

U. S. ATOMIC ENERGY COMMISSION
DIRECTORATE OF REGULATORY OPERATIONS
REGION I

REPORT OF VENDOR INSPECTION

RO VENDOR INSPECTION REPORT NO. 50-363/73-06

DOCKET NO. 05000363

VENDOR: Klockner Works

LICENSE NO. CPPR-96

ADDRESS: Osnabruck, Germany

PRIORITY _____

CATEGORY A

EQUIPMENT: Reactor Coolant Pumps

LICENSEE: Jersey Central Power & Light Company

LOCATION: Parsippany, New Jersey (Forked River)

TYPE OF LICENSEE: PWR-MW(e) 1070

TYPE OF INSPECTION: Vendor, Announced

DATE OF INSPECTION: November 1-2, 1973

DATE OF PREVIOUS INSPECTION: April 9-10, 1973

REPORTING INSPECTOR: Ross L. Brown, Reactor Inspector

DATE: 11-27-73

ACCOMPANYING INSPECTOR _____

DATE: _____

OTHER ACCOMPANYING PERSONNEL: None

REVIEWED BY: J. H. Tillou, Senior, Reactor Inspector

DATE: _____

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SUMMARY OF FINDINGS

Enforcement Action

None

Licensee Action on Previously Identified Enforcement Items

None

Design Changes

The design of the pump support lugs has been changed to comply with the seismic design criteria. (Details, Paragraph 3)

Unusual Occurrences

None

Other Significant Findings

A. Current Findings

The vendor has been requested to determine if these pump casings will be in conformance with the requirements of ASME Codes, Sections II, III, IX, 1971 Edition and including the Addenda through Winter 1971. (Details, Paragraph 4)

B. Status of Previously Reported Unresolved Items

1. The vendor's heat treatment procedure has been revised to define a temperature range for each heat treatment temperature. This item is considered resolved.
2. The vendor has issued shop instructions to all production departments, that requires cleaning and inspection of all clad components prior to heat treatment. The instruction also establishes responsibility and authority for this activity. This item is considered resolved.

Management Interview

- A. The inspector conducted a meeting with the following management representatives at the conclusion of the inspection.

Persons Present:

Combustion Engineering

J. L. VanFleet, Assistant, Project Manager
G. Brunetto, Quality Assurance, Representative

KSB

M. Dilly, Quality Assurance, Engineer

Klockner

Korbe, General Manager Production
Knorre, Project Manager
Dr. W. Austel, Quality Assurance
C. Maidorn, Quality Assurance
W. Neumann, Quality Control Assistant
H. Wiebrock, Quality Control Assistant

B. The following items were discussed:

1. The inspector discussed the AEC procedure for handling reports, prior to their placement in the Public Document Room.
2. The inspector stated that the AEC requires documentary evidence that the vendor has conducted a review and recorded their findings relative to upgrading these pumps to the later code requirements.

The inspector described how the AEC establishes the effective addenda to the codes to comply with the requirements of 10 CFR 50.55a, "Codes and Standards".

The vendor management stated, that Klockner will prepare the documentary evidence necessary to verify conformance with the later code requirements when Klockner receives a purchase order change notice from the KSB Company, however, there does not appear to be any problem in conforming with the requirements of the addenda to the codes through Winter 1971.

The inspector stated, that this item will be carried by the AEC as an open item and will be audited during a subsequent vendor inspection possibly at KSB. (Details, Paragraph 4)

3. The inspector stated, that the quality records that were selected at random and reviewed in detail, appeared to be in conformance with the requirements of the specified codes and standards, but these records must be reviewed by the vendor to verify conformance with the later code requirements.

DETAILS

1. Persons Contacted

Combustion Engineering (CE)

J. L. VanFleet, Assistant Project Manager
G. Brunetto, Quality Assurance Representative

KSB

M. Dilly, Quality Assurance Engineer

Klockner

C. Maidorn, Quality Assurance
W. Neumann, Quality Control Assistant
H. Wiebrock, Quality Control Assistant

2. General

The testing of the pumps is scheduled to start in January 1974 and all four pumps are scheduled to be completed and ready for shipment in mid year 1974.

3. Design Change of the Pump Support Lugs

- a. The length of the pump support lugs has been extended to meet the seismic design criteria.
- b. The support lugs as originally designed had been welded to the casings prior to this change.
- c. The extensions have been welded previously attached lugs, utilizing 100% penetration weld.
- d. These welds will be magnetic particle and ultrasonically examined after stress relief.

The CE representative stated that he is not aware if this change has been covered in the safety analysis report.

4. Upgrading the pump to conform with the Winter 1971 Code Requirements.

- a. The inspector stated that in accordance with requirements of 10 CFR 50.55a "Codes and Standards", these pumps must be in conformance with the Winter 1971 Code Requirements.
- b. The inspector also stated that the AEC requires documentary evidence that the code requirements relative to the design, material characteristics, testing, welding, and qualifications have been reviewed and all required changes identified and any necessary corrective action has been taken or scheduled to be taken.
- c. The Klockner management stated, that they have been requested to conduct a review for possible upgrading to the Winter 1971 Code Requirements, but they have not received a purchase order change to officially require the upgrading.
- d. The Combustion Engineering representative stated, that a purchase order change will be issued to require these pumps to be upgraded to the Winter 1971 Code Requirements.

5. Record Review

The inspector selected on a random basis records pertinent to the numbers 3, 4 pump casing components (shell, casing flange, suction nozzle and discharge nozzle). These records were audited in detail to insure the vendors utilizing materials, procedures and techniques that are in conformance with the specified code and specifications.

- a. Material tests reports, which include the chemical characteristics, physical properties, charpy "V" notch, charpy "V" notch curves, drop weights, and ultrasonic examination after heat treatment.
- b. Quench and temper heat treatment report and furnace charts.
- c. Cladding Weld History Reports and Chemical Analyses Reports including ferrite content.

No violations to the specified codes and specifications were identified.

6. Observation of Work Performance

During the inspection shop tour no violations to the codes, specifications, or quality assurance program were observed.