

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

Report No. 99900105/79-01

Company: Fisher Controls Company
Marshalltown Division
205 South Center
Marshalltown, Iowa 50158

Inspection Conducted: September 24-28, 1979

Inspectors: *J. W. Sutton* Oct 19, 79
J. W. Sutton, Contractor Inspector
Components Section I
Vendor Inspection Branch
Date

Approved by: *D. E. Whitesell* Oct 19, 79
D. E. Whitesell, Chief
Components Section I
Vendor Inspection Branch
Date

Summary

Inspection on September 24-28, 1979

Areas Inspected: Implementation of 10 CFR 50, Appendix B and applicable codes and standards, including action on previous inspection findings, nondestructive examination, ANI interface, welding procedures and review of vendor's activities. The inspection involved twenty eight (28) inspector-hours on site by one NRC inspector.

Results: In the five (5) areas inspected no deviations or unresolved items were identified in four (4) areas. The following was identified in the remaining area.

Deviation: Welding procedures, hardfacing preheat temperature not being maintained. (Notice of Deviation)

Unresolved item: (1) Welding instructions do not clearly identify control and use of weld wire and flux materials. (Details Section, paragraph D.3.b.(1))
(2) Clarification of heat treating procedures is needed to clearly indicate the requirements of holding time at temperatures as required by NB4622.4. (Details Section, paragraph D.3.b.(2))

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DETAILS SECTION

A. Persons Contacted

Fisher Controls Company (FCC)

- *M. Brauns - QA Engineer Supervisor
- D. Baie - NDE Level II, PT-RT.
- *G. Baitinger - QA Engineer
- *D. Estill - Vice President, Marshalltown Div.
 - J. Hanus - Foreman, NDE
 - L. Johnson - Weld Shop Inspector
- *J. Ketcham - QA Engineer
- *B. Raabe - Weld Shop Manager
- *B. Shiek - Shop Manager, Inspection
 - E. R. Stevens - Welding Engineer
 - G. Tichy - Weld Shop Foreman

Hartford Steam Boiler Co. (HSB)

- C. A. Ireland - Authorized Nuclear Inspector (ANI)

*Indicates those who attended exit interview.

B. Action on Previous Inspection Findings

(Closed) Deviation, (Report No. 78-01) Testing and Inspection. The appropriate drawing revision used for receiving parts was not being identified on the inspection report. The inspector verified by review of inspection documentation that the correct drawing revisions are being recorded.

C. Nondestructive Examination

1. Objectives

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

- a. The manufacturers program for qualification of personnel performing special processes (other than welding) meets regulatory and applicable ASME Code and contract requirements.
- b. All personnel performing special processes, including nondestructive examination are being qualified in accordance with the above program and the manufacturers overall QA plan.
- c. Nondestructive examination procedures used by the manufacturer meet ASME Code and applicable regulatory and contract requirements.
- d. Nondestructive examination is being conducted by properly qualified personnel in accordance with the above procedures and the manufacturers overall QA plan.

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2. Method of Accomplishment

The preceding objectives were accomplished by:

- a. Review of the Fisher Controls Company (FCC) Quality Assurance manual, Sections 2.8 and 10.4.2, Revision 1, dated August 15, 1978.
- b. Review of the following shop orders for NDE requirements, S.O. Numbers, XD8642., XT9945, and PA0210.
- c. Review of the following Fisher Mfg., (FMP) procedures which established the specific requirements for nondestructive examinations:
 - (1) FMP 2-G-14, Revisions 1 and 2, amendment 2514 for radiographic examination.
 - (2) FMP 2-G-3, Revision 5, for dry powder magnetic particle testing.
 - (3) FMP 2-G-15, for spot examination of welded joints by radiograph.
 - (4) FMP 2-G-12, Revision 2, for fabrication welds and forgings.
 - (5) FMP 2-G-2, Revision 13, for wet fluorescent magnetic particle inspection.
 - (6) FMP 2-G-1, Revision 13, for liquid penetrant inspection, water washable.
 - (7) FMP 2-G-1.1 Revision 6, for liquid penetrant inspection fluorescent solvent removable
 - (8) FMP 2-G-1.2 Revision 6, for liquid penetrant inspection, visible dye penetrant.
 - (9) FMP 2-G-5, Revision 3, for ultrasonic examination, castings, forgings, plate and bars.
 - (10) FMP 2-G-5.1, for ultrasonic examination, pipe and tubing.
- d. Review of radiographic film for casting Serial No. PA0210-1, Shop Order PA0210
- e. Review of available travelers, inspection reports on hardware, to verify that NDE procedures were being properly implemented.

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- f. Review of equipment calibration records and testing materials certifications.
- g. Review of Level III personnel qualification records.
- h. Review of SNT-TC-1A 1975, "Personnel Qualifications and Certification in Nondestructive Testing", and FMP 2J1 Procedure.
- i. Review of nine (9) NDE personnel records.
- j. Discussion with NDE Personnel.

3. Findings

From the documents and records reviewed, it was determined that the system for control of NDE personnel qualification is consistent with the NRC rules and Code requirements, and the system is being properly implemented.

No deviations or unresolved items were identified in this area of the inspection.

D. Control of Special Processes, Welding Procedure Specifications Use and Control

1. Objectives

The objectives of this area of the inspection were to verify that welding procedure specifications used for production welding are controlled and used in accordance with the vendor's commitments, and the NRC contract and Code requirements.

2. Method of Accomplishment

The preceding objectives were accomplished by:

- a. Review of the QA manual, Section 10, Revision 1, dated August 15, 1979.
- b. Review of the following welding procedures/qualifications.
 - (1) 5E3.4/PQR 3.4, Hardsurfacing of P-8 material single layer.
 - (2) Hardsurfacing Procedures 5E3.3/PQR E3.3, 5E3.2/PQR 3.2, 5E3.10 with Amendment AM-23 MPR 1067-7.

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- c. Observation of hardsurfacing procedure implementation on valve seat ring, S.O RD2814.
- d. Review of current welders qualification records.
- e. Review of welding equipment calibration requirements.
- f. Inspection of weld material control and storage.
- g. Review of heat treating procedures; FMP5C72.1, FMP6A1, Revision 3, FMP B1-1 and FMP6B2-2.
- h. Discussions with shop personnel.

3. Findings

a. Deviations

See Notice of Deviation.

b. Unresolved Items

- (1) During the review of welding procedures and QA manual requirements it was noted and brought to managements attention that the control of weld wire and flux has not been addressed in the existing procedures or instructions. Management indicated that this item would be reviewed.
- (2) In reviewing the heat treat procedures it was noted that the requirement for accumulating total time at temperature did not require recording the sizes of the material receiving PWHT, which created difficulties in verifying whether the heat treat time at temperature was within the limits prescribed in Table 4622.1-1 of Section III, ASME Code. Management indicated that this item would be reviewed and clarified as required.

E. Authorized Nuclear Inspector (ANI) Interface

1. Objectives

The objectives of this area of the inspection were to ascertain whether procedures had been prepared and approved, which describes the system to be implemented for the achievement of interface activities with the ANI, and that the indentified activities are consistent with the NRC rules, Code requirements, and the QA Program commitments.

2. Method of Accomplishment

The objectives of this area of the inspection were accomplished as follows:

- a. Review of Fisher Controls Company's QA Manual to ascertain whether the system provides for interface with the ANI and/or the Authorized Inspection Agency (AIA) to review the Design Specification (DS), and provide the inspection services, required by code, of all code items covered by the customer's order and DS.
- b. Review of nonconforming reports to verify that changes in the customer's design specifications (DS) are reviewed with the ANI to inform him of the status of the inspections and tests of the items when it is removed from the manufacturing process.
- c. Review of FCC Manual, Section 9, to verify that measures have been provided to make available for review by the ANI, Material Certifications and the QC Source and/or Receiving Inspection Reports, and that such reviews are documented.
- d. Review of FCC Manual, Section 9, to verify that a system has been provided to maintain the identification of materials, and that the identification is transferred when it becomes necessary to divide the material, also, to verify that the ANI is provided the opportunity to verify that the identification of material is properly maintained and documented.
- e. Review of FCC Manual Section 10; to ascertain whether measures have been established for the ANI to witness any welding procedure and/or any welder performance qualification tests and to verify that he may request the requalification of any procedure or welder.
- f. Review of FCC Manual, Section 12; to verify that the program provides for the application of the code stamp only with the authorization of the ANI after acceptable pressure testing, and the certification of the Manufacturer's Data Report, and only in the presence of the ANI.
- g. The Daily Log Book maintained by the ANI was reviewed, and it was observed that he has documented his inspection/surveillance activities as required. The inspectors entries were found to be self explanatory.

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3. Findings

The ANI activities as documented in his bound log book, and by documents reviewed, supports a finding that the vendor is properly implementing its interface responsibilities with the ANI in a manner consistent with the NRC rules, Code requirements and its QA program commitments.

F. Review of Vendor's Activities1. Objectives

The objectives of this area of the inspection were:

- a. To review the nuclear activity and work load to assess their impact on future NRC inspections.
- b. Evaluate the vendor's fabrication/manufacturing equipment and capabilities.

2. Method of Accomplishment

The foregoing objectives were accomplished by observing the manufacturing/fabrication in progress, and discussions with the cognizant vendor personnel.

3. Findings

The vendor has the capability to design, manufacture, and test ASME Code Class 1, 2 and 3 Nuclear valves of the Rotary and Globe designed with maximum sizes of 48" Rotary and 24" Globe.

The vendor is capable of both manual and automatic machining operations of valves and parts from castings, forgings and bar stock.

The vendor performs all NDE activities in-house. The vendor is capable of heat treating all manufactured components. Completed products are shipped via truck. The vendor holds valid ASME Certificates of Authorization NON-1929 for class 1, 2 and 3 vessels, valves and fluid conditioning devices and NPT-1930 for class 1, 2, and 3 components parts and appurtenances, piping subassemblies and fluid conditioning devices at the Governor Road and Olive Street, Marshalltown, Iowa locations. Thirty (30) nuclear contracts are currently being processed by the vendor, which represents approximately 10 per cent of the total work load.

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G. Exit Interview

The inspector met with management representatives (denoted in paragraph A) at the conclusion of the inspection. The inspector summarized the scope and findings of the inspection. The management representatives had no comment in response to the items discussed by the inspector.

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