

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

Report No. 99900264/79-01

Program No. 51300

Company: Dragon Valves, Inc.  
13457 Excelsior Drive  
Norwalk, California 90650

Inspection Conducted: May 7-11, 1979

Inspectors: *J. W. Sutton* 05-23-79  
J. W. Sutton, Contractor Inspector, Vendor Date  
Inspection Branch

*D. E. Whitesell* 05-23-79  
D. E. Whitesell, Chief, Components Section I, Date  
Vendor Inspection Branch

Approved by: *D. E. Whitesell* 05-23-79  
D. E. Whitesell, Chief, Components Section I, Date  
Vendor Inspection Branch

Summary

Inspection on May 7-11, 1979 (99900264/79-01).

Areas Inspected: Implementation of 10 CFR 50, Appendix B criteria, and applicable codes and standards; including the vendor's action on previous findings, manufacturing process control, calibration, testing of completed products, non-destructive examination (NDE) personnel qualifications, nonconformance and corrective action, and review of vendor activities. The inspection involved fifty-six (56) inspector hours on site by two (2) NRC inspectors.

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

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Details SectionA. Persons Contacted

\*H. C. Bond, President  
 \*K. D. Haggart, QA Manager  
 R. L. Snyder, Manufacturing Control

State of California, Division of Industrial Safety

J. E. Warren, Safety Engineer

\*Denotes those persons who attended the exit interview.

B. Action of Previous Inspection Findings

(Closed) Deviation (Report No. 77-01): The QA Manual had not been kept current or reviewed semi-annually as required. The inspector verified that the QA Manual has been reviewed and revised as required. The review and required revisions to the QA manual were documented.

C. Manufacturing Process Control1. Objectives

The objectives of this area of the inspection were to ascertain whether the manufacturing process is controlled in a manner which is consistent with the applicable regulatory code and contract requirements, and is effective in assuring product quality.

2. Method of Accomplishment

The foregoing objectives were accomplished as follows:

a. Review of Section 6, Revision B, dated June 2, 1978, of the Vendor's Quality Assurance Manual, "Process Control," to determine the Vendor's method and approach for controlling and verifying the various activities included in his manufacturing process. Also, to ascertain who, when, and how the process sheets were prepared, reviewed, and released to production.

b. Review of the following Purchase Orders (POs) and Design Specifications (DSs):

(1) PO No. E-36200-11, dated October 27, 1978, and DS No. CNS-1210-00-0019, dated February 1, 1978.

583 120

- (2) PO No. 78K-A1-823808-RO, dated January 19, 1978, and R1, dated March 20, 1978. DS No. SNP-DS-1935-3688-R1, dated August 9, 1978 (Sequoyah 1 and 2).
- (3) PO No. 10407-13-JM-705 and DS No. 13-JM-705, dated March 31, 1978 (Palo Verde).

The foregoing documents were reviewed to verify the code classification material, inspection, and test requirements established for the items covered.

- c. Review of Process Sheet No. N21843T (Palo Verde) to verify that traceability is provided to the customer and this purchase order. Also, to verify that the Process Sheets provide for the following:
  - (1) Identified the sequence of activities.
  - (2) Where an activity is controlled by detailed written procedure, (ie: LP examination, Hydro test, etc.) that the procedure is identified by number and revision on the Process Sheet.
  - (3) Space is provided for the stamp, or initial, and date to indicate the completion of each identified activity and the verification of the acceptability of the completed activity.
  - (4) Space is provided for both the customer and the ANI to select the specific activity which they wish to witness or verify, and initial, sign, or stamp, and date to document their witnessing and acceptance of the activity.
- d. Observed the manufacturing of components being processed on the shop floor, to verify that the work was progressing in the established sequences, and where activities were controlled by detailed written procedure, verified that the activity was performed in accordance with the specified procedure.

### 3. Findings

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

### D. Calibration

#### 1. Objectives

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

- a. Calibration activities are performed and controlled in accordance with the QA Manual commitments and the applicable NRC regulations and ASME Code requirements.
- b. A system has been established, and is maintained, to assure that tools, gages, instruments and other measuring devices used in activities affecting quality are properly calibrated and adjusted at specified periods to maintain accuracy within the specified limits.
- c. Calibration records are kept for each instrument indicating the calibration results.
- d. The calibration system is being properly implemented.

2. Method of Accomplishment

The preceding objectives were accomplished by:

- a. Review of the QA Manual, Section 12, Revision B, dated June 2, 1978, titled, Qualification of Inspection and Measuring Equipment, to verify that provisions have been established to assure that equipment requiring calibration had been identified, the calibration frequency is specified, the calibration standards are identified, the traceability of standards is required, and a recall system is in effect.
- b. Review of the calibration log books.
- c. Review of the working pressure gage log book.
- d. Review of the recall system.
- e. Review of the index system calibration records cards.
- f. Review of certification for standards, pressure gage No. 14565, dead weight tester, and gage block set No. 3000.
- g. Review of calibration records for the following:
  - (1) Pressure gages Nos. 6 and 7.
  - (2) Tong tester VA001.
  - (3) Various measuring instruments.
- h. Discussion with shop personnel.

583 122

### 3. Findings

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

## E. Testing of Completed Products

### 1. Objectives

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

- a. Testing activities are controlled in accordance with the QA Manual commitments and applicable NRC regulations and the ASME Code requirements.
- b. Products are assembled in accordance with approved procedures and materials comply with approved specification.
- c. Functional tests of products are performed in accordance with approved test documents.
- d. That the system is being properly implemented.

### 2. Method of Accomplishment

The preceding objectives were accomplished by:

- a. Review of the QA Manual, Section 21, Revision B, dated June 2, 1978, titled Assembly, Final Inspection, Shipping and Records.
- b. Review of the following procedures;
  - (1) Cleaning procedure No. 10559.
  - (2) Assembly procedure No. 12577, Revision B.
  - (3) Test procedure No. 12790.
  - (4) Hydrostatic Test procedures 10516, Revision E, and 12258.
- c. Review of Valve Assembly No. 12577-65E, Job N185995, Supp #3, Class 2, Blow Down Valve and Job No. N20149T, Valves GP 1201 to 1253.
- d. Review of shipping instructions No. 10203-C.

583 123

- e. Review of documentation checklists for the above jobs.
- f. Review of the individual acceptance test data reports for the above jobs.
- g. Inspection of the test equipment and certification of gages and instruments used during final testing.
- h. Review of test reports to verify that test results are within the specified acceptance limits and are properly documented, and that the procedures are being properly implemented.
- i. Observation of shop activities.

### 3. Findings

In this area of the inspection, no deviations or unresolved items were identified.

## F. Nondestructive Examination (NDE) Personnel Qualifications

### 1. Objectives

The objectives of this area of the inspection were to verify that the vendor had developed and implemented detailed procedures for the qualification and certification of NDE personnel, in accordance with the QA Manual commitments and applicable NRC regulations and ASME Code requirements.

### 2. Method of Accomplishment

The preceding objectives were accomplished by:

- a. Review of the QA Manual, Section 13, Revision B, dated June 7, 1978, titled, "Nondestructive Examination."
- b. Review of eight (8) NDE personnel qualification and physical records.
- c. Review of SNT-TC-1A 1975, "Personnel Qualifications and Certification in Nondestructive Testing."
- d. Review of audits performed on suppliers of subcontracted NDE work.
- e. Review of the written practice of the NDE subcontractor.

583 124

- f. Review of PT Procedure No. 10112-F, dated August 2, 1978.
- g. Review of Ultra Sonic Testing Procedure No. 10119-A, dated August 2, 1978.
- h. Review of certification for NDE testing materials, 78F01W and 4203i.
- i. Review of the level III examiner qualifications.
- j. Review of calibration records and certification for NDE equipment.

3. Findings

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

G. Nonconformance and Corrective Action

1. Objectives

The objectives of this inspection were to verify that:

- a. A system for control of nonconformances and corrective actions has been established and is consistent with NRC regulations, and the QA Program requirements; and
- b. The system is properly implemented.

2. Method of Accomplishment

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

- a. Review of the QA Manual, Section 13, Revision B, titled Nonconformance and Corrective Action.
- b. Review of the nonconformance files.
- c. Review of fifteen (15) MRB reports to verify appropriate disposition.
- d. Review of the scrap and rework reports.
- e. Inspection of the segregation and scrap areas.
- f. Discussion with shop personnel.

### 3. Findings

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

### H. General Review of Vendor's Activities

1. Dragon Valve Corporation holds an ASME Certificate of Authorization for "N" Stamp No. N1033 and "NPT" Stamp No. N-1034, for the manufacture of Class 1, 2, and 3 valves and Class 1, 2, and 3 valve parts, appurtenances and piping subassemblies.
  - a. The Authorized Inspection Agency is the Division of Industrial Safety, State of California.
  - b. The Authorized Nuclear Inspector (ANI) performs inspections on an itinerant basis.
2. Although approximately 50% of the Vendor's work load is nuclear (40% domestic and 10% foreign), the largest size valve that the company is tooled to manufacture is a 2" nominal pipe size. However, the current production is primarily limited to 1/4", 3/8", and 1/2" stainless steel instrumentation valves, valve manifolds, and sample valves. The valves are machined from both bar stock and forgings.
3. Stress analysis is performed by an outside engineering firm on a contract basis. Their welding and NDE level III services are also provided on an open contract.

### I. Exit Interview

The inspector met with management representatives (denoted in paragraph A) at the conclusion of the inspection. The inspector summarized the scope of the inspection and indicated that no deviations or unresolved items were identified.

583 126