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

Report No. 99900346/79-02 Program No. 51300

Company: Velan Valve Corp.
Avenue C, Griswold Industrial Park
Williston, Vermont 05495

Inspection Conducted: October 16-18, 1979

Inspector: Wm D. Kelley 11/2/79
Wm. D. Kelley, Contractor Inspector Date
Components Section I
Vendor Inspection Branch

Approved by: D.E. Whitesell 11/5/79
D. E. Whitesell, Chief Date
Components Section I
Vendor Inspection Branch

Summary

Inspection on October 16-18, 1979 (99900346/79-02)

Areas Inspected: Implementation of 10 CFR 50, Appendix B and applicable codes and standards including, design and document control - design verification, manufacturing process control - material identification and control, inspection and test - magnetic particle examination, training - welder qualification and control of special processes - machining. Also, reviewed previous inspection findings and vendor's activities and conducted exit interview. The inspection involved thirteen (13) inspector-hour on site by one (1) NRC inspector.

Results: In the seven (7) areas inspected, no deviations or unresolved items were identified in six (6) areas. The following were identified in the remaining area.

Unresolved - Inspection and Test-Magnetic Particle Examination. (Details, paragraph G). The verification of the contact method of the magnetic particle examination procedure with the authorized nuclear inspector's acceptance was not available at the VVC-Burlington VT plant.

DETAILS

A. Persons Contacted

Velan Valve Corp. (VVC)

*E. I. Francois, Corporate Manager of Quality
M. Huck, Welding Engineer
P. Maynard, Superintendent of Machine Shop
P. Strelczyk, Vice President and Plant Manager
D. Williamson, Receiving
D. A. Winton, Quality Control Manager

Kemper Insurance Company

G. P. Odom, Authorized Nuclear Inspector (NB Number 6986)

*Denotes these persons who attended the exit interview.

B. General Review of Vendor's Activities

There has been no change in the status of the ASME issued Certificates of Authorization, the authorized inspection agency, the authorized nuclear inspector or the vendors contribution to the nuclear industry as reported in Report Number 99900346/79-01.

C. Vendor's Action on Previous Identified Findings

(Closed) Deviation (Report No. 79-02, Item 1): Contrary to Criterion V of Appendix B to 10 CFR 50, paragraph NCA-4134.5 of Section III of the ASME Code and paragraph 4.6.1 of QC procedure VELW-QC-156.11, Revision 1 to the ASME accepted Quality Assurance Manual calibration labels were not affixed to any of the ten (10) "go" "no go" gauges or affixed to their containers as prescribed.

The inspector verified that a list of the gauges and the calibration status had been attached to the gauge containers as permitted by the ASME accepted Quality Assurance Program.

(Closed) Deviation Report No. 79-01): Contrary to Criterion V of Appendix B to 10 CFR 50, paragraph NCA-4134.5 of Section III to the ASME Code and paragraph 4.4.1 of QC procedure VELW-156.11, Revision 1 to the ASME accepted Quality Assurance Manual there was no evidence that the meters on the two (2) Thermal Arc Welding Consoles, Model WC-122 had been calibrated.

The inspector verified that the meters in question had been identified as not being used to verify essential variables of the welding process and had been removed from service.

D. Material Identification and Contol

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 VELW-QC-156, Revision 2;

(1) QC Procedure VELW-QC-156.2 Procurement Controls and Receiving Inspection Materials, Parts, and Services, and

(2) QC Procedure VELW-QC-156.5 Identification and Control of Materials and Items - Traceability,

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

b. Review of the procedures reference 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. 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, code requirement and the vendor's commitments.

b. The design verification procedures are properly and effectively implemented by the vendor.

2. Method of Accomplishment

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

a. Review of the ASME accepted Quality Assurance Manual VELW-QC-156, Revision 2;

(1) Organization Chart, and

(2) QC procedure VELW-QC-156.1, Design Control,

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

b. Reviewed the documents referenced in paragarph a. to verify they had been prepared by the designated authority, approved by management, and reviewed by QA.

c. Interviews with personnel to verify they are knowledgeable in the procedures applicable to design verification.

3. Findings

a. The inspector verified that:

(1) Procedures had been prepared and approved by the vendor prescribing a system for design verification which is

consistent with NRC rules and regulations, Code requirements, and the vendor's commitments.

(2) The design verification procedures are properly and effectively implemented.

b. The inspector verified that the design functions, including design verification, and the issuance of the certified design report, is performed under the jurisdiction of the Corporate Manager of Engineering located at the Velan Engineering, Ltd., Montreal, Quebec, Canada plant. Inspection of the design functions of Velan Engineering, Ltd., are contained in the inspection reports in docket file 99900061.

c. Within this area of the inspection no deviations or unresolved items were identified.

F. Training - Welder Qualification

1. 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,

2. Method of Accomplishment

The objectives of the inspection were accomplished by:

a. Review of the ASME accepted Quality Assurance Manual VELW-QC-156, Revision 2;

(1) Section VELW-QC-156.7 Welding - Quality Assurance, and

(2) Section VELW-QC-156.14 - Indoctrination and Training of Quality Related Personnel,

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, 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 continous 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 welders and welding operators were qualified in accordance with NRC rules and regulations, the code requirements and the vendor's commitments.

b. The inspector was informed that the welder training program would be updated to include appropriate welding training plans, as appropriate for the new welding equipment that has been purchased for production welding.

c. Within this area of the inspection no deviations or unresolved items were identified.

G. Inspection and Test - Magnetic Particle Examination

1. Objectives

The objectives of this area of the inspection was 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 VELW-QC-156, Revision 2;

(1) QC procedure VELW-QC-156.8 Examination, Test and Inspection, and

(2) QC procedure VELW-QC-156.16 Performance of NDE and the Control and Administration of NDE Personnel,

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

b. Review of QC procedure VEL-NDT-543B "Magnetic Particle Examination, for ASME Boiler and Pressure Vessel Code Section III, Nuclear Power Plant Components," to verify that it had been reviewed, approved, and qualified, in accordance with the quality assurance program and Code requirements, and accepted by the Authorized Nuclear Inspector.

c. Observed the performance of magnetic particle examination and verified that:

(1) The applicable traveler specified the appropriate test procedure, and that a copy of the procedure is available at the work station.

(2) The personnel performing the examinations are properly qualified.

(3) The test equipment has been calibrated and materials surfaces to be examined had been properly prepared.

(4) The test parameters are as specified in the examination procedure.

(5) The indications are evaluated in accordance with the procurement requirements, and the results reported in the prescribed manner.

d. Interviews with personnel to verify they are knowledgeable in the procedures applicable to magnetic particle examination.

3. Findings

a. Within this area of the inspection no deviations were identified.

b. Unresolved Item

The inspector observed the magnetic particle examination of a 20" 900# valve body by the contact method in accordance with QC procedure VEL-NDT-543B "Magnetic Particle Examination for ASME Boiler and Pressure Vessel Code, Section III, Nuclear Power Plant Component." The inspector requested to see a copy of the verification record of the magnetic particle examination procedure which had been accepted by the authorized nuclear inspector. However the verification record was not

available at the Burlington, VT plant, and the Level III Non-destructive Examiner who had developed the procedure, was not available at the corporate office to verify that the record(s) were available at the Corporate Office in Montreal.

The vendor will have the QC procedure VEL-NDT-543B verification available for the inspector on the next inspection at the VVC Burlington, VT plant.

H. Manufacturing Process Control - Machining

1. Objectives

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

a. The machining operations are performed under a controlled system of manufacturing which is consistent with the NRC rules and regulations, Code requirements and the vendor's commitments. The controlled system of manufacturing is implemented and is effective in assuring that product quality is achieved.

2. Method of Accomplishment

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

a. Review of the ASME accepted Quality Assurance Manual, VELW-QC-156, Revision 2;

(1) QC procedure VELW-QC-156.5 "Identification and Control of Materials and Items" - Traceability,

(2) QC procedure VELW-QC-156.6, "Control of Fabrication Process" - Operation and Routing Sheets, and

(3) QC procedure VELW-QC-156.9 "Certification of Materials,"

to verify that procedures had been established which prescribes a control system of operation and manufacturing processes.

b. Reviewed the following specification and procedures:

(1) QC Procedure VEL-NDT-543A "Magnetic Particle Examination," and

(2) QC procedure VEL-QC-156.6, "Control of Fabrication Process" - Operation and Routing Sheet,

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 regulation, Code requirements, and the vendor's 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.

e. Examined the documents of the following parts:

(1) 8149-008-002 20"-900# Body,

(2) 8965-038-002 4"-150# Bolted Bonnet-Gate, and

(3) 8147-004-002 6"-900# PS Gate Valve,

to verify compliance with applicable documentation requirements.

3. Findings

a. The inspector verified that:

(1) 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.

(2) The controlled system of manufacturing was effective in assuring product quality.

b. Within this area of the inspection no deviations or unresolved items were identified.

I. Exit Interview

At the conclusion of the inspection on October 18, 1979, the inspector met with the company's management, identified in paragraph A, for the purpose of informing him as to the results of the inspection. During this meeting the unresolved item was discussed and the evidence which supported the finding was identified.

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