

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

Report No. 99900340/79-02

Program No. 51300

Company: Yarway Corporation
Blue Bell, Pennsylvania 19422

Inspection Conducted: August 20-22, 1979

Inspector:

Wm. D. Kelley
Wm. D. Kelley, Contractor Inspector
Components Section I
Vendor Inspection Branch

9-6-79
Date

Approved by:

Wm. D. Kelley
for D. E. Whitesell, Chief
Components Section I
Vendor Inspection Branch

9-6-79
Date

Summary

Inspection on August 20-22, 1979 (99900340/79-02)

Areas Inspected: Implementation of 10 CFR 50, Appendix B and applicable codes and standards including, procurement document control, control of special processes - weld heat treatment, manufacturing process control - machining, calibration, and quality assurance records; also reviewed previously identified items and vendors activities. The inspection involved twenty (20) inspector hour on site by one (1) NRC inspectors.

Results: In the seven (7) areas inspected, no deviations or unresolved items were identified.

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DETAILSA. Persons ContactedYarway Corporation (YC)

- *W. D. Clinton, Vice President of Manufacture
- C. D. Galloway, Senior Buyer
- C. McDevitt, Gage Inspector
- *S. F. Myers, Vice President, Reliability
- *W. A. Volger, Manager, Quality Assurance

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

B. General Review of Vendor's Activities

1. The ASME issued the following Certificates of Authorization to YC to use their symbol:

<u>Certification No.</u>	<u>Symbol</u>	<u>Product</u>
N-1891	N	Class 1, 2, and 3 valves
N-1892	NPT	Class 1, 2, and 3 valve parts, appurtenances, and piping subassemblies

These certificates expire on October 21, 1980.

2. The authorized inspection agency is Factory Mutual Engineering. The authorized nuclear inspector is an itinerate inspector.
3. YC's contribution to the nuclear industry represents approximately eight percent (8%) of its total workload.
4. YC has the design and manufacturing capabilities to produce up to and including 24 inch line size and 2500# ANSI flow control, automatic recirculating, high pressure drop valves and steam traps.

C. Previously Identified Items

(Closed) Deviation (Report No. 79-01): Contrary to Criterion V of Appendix B to 10 CFR 50 and paragraph NCA-4134.5 of Section III to the ASME Code and paragraph 8.1.3 of the ASME accepted Quality Assurance Manual, Torque Wrench YM-7 assigned to the research department had a

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calibration due date of November 8, 1978, but was being used in the assembly area on January 23, 1979.

The inspector verified that all torque wrenches are now maintained in a central location and that the inspectors have received additional training regarding the need of reporting the tools and gages which are found to be out of calibration.

(Closed) Unresolved Item (Report No. 79-01): YC Interoffice memo dated April 7, 1975, subject "Product Developing Scheduling," was approved but not identified as a controlled document.

The inspector verified that the document is now a controlled document.

D. Quality Assurance Records

1. Objectives

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

- a. Procedures had been prepared and approved by the vendor that prescribed a system for control of quality assurance records which is consistent with NRC rules and regulations and the ASME accepted Quality Assurance Program.
- b. The quality assurance record procedures are properly and effectively implemented.

2. Method of Accomplishment

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

- a. Review of the ASME accepted Quality Assurance Manual revised September 21, 1978;
 - (1) Section 3, Customer Order Control,
 - (2) Section 4, Procurement Control. and
 - (3) Section 10, Retention of Records

to verify that the vendor has established procedures that prescribed a system for the control of quality assurance records.

- b. Review of procedure QAI-074, Revision 0, "Quality Records," to verify that it had been prepared by the designated authority, approved by responsible management, and reviewed by QA.

- c. Review of the procedures identified in paragraphs a and b to verify that they identify the records that are to be retained, defines where and how they are to be stored for preservation and safekeeping, and provides for their retrieval without undue delay.
- d. Review of the following quality assurance records for two purchase orders:
 - (1) Nuclear Control Plan,
 - (2) Hydrostatic Test Reports,
 - (3) Form NPV-1 Manufactures Data Reports,
 - (4) Certificates of Conformance,
 - (5) Mill Test Reports, and
 - (6) Performance Test Reportsto verify that the vendor's procedures pertaining to quality assurance records are properly and effectively implemented.
- e. Verify that the procedures and necessary resources are available to the personnel responsible for identifying and filing quality assurance documents.
- f. Interviews with personnel to verify whether they are knowledgeable in the procedures applicable to the identification and filing of quality assurance documents.

3. Findings

- a. The inspector verified that:
 - (1) Procedures had been prepared and approved by the vendor which prescribed a system for the control of quality assurance records, and the system is consistent with NRC rules and regulations and the ASME accepted Quality Assurance Program.
 - (2) The quality assurance records procedure are properly and effectively implemented.
- b. Within this area of the inspection, no deviations or unresolved items were identified.

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E. Procurement Document Control

1. Objectives

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

- a. Procedures had been prepared and approved by the vendor which prescribes a system for procurement document control which is consistent with NRC rules and regulations, ASME Code, and the vendor's commitments in the ASME accepted Quality Assurance Program.
- b. The procurement document control 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, revised September 21, 1978;
 - (1) Section 3, "Customer Order Control," and
 - (2) Section 4, "Procurement Control"to verify that the vendor had established procedures that prescribed a system for procurement document control.
- b. Review of the procedures identified in paragraph a, to verify that they had been prepared by the designated authority, approved by responsible management and reviewed by the QA.
- c. Reviewed the procedures identified in paragraph a to verify that the scope of work to be performed is identified, the technical requirements are specified, test and inspection criteria are identified, special instructions and requirements identified, suppliers are required to have a documented QA Program, and that the procurement documents are reviewed prior to release for bid and/or contract award.
- d. Review of the following documents of four orders:
 - (1) Procurement documents,
 - (2) Purchase requisitions,

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- (3) Purchase orders,
- (4) Technical documents

to verify that the procurement procedures are being properly and effectively implemented, interface control of procurement documents is effectively and properly performed in accordance with procedures, and that the distribution list for procurement documents had been established and are current.

- e. Interviews with personnel to verify they are knowledgeable in the procedures applicable to procurement document control.

3. Findings

- a. The inspector verified that:

- (1) Procedures had been prepared and approved by the vendor that prescribed a system for procurement document control which is consistent with NRC rules and regulations, and the vendor's commitments in the ASME accepted Quality Assurance Program.
- (2) The procurement document control procedures are properly and effectively implemented by the vendor.

F. Equipment Calibration

1. Objectives

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

- a. A system had been established and is maintained to assure that tools, gages, instruments and other measuring devices used in activities affecting quality are properly controlled, calibrated and adjusted at specified periods to maintain accuracy within specified limits.
- b. The system was adequately documented with approved procedures and the procedure were being implemented.

2. Method of Accomplishment

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

- a. Review of the ASME accepted Quality Assurance Manual, revised September 21, 1978, Section 8, Control of Measuring and Test

Equipment to verify that the vendor had established procedures that prescribed a system for equipment calibration.

b. Review of the following procedures:

1. QA1-059, Revision 2, "Accuracy of Hydrostatic Test and Wall Thickness Gages,"
2. QA1-070, "Hardness Testing Equipment," and
3. QA1-039, "GO/NO Go Plug Gage Design Standards"

to verify that they had been prepared by the designated authority, approved by responsible management and reviewed by quality assurance.

c. Review of the documents referenced in paragraphs a and b to verify that they identified the items included in the calibration program, the frequency of calibration, method of calibration, and provided data sheets for recording calibration results.

d. Review of the calibration records of the following items:

1. 147000, Gage Blocks,
2. 147048, Measuring Wires,
3. VW-5, Blade Micrometer,
4. TR-11, Dial Indicator,
5. #255, Height Vernia, and
6. VW-54, Dial Indicator

to verify that they provided all pertinent information pertaining to calibration history, identification of the item, standards used in calibration, due date and interval, and location for use.

e. Review of standards used in the calibration process to verify that they have been properly calibrated and certified.

f. Review the calibration records of the items listed in paragraph d to verify that the calibration procedures had been properly implemented.

g. Interviews with personnel responsible for the calibration program to verify that they are knowledgeable in the applicable procedures.

3. Findings

The inspector verified that:

- a. A system had been established and was maintained to assure that tools, gages, instruments and other measuring devices used in activities affecting quality were properly controlled, calibrated and adjusted as specified periods to maintain accuracy within specified limits.
- b. The system was adequately documented with approved procedures and the procedures were being implemented

G. Control of Special Processes-Weld Heat Treatment and Brazing1. Objectives

The objectives of this area of the inspection were to verify that the heat treatment related to welding and brazing is specified, and that it is performed in accordance with qualified procedures, consistent with the NRC rules and regulations, and the vendor's commitments in the ASME accepted Quality Assurance Manual.

2. Method of Accomplishment

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

- a. The review of the ASME accepted Quality Assurance Manual, Revision date September 21, 1978;
 1. Section 6, "Welding/Brazing Quality Assurance," and
 2. Section 9, "Heat Treatment"

to verify that the vendor had established procedures to prescribe a system for weld heat treatment and brazing.
- b. Review of the following procedures:
 1. 944314, Revision H, "High Temperature Vacuum Seat Brazing" . . . ,
 2. 952883, Revision C, "Vacuum Furnace Brazing, Procedure and Qualification" . . . , and
 3. 954048, Revision A, "Yarway Heat Treating Procedure" . . . ,

to verify that they had been reviewed, approved, and properly qualified.

- c. Interviews with personnel to verify they are knowledgeable in the procedures applicable to weld heat treating and brazing.

3. Findings

- a. The inspector verified that the heat treatment relative to welding and brazing, was specified and was being performed in accordance with qualified procedures.
- b. No heat treating or brazing of parts for nuclear service was being performed during this inspection.
- c. Within this area of the inspection, no deviations or unresolved items were identified.

H. Manufacturing Process Control - Machining

1. Objectives

The objectives of this area of the inspection were to verify that the machining operations are performed under a controlled system of manufacturing which meets NRC rules and regulations, and the ASME accepted Quality Assurance Manual, and is effective in assuring product quality.

2. Method of Accomplishment

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

- a. Review of the ASME accepted Quality Assurance Manual, Revision date September 21, 1978;
 - (1) Section 5, "Process Control,"
 - (2) Section 13, "Controlled Manufacturing System," and
 - (3) Section 14, "Handling, Storage, Shipping and Preservation"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 rules and regulations, and the vendor's QA commitments.

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c. Review the following documents:

- (1) Nuclear Control Plan,
- (2) Drawings,
- (3) Bills of Material, and
- (4) Route Sheets

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.

e. Examined the following documents:

- (1) Route Sheets, and
- (2) Observation Record Form

to verify compliance with applicable documentation requirements.

3. Findings

The inspector verified that the machining operations were performed under a controlled system of manufacturing that meets NRC rules and regulations and the ASME accepted Quality Assurance Manual, and is effective in assuring product quality.

I. Exit Interview

At the conclusion of the inspection on August 22, 1979, 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 management was informed, no deviations or unresolved items were identified.

The company's management acknowledged the inspector's statement and had no additional comments.