

U.S. NUCLEAR REGULATORY COMMISSION
OFFICE OF INSPECTION AND ENFORCEMENT
REGION IV

Report No. 99900245/80-01

Program No. 51300

Company: J. E. Lonergan Company
Red Lion Road, West of Verrie Road
Philadelphia, Pennsylvania 19115

Inspection Conducted: April 21-22, 1980

Inspector: *W.D. Kelley* 05/08/80
William D. Kelley, Contractor Inspector
Components Section I
Vendor Inspection Branch
Date

Approved by: *D.E. Whitesell* 05/08/80
D. E. Whitesell, Chief
Components Section I
Vendor Inspection Branch
Date

Summary

Inspection on April 21-22, 1980 (99900245/80-01)

Areas Inspected: Implementation of 10 CFR, Appendix B and applicable codes and standards including, design and document control - design verification, manufacturing process control - material identification and control and machining, inspection and test-magnetic particle examination, and training - welder qualification. Also, performed a general review of vendor's activities and conducted an exit interview.

The inspection involved eight (8) inspector-hours on site by one (1) NRC inspector.

Results: In the five (5) areas inspected, no unresolved items were identified. One deviation was identified.

Deviation: Manufacturing Process Control - certain manufacturing requirements were not met (See Notice of Deviation).

DETAILS SECTIONA. Persons ContactedJ. E. Lonergan Company (JEL)

- *T. A. Nickey - Quality Assurance Manager
- *A. J. Schmidt - Chief Engineer
- *W. A. Roach, Jr. - Assistant to the President

Hartford Steam Boiler Inspection and Insurance Company

E. Eirikis - Authorized Nuclear Inspector

*Denotes those persons who attended the Exit Interview (See paragraph H)

B. General Review of Vendor's Activities

The ASME issued the following Certificates of Authroization to JEL to use their symbol:

<u>Certification No.</u>	<u>Symbol</u>	<u>Product</u>
N-2359	NV	Class 1, 2, & 3 safety and Safety relief valve

This certificate expires on September 10, 1980.

The inspector requested to see JEL's "NPT" certificate of Authorization and was informed that they did not possess one as in their judgement it was not required. JEL personnel stated it is their interpretation of the Code that a "NPT" Certificate of Authorization was not required for replacement parts manufactured in their plant under the controls imposed by their "NV" Certificate of Authorization and its required quality assurance program.

The authorized inspection agency was contacted by the quality assurance manager during the inspection and the inspector was informed that the authorized inspection agency's interpretation of the ASME Code was a "NPT" Certificate of Authorization is required only when parts are joined by welding. However, the authorized inspection agency did state that it may be advisable the apply for the certification when application is made for renewal of the "NV" Certificate of Authorization.

This item will be forwarded to Inspection and Enforcement - Headquarters for interpretation and resolution.

C. Design and Document Control - Design Verification

1. Objectives

The objectives of this area of the inspection were to verify that:

- a. Procedures had been prepared and approved by the vendor to prescribe a system for design verification which is consistent with NRC rules and regulations, and the vendor's commitments in the ASME accepted Quality Assurance Program.
- b. The design verification procedures are properly and effectively implemented by the vendor.

2. Method of Accomplishment

The objectives of this area of the inspection were accomplished by:

- a. Review of the ASME accepted Quality Assurance Manual Revision 0; Second Edition.

(1) Section 3, "Administrative Control" and

(2) Section 4, "Engineering";

to verify that the vendor had established procedures to prescribe a system for design verification.

- b. Reviewed the JEL Contract Review - JEL Form 95 on Shop Order 7904329 Documentation Check List Form 98 to verify that they had been prepared by the designated authority, approved by management, and reviewed by QA.

- c. Reviewed the documents referenced in paragraphs a. and b. to verify that they contained measures to verify the adequacy of design, require documented results of the design verification, required the design verification to consider the importance to safety, identify the method of performing the design verification, identify items to be addressed during the design review, and prescribes the requirements for performing verification by alternate calculations, or by qualification test.

- d. Reviewed by design verifications:

(1) Design Report for 2" x 3" DB-92 G/S4/SP Safety Relief Valve

(2) National Board of Boiler and Pressure Vessel Inspectors Letter dated October 15, 1975. Re: Capacity Certification of LCT Series per ASME Code, Section VIII to verify that the design verification procedures are being implemented.

- e. Interviews with personnel to verify that they are knowledgeable in the procedures applicable to design verification.

3. Findings

- a. The inspector verified that procedures had been prepared and approved by the vendor prescribing a system for design verification which is consistent with NRC rules and regulations, and the vendor's commitments in the ASME accepted Quality Assurance Program.
- b. Within this area of the inspection no deviations or unresolved items were identified.
- c. Follow-up Item

Subsequent to the inspection the inspector noted in his review of the design report for a 2" x 3" DB-92 S/S4/SP Class 1 safety relief valve that it did not address the disc, bolting, and flange design. The inspector will review the design report with the vendor on a subsequent inspection.

D. Manufacturing Process Control - Material Identification and Control

1. Objective

The objective of this area of the inspection was to verify that material identification and control during manufacturing is in accordance with NRC rules and regulation, and the vendor's commitments in the ASME accepted Quality Assurance Program.

2. Method of Accomplishment

The objective of this area of the inspection was accomplished by:

- a. Review of the ASME accepted Quality Assurance Manual, Revision 0; Second Edition.
- (1) Section 7, "Receiving and Receiving Inspection,"
- (2) Section 8, "First Piece and In-Process Inspection," and

(3) Section 10, "Control and Identification of Controlled Items;"

to verify that procedures had been established for material identification and control during manufacturing.

- b. Review of the procedures referenced in paragraph a. to verify they provided for the identification and control of purchased materials, requires positive identification of materials throughout the manufacturing cycle, and provide for the segregation and disposition of nonconforming materials.
- c. Reviewed certified material test reports to verify they conformed with ASME Code requirements, applicable material specifications, and/or special requirements, are included in the procurement documents.
- d. Examined representative material in various stages of manufacturing and verified that the identification, and traceability to the certified mill test report, was being maintained.
- e. Interviews with personnel to verify they are knowledgeable in the procedures applicable to material identification and control.

3. Findings

- a. The inspector verified that the material identification and control during manufacturing was consistent with NRC rules and regulation, and the vendor's commitments.
- b. Within this area of the inspection no deviations or unresolved items were identified.

E. Manufacturing Process Control - Machining

1. Objectives

The objectives of this area of the inspection were to verify that:

- a. The machining operations were performed under a controlled system of manufacturing which meets NRC rules and regulations and the vendor's commitments in the ASME accepted Quality Assurance Program.
- b. The controlled system of manufacturing was effective in assuring product quality.

2. Method of Accomplishment

The objectives of this area of the inspection were accomplished by:

- a. Review of the ASME accepted Quality Assurance Manual, Revision 0, Second Edition.
 - (1) Section 8, "First Piece and In-Process Inspection" and
 - (2) Section 17, "Handling, Storage, Preservation and Shipping.to verify that procedures had been established to prescribe a control system of operation.
- b. Review the procedures referenced in paragraph a. to verify that they had been prepared by the designated authority, approved by management, and reviewed by QA, and are consistent with NRC regulation, Code requirements, and QA commitments.
- c. Review of the following documents:
 - (1) Operation and routing sheets,
 - (2) Drawings,
 - (3) Receiving Logs, and
 - (4) Certified Material Test Reports,to verify that they provide drawing/document control in the shop, and also provides for part identification and traceability, in-process and final inspections, identification and segregation of defective items, the resolving of nonconforming items, and that the gages and measuring devices are under a controlled calibration system.
- d. Examine three (3) representative samples of finished machined parts to verify that they were properly identified and machined to conform to the drawings and specifications.

3. Findings

- a. The inspector verified that the machining operations were performed under a controlled system of manufacturing which meets NRC rules and regulations and the vendor's commitments in the ASME accepted Quality Assurance Program.

b. Deviation

The inspector noted that drawing, B2450 Revision 9 for Bonnet (0022010172) specified a 5/16 inch radius at the hub of the flange and backfaced to a 3 5/8 inch diameter. The part had been backfaced and the backfacing had removed the 5/16 inch radius, and this departure from drawing requirements was not identified and a Defectice Material Report initiated.

The removal of the radius of the bonnet by the backfacing operation is a deviation from code requirements, and drawing dimensions, and the Vendor's commitments. See Notice of of Deviation.

- c. While inspecting valve parts in the nuclear controlled areas, the quality assurance manager noted that bodies on DMR 2577, Part 10 (107204219) which are for nuclear navy, were in the controlled area for commercial nuclear valves. It was established that this was an isolated case and the valves were removed immediately from the commercial nuclear valve controlled area, and placed in the navy valve controlled area.

F. Inspection and Test - Magnetic Particle Examination

1. Objectives

The objectives of this area of the inspection were to verify that:

- a. The magnetic particle examination procedures used by the vendor meets the applicable NRC rules and regulations, and the vendor's commitments in the ASME accepted Quality Assurance Program.
- b. The magnetic particle examinations are performed by properly qualified personnel in accordance with the procedures.

2. Method of Accomplishment

The objectives of this area of the inspection were accomplished by:

- a. Review of the ASME accepted Quality Assurance Manual, Revision 0, Second Edition.

(1) Section 5, "Procurement of Material" and

(2) Section 7, "Receiving Inspection."

to verify that procedures had been established for magnetic particle examination.

- b. Review of procedures referenced in paragraph a. to verify that they had been reviewed and approved, in accordance with the quality assurance program and Code requirements.
- c. Interviews with personnel to verify they are knowledgeable in the procedures applicable to magnetic particle examination.

3. Findings

- a. The inspector verified that all nondestructive testing is performed by an outside vendor that has been surveyed and approved by JEL in accordance with the requirements of their ASME accept quality assurance program and placed on the approved vendors list.
- b. Within this area of the inspection no deviations or unresolved items were noted.

G. Training - Welder Qualification1. Objective

The objectives of this area of the inspection were to verify that the welders and welding operators are qualified in accordance with NRC rules and regulations, and the vendor's commitments in the ASME accepted Quality Assurance Program.

2. Method of Accomplishment

The objectives of the inspection were accomplished by:

- a. Review of the ASME accepted Quality Assurance Manual Revision 0, Second Edition, Section 11, "Welding" to verify that procedures had been established requiring the qualification of welders and welding operators.
- b. Review of the Record of Performance Qualification tests of welders and welding operators of procedures W-117. Hard Surfacing Procedure and W-102 procedure for Manual shielded Metal Arc Welding SA-106 Grade B.P.1. to verify that they are in conformance with ASME Code requirements.
- c. Review of welders qualification log, to verify that the vendor has provided a system for maintaining a continuous record of the

welder qualifications; and that the welders have been, and are currently, qualified to weld under the prescribed procedures.

- d. Interviews with personnel to verify they are knowledgeable in the procedures applicable to welder qualification.

3. Findings

- a. The inspector verified that the welder was qualified in accordance with NRC rules and regulations, and the vendor's commitments.
- b. JEL has only one qualified welder that has been with the company for approximately 15 years.
- c. Within this area of the inspection no deviations or unresolved items were identified.

H. Exit Interview

At the conclusion of the inspection on April 22, 1980, the inspector met with the company's management, identified in paragraph A, for the purpose of informing them as to the results of the inspection. During this meeting the identified deviation was discussed and the evidence which supported the findings were identified.

The company's management acknowledged the findings and supporting evidence as being understood, but had no additional comments.