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SOCKET OR FILLET WELDS
Welders qualified for groove welds are also qualified to make fillet welds of any size on all thickness and pipe diameters within the welding variables.

			CARBON AND LOW ALLOY															STAINLESS AND DISS.								
			O.B.		O.B.			O.B.				KI				B.R.			O.B.		O.B.			KI		
			SMAW		GTAW			GTAW-SMAW				GTAW-SMAW				SMAW			GTAW		GTAW-SMAW			GTAW-SMAW		
WELDER	Purge	STEN	CL1-1-OB-2 IT11-III-1-OB-2		10-I-1-OB-1 73-I-4/1-OB-1 IT10-III-1-OB-1			61-1-5-OB-12 12-I-1-OB-12 IT12-III-1-OB-12 331-I-1/GE-OB-12				1-I-1-KI-12 74-1-5/1-KI-12 IT1-III-1-KI-12 71-I-4/1-KI-12 44-I-4-KI-12 48-I-5-KI-12				8-I-1-BR-2 50-I-5-BR-2 59-I-4-BR-2 IT8-III-1-BR-2 CL1-1-BR-2			79-I-8/1-OB-1 79-III-8/1-OB-1 29-III-8-OB-1		27-I-8-OB-12 81-I-8/1-OB-12 81-III-8/1-OB-12 27-III-8-OB-12 39-I-8-BR-2			24-I-8-KI-12 77-I-8/1-KI-12 77-III-8/1-KI-12 24-III-8-KI-12 39-I-8-BR-2		
			L	S	XL	L	L	S	H	L	S	H	L	S	H	XL	L	L	S	H	L	S	H
F. L. Southe		NT		X*							X*			X*											
J.W. Costello		NV		X*							X*			X*											
D.D. Walton		NY	X+	X*		X				X+	X*		X+	X*											
T.R. Ellis		PE		X*							X*			X*								X*			
W.C. Perrin		PC		X*							X*			X*											
R.C. Jones		PD		X*							X*			X*											
R.G. Dupuis		PE		X*		X					X*	5		X*	5										
R.L. Chandler		PF	X+	X*						X+	X*		X+	X*											
Dill		PJ		X*		X					X*	5		X*	5										
W.R. Austin S/F		PL	X+	X*			X+						X+	X*											
A.B. Glidden		PN		X*		X				X+	X*			X*											
E.E. Dobson		PP		X*							X*	5		X*	5						5		X*		
L.L. Boisvert		PT	X+	X*						X+	X*		X+	X*											
M.A. Peterson		PX	X+	X*						X+	X*		X+	X*			X					X*			
M.I. Sciuto		PY		X*							X*			X*	6										
R. I. Burton		PZ		X*							X*			X*							X+				

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NOTE 5: Qualified for following thickness: GTAW 1/16" to .176" Max. SMAW 3/16" to Max. to be wel

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4/16

FULLTON CRANE PRODUCTS QUALIFIED WELDERS

DATE - 6-21-82

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SOCKET OR FILLET WELDS
Welders qualified for groove welds are also qualified to make fillet welds of any size on all thickness and pipe diameters within the welding variables.

		CARBON AND LOW ALLOY																STAINLESS AND DISS.								
		G.B.		G.B.		G.B.			KI			B.B.			G.B.			G.B.			KI		
		SMAW		GTAW		GTAW-SMAW			GTAW-SMAW			SMAW			GTAW			GTAW-SMAW			GTAW-SMAW		
		CL1-1-OB-2 IT11-III-1-OB-2		10-I-1-OB-1 73-I-4/1-OB-1 IT10-III-1-OB-1		61-1-5-OB-12 12-I-1-OB-12 IT12-III-1-OB-12 331-1-1/GK-OB-12			1-I-1-KI-12 74-1-5/1-KI-12 IT1-III-1-KI-12 44-I-4-KI-12 40-I-5-KI-12			0-I-1-BR-2 50-I-5-BR-2 59-I-4-BR-2 IT8-III-1-BR-2 CL1-1-BR-2			79-1-0/1-OB-1 79-III-0/1-OB-1 29-III-0-OB-1			27-I-0-OB-12 01-I-0/1-OB-12 01-III-0/1-OB-12 27-III-0-OB-12 39-I-0-BR-2			24-I-0-KI-12 77-I-0/1-KI-12 77-III-0/1-KI-12 24-III-0-KI-12 39-I-0-BR-2		
WELDER	Purge STEN	L	S	XL	L	L	S	E	L	S	E	L	S	E	XL	L	L	S	E	L	S	E
D. M. Martin	RB		X*							X*			X*									X*	
N. E. Walker	RC		X*							X*			X*	6								X*	
M. D. Kimmins	RF		X*		X					X*			X*										
R. Calkins	RH		X*							X*			X*									X*	
C.D. Lyon	RJ		X*							X*	5		X*	5									
S.L. Ellenwood	RK		X*							X*			X*									X*	
T.E. Weightman	RL		X*							X*			X*									X*	
M. J. O'Neil	RM		X*							X*			X*	6									
R. W. Carrol	RP		X*							X*			X*										
R. S. Maxwell	RV		X*							X*	5		X*	5									
C. G. Henderson	RW		X*							X*			X*										
G. J. Cassella	RY		X*							X*	5		X*	5									
A. E. Joseph	RZ		X*							X*			X*										
R. L. Boska	SA		X*							X*			X*										
P M. Mowatt	SD		X*		X					X*			X*										
D. P. Wolfe	SF		X*							X*			X*										
E.F. STEWART	SG		X*							X*			X*										
R. R. Trial B/M	SK		X										X										

XL = FROM ¼" NPS TO MAX. DIA., 1/16" to 294" WALL

L = FROM 3/4" NPS 1/16" - .436" WALL

S = FROM 2½" NPS to MAX DIA., 1/16" to .864" WALL

E = FROM 2½" NPS to MAX DIA., 3/16" to MAX WALL

NOTE 1: For 408-1-Carp-20-OB-1; 408-III-Carp-20-OB-1 only to .560" WALL
NOTE 2: Plate only: Limited to .750" WALL
NOTE 3: For 29-I-0-BR-2 only
NOTE 4: For 408-1-Carp-20-OB-1; 408-III-Carp-20-OB-1 to .308" wall only
NOTE 5: Qualified for following thickness: GTAW 1/16" to .176" Max. SMAW 3/16" to Max. to be weld
NOTE 6: Plate only 3/16" to max.
NOTE 7: Qualified for 100-1-6/45-OB-1 only.

* = COMBINATION TESTS QUALIFY FOR THE FOLLOWING: GTAW; .176" WALL, SMAW; .688" WALL

+ = COMBINATION TESTS QUALIFY FOR THE FOLLOWING: GTAW; .176" WALL, SMAW; .280" WALL

$ = Qualified to weld to qualified NPS without use of backing gas purge.

3/18

Date 6-21-82

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PULLMAN POWER PRODUCTS QUALIFIED WELDERS

SOCKET OR FILLET WELDS
Welders qualified for groove welds are also qualified to make fillet welds of any size on all thickness and pipe diameters within the welding variables.

			CARBON AND LOW ALLOY															STAINLESS AND DISS.								
			O.B.		O.B.		O.B.			KI			B.R.			O.B.		O.B.			KI		
			SMAW		GTAW		GTAW-SMAW			GTAW-SMAW			SMAW			GTAW		GTAW-SMAW			GTAW-SMAW		
			CL1-1-OB-2 IT11-III-1-OB-2 ✓		10-I-1-OB-1 73-I-4/1-OB-1 IT10-III-1-OB-1		61-1-5-OB-12 12-I-1-OB-12 IT12-III-1-OB-12 331-I-1/GE-OB-12			I-I-I-KI-12 74-1-5/1-KI-12 IT1-III-1-KI-12 71-I-4/1-KI-12 44-I-4-KI-12 48-I-5-KI-12 ✓			8-I-1-BR-2 50-I-5-BR-2 59-I-4-BR-2 IT8-III-1-BR-2 CL1-1-BR-2 ✓			79-1-8/1-OB-1 79-III-8/1-OB-1 29-III-8-OB-1		27-I-8-OB-12 81-I-8/1-OB-12 81-III-8/1-OB-12 27-III-8-OB-12 39-I-8-BR-2			24-I-8-KI-12 77-I-8/1-KI-12 77-III-8/1-KI-12 24-III-8-KI-12 39-I-8-BR-2		
WELDER	Purge	STEN	L	S	XL	L	L	S	H	L	S	H	L	S	H	XL	L	L	S	H	L	S	H
R.L. Brady		SL		X*							X*			X*									X*	
D.J. Recine		SP		X*							X*			X*										
T. Fisher		SR		X*							X*			X*									X*	
P.E. Cote		SY		X*							X*			X*										
T.E. Weaver		TB		X*							X*			X*										
K.W. Krivoy		TD		X*							X*			X*									X*	
S.J. Reynolds		TG		X*							X*			X*										
R.C. Koehler		TM		X*							X*			X*										
J.M. Gonslaves		TP		X*							X*			X*										
C.M. Kashnicki		TS		X*							X*	5		X*	5									
J.O. Walsh		TV		X*							X*			X*										
M.E. Goodwin		TX		X*							X*			X*										
P.L. Champman		TY		X*							X*			X*										

XL = FROM ⅛" NPS TO MAX. DIA., 1/16" to 294" WALL

L = FROM 3/4" NPS 1/16" - .436" WALL

S = FROM 2½" NPS to MAX DIA., 1/16" to .864" WALL

H = FROM 2½" NPS to MAX DIA., 3/16" to MAX WALL

NOTE 1: For 408-1-Carp-20-OB-1; 408-III-Carp-20-OB-1 only to .560" WALL

NOTE 2: Plate only: Limited to .750" WALL

NOTE 3: For 39-I-8-BR-2 only

NOTE 4: For 408-I-Carp-20-OB-1; 408-III-Carp-20-OB-1 to .308" wall only

NOTE 5: Qualified for following thickness: GTAW 1/16" to .176" Max. SMAW 3/16" to Max. to be weld

NOTE 6: Plate only 3/16" to max.

NOTE 7: Qualified for 100-1-8/45-OB-1 only.

* = COMBINATION TESTS QUALIFY FOR THE FOLLOWING: GTAW; .176" WALL, SMAW; .688" WALL

+ = COMBINATION TESTS QUALIFY FOR THE FOLLOWING: GTAW; .176" WALL, SMAW; .260" WALL

S = Qualified to weld to qualified WPS without use of backing gas purge.

4/13

Date 6-21-82

PULLMAN POWER PRODUCTS QUALIFIED WELDERS

SOCKET OR FILLET WELDS Welders qualified for groove welds are also qualified to make fillet welds of any size on all thickness and pipe diameters within the welding variables.

			CARBON AND LOW ALLOY														STAINLESS AND DISS.								
			O.B.		O.B.		O.B.			KI			B.R.			O.B.		O.B.			KI		
			SMAW		GTAW		GTAW-SMAW			GTAW-SMAW			SMAW			GTAW		GTAW-SMAW			GTAW-SMAW		
			CL1-1-OB-2 IT11-III-1-OB-2		10-I-1-OB-1 73-I-4/1-OB-1 IT10-III-1-OB-1		61-1-5-OB-12 12-I-1-OB-12 IT12-III-1-OB-12 331-I-1/GE-OB-12			I-I-I-KI-12 74-1-5/1-KI-12 IT1-III-1-KI-12 71-I-4/1-KI-12 44-I-4-KI-12 48-I-5-KI-12			8-I-1-BR-2 50-I-5-BR-2 59-I-4-BR-2 IT8-III-1-BR-2 CL1-1-BR-2			79-1-8/1-OB-1 79-III-8/1-OB-1 29-III-8-OB-1		27-I-8-OB-12 81-I-8/1-OB-12 81-III-8/1-OB-12 27-III-8-OB-12 39-I-8-BR-2			24-I-8-KI-12 77-I-8/1-KI-12 77-III-8/1-KI-12 24-III-8-KI-12 39-I-8-BR-2		
WELDER	Purge	SIEN	L	S	XL	L	L	S	H	L	S	H	L	S	H	XL	L	L	S	H	L	S	H
D.A. Gagne		VA		X*							X*			X*									
R.J. Hinerman		VB		X*							X*			X*									
W.F. Giles, JR.		VC		X*							X*	5		X*	5								
V. Beskrowni		VD		X*							X*			X*									
D. Stilwell		VE		X*							X*			X*									
J. Stefan		VF		X*							X*			X*	6								
M. Hanrahan		VH		X*			X+				X*	5		X*	5		X					X*	
R. Burtley		VJ		X*							X*			X*								X*	
Beaurivzge		VK		X*							X*			X*									
D.K. Comant		VM		X*							X*			X*									
R.H. Hachez		VP		X*							X*			X*								X*	
P.J. Gagnon M/W		VT												3	6								
T.J. Smith		VX		X*							X*			X*									
S.C. West		VY		X*		X					X*			X*	6							X*	
R.W. Arsenault		VZ		X*							X*			X*							X+	X*	

XL = FROM ½" NPS TO MAX. DIA., 1/16" to 294" WALL

L = FROM 3/4" NPS 1/16" - .436" WALL

S = FROM 2½" NPS to MAX DIA., 1/16" to .864" WALL

H = FROM 2½" NPS to MAX DIA., 3/16" to MAX WALL

NOTE 1: For 408-1-Carp-20-OB-1; 408-III-Carp-20-OB-1 only to .560" WALL

NOTE 2: Plate only: Limited to .750" WALL

NOTE 3: For 39-I-8-BR-2 only

NOTE 4: For 408-I-Carp-20-OB-1; 408-III-Carp-20-OB-1 to .308" wall only

NOTE 5: Qualified for following thickness: GTAW 1/16" to .176" Max. SMAW 3/16" to Max. to be weld

NOTE 6: Plate only 3/16" to max.

NOTE 7: Qualified for 100-1-8/45-OB-1 only.

* = COMBINATION TESTS QUALIFY FOR THE FOLLOWING: GTAW; .176" WALL, SMAW; .688" WALL

+ = COMBINATION TESTS QUALIFY FOR THE FOLLOWING: GTAW; .176" WALL, SMAW; .260" WALL

S = Qualified to weld to qualified WPS without use of backing gas purge.

6/15

Date 6-21-82

PULLMAN POWER PRODUCTS QUALIFIED WELDERS

SOCKET OR FILLET WELDS
Welders qualified for groove welds are also qualified to make fillet welds of any size on all thickness and pipe diameters within the welding variables.

			CARBON AND LOW ALLOY															STAINLESS AND DISS.								
			O.B.		O.B.		O.B.			KI			B.R.			O.B.		O.B.			KI		
			SMAW		GTAW		GTAW-SMAW			GTAW-SMAW			SMAW			GTAW		GTAW-SMAW			GTAW-SMAW		
			CL1-1-OB-2 IT11-III-1-OB-2		10-I-1-OB-1 73-I-4/1-OB-1 IT10-III-1-OB-1		61-1-5-OB-12 12-I-1-OB-12 IT12-III-1-OB-12 331-I-1/GE-OB-12			I-I-I-KI-12 74-1-5/1-KI-12 IT1-III-1-KI-12 71-I-4/1-KI-12 44-I-4-KI-12 48-I-5-KI-12			8-I-1-BR-2 50-I-5-BR-2 59-I-4-BR-2 IT8-III-1-BR-2 CL1-1-BR-2			79-1-8/1-OB-1 79-III-8/1-OB-1 29-III-8-OB-1		27-I-8-OB-12 81-I-8/1-OB-12 81-III-8/1-OB-12 27-III-8-OB-12 39-I-8-BR-2			24-I-8-KI-12 77-I-8/1-KI-12 77-III-8/1-KI-12 24-III-8-KI-12 39-I-8-BR-2		
WELDER	Purge	STEN	L	S	XL	L	L	S	H	L	S	H	L	S	H	XL	L	L	S	H	L	S	H
T.R. Weakland JR.		XA		X*						X+	X*			X*	6						X+	X*	
J. Kolen		XC		X*							X*	5		X*	5							X*	
T. Phelps		XD		X*							X*	5		X*	5							X*	
M.A. Janezic		XE		X*							X*			X*	6							X*	
M.J. Zywar		XF		X*							X*			X*	6							X*	
D.J. Friedl		XG		X*							X*			X*									
M.H. Lapsevich		XJ		X*							X*			X*									
A. Castro		XL		X*		X					X*	5		X*	5								
B.L. Stout		XP		X*							X*			X*								X*	
M.L. Lewis		XR		X*							X*			X*									
R.A. Bergevin		XT		X*							X*			X*									
G.L. Lanoie		XV		X*							X*			X*									
D.K. Teague		YD		X*							X*			X*								X*	
M.R. Berger		YF		X*		X					X*			X*								X*	
J.J. Meridith		YG		X*							X*			X*	6							X*	
J.M. Trapp		YJ		X*							X*			X*	6								
R.J. Flaherty		YK		X*							X*			X*									

XL = FROM ½" NPS TO MAX. DIA., 1/16" to 294" WALL

L = FROM 3/4" NPS 1/16" - .436" WALL

S = FROM 2½" NPS to MAX DIA., 1/16" to .864" WALL

H = FROM 2½" NPS to MAX DIA., 3/16" to MAX WALL

NOTE 1: For 408-1-Carp-20-OB-1; 408-III-Carp-20-OB-1 only to .560" WALL
NOTE 2: Plate only: Limited to .750" WALL
NOTE 3: For 39-I-8-BR-2 only
NOTE 4: For 408-I-Carp-20-OB-1; 408-III-Carp-20-OB-1 to .308" wall only
NOTE 5: Qualified for following thickness: GTAW 1/16" to .176" Max. SMAW 3/16" to Max. to be weld
NOTE 6: Plate only 3/16" to max.
NOTE 7: Qualified for 100-1-8/45-OB-1 only.

* = COMBINATION TESTS QUALIFY FOR THE FOLLOWING: GTAW; .176" WALL, SMAW; .688" WALL

+ = COMBINATION TESTS QUALIFY FOR THE FOLLOWING: GTAW; .176" WALL, SMAW; .260" WALL

S = Qualified to weld to qualified WPS without use of backing gas purge.

3/17

DATE 6-21-82

PAGE 14 OF 25

PULLMAN POWER PRODUCTS QUALIFIED WELDERS

SOCKET OR FILLET WELDS
Welders qualified for groove welds are also qualified to make fillet welds of any size on all thickness and pipe diameters within the welding variables.

		CARBON AND LOW ALLOY														STAINLESS AND DISS.								
		0.B.		0.B.		0.B.			KI			B.B.				0.B.		0.B.			KI			
		SMAW		GTAW		GTAW-SMAW			GTAW-SMAW			SMAW				GTAW		GTAW-SMAW			GTAW-SMAW			
		CL1-1-OB-2 IT11-III-1-OB-2		10-I-1-OB-1 23-I-4/1-OB-1 IT10-III-1-OB-1		61-1-5-OB-12 12-I-1-OB-12 IT12-III-1-OB-12 331-1-1/GR-OB-12			1-I-1-KI-12 74-1-5/1-KI-12 IT1-III-1-KI-12 71-I-4/1-KI-12 44-I-4-KI-12 48-I-5-KI-12			B-I-1-BR-2 50-I-5-BR-2 59-I-4-BR-2 IT8-III-1-BR-2 CL1-1-BR-2				79-1-0/1-OB-1 79-III-0/1-OB-1 29-III-0-OB-1		27-I-0-OB-12 81-I-0/1-OB-12 81-III-0/1-OB-12 27-III-0-OB-12 39-I-0-BR-2			24-I-0-KI-12 77-I-0/1-KI-12 77-III-0/1-KI-12 24-III-0-KI-12 39-I-0-BR-2		
WELDER	Purge STEN	L	S	XL	L	L	S	E	L	S	E	L	S	E	XL	L	L	S	E	L	S	E
R. R. Ford	YN		X*							X*			X*										
C. E. Fitts	YP		X*							X*			X*									X+	
L. R. Sullivan	YR		X*							X*			X*									X+	
R. M. Bird	YT		X*							X*			X*										
K. S. McMenemy	YV		X*							X*			X*										
D. C. Jones	YX		X*							X*			X*										
T. J. Fortwood	YZ		X*							X*			X*										
P. F. Sullivan	ZA		X*							X*			X#6										
C. J. Callahan	ZE		X*							X*			X*										
K. M. Fullis	ZK		X*							X*			X*										
K. R. Chalbeck	ZR		X*							X*			X*										
W. A. McKinnon	ZT		X*							X*			X*										

XL = FROM ¼" NPS TO MAX. DIA., 1/16" to 294" WALL

L = FROM 3/4" NPS 1/16" - .436" WALL

S = FROM 2½" NPS to MAX DIA., 1/16" to .864" WALL

E = FROM 2½" NPS to MAX DIA., 3/16" to MAX WALL

NOTE 1: For 408-1-Carp-20-CS-1; 408-III-Carp-20-CS-1 only to .560" WALL
NOTE 2: Plate only: Limited to .750" WALL
NOTE 3: For 39-I-0-BR-2 only
NOTE 4: For 408-I-Carp-20-CS-1; 408-III-Carp-20-CS-1 to .308" wall only
NOTE 5: Qualified for following thickness: GTAW 1/16" to .176" Max. SMAW 3/16" to Max. to be welded
NOTE 6: Plate only 3/16" to max.
NOTE 7: Qualified for 100-1-0/41-CS-1 only.

* = COMBINATION TESTS QUALIFY FOR THE FOLLOWING: GTAW; .176" WALL, SMAW; .668" WALL

+ = COMBINATION TESTS QUALIFY FOR THE FOLLOWING: GTAW; .176" WALL, SMAW; .280" WALL

$ = Qualified to weld to qualified WPS without use of backing gas purge.

7/12

Date 6-21-82

PULLMAN POWER PRODUCTS QUALIFIED WELDERS

SOCKET OR FILLET WELDS Welders qualified for groove welds are also qualified to make fillet welds of any size on all thickness and pipe diameters within the welding variables.

			CARBON AND LOW ALLOY														STAINLESS AND DISS.								
			O.B.		O.B.		O.B.			KI			B.R.				O.B.		O.B.			KI			
			SMAW		GTAW		GTAW-SMAW			GTAW-SMAW			SMAW				GTAW		GTAW-SMAW			GTAW-SMAW			
			CL1-1-OB-2 IT11-III-1-OB-2		10-I-1-OB-1 73-I-4/1-OB-1 IT10-III-1-OB-1		61-1-5-OB-12 12-I-1-OB-12 IT12-III-1-OB-12 331-I-1/GR-OB-12			1-I-1-KI-12 74-1-5/1-KI-12 IT1-III-1-KI-12 71-I-4/1-KI-12 44-I-4-KI-12 48-I-5-KI-12			8-I-1-BR-2 50-I-5-BR-2 59-I-4-BR-2 IT8-III-1-BR-2 CL1-1-BR-2				79-1-8/1-OB-1 79-III-8/1-OB-1 29-III-8-OB-1		27-I-8-OB-12 81-I-8/1-OB-12 81-III-8/1-OB-12 27-III-8-OB-12 39-I-8-BR-2			24-I-8-KI-12 77-I-8/1-KI-12 77-III-8/1-KI-12 24-III-8-KI-12 39-I-8-BR-2		
WELDER	Purge	STEN	L	S	XL	L	L	S	H	L	S	H	L	S	H	XL	L	L	S	H	L	S	H
M.A. Cain		ZY		X*		X+					X*	5		X*	5								
R.A. Griesmayer		1A	X+	X*						X*	X*		X+	X*								X*	
J. Benson		3A		X*							X*			X*									
R.F. Medves		5A		X*							X*			X*									
M.E. Cornelissen		8A		X*							X*			X*									
G.L. Miles		9A		X*							X*			X*									
A.L. Bolster		1B		X*							X*			X*									
P. Cavaleri		2B		X*							X*	5		X*	5								
Hamilton		5B		X*							X*			X*									
T.M. Baker		6B		X*							X*			X*									
L.R. Early		7B		X*							X*			X*									
J.E. Cramer		1C		X*							X*			X*									
S.L. Repici		2C		X*							X*			X*									
E.R. Rournier		3C		X*							X*			X*									

XL = FROM ½" NPS TO MAX. DIA., 1/16" to 294" WALL

L = FROM 3/4" NPS 1/16" - .436" WALL

S = FROM 2½" NPS to MAX DIA., 1/16" to .864" WALL

H = FROM 2½" NPS to MAX DIA., 3/16" to MAX WALL

NOTE 1: For 408-1-Carp-20-OB-1; 408-III-Carp-20-OB-1 only to .560" WALL

NOTE 2: Plate only: Limited to .750" WALL

NOTE 3: For 39-I-8-BR-2 only

NOTE 4: For 408-I-Carp-20-OB-1; 408-III-Carp-20-OB-1 to .308" wall only

NOTE 5: Qualified for following thickness: GTAW 1/16" to .176" Max. SMAW 3/16" to Max. to be weld

NOTE 6: Plate only 3/16" to max.

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S = Qualified to weld to qualified WPS without use of backing gas purge.

1/14

Date 6-21-82

PULLMAN POWER PRODUCTS QUALIFIED WELDERS

SOCKET OR FILLET WELDS
Welders qualified for groove welds are also qualified to make fillet welds of any size on all thickness and pipe diameters within the welding variables.

	CARBON AND LOW ALLOY														STAINLESS AND DISS.								
	O.B.		O.B.			O.B.			KI			B.R.			O.B.		O.B.			KI		
	SMAW		GTAW			GTAW-SMAW			GTAW-SMAW			SMAW			GTAW		GTAW-SMAW			GTAW-SMAW		
	CL1-1-OB-2 IT11-III-1-OB-2		10-I-1-OB-1 73-I-4/1-OB-1 IT10-III-1-OB-1			61-1-5-OB-12 12-I-1-OB-12 IT12-III-1-OB-12 331-I-1/GE-OB-12			1-I-1-KI-12 74-1-5/1-KI-12 IT1-III-1-KI-12 71-I-4/1-KI-12 44-I-4-KI-12 48-I-5-KI-12			8-I-1-BR-2 50-I-5-BR-2 59-I-4-BR-2 IT8-III-1-BR-2 CL1-1-BR-2			79-1-C/1-OB-1 79-III-8/1-OB-1 29-III-8-OB-1		27-I-8-OB-12 81-I-8/1-OB-12 81-III-8/1-OB-12 27-III-8-OB-12 39-I-8-BR-2			24-I-8-KI-12 77-I-8/1-KI-12 77-III-8/1-KI-12 24-III-8-KI-12 35-I-8-BR-2		
WELDER	STEN	L	S	XL	L	L	S	H	L	S	H	L	S	H	XL	L	L	S	H	L	S	H
A.A. King	5C		X*							X*			X*										
M.D. Morse	7C		X*							X*			X*										
W.L. Simpson	9C		X*							X*			X*										
G.J. Scott	2D		X*							X*			X*										
J.M. Feldsher	3D		X*							X*			X*										
G.A. Nicely	4D		X*							X*			X*										
A.T. Tweedy	6D		X*							X*			X*										
[illegible] Jordan	7D		X*							X*			X*										
[illegible] Williams	8D		X*							X*			X* 6										
J.E. Arkins	1E	X+	X*						X+	X*		X+	X*									X*	
R.J. Foriner	2E		X*							X* 5			X* 5										
P.G. Chevalier	6E		X*							X*			X*										
S.J. Kenney	7E		X*							X*			X*										

XL = FROM ¼" NPS TO MAX. DIA., 1/16" to 294" WALL

L = FROM 3/4" NPS 1/16" - .436" WALL

S = FROM 2½" NPS to MAX DIA., 1/16" to .864" WALL

H = FROM 2½" NPS to MAX DIA., 3/16" to MAX WALL

NOTE 1: For 408-1-Carp-20-OB-1; 408-III-Carp-20-OB-1 only to .560" WALL

NOTE 2: Plate only: Limited to .750" WALL

NOTE 3: For 39-I-8-BR-2 only

NOTE 4: For 408-I-Carp-20-OB-1; 408-III-Carp-20-OB-1 to .308" wall only

NOTE 5: Qualified for following thickness: GTAW 1/[illegible]" to .176" Max. SMAW 3/16" to Max. to be wel

NOTE 6: Plate only 3/16" to max.

NOTE 7: Qualified for 100-1-8/45-OB-1 only.

* = COMBINATION TESTS QUALIFY FOR THE FOLLOWING: GTAW; .176" WALL, SMAW; .688" WALL

+ = COMBINATION TESTS QUALIFY FOR THE FOLLOWING: GTAW; .176" WALL, SMAW; .260" WALL

S = Qualified to weld to qualified WPS without use of backing gas purge.

9/13

Date 6-21-82

PULLMAN POWER PRODUCTS QUALIFIED WELDERS

SOCKET OR FILLET WELDS
Welders qualified for groove welds are also qualified to make fillet welds of any size on all thickness and pipe diameters within the welding variables.

			CARBON AND LOW ALLOY														STAINLESS AND DISS.								
			O.B.		O.B.			O.B.			KI			B.R.			O.B.		O.B.			KI		
			SMAW		GTAW			GTAW-SMAW			GTAW-SMAW			SMAW			GTAW		GTAW-SMAW			GTAW-SMAW		
			CL1-1-OB-2 IT11-III-1-OB-2		10-I-1-OB-1 73-I-4/1-OB-1 IT10-III-1-OB-1			61-1-5-OB-12 12-1-1-OB-12 IT12-III-1-OB-12 331-I-1/GE-OB-12			1-1-1-KI-12 74-1-5/1-KI-12 IT1-III-1-KI-12 71-I-4/1-KI-12 44-1-4-KI-12 48-I-5-KI-12			8-I-1-BR-2 50-I-5-BR-2 59-I-4-BR-2 IT8-III-1-BR-2 CL1-1-BR-2			79-1-8/1-OB-1 79-III-8/1-OB-1 29-III-8-OB-1		27-I-8-OB-12 81-I-8/1-OB-12 81-III-8/1-OB-12 27-III-8-OB-12 39-I-8-BR-2			24-I-8-KI-12 77-I-8/1-KI-12 77-III-8/1-KI-12 24-III-8-KI-12 39-I-8-BR-2		
WELDER	Purge	STEN	L	S	XL	L	L	S	H	L	S	H	L	S	H	XL	L	L	S	H	L	S	H
J.G. Paolino		2F	X+	X*		X				X+	X*	5	X+	X*	5								
J. Hall		3F		X*		X					X*			X*									
G.A. Perry		5F		X*		X	X+			X+	X*	5		X*	5								
T. Gilligan		9F		X*							X*			X*									
D.D. Dispennett		3G		X*							X*			X*									
L.A. Milette		4G		X*							X*			X*									
Giolito		5G	X+	X*						X+	X*		X+	X*									
R.D. Spath, JR.		6G		X*							X*			X*									
K. Ishihara		7G		X*							X*			X*									
D.S. McCoole		8G		X*							X*			X*									
P.H. Tower		9G		X*							X*			X*									
C. Gormly		1H		X*							X*			X*									

XL = FROM ½" NPS TO MAX. DIA., 1/16" to 294" WALL

L = FROM 3/4" NPS 1/16" - .436" WALL

S = FROM 2½" NPS to MAX DIA., 1/16" to .864" WALL

H = FROM 2½" NPS to MAX DIA., 3/16" to MAX WALL

NOTE 1: For 408-1-Carp-20-OB-1; 408-III-Carp-20-OB-1 only to .560" WALL

NOTE 2: Plate only: Limited to .750" WALL

NOTE 3: For 39-I-8-BR-2 only

NOTE 4: For 408-I-Carp-20-OB-1; 408-III-Carp-20-OB-1 to .308" wall only

NOTE 5: Qualified for following thickness: GTAW 1/16" to .176" Max. SMAW 3/16" to Max. to be weld

NOTE 6: Plate only 3/16" to max.

NOTE 7: Qualified for 100-1-8/45-OB-1 only.

* = COMBINATION TESTS QUALIFY FOR THE FOLLOWING: GTAW; .176" WALL, SMAW; .688" WALL

+ = COMBINATION TESTS QUALIFY FOR THE FOLLOWING: GTAW; .176" WALL, SMAW; .260" WALL

S = Qualified to weld to qualified WPS without use of backing gas purge.

7/12

Date 6-21-82

PULLMAN POWER PRODUCTS QUALIFIED WELDERS

SOCKET OR FILLET WELDS
Welders qualified for groove welds are also qualified to make fillet welds of any size on all thickness and pipe diameters within the welding variables.

		CARBON AND LOW ALLOY														STAINLESS AND DISS.								
		O.B.		O.B.			O.B.			KI			B.R.			O.B.		O.B.			KI		
		SMAW		GTAW			GTAW-SMAW			GTAW-SMAW			SMAW			GTAW		GTAW-SMAW			GTAW-SMAW		
		CL1-1-OB-2 IT11-III-1-OB-2		10-I-1-OB-1 73-I-4/1-OB-1 IT10-III-1-OB-1			61-1-5-OB-12 12-I-1-OB-12 IT12-III-1-OB-12 331-I-1/GE-OB-12			1-I-1-KI-12 74-1-5/1-KI-12 IT1-II-1-KI-12 71-I-4/1-KI-12 44-I-4-KI-12 48-I-5-KI-12			8-I-1-BR-2 50-I-5-BR-2 59-I-4-BR-2 IT8-III-1-BR-2 CL1-1-BR-2			79-1-8/1-OB-1 79-III-8/1-OB-1 29-III-8-OB-1		27-I-8-OB-12 81-I-8/1-OB-12 81-III-8/1-OB-12 27-III-8-OB-12 39-I-8-BR-2			24-I-8-KI-12 77-I-8/1-KI-12 77-III-8/1-KI-12 24-III-8-KI-12 39-I-8-BR-2		
WELDER	Purge	STEN	L	S	XL	L	L	S	H	L	S	H	L	S	H	XL	L	L	S	H	L	S	H
D.S. Catani		4H		X*							X*			X*									
R.P. Fenstemacher		7H		X*							X*			X*									
T.R. Watts		9H	X+	X*						X+	X*		X+	X*								X*	
G.M. Crow		1J		X*							X*			X*									
P.J. Scott		3J		X*							X*			X*									
D. Powell		4J		X*							X*			X*			X					X*	
E.R. McMahon		5J		X*							X*			X*	6								
J.L. Gardner		8J		X*							X*			X*									
D.A. Corella		9J		X*							X*			X*									
T.F. Ryan		1K		X*							X*			X*									
R.A. Wasson		2K		X*							X*			X*									
T.M. Stewart		3K		X*							X*			X*									
W.J. Hebert		4K		X*							X*			X*									

XL = FROM ¼" NPS TO MAX. DIA., 1/16" to 294" WALL

L = FROM 3/4" NPS 1/16" - .436" WALL

S = FROM 2½" NPS to MAX DIA., 1/16" to .864" WALL

H = FROM 2½" NPS to MAX DIA., 3/16" to MAX WALL

NOTE 1: For 408-1-Carp-20-OB-1; 408-III-Carp-20-OB-1 only to .560" WALL
NOTE 2: Plate only: Limited to .750" WALL
NOTE 3: For 39-I-8-BR-2 only
NOTE 4: For 408-I-Carp-20-OB-1; 408-III-Carp-20-OB-1 to .308" wall only
NOTE 5: Qualified for following thickness: GTAW 1/16" to .176" Max. SMAW 3/16" to Max. to be weld
NOTE 6: Plate only 3/16" to max.
NOTE 7: Qualified for 100-1-8/45-OB-1 only.

* = COMBINATION TESTS QUALIFY FOR THE FOLLOWING: GTAW; .176" WALL, SMAW; .688" WALL

+ = COMBINATION TESTS QUALIFY FOR THE FOLLOWING: GTAW; .176" WALL, SMAW; .260" WALL

S = Qualified to weld to qualified WPS without use of backing gas purge.

7/13

Date 6-21-82

PULLMAN POWER PRODUCTS QUALIFIED WELDERS

SOCKET OR FILLET WELDS
Welders qualified for groove welds are also qualified to make fillet welds of any size on all thickness and pipe diameters within the welding variables.

			CARBON AND LOW ALLOY															STAINLESS AND DISS.								
			O.B.		O.B.			O.B.			KI			B.R.			O.B.			O.B.			KI		
			SMAW		GTAW			GTAW-SMAW			GTAW-SMAW			SMAW			GTAW			GTAW-SMAW			GTAW-SMAW		
			CL1-1-OB-2 IT11-III-1-OB-2		10-I-1-OB-1 73-I-4/1-OB-1 IT10-III-1-OB-1			61-1-5-OB-12 12-I-1-OB-12 IT12-III-1-OB-12 331-I-1/GE-OB-12			1-I-1-KI-12 74-1-5/1-KI-12 IT1-III-1-KI-12 71-I-4/1-KI-12 44-I-4-KI-12 48-I-5-KI-12			8-I-1-BR-2 50-I-5-BR-2 59-I-4-BR-2 IT8-III-1-BR-2 CL1-1-BR-2			79-1-8/1-OB-1 79-III-8/1-OB-1 29-III-8-OB-1			27-I-8-OB-12 81-I-8/1-OB-12 81-III-8/1-OB-12 27-III-8-OB-12 39-I-8-BR-2			24-I-8-KI-12 77-I-8/1-KI-12 77-III-8/1-KI-12 24-III-8-KI-12 39-I-8-BR-2		
WELDER	Purge	SIEN	L	S	XL	L	L	S	H	L	S	H	L	S	H	XL	L	L	S	H	L	S	H
S.D. Jones		7K		X*							X*			X*										
D. Lappin		8K		X*							X*			X*										
J.W. Cauble		9K		X*		X	X+				X*			X*									X*	
W.A. Galliway		2L		X*							X*			X*									X*	
J.R. Smith		3L		X*							X*			X*									X*	
M. Moreno		4L		X*							X*			X*									X*	
L.J. Hedberg		5L		X*		X					X*			X*			X				X+		X*	
E. Kelley		6L		X*							X*			X*									X*	
J.F. Gering		7L		X*							X*			X*										
H.J. Maller, JR.		8L		X*							X*			X*									X*	
K.D. Smith		1M		X*							X*			X*			4						X*	
A.G. Anderson		2M		X*							X*			X*										
J.F. Cody		3M		X*							X*			X*									X*	

XL = FROM ½" NPS TO MAX. DIA., 1/16" to 294" WALL

L = FROM 3/4" NPS 1/16" - .436" WALL

S = FROM 2½" NPS to MAX DIA., 1/16" to .864" WALL

H = FROM 2½" NPS to MAX DIA., 3/16" to MAX WALL

NOTE 1: For 408-1-Carp-20-OB-1; 408-III-Carp-20-OB-1 only to .560" WALL

NOTE 2: Plate only: Limited to .750" WALL

NOTE 3: For 39-I-8-BR-2 only

NOTE 4: For 408-I-Carp-20-OB-1; 408-III-Carp-20-OB-1 to .308" wall only

NOTE 5: Qualified for following thickness: GTAW 1/16" to .176" Max. SMAW 3/16" to Max. to be weld

NOTE 6: Plate only 3/16" to max.

NOTE 7: Qualified for 100-1-8/45-OB-1 only.

* = COMBINATION TESTS QUALIFY FOR THE FOLLOWING: GTAW; .176" WALL, SMAW; .688" WALL

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S = Qualified to weld to qualified WPS without use of backing gas purge.

3/13

Date 6-21-82

PULLMAN POWER PRODUCTS QUALIFIED WELDERS

SOCKET OR FILLET WELDS
Welders qualified for groove welds are also qualified to make fillet welds of any size on all thickness and pipe diameters within the welding variables.

			CARBON AND LOW ALLOY														STAINLESS AND DISS.								
			O.B.		O.B.		O.B.			KI			B.R.				O.B.		O.B.			KI			
			SMAW		GTAW		GTAW-SMAW			GTAW-SMAW			SMAW				GTAW		GTAW-SMAW			GTAW-SMAW			
			Cl1-1-OB-2 IT11-III-1-OB-2		10-I-1-OB-1 73-I-4/1-OB-1 IT10-III-1-OB-1		61-1-5-OB-12 12-I-1-OB-12 IT12-III-1-OB-12 331-I-1/GE-OB-12			I-I-I-KI-12 74-1-5/1-KI-12 IT1-III-1-KI-12 71-I-4/1-KI-12 44-I-4-KI-12 48-I-5-KI-12			6-I-1-BR-2 50-I-5-BR-2 59-I-4-BR-2 IT8-III-1-BR-2 Cl1-1-BR-2				79-1-8/1-OB-1 79-III-8/1-OB-1 29-III-8-OB-1		27-I-8-OB-12 81-I-8/1-OB-12 81-III-8/1-OB-12 27-III-8-OB-12 39-I-8-BR-2			24-I-8-KI-12 77-I-8/1-KI-12 77-III-8/1-KI-12 24-III-8-KI-12 39-I-8-BR-2		
WELDER	Purge	STEN	L	S	XL	L	L	S	H	L	S	H	L	S	H	XL	L	L	S	H	L	S	H
D.L. Westbury	S/F	4M		X										X*										
K.R. Hilton		5M		X*							X*			X*										
J.B. Lee		6M		X*							X*			X*			X					X*	
R. Russo		7M		X*							X*			X*									
E.A. John		8M		X*							X*			X*									
K.J. Real		9M		X*							X*			X*									
B. Clouse		4N		X*							X*			X*								X*	
J.F. Homer		5N		X*							X*			X*									
M.E. Maksybowicz		6N		X*							X*			X*									
S.L. Tenbrink		7N		X*							X*			X*			X					X*	
T.P. Jackson		8N		X*							X*			X*									
J.I. Edmonds		9N		X*							X*			X*									
J.A. Graney		1P		X*							X*			X*									

XL = FROM ¼" NPS TO MAX. DIA., 1/16" to 294" WALL

L = FROM 3/4" NPS 1/16" - .436" WALL

S = FROM 2½" NPS to MAX DIA., 1/16" to .864" WALL

H = FROM 2½" NPS to MAX DIA., 3/16" to MAX WALL

NOTE 1: For 408-1-Carp-20-OB-1; 408-III-Carp-20-OB-1 only to .560" WALL
NOTE 2: Plate only: Limited to .750" WALL
NOTE 3: For 39-I-8-BR-2 only
NOTE 4: For 408-I-Carp-20-OB-1; 408-III-Carp-20-OB-1 to .308" wall only
NOTE 5: Qualified for following thickness: GTAW 1/16" to .176" Max. SMAW 3/16" to Max. to be welded
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6/13

Date 6-21-82

PULLMAN POWER PRODUCTS QUALIFIED WELDERS

SOCKET OR FILLET WELDS
Welders qualified for groove welds are also qualified to make fillet welds of any size on all thickness and pipe diameters within the welding variables.

			CARBON AND LOW ALLOY															STAINLESS AND DISS.								
			O.B.		O.B.			O.B.			KI			B.R.			O.B.		O.B.			KI		
			SMAW		GTAW			GTAW-SMAW			GTAW-SMAW			SMAW			GTAW		GTAW-SMAW			GTAW-SMAW		
			CL1-1-OB-2 IT11-III-1-OB-2		10-I-1-OB-1 73-I-4/1-OB-1 IT10-III-1-OB-1			61-1-5-OB-12 12-I-1-OB-12 IT12-III-1-OB-12 331-I-1/GE-OB-12			I-1-I-KI-12 74-1-5/1-KI-12 IT1-III-1-KI-12 71-I-4/1-KI-12 44-I-4-KI-12 48-I-5-KI-12			8-I-1-BR-2 50-I-5-BR-2 59-I-4-BR-2 IT8-III-1-BR-2 CL1-1-BR-2			79-1-8/1-OB-1 79-III-8/1-OB-1 29-III-8-OB-1		27-I-8-OB-12 81-I-8/1-OB-12 81-III-8/1-OB-12 27-III-8-OB-12 39-I-8-BR-2			24-I-8-KI-12 77-I-8/1-KI-12 77-III-8/1-KI-12 24-III-8-KI-12 39-I-8-BR-2		
WELDER	Purge	SIEN	L	S	XL	L	L	S	H	L	S	H	L	S	H	XL	L	L	S	H	L	S	H
J.E. Mahley		2P		X*							X*			X*										
F.G. Arledge		3P		X*							X*			X*										
S.L. Couette		4P		X*							X*			X*										
M.C. Fisher		5P	X+	X*						X+	X*	5	X+	X*	5		X					X*	5
E.C. Scoble		7P		X*							X*			X*										
M.A. Grant		8P		X*							X*	5		X*	5									
J. Tole		2R		X*							X*			X*										
D.M. Trefathen		3R		X*							X*			X*										
D.R. Liberty		1S		X*							X*			X*										
S. E. Goff		3S	X+	X*		X+	X+			X+	X*	5	X+	X*	5		X					X*	
M.R. Boldure		4S		X*							X*			X*										
R. Moreau		5S		X*							X*			X*								X*	5
R.R. Feleciano		6S		X*							X*			X*								X*	
L. Labonte		7S		X*							X*			X*								X*	
V. Capron		8S		X*							X*			X*			X					X*	

XL = FROM ¼" NPS TO MAX. DIA., 1/16" to 294" WALL

L = FROM 3/4" NPS 1/16" - .436" WALL

S = FROM 2½" NPS to MAX DIA., 1/16" to .864" WALL

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NOTE 1: For 408-1-Carp-20-OB-1; 408-III-Carp-20-OB-1 only to .560" WALL

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7/15

Date 6-21-82

PULLMAN POWER PRODUCTS QUALIFIED WELDERS

SOCKET OR FILLET WELDS
Welders qualified for groove welds are also qualified to make fillet welds of any size on all thickness and pipe diameters within the welding variables.

			CARBON AND LOW ALLOY															STAINLESS AND DISS.								
			O.B.		O.B.		O.B.			KI			B.R.			O.B.		O.B.			KI		
			SMAW		GTAW		GTAW-SMAW			GTAW-SMAW			SMAW			GTAW		GTAW-SMAW			GTAW-SMAW		
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WELDER	Purge	SIEN	L	S	XL	L	L	S	H	L	S	H	L	S	H	XL	L	L	S	H	L	S	H
M.D. MacAllister		1T		X*							X*			X*									
D. Montaomery		2T		X*							X*			X*									
D. Deschene		3T		X*							X*			X*							X*	
D.A. Clark		4T		X*							X*			X*									
C. Surkosky		5T		X*							X*			X*									
G. Surkosky		6T		X*							X*			X*									
D.R. Cozzi		7T		X*							X*			X*							X*	
T.A. Mazzalla		8T		X*							X*			X*							X*	
Butler		9T		X*							X*			X*									
M.J. Smith		1V		X*							X*			X*									
R.W. Boatman		3V		X*							X*			X*									
R.L. Omearn		4V		X*							X*			X*									
W.J. Duchae		6V		X*							X*			X*									
D.A. Jackson		7V		X*							X*			X*							X*	
S.J. Burke		8V		X*							X*			X*							X*	

XL = FROM ⅛" NPS TO MAX. DIA., 1/16" to 294" WALL

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H = FROM 2½" NPS to MAX DIA., 3/16" to MAX WALL

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NOTE 3: For 39-I-8-BR-2 only
NOTE 4: For 408-I-Carp-20-OB-1; 408-III-Carp-20-OB-1 to .308" wall only
NOTE 5: Qualified for following thickness: GTAW 1/16" to .176" Max. SMAW 3/16" to Max. to be weld
NOTE 6: Plate only 3/16" to max.
NOTE 7: Qualified for 100-1-8/45-OB-1 only.

* = COMBINATION TESTS QUALIFY FOR THE FOLLOWING: GTAW; .176" WALL, SMAW; .688" WALL

+ = COMBINATION TESTS QUALIFY FOR THE FOLLOWING: GTAW; .176" WALL, SMAW; .260" WALL

S = Qualified to weld to qualified WPS without use of backing gas purge.

5/15

DATE 6-21-82
PAGE 23 OF 25

PULLMAN POWER PRODUCTS QUALIFIED WELDERS

SOCKET OR FILLET WELDS
Welders qualified for groove welds are also qualified to make fillet welds of any size on all thickness and pipe diameters within the welding variables.

		CARBON AND LOW ALLOY														STAINLESS AND DISS.								
		O.B.		O.B.		O.B.			KI			B.R.			O.B.		O.B.			KI		
		SMAW		GTAW		GTAW-SMAW			GTAW-SMAW			SMAW			GTAW		GTAW-SMAW			GTAW-SMAW		
		CL1-1-OB-2 IT11-III-1-OB-2		10-I-1-OB-1 23-I-4/1-OB-1 IT10-III-1-OB-1		61-1-5-OB-12 12-I-1-OB-12 IT12-III-1-OB-12 331-I-1/GR-OB-12			I-1-1-KI-12 74-1-5/1-KI-12 IT1-III-1-KI-12 711-I-4/1-KI-12 44-1-4-KI-12 48-1-5-KI-12			8-Y-1-BR-2 50-1-5-BR-2 59-1-4-BR-2 IT10-III-1-BR-2 CL1-1-BR-2			79-1-0/1-OB-1 79-III-0/1-OB-1 29-III-0-OB-1		27-I-0-OB-12 81-I-0/1-OB-12 81-III-0/1-OB-12 27-III-0-OB-12 39-I-0-BR-2			24-I-0-KI-12 77-I-0/1-KI-12 77-III-0/1-KI-12 24-III-0-KI-12 39-I-0-BR-2		
WELDER	Purge SIZE	L	S	XL	L	L	S	E	L	S	E	L	S	E	XL	L	L	S	E	L	S	E
L. Couture	9V		X*							X*			X*								X*	
	..		..							..			..								..	
T. Record	1X		X*							X*			X*									
W.J. Sexton	2X		X*							X*			X*									
M.A. Clements	3X		X*							X*			X*									
L. Bartolozzi	5X		X*							X*			X*									
D.E. Tracy	6X		X*							X*			X*								X*	
M. Collins	7X		X*							X*			X*								X*	
C.P. Carleton	8X		X*							X*			X*								X*	
T.E. Pryor	9X		X*							X*			X*								X*	
D.J. Healy	1Y		X*							X*			X*									
J.D. Merrigan Jr.	2Y		X*							X*			X*									
J.R. Poust	3Y		X*							X*			X*								X*	
C.W. Geisler	4Y		X*							X*			X*									
M.D. Mulcaly	5Y		X*							X*			X*									
A.H. Stokes	7Y		X*							X*			X*								X*	
J. F. Lamken	8Y		X*							X*			X*								X*	

XL = FROM ¼" NPS TO MAX. DIA., 1/16" to 294" WALL

L = FROM 3/4" NPS 1/16" - .436" WALL

S = FROM 2½" NPS to MAX DIA., 1/16" to .864" WALL

E = FROM 2½" NPS to MAX DIA., 3/16" to MAX WALL

NOTE 1: For 408-1-Carp-20-OB-1; 408-III-Carp-20-OB-1 only to .560" WALL
NOTE 2: Plate only: Limited to .750" WALL
NOTE 3: For 19-I-8-BR-2 only
NOTE 4: For 408-I-Carp-20-OB-1; 408-III-Carp-20-OB-1 to .308" wall only
NOTE 5: Qualified for following thickness: GTAW 1/16" to .176" Max. SMAW 3/16" to Max. to be weld
NOTE 6: Plate only 3/16" to max.
NOTE 7: Qualified for 100-1-8/45-OB-1 only.

* = COMBINATION TESTS QUALIFY FOR THE FOLLOWING: GTAW; .176" WALL, SMAW; .688" WALL

+ = COMBINATION TESTS QUALIFY FOR THE FOLLOWING: GTAW; .176" WALL, SMAW; .280" WALL

S = Qualified to weld to qualified WPS without use of backing gas purge.

6/16

Date 6-21-82

PULLMAN POWER PRODUCTS QUALIFIED WELDERS

SOCKET OR FILLET WELDS
Welders qualified for groove welds are also qualified to make fillet welds of any size on all thickness and pipe diameters within the welding variables.

	CARBON AND LOW ALLOY																STAINLESS AND DISS.								
	O.B.		O.B.			O.B.			KI				B.R.				O.B.		O.B.				KI		
	SMAW		GTAW			GTAW-SMAW			GTAW-SMAW				SMAW				GTAW		GTAW-SMAW				GTAW-SMAW		
	CL1-1-OB-2 IT11-III-1-OB-2		10-I-1-OB-1 73-I-4/1-OB-1 IT10-III-1-OB-1			61-1-5-OB-12 12-I-1-OB-12 IT12-III-1-OB-12 331-I-1/GE-OB-12			1-I-1-KI-12 74-1-5/1-KI-12 IT1-III-1-KI-12 71-I-4/1-KI-12 44-I-4-KI-12 48-I-5-KI-12				8-I-1-BR-2 50-I-5-BR-2 59-I-4-BR-2 IT8-III-1-BR-2 CL1-1-BR-2				79-1-8/1-OB-1 79-III-8/1-OB-1 29-III-8-OB-1		27-I-8-OB-12 81-I-8/1-OB-12 81-III-8/1-OB-12 27-III-8-OB-12 39-I-8-BR-2				24-I-8-KI-12 77-I-8/1-KI-12 77-III-8/1-KI-12 24-III-8-KI-12 39-I-8-BR-2		
WELDER	STEN	L	S	XL	L	L	S	H	L	S	H	L	S	H	XL	L	L	S	H	L	S	H
K.B. Kelley	2Z		X*							X*			X*									X*	
C. Medefros	3Z		X*							X*			X*									X*	
P. Suvatich	4Z		X*							X*			X*										
D. Brown	5Z		X*							X*			X*										
J.A. Maneval	7Z		X*							X*			X*										
D.B. Bolvin	8Z		X*							X*			X*										
B. McCordell	A11		X*							X*			X*									X*	
J. Fisher	A12		X*							X*			X*										
[illegible]eterson	A13		X*							X*			X*										
F. Dobson	A14		X*										X*										
E. Kershaw	A15		X*							X*			X*									X*	
S. Janeski	A17		X*							X*			X*										
C. Bowman	A18		X*							X*			X*										
B. Mabe	A20		X*							X*			X*										
W. FiField	A22		X*							X*			X*									X*	
C. Roy	A30	X+			X				X+		5	X+		5									
D. Gillespie	A41																					X*	

XL = FROM ¼" NPS TO MAX. DIA., 1/16" to 294" WALL

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S = FROM 2½" NPS to MAX DIA., 1/16" to .864" WALL

H = FROM 2½" NPS to MAX DIA., 3/16" to MAX WALL

NOTE 1: For 408-1-Carp-20-OB-1; 408-III-Carp-20-OB-1 only to .560" WALL

NOTE 2: Plate only: Limited to .750" WALL

NOTE 3: For 39-I-8-BR-2 only

NOTE 4: For 408-I-Carp-20-OB-1; 408-III-Carp-20-OB-1 to .308" wall only

NOTE 5: Qualified for following thickness: GTAW 1/16" to .176" Max. SMAW 3/16" to Max. to be welded

NOTE 6: Plate only 3/16" to max.

NOTE 7: Qualified for 100-1-8/45-OB-1 only.

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10/17

Date 6-21-82

PULLMAN POWER PRODUCTS QUALIFIED WELDERS

SOCKET OR FILLET WELDS
Welders qualified for [illegible]ve welds are also [illegible]lified to make fillet welds of any size on all thickness and pipe diameters within the welding variables.

	CARBON AND LOW ALLOY															STAINLESS AND DISS.								
	O.B.		O.B.			O.B.			KI			B.R.				O.B.		O.B.			KI			
	SMAW		[illegible]W			GTAW-SMAW			GTAW-SMAW			SMAW				GTAW		GTAW-SMAW			GTAW-SMAW			
	CL1-1-OB-2 IT11-III-1-OB-2		10-I-1-OB-1 73-I-4/1-OB-1 IT10-III-1-OB-1			61-1-5-OB-12 12-I-1-OB-12 IT12-III-1-OB-12 331-I-1/GE-OB-12			1-I-1-KI-12 74-1-5/1-KI-12 IT1-III-1-KI-12 71-I-4/1-KI-12 44-I-4-KI-12 48-I-5-KI-12			8-I-1-BR-2 50-I-5-BR-2 59-I-4-BR-2 IT8-III-1-BR-2 CL1-1-BR-2				79-1-8/1-OB-1 79-III-8/1-OB-1 29-III-8-OB-1		27-I-8-OB-12 81-I-8/1-OB-12 81-III-8/1-OB-12 27-III-8-OB-12 39-I-8-BR-2			24-I-8-KI-12 77-I-8/1-KI-12 77-III-8/1-KI-12 24-III-8-KI-12 39-I-8-BR-2		
WELDER	STEN	L	S	XL	L	L	S	H	L	S	H	L	S	H	XL	L	L	S	H	L	S	H
F.R. Pickett JR.	B22		X*							X*			X*										
J.A. Mancuso	B30		X*							X*			X*										
V. Patriotti	B33		X*							X*			X*									X*	
M. Arsenault	B34		X*							X*			X*										
E.R. Nabydoski	B35		X*							X*			X*									X*	
R.G. Drakoulakos	B37		X*							X*			X*									X*	
L.L. Prieur	B38		X*							X*			X*										
[illegible]onchak	B40		X*							X*			X*									X*	
R. Celi	B43																					X*	

XL = FROM ¼" NPS TO MAX. DIA., 1/16" to 294" WALL

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3/9

SEABROOK STATION
PULLMAN POWER PRODUCTS

WELD ROD STORES REQUISITION JOB 7035

№ 19753

[redacted]

[redacted]			QASW	QASW	QASW
[redacted]	Insert or Backing Ring Heat No. Y 425B13.1	Insert/BR Returned Yes ☐ No ☐	Time A.M. P.M. / Date	Time A.M. P.M. / Date	Time A.M. P.M. / Date

Consumable Insert

Rod Type	Size & Amount 1/16	3/32	1/8	5/32	3/16	Heat Lot No. or Control No.	Issue LB./PCS.	Re-Issue LB./PCS.	Re-Issue LB./PCS.	Return LB./PCS.
ER [redacted]										
[redacted]										
[redacted]										

Applicable To Welds Not Requiring Process Sheets

Final Visual Accept. __________ Date __________ Production __________ Date __________ QC.

[redacted] Issued By __________ Time ________ A.M. or P.M.

__________ QA Approval __________

__________ __________ __________ Heat Number Verified QA __________

PULLMAN POWER PRODUCTS
SEABROOK STATION
FIELD WELD PROCESS SHEET

Forward ✓

Job No. 7035 Cust. Public Service Co. NH
Sys.-LINE/ISO No. 1CBS-1201-07 ✓
Weld No. F0-101 ✓
Mat'l P1 Code ASME III Class 1
Size 6" ✓ Thk. .280 ✓ Insert YES ✓
WPS No. IT1-III-1-KI-12
Bare Wire E105-2 Electrode E7018
Preheat Range °F Min. 50°F ✓
Interpass Temp °F Max. 600°F ✓
PWHT Temp °F ~~1150°±50°F~~ NA
Hold Time Hrs. NA ✓
Heat Rate °F/hr. ~~600°F~~ NA
Cool Rate °F/hr. ~~600°F~~ NA
Type of Joint: CIRCUM GROOVE ✓
Type of Purge Dam:
LIMITED ACCESS WELD YES NO
Other:

Prepared By: S. Harrington Date: 1-25-82
QA Approved: Jeff Taylor Date: 1/25/82
ANI Review: J. C. Cangeviano Date: 1/25/82

WELD RECORD
Welder(s) Symbol - Root Final
Insert/Backing Ring HT. No. 4250B131
Electrode Lot No(s) A0004, CLO75, 77028
Heat Chart No.

Final Check
QA Date:

Originator Code PX-52
Record Type 41-S-03-006
EMS Index Number

LOCATION:

Opr. No.	OPERATION	N/A	Proc. No.	HOLD ANI	HOLD P.P.P.	Oper.	P.P. Ins. Date	ANI Ins. & Date
	Material Description TO							
1	PC. MARK OR HT. NO. TO							
2	VISUAL INSPECTION		REV. IX-9		H			
3	FIT UP AND TACK		REV. IT1-III-1-KI-12		H			
4	PREHEAT		REV. IT1-III-1-KI-12					
5	ROOT PASS WELD	ANI HOLD POINTS	REV IT1-III-1-KI-12					
6	[redacted]							
7	RADIOGRAPH ROOT	NA						
8	WELD OUT		REV. IT1-III-1-KI-12					
9	INTERPASS TEMP		REV. IT1-III-1-KI-12					
10	PREPARE SURFACE FOR EXAM.		REV. IX-RT-1-W99					
11	VISUAL INSPECT FINAL WELD		REV. IX-9		H			
12	REMOVE PURGE DAM		REV IX-29		H			
13	~~MAGNETIC PARTICLE 100%~~ LIQUID PENETRANT 100%		REV. IX-PT-1-W99		H			
14	[redacted]							
15	POST WELD HEAT TREAT	NA	REV IX-15					
16	P.T. or M.T. 100% Weld and/or Thermocouple Tack Weld	NA	REV					
17	RADIOGRAPH 100%	NA						
18								