T I T L E P A G E

DEPARTMENTAL PROCEDURE MI-5-121 REVISION 01

APPROVAL DATE 2/3/84

EFFECTIVE DATE 2-14-84

Calibration Procedure
Calibration of Burndy
Hypress Crimpers

APPROVED: _____

GROUP HEAD (or designee) SIGNATURE

DEPARTMENTAL PROCEDURE

CHANGE/REVISION/DELETION REQUEST

PROCEDURE NO. MI-5-121 TITLE Calibration of the Eberline Hygrus Grinder

EFFECTIVE DATE _____
(If different from Group Head approval date)

PROCEDURE STATUS

A. Change No. NA

B. Revision No. 1

C. Deletion NA

REASON FOR CHANGE, REVISION, OR DELETION

Correct minor discrepancies, incorporate standard format changes during Biennial Review.

REVIEW SIGNATURES

Originator [signature] Date 1-5-84

Technical Review [signature] Date 1-6-84

PROCEDURE EVALUATION - Does this change, revision, or deletion:

	YES	NO
1. Change the facility as described in the FSAR?	____	✓
2. Change the procedures as described in the FSAR?	____	✓
3. Conduct tests/experiments not described in the FSAR?	____	✓
4. Create a condition or conduct an operation which exceeds or could result in exceeding, the limits in Technical Specification?	____	✓

If the answer to any of the above is yes, complete and attach a 10 CFR 50.59 Safety Evaluation checklist.

PROCEDURE EVALUATION [signature] Date 1-6-84

Q.C. Review [signature] Date 2-3-84

Department Head [signature] Date 2-7-84

TEMPORARY APPROVAL SIGNATURES *

NOS _____ Date _____

Maint. Super (or Group/Dept. Head) _____ Date _____

*Temporary approval must be followed by QC Review, Department Head Review and Group Head Approval within 14 days.

PERMANENT APPROVAL SIGNATURE (Changes/Deletions Only - For Revisions, see Title Page)

Group Head [signature] Date 2-8-84

TABLE OF CONTENTS

LIST OF EFFECTIVE PAGES

Title	Revision 1
1-7	Revision 1

1.0 PURPOSE

This Measuring and Test Equipment (M&TE) procedure provides instructions for verifying the accuracy of the Burndy Hydraulic Hypress Crimper.

2.0 REFERENCES

2.1 MI-1-002, Administrative Control of Measuring and Test Equipment

2.2 Burndy Y35/Y35-2 Hydraulic Hypress Operating, Maintenance & Instructions (457000479)

ME-4-811 requires a Burndy 4-46 crimper

3.0 PREREQUISITES

3.1 Temperature, 70 ± 3 degrees Fahrenheit

3.2 Relative humidity, 20 to 55 percent

4.0 PRECAUTIONS AND LIMITATIONS

4.1 "As Found" readings shall be taken prior to any repairs or adjustments being made.

4.2 If any "As Found" readings are out of tolerance, refer to MI-1-002 for disposition.

5.0 INITIAL CONDITIONS

NONE

6.0 MATERIAL AND TEST EQUIPMENT

6.1 Burndy Mean Set Position Gauge PT292791

6.2 Standard Test Dies PT12831

7.0 ACCEPTANCE CRITERIA

Burndy Hydraulic Hypress Crimpers listed in the Louisiana Power & Light (LP&L) M&TE Index must meet the accuracy requirements specified in the M&TE Index. Burndy Hydraulic Hypress Crimpers not

listed in the LP&L M&TE Index must meet the accuracy requirements specified by the customer.

8.0 PROCEDURE

8.1 PRECALIBRATION

Record the Metrology Laboratory ambient temperature and relative humidity on Attachment 10.1.

8.2 CALIBRATION

8.2.1 Performance Test

8.2.1.1 Slide the upper die into position until it stops. Depress the DIE button and continue to slide in the die. Release the button and slide in the die until the die retainer clicks into place.

8.2.1.2 Advance the ram by rotating the handle until the DIE button is exposed. Slide the ram die into position until it stops. Depress the DIE button and continue to slide in the die. Release button and slide in the die until the die retainer clicks into place.

8.2.1.3 Place the Burndy Mean Set Position Gauge between the jaws of the crimper with the gauge facing upward.

NOTE

Advance or retract the ram by rotating the handle clockwise or counterclockwise as necessary to allow the gauge to fit between the dies. Once the gauge has been properly positioned between the dies, rotate the handle clockwise until the gauge is held firmly in place.

8.2.1.4 Advance the ram by pumping the handles with complete, steady strokes until an audible click is heard and the gauge indicates a sudden drop in pressure. Note the maximum gauge reading.

8.2.1.5 Verify that the crimper force exerted falls within specified limits and record the test results as "SAT or "UNSAT" on Attachment 10.1.

8.2.1.6 Retract the ram by opening the handle as if making a stroke. depressing the handle trigger and closing the handles while holding the trigger down.

8.2.1.7 If the ram was advanced by rotating the handle. turn the handle counterclockwise and depress the trigger as in step 8.2.1.6.

8.2.1.8 Remove the gauge and dies from the crimper.

8.3 POST CALIBRATION

8.3.1 If all "As Found" readings are within tolerance and no adjustments were made to improve accuracy, recording of "As Left" data on Attachment 10.1 is not applicable. Attach a completed calibration sticker to the instrument in accordance with MI-1-002.

8.3.2 If any "As Found" or "As Left" readings are out of tolerance, refer to MI-1-002 for disposition.

9.0 SETPOINTS

NONE

10.0 ATTACHMENTS

10.1 G12.21. Measuring and Test Equipment Record of Calibration

10.2 Sketch of the Burndy Hydraulic Hypress Crimper

11.0 COMMITMENTS AND REFERENCES

DOCUMENT REVIEW COMMENTS

DOCUMENT NO. NI-5-121 REV./DRAFT R/1

TITLE CALIBRATION OF BURNDY HYPRESS CRIMPERS

COMMENT NO.	COMMENT	RES. NO.	RESOLUTION
(1)	NONE		

1. Reviewed By.

Stephen G Angloff 2354

Reviewer Date

2-3-84

2. Comments Resolved By:

Author Date

3. Resolution of Comments Accepted By

Reviewer Date

F 1069 81 00 SU

TECHNICAL REVIEW CHECKLIST

PROCEDURE NO. MT-S-121 TITLE Calibration of the Tenney Hydrostatic Hydraulic Control

REVISION NO. 1

INSTRUCTIONS FOR TECHNICAL REVIEWER

A. This form is required for new procedures and revisions. It is not applicable to changes or deletions.

B. If any of the checklist items cannot be verified with a "YES" answer, document each item on an attached Document Review Comment Sheet; and return to the author for resolution.

C. Following resolution of comments, change the answer, initial and date and return this checklist to the Author. No Technical Review Checklist with an unresolved "NO" answer should be submitted to the POMC.

		YES	NO
1.	Can this procedure be performed in verbatim compliance and in the sequence listed?	✓	
2.	Is all the information necessary for procedure performance in the procedure or listed as a Reference?	✓	
3.	Are all necessary references readily available?	✓	
4.	Are all necessary materials, test equipment, etc., listed in the procedune?	✓	
5.	Are all steps clear and require no interpretation?	✓	
6.	Are the prerequisites/initial conditions sufficient?	✓	
7.	Do precautions or notes warn Operators of alarms to be received or equipment made inoperable during the procedure?	✓	~~✓~~ ✗ ECN 1644
8.	Are plant systems/components properly restored and retested?	✓	~~✓~~ ✓ ECN 1644
9.	Are all equipment numbers and/or nomenclature in the procedure identical to those displayed on the equipment or controls?	✓	
10.	Can all of the equipment/components in the procedure be easily located?	✓	
11.	Are applicable safety precautions included in the procedure?	✓	
12.	Does the procedure meet the requirements of the applicable codes, standards, regulatory guides, Technical Specifications, FSAR, etc?	✓	
13.	Does the procedure conform to the applicable procedure guidelines (pages 2 thru 8 of Attachment 6.9)?	✓	
14.	Is post-maintenance testing conducted in accordance with the applicable Technical Specifications and vendor and/or engineering recommendations?	✓	
15.	Is the procedure consistent with all Technical Specification limiting conditions for operation and applicable vendor-recommended operating limits?	✓	

TECHNICAL REVIEWER [signature] DATE: 1-6-83

CHANGE 2 SOR 11-3-83

PROCEDURE WRITING GUIDELINES

A. GENERAL

1. The procedure does not have the potential of involving an unreviewed safety question, as documented by "NO" answers to all Safety Evaluation questions on the attached Review Cover Sheet or Change/Revision/Deletion Request.

B. FORMAT

1. The procedure format is correct for the appropriate procedure type as described in UNT-1-002.

2. The procedure categorization (e.g., Surveillance, Administration, etc.) is correct per the requirements of UNT-1-002.

C. PURPOSE

1. The purpose statement clearly identifies the objective of the procedure.

2. The purpose statement clearly identifies the systems, subsystems, or equipment to which the procedure is applicable.

D. REFERENCES

1. All reference documents are identified correctly.

2. All references identified are easily available to any individual who might be performing this procedure.

E. DEFINITIONS

1. Definitions are provided for all terms or phrases which have a special or limited meaning when applied within the context of the procedure.

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F. RESPONSIBILITIES

1. Significant group and departmental interfaces associated with the conduct of the procedure are clearly identified.

2. Organizational and position titles and descriptions are current and correct.

3. Responsibilities are clear and designate accountability and evaluation of results.

G. PREREQUISITES

The PREREQUISITES section provides the individuals performing the procedure enough information to properly plan and schedule procedure performance, including:

1. Other procedures which must be completed prior to use.

2. The number and/or types of personnel required to perform the procedure.

3. All bulk materials, chemicals, solvents, bottled gases, etc. required during the conduct of the procedure.

4. Any required condition not associated with specific system or plant operatingconditions (e.g., reactor vessel head installed, airlock inner door strong backs in place, blind flanges installed, etc.)

H. PRECAUTIONS AND LIMITATIONS

1. All major equipment operating precautions and limits recommended by the appropriate vendor manuals are included

CHANGE 2 PCR 11-E-83

2. Any unique personnel hazard which may exist during the conduct of the procedure is identified along with any personnel protective equipment required.

3. Any procedural evolution which may introduce a significant probability of degrading nuclear, equipment, or personnel safety through a single human or equipment failure is noted with an appropriate caution.

4. Any entry into a Technical Specification action statement through removing components from service for testing, maintenance, etc. is noted.

5. Controls are included to ensure that all applicable cleanliness requirements are satisfied per appropriate plant procedures/industry standards.

I. INITIAL CONDITIONS

1. All plant or system operating conditions required to be established prior to the start of the procedure are identified. This includes operational mode or alignment and operating parameters.

2. All initial conditions associated with indicated process parameters have a tolerance associated with them (e.g., pressurizer pressure is 2150 ±20 psig).

3. Notification and authorization of the NOS to start the procedure is obtained and documented for any procedure affecting equipment or system availability, nuclear safety, capacity, or which will affect operating indications.

4. Cross references to other procedures utilized to establish initial operating modes or system configurations are correct (e.g., system in operation per section ____ of OP_____).

J. MATERIAL AND TEST EQUIPMENT

1. All special tools or test equipment required to perform the procedure are specified (by the appropriate part number and/or unique nomenclature, if applicable).

2. Calibration requirements are specified for all special tools and/or test equipment.

3. Adequate provisions exist when specifying the type of test equipment to be utilized to ensure that the appropriate ranges are specified and that required accuracies are obtained.

4. All materials necessary to perform the procedure are adequately specified.

K. ACCEPTANCE CRITERIA

1. Source documentation for the development of acceptance criteria is included in the REFERENCES section of the procedure.

2. The acceptance criteria provided are consistent with the values provided in the referenced source documentation.

3. Verification of acceptance criteria is consistent with the stated purpose of the procedure.

4. If a quantitative acceptance criterion is based on deviation from a design value, the acceptance criterion is stated as a range with an upper or lower acceptance value, as appropriate.

L. PROCEDURE

1. The procedure minimizes references to other procedures and provides all instructional information required to perform the activity.

2. References to other procedures specify the exact section, paragraph, page, or steps, as appropriate.

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PROCEDURE WRITING GUIDELINES

3. Adequate provisions have been made to provide necessary Quality Control hold and/or witness points.

4. The procedure provides for verification and signoff of actions.

5. Individual steps are short, concise, identifiable steps as opposed to multi-sentence paragraphs.

6. Each step has the following provisions incorporated:

   a. Each action to be taken is specifically identified.

   b. Limits and setpoints are accurate and stated quantitatively with the proper units.

   c. It is clear which individual is to perform the step.

7. Warnings, cautions, and note applicable to the performance of specific steps or series of steps are accurate, highlighted, and placed immediately ahead of the step to be performed.

8. All equipment, switches, controls, indications, or alarms requiring alignment are specifically identified using the appropriate step (does not refer to previous steps).

10. The procedure is written so as to employ good ALARA principles and avoid unnecessary personnal exposure.

11. If system components are aligned in other than their as-found or normal operational alignment, the procedure includes the following:

    a. Each item or component requiring realignment is individually specified.

    b. Each item is correctly identified with a unique number or nomenclature.

c. The position or state to which the component is to be placed is clearly and correctly specified with a signoff to document restoration.

d. If proper restoration of the component has safety significance, double independent verification is provided with provisions for signoffs for each verification performed.

12. The procedure includes positive verification that applicable acceptance criteria have been satisfied and provides guidance for subsequent action to be taken in the event that acceptance criteria are not met.

13. The procedure can be performed in the sequence in which it was written.

14. The procedure is consistent with all Technical Specification limiting conditions for operation and applicable vendor-recommended operating limits.

Q. SETPOINTS

1. All setpoints listed are provided with the proper engineering units.

2. All setpoints are consistent with values provided in the latest source documentation.

R. FINAL CONDITIONS

1. All conditions whose existance indicates that the purpose of an Emergency Implementing Plan procedure or instruction has been fulfilled are listed.

S. ATTACHMENTS

1. All illustrations, graphs, charts, tables, and computational formulas are accurate and appropriate for their intended use.

CHANGE 7 1-3-83

DOCUMENT REVIEW COMMENTS

DOCUMENT NO. MI-5-121 REV. ~~SCRIPT~~ 1

TITLE CAL OF BLENDY HYDRAULIC CRIMPER

COMMENT NO.	COMMENT	RESOLUTION NO.	RESOLUTION
1)	STEPS 7+8 OF TECH REVIEW CHECKLIST ARE NOT APPLICABLE TO THIS PROCEDURE	1)	Concur

1. Reviewed By: [signature] 1-6-94
Reviewer Date

2. Comments Reviewed By: [signature] 1/6/94
Author Date

3. Resolution of Comments Accepted By [signature] 1-6-94
Reviewer Date

PCM PROCEDURE TRACKING SHEET

Number MI-5-121 Title Calibration of the Sandy Type Dimpler

Rev. No. 1

Author D. Whittaker

	NAME/DATE
DRAFT 1	
EDIT	KK 1/12/84
ENTER/C&P	[illegible] 1/12/84
PROOF/VFY	KK 1/19/84
C&P	[illegible] 1/20/84
VFY	KK 1/20/84
REV. 0 (1, 2, etc.)	
EDIT	[illegible] 1/31/84
C&P	[illegible] 1/31/84
VFY	KK 1/23/84
C&P	CMB 1-23-84
VFY	[illegible] 1/24/84
C&P	
VFY	KK 1/25/84

MIDDLE SOUTH UTILITIES SYSTEM

G12.21
Rev.0

MEASURING AND TEST EQUIPMENT RECORD OF CALIBRATION

CONTROL NUMBER

USER _____ SERIAL NO. _____

TEST INSTRUMENT (Name of Item Calibrated) HYDRAULIC HYPRESS CRIMPER RANGE N/A

MANUFACTURER BURNDY CALIBRATION PROCEDURE NUMBER MI-5-121

MODEL NUMBER Y-35/Y-39 REVISION 01

AS FOUND CONDITION

SATISFACTORY ☐
UNSATISFACTORY ☐

AS LEFT CONDITION

SATISFACTORY ☐
UNSATISFACTORY ☐

MANHOURS _____

NEXT CALIBRATION DUE DATE ___/___/___ Month Day Year

METROLOGY LABORATORY

TEMPERATURE _____ °F
RELATIVE HUMIDITY _____ %
BAROMETRIC PRESS. N/A in Hg

CIWA NUMBER

RECORD SEARCH _____
REWORK _____

TASK CARD NUMBER _____

CALIBRATION CYCLE _____ (Months)

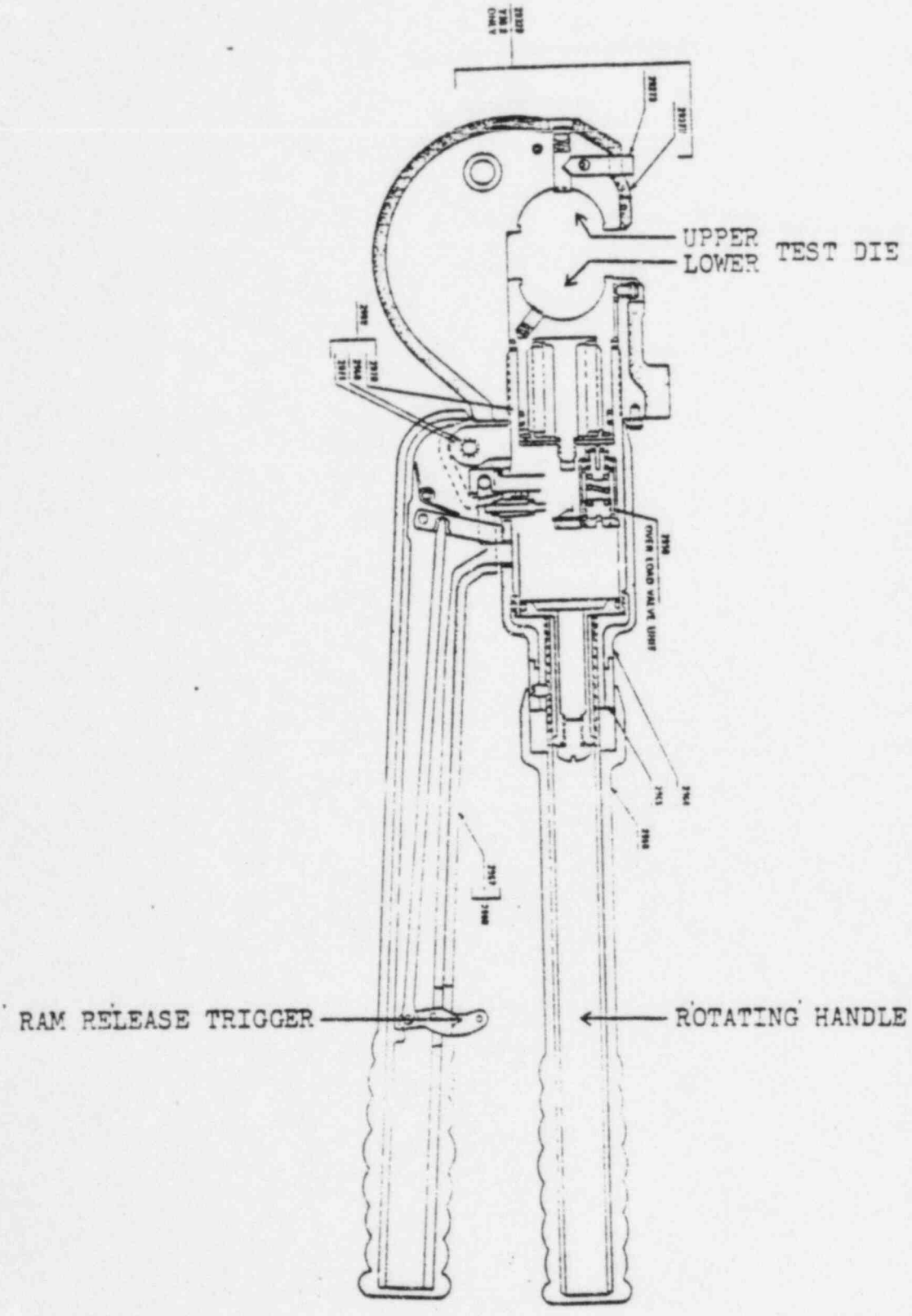
CALIB. EQUIP.	CONTROL NO.	CALIB. DUE DATE	REMARKS
			CALIBRATION EQUIPMENT USED IS TRACEABLE TO THE NATIONAL BUREAU OF STANDARDS.

CALIBRATION TECHNICIAN (Print) _____ REVIEWED BY (Signature) _____

DATE Time ___/___/___ Month Day Year

DATE ___/___/___ Month Day Year

PROC. STEP NO.	FUNCTION TESTED	NOMINAL	MEASURED VALUES		CALIBRATION TOLERANCES
			AS FOUND	AS LEFT	
8.2.1.5	CRIMPER FORCE	CRIMPER bREAKS			SAT/UNSAT
	-	BETWEEN GAGE MIN.			
		AND MAX. FORCE			
		POINTS.			



SKETCH OF THE BURNDY HYDRAULIC HYPRESS CRIMPER