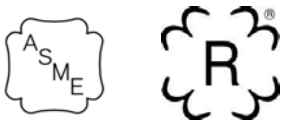
Section 000
Issue II Revision 0, 7/18/2006
Revision 1, 7/20/2006
Revision 2, 6/22/2009
Revision 3, 6/29/2009
Revision 4, 9/24/2009
Revision 5, 1/17/2012
Revision 6, 8/30/2012
Revision 7, 3/5/2014
Revision 8, 8/25/2015
Revision 9, 9/4/2018

QUALITY CONTROL MANUAL

FOR

FISHER CONTROLS INTERNATIONAL, LLC,
VALVE DIVISION
1702 SOUTH 12th AVENUE
MARSHALLTOWN, IA 50158

ASME CERTIFICATION MARK and "S" DESIGNATOR & "R" SYMBOL



S

This manual will be used for shop fabrication of Power Boiler Components in accordance with ASME Code, Section I and ASME B31.1, and Shop Repairs and Alterations to existing boilers and pressure vessels in accordance with the NATIONAL BOARD INSPECTION CODE and jurisdictional requirements at this location.

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Non-Controlled _____

Manual No. Web Copy

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EMERSON.
Process Management

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FISHER CONTROLS INTERNATIONAL, LLC

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STATEMENT OF POLICY AND AUTHORITY

It is the policy of Fisher Controls International, LLC to support Quality Control to the fullest and that all ASME Code Boiler Components will be fabricated in full compliance with this manual and the ASME Code Section I and ASME B31.1. All repairs and alterations of any boiler or pressure vessel will be performed in accordance with the NBIC and jurisdictional requirements. No person in this organization shall deviate from these quality standards set forth.

The Quality Manager will have sufficient and well-defined responsibility, the authority and the organizational freedom to identify quality control problems and to initiate, recommend, and provide solutions.

In the event that Quality Control and Production come to an impasse concerning quality, the Plant Manager, Marshalltown Operations, will make the final and binding decision, provided this decision is within the limits of the Code and this Manual.

On Behalf of Rande Jones: Michelle Carter 8/30/18

Rande Jones
Plant Manager, Marshalltown Operations

FISHER

TABLE OF CONTENTS

Quality Manager_____ Date_____

Authorized Inspector_____ Date_____

1.0 Authority and Responsibility

1.1 Scope. This section covers the interface and responsibility of each person within the Fisher Controls International, LLC, Valve Division organization.

1.2 Responsibility. Responsibility for this section lies with the Plant Manager, Marshalltown Operations.

1.3 Plant Manager. The Plant Manager, Marshalltown Operations, is directly responsible for the overall operation of the Marshalltown Operation. The Plant Manager will designate responsibility to various department heads and will be the arbitrator of any conflicts between Quality Control and Production.

1.4 Quality Manager. The QM will have overall responsibility for the implementation of the Quality Control Program and he will work closely with all other departments with the goal of producing quality items. The QM will be responsible for the approval of the Quality Control Manual and its revisions.

1.5 Product Engineer. The Product Engineer is responsible for the preparation of drawings, design calculations, specifications, and subsequent changes.

1.6 Welding Manager. The Welding Manager is responsible for the formation and application of weld and repair procedure specifications.

1.7 Supervisor, Quality Plans and Specifications. The Supervisor, Quality Plans and Specifications is responsible for preparation of the Inspection Test Report and Assembly Test Report which are the basis for the quality and production plan.

1.8 Buyer. The Buyer is responsible for preparing the purchase order and the purchase of ASME Code material.

1.9 Direct Supervisor. The Direct Supervisor is responsible for fabrication of the boiler components in the shop. The Manufacturing Facility is organized both by Value Stream Cells and Manufacturing Areas. In some areas the responsible person assigned has the title Product Coordinator, but has the same qualifications and responsibilities as others with the Direct Supervisor title.

1.10 Quality Control Inspector. The QCI is responsible for the quality control inspection in the shop. The QCI is any qualified member of the Quality organization.

1.11 Manual Control. The manual is written by the QM with acceptance by the Authorized Inspector. Acceptance of the Quality Control Manual is indicated on the Table of Contents page.

Revisions to the Manual may be requested by any person or customer. All revisions asked for will receive due consideration. This is not to imply that all changes will be made. Revisions to the Manual will be made by the QM. Revisions will be submitted to the AI for review prior to the Manual being released or implemented. QM approval and AI acceptance will be indicated by signature and date on the Table of Contents. A new revision will be given to the entire Manual when it is revised. Latest revisions to the Manual will be indicated by italicized (also blue when in color) that has been added and a vertical line in the margin when text has been revised and will indicate deleted text.

Quality Control Manual revisions are retained for 5 years.

The original of the Quality Control Manual shall be filed and maintained as a controlled document in EDOCS by the Quality Manager.(EDOCS is an acronym for Electronic Documents System, a WEB based application for management and presentation of documents and other information to the workplace. EDOCS is a multi-departmental application that is the primary storage and maintenance location for documents that require access by multiple users). *When the Manual is printed directly from EDOCS, a watermark will indicate the copy is UNCONTROLLED.*

Primary distribution of the Manual will be by EDOCS.

Fisher Controls International, LLC, Valve Division will designate paper copies of the Manual as controlled or uncontrolled. Uncontrolled Manuals will be up-to-date on the day delivered, after which date revisions will not be added. A record of who have been issued controlled copies of the Manual will be kept by the QM.

All controlled paper copies of the Manual will be numbered. The numbers and to whom they are issued will be entered in a log.

One current paper copy of the controlled Manual will be assigned to the AI and the Quality Manager.

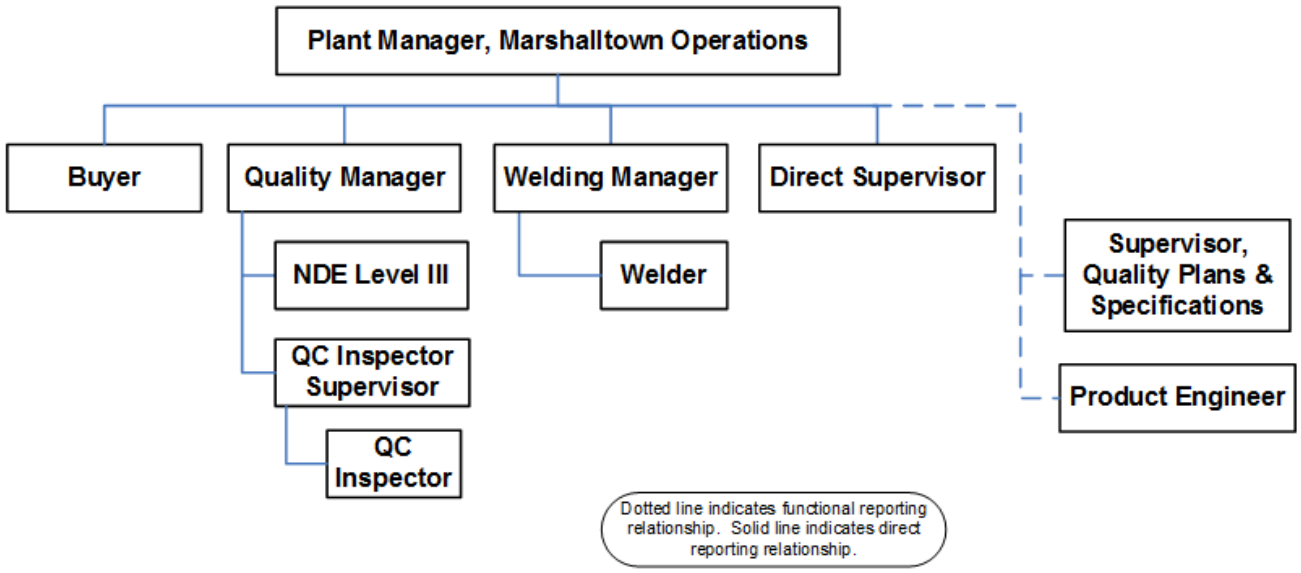
The QM shall review Code Edition when issued for possible Manual revisions. Any revision shall be implemented within six months of issue date and a letter detailing this review will be kept on file and available to the AI.

2.0 Organization.

2.1 Scope. This section covers the organization of Fisher Controls International, LLC, Valve Division. It sets forth the line of communications and shows how the departments relate to each other in processing Section I *and NBIC* Work. Reporting relationships shown here supersede other organization charts internal to the organization when dealing with Section I *and NBIC* work.

2.2 Responsibility. The Plant Manager, Marshalltown Operations, is the one who delegates responsibility and everyone ultimately answers to him. In the cases where Managers are identified as responsible for an activity, they may delegate performance of the activity to others in the organization. When activities occur outside the administrative boundaries of the Marshalltown Operation, the Plant Manager, Marshalltown Operations still maintains functional responsibility. Dotted line indicates functional reporting relationship. Solid line indicates direct reporting relationship.

2.3 Organizational Chart.



3.0 Drawings, Design Calculations and Specification Control

3.1 Scope. This section is concerned with the generation, review, approval, distributions, and revisions to drawings, design calculations and specifications. This section covers the ASME Code relation to each of these items.

3.2 Responsibility. It is the responsibility of the Product Engineer to generate, review, approve, and distribute these documents. It is the responsibility of the QM to approve these documents and to make them available to the AI for his review.

3.3 Drawings and Specifications. Drawings and specifications will be provided by the Fisher Controls International, LLC, Valve Division or by the customer. The Product Engineer will be responsible for the final review of the drawing/specification for ASME Code compliance. This may include:

a. Design criteria
b. Drawing and part number
c. Material (specification and grade), size
d. WPS and joint detail
e. NDE
f. PWHT
g. Dimensions

It is the responsibility of the Product Engineer to see that the drawings and specifications are available. A form 8870, Specification and Design Review, (Exhibit 1) will be completed by the Supervisor, Quality Plans and Specifications, the Product Engineer, and the QM to summarize the design review process for each order per Section 5.3.

3.4 Design Calculations. Design calculations will be generated by the Fisher Controls International, LLC, Valve Division or customers. It will be the responsibility of the Product Engineer to review and approve these design calculations for ASME Code compliance. Form 8870 will contain the applicable ASME Code Section and Product Engineer sign-off signifying review and approval of the design calculations. These calculations will be made available to the AI for his review.

3.5 Customer and/or Subcontracted Provided Design. Product design specifications supplied by the customer or subcontractor will be reviewed by the Product Engineer. The Product Engineer will review the specifications and be responsible for design criteria, calculations, material specifications, construction practices, weld joint detail and WPS, NDE, PWHT, dimensions and drawings. Customer supplied drawings will be reviewed and approved as those generated in-house.

3.6 Code Revisions. New Editions to the Code will be reviewed by the Product Engineer who will be responsible for any changes in design and/or recalculations required by any Code Revision and its incorporation into the drawings and manufacturing processes. Changes will be made prior to the mandatory Edition date.

3.7 Document Control. Drawings and specifications are controlled documents; changes are through the Engineering Change Request Notice system. Design Calculations are reviewed for each new Edition and revised when required by Code. These are revision controlled.

4.0 Material Control

4.1 Scope. This section covers the ordering, receiving and storage of Code material. Code material also includes welding material.

4.2 Responsibility. Ordering of material will be the responsibility of the Buyer. Receiving Inspection will be the responsibility of the QM and the actual storage will be the responsibility of the Direct Supervisor.

4.3 Purchase Order. The Buyer will generate the Purchase Order (Exhibit 5) based on the 11 digit part number. All pressure retaining material will be ordered to an SA or SFA specification or other specifications allowed by the ASME Code and Fisher part number.

Material Test Reports or Certificates of Compliance shall be specified for all ASME Code material. All product forms shall be marked as required by Section II ASME Code and the ASME Construction Code. Material substitutions are allowed only with the documented concurrence of the Product Engineer and the AI.

4.4 Receiving Inspection. The QCI makes certain the dimensions and required markings correspond to those on the Drawings, Assembly Work Order and, when applicable, MTR(s). When all material for an order is found to conform to the drawing and Assembly Work Order and the MTR(s) is forwarded to the Quality Manager. The QCI shall document completion of the inspection on the Inspection and Test Report (Exhibit 2) and complete the Material Information Report as required (Exhibit 9).

After the ITR has been signed by the QCI, the ITR and other shop documentation will be placed in an orange shop pack. This pack will remain with the parts for the balance of the manufacturing process and provides a visual indication that this is Code material.

All non-conforming material will be segregated and processed per sections 6.3 and 6.4 of this manual.

The MTR's are checked by the Quality Manager against ASME Code Section II Parts A, C, and D. The MTR will be checked against the material specification criteria to determine that all required physical, chemical and testing requirements per the material specification have been met. If the MTR and ITR are acceptable, the MTR and ITR will be stamped by Quality Manager.

4.5 Storage. Code material in the shop will be stored in the manufacturing area and will be readily identified as Code material by the orange shop pack. Welding materials will be stored in a clean, dry area and under the control of the Direct Supervisor.

4.6 Documents. All documents for Code material will be made available to the AI.

5.0 Examination and Inspection Program

5.1 Scope. This section describes receiving inspection, in-process inspection program, stamping and Manufacturer's Data Reports.

5.2 Responsibility. Material movement within the shop will be the responsibility of the Direct Supervisor. The inspection program will be the responsibility of the QM.

5.3 Order Preparation. Prior to the start of a job, the Supervisor, Quality Plans and Specifications will prepare an Inspection and Test Report (Exhibit 2) and an Assembly Test Report (Exhibit 8). The Inspection and Test Report (ITR) describes the major steps of fabrication, inspection and testing of the component being constructed. It will be used to record specific information related to welding, heat treat, NDE, testing and inspection. The Assembly Test Report (ATR) is used to describe and record specific information related to any additional functional test results. The QM will present the ITR to the AI prior to the start of fabrication for review and insertion of inspection 'hold points'. The ATR will be presented to the AI once the assembly operations are completed.

5.4 Release of Material. The Direct Supervisor will release only material for production that has been cleared through receiving inspection. The Direct Supervisor will also complete the Weld Order Card (Exhibit 6). The Weld Order Card is utilized to document welding information. Weld acceptance by QCI is confirmed by QCI's signature on Weld Order Card.

5.5 Transfer of Stampings. When plates or pipe are cut, the material identification numbers will be transferred to preserve the identity of the ASME Code material. The transferring of numbers will be done before plate is cut; however, when cutting pipe into shorter lengths, the numbers may be stamped immediately after these pieces are removed. As an alternative, the material heat number and piece serial number may be marked on the material as a coded marking system. In addition, all material heat numbers are recorded on the ITR and weld order card. For small pressure retaining material where physically marking the part is not practical, material with the same heat number is placed in a container and the container identified with the unique heat number and material identification.

5.6 Material Identification. All pressure boundary material used on the boiler component is recorded on the ATR/MIR. The ATR contains a complete description of the boiler component. It shows the date of preliminary and final inspection, documentation of the MTR, WPS, NDE inspection review, hydrostatic test results, post-weld heat treat and sign-off for check points.

5.7 Inspections. All inspections called for on the ITR and ATR shall be performed by Quality Control and documented.

5.8 Final Testing. Final inspection and the hydrostatic test is witnessed by the company QCI and the AI. The ranges of the test gauges are checked by the Direct Supervisor. Dial pressure gages shall preferably have dials graduated over their entire range of about double the intended maximum test pressure, but in no case shall the range be less than 1 ½ times that pressure. The spacing between graduations shall be such that the AI and the operator controlling the test shall be able to determine when the required test pressure has been applied. Digital pressure gages having a wider range of pressure readings may be used provided the readings give the same or greater degree of accuracy as obtained with dial pressure gages.

All welding repairs are referred to the AI prior to the performance of such repairs. No pneumatic testing will be performed in lieu of Code required hydrostatic testing.

5.9 Authorized Inspector. The QM shall be responsible for notifying the AI of his approaching hold points, for reviewing results of all documentation for Code compliance, and checking the nameplate data against the Manufacturers Data Report.

5.10 ASME Certification Mark. The ASME Certification Mark and Designator marking shall be applied only in the presence of the AI. It is the responsibility of the QM for custody of the ASME Certification Mark and NB Stamp.

5.11 Manufacturer's Data Report and Stamping. Following acceptable final inspection and hydrostatic test, the QM will write a complete Manufacturer's Data Report (MDR). Prior to the presentation of the Manufacturer's Data Report to the AI, the QM will review it for corrections and accurate description of the component. The QM will certify that the boiler component meets all of the required design and ASME Code requirements. After the final hydrostatic test, the ASME Certification Mark and the National Board number, if required, shall be assigned and stamped on the boiler component and the MDR submitted to the AI for his signature. One copy of the signed Manufacturer's Data Report will be given to the AIA.

If necessary due to space, "Fisher Controls Int'l LLC" may be used in lieu of "Fisher Controls International, LLC Valve Division" for stamping.

5.12 National Board Registration. National Board Numbers shall be controlled and issued by the QM or his designee. A log showing the type of boiler component, date the National Board Number was issued, and the date mailed shall be maintained.

Transmittal of the MDR with National Board Numbers to the National Board shall be within thirty (30) days of completion of the boiler component stamping. The QM shall also maintain and submit to the National Board the original of all Manufacturers' Data Reports for each Code component. National Board Numbers will be assigned as required without skips or gaps of unused numbers or duplication.

6.0 Correction of Non-Conformities

6.1 Scope. This section will cover the procedure to be followed in the correction of non-conformities. Non-conformities may be found during receiving inspection or during fabrication and final testing. A non-conformity is any condition that does not meet the requirements of the ASME Code, or NBIC for repairs, the job specifications or the rules of this manual.

6.2 Responsibility. Any individual may identify a non-conformance and shall notify the QCI for marking the component with a Nonconformance Hold Tag (Exhibit 11). A Quality Representative shall write a Disposition Report (Exhibit 3).

Resolution/Disposition of non-conformities is the responsibility of the QM. The Product Engineer, Direct Supervisor, Weld Engineer, AI, Buyer, or customer shall be consulted as necessary on problems relating to the deviation. Non-conformities may be resolved in any of the following ways:

1. Repair (welding)
2. Use as is
3. Return to vendor
4. Non-Code use
5. Scrap

The Direct Supervisor or his designee shall assign a qualified WPS for all welded repairs.

6.3 Non-Conformities. Resolutions/Dispositions of repair or use as is shall always call for AI acceptance prior to implementation of resolution. Use as is resolution shall require the Product Engineer's approval. All use as is resolutions shall meet Code requirements. Once the component is inspected and determined to be in compliance with the specifications, the Nonconformance Tag shall be removed from the item at the time of resolution/disposition. The Disposition Report shall be reviewed and signed indicating acceptance of the resolution/disposition and completed actions have been taken.

6.4 Disposition Report. A Disposition Report (Exhibit 3) shall be generated by a Quality Representative and shall be documented and signed off as shown on the Disposition Report. Nonconformance number shall be recorded on the ITR.

6.5 Additional Hold Points. The AI shall be given the opportunity to establish additional hold points.

7.0 Welding

7.1 Scope. This section will cover the WPS, PQR, WPQR, weld material distribution, and control of welding processes. All welding shall conform to the requirements of Section I and IX as applicable.

7.2 Responsibility. All welding procedures will be the responsibility of the Welding Manager. The qualification *and certification* of the procedures and welders will be the responsibility of the QM and the Welding Manager. The Direct Supervisor will be responsible for the instruction and supervision of the qualified welders. The Direct Supervisor will control disbursement of welding material and in process welds. Final weld inspection will be performed by the QCI.

7.3 Welding Material Distribution. Weld material will be received per Para. 4.4, stored in a clean, dry area and will be issued by and returned to the Direct Supervisor. The Direct Supervisor shall determine the appropriate welding materials to be issued based on the requirements of Welding Procedure Specification listed on the ITR for each Code order. He/she shall issue material for each welding operation noting lot control and/or heat number, manufacturer, and size on a Weld Order Card. The Direct Supervisor, welder, and the QCI shall sign and date the Weld Order Card. Only sufficient electrodes to complete the welding operation or to last for a period of (4) hours maximum shall be issued to the welder or weld operator. Low hydrogen electrodes, when issued in heated portable ovens, extend the time to the end of the welder shift, but no longer than 12 hours. Unconsumed electrodes issued in heated portable ovens and Bare Wire may be returned to the Direct Supervisor, inspected for damage, cleanliness, and identification, and returned to storage. Unacceptable wire and electrodes are scrapped.

7.4 Weld Procedure Specification/Welder Performance Qualification. The Welding Manager will be responsible for the formation and application of weld and repair procedure specifications. The PQR *and WPQ* will be conducted by the Welding Manager and *recorded*. *The welding performed for the PQR and WPQ shall be done under the direct supervision of the Welding Manager.* The Direct Supervisor will be responsible for the qualifying of welders. Each welder will be assigned a unique identifying symbol upon successful completion of his certification. The Direct Supervisor shall create a monthly record showing each welder's performance to a process for the purpose of documenting welder qualification. This record shall be submitted monthly to the Welding Manager. The Welders Log (Exhibit 12) will be updated every six months by the Welding Manager. Direct Supervisor will be responsible for the assignment of welders. Each fabrication weld will be identified by the welders' unique symbol which will be stamped at intervals of not more than three feet of weld. All welders and written welding procedures will be qualified in accordance with Section IX and the applicable sections of the ASME Code.

7.5 Welding Documents. All welding documents will be kept on file by the Welding Manager and copies of the WPS will be accessible in each welder's work area. The Welding Manager shall be responsible for maintaining and documenting the PQR and WPQ.

7.6 Requalification. The AI may request the requalification of a welder or WPS. Requalification of welders shall be required for changes in performance essential variables.

7.7 Assignment and Removal of Welders. At the discretion of the Direct Supervisor, welding personnel may be reassigned or removed from their position without involvement of any other organization.

7.8 Tack Welds. When tack welds are left in place, excessive weld buildup will be ground off to enable tack welds to be incorporated into the root pass. All tack welds will be made according to a qualified procedure by a qualified welder. Prior to being incorporated, the welder will visually inspect tack welds in accordance with procedure FMP5B2. If a discontinuity is found, the tack weld shall be removed.

7.9 Welding Procedure Specification Revision. Changes to essential variables shall require a new Procedure Qualification Record (PQR). Changes to non-essential variables shall require a revision of the Welding Procedure Specification.

7.10 Corrections to Procedure Qualification Record. Corrections to the PQR are only allowed for editorial changes and a record is available of the actual variables used during the welding.

7.11 Expiration of Welder's Qualifications. When a welder has not welded with a process during a period of six months or more, his qualifications for that process shall expire.

8.0 Non-Destructive Examination

8.1 Scope. This section will cover the requirements for non-destructive examination and documentation of the NDE personnel results as required for ASME Code compliance in accordance with SNT-TC-1A, latest Code accepted edition.

8.2 Responsibility. Non-destructive examination procedures, qualifications, and conducting of examinations will be the responsibility of the QM and NDE Level III personnel.

It is the responsibility of the Product Engineer to designate the non-destructive examination requirements for individual boiler components. All non-destructive examinations will be conducted by qualified Level II or Level III examiners, with the exception of visual examinations required by ASME B31.1. For ASME B31.1 visual examinations, personnel will be qualified in accordance with procedure FMP2G29.

All NDE procedures are approved by NDE Level III and the QM. The NDE Level III shall be responsible for certification of all NDE personnel.

8.3 Documentation. Non-destructive examination results will be documented as described in the NDE procedure. For RT, the results will be documented on a Reader Sheet. The reader sheet will be incorporated with the radiograph storage envelope. The non-destructive examination technician will sign and date the reader sheet and include data as requested. The pertinent documents and radiographs will be made available to the AI for his review.

8.4 Level III Examiner. In accordance with Fisher Controls International, LLC, Valve Division's written practice, an NDE Level III examiner shall be qualified. Fisher Controls may subcontract NDE to a qualified NDE subcontractor. The QM is responsible for reviewing the subcontractors' written practice and procedures.

The following documentation will be on file for all non-destructive examination personnel:

1. Level of education.
2. Work history and experience.
3. Levels of certification for each non-destructive examination method in which the examiner is qualified.
4. Current visual test (annual): Jaeger I and color perception.
5. Examination and test papers, including grades and percentile.
6. Signature of examiner who certified to level appointment including examiner's level of qualification. (Must be Level III)

8.5 Recertification. Each NDE examiner shall be recertified in accordance with the written practice.

8.6 Requalification. The AI has the prerogative of requiring requalification of NDE procedures and examiners if he has reason to doubt effectiveness of the results.

8.7 Assignment and Removal of NDE examiner. At the discretion of the Direct Supervisor, NDE examiner may be reassigned or removed from their position without involvement of any other organization.

8.8 Demonstration. NDE procedures shall be demonstrated capable of producing meaningful results to the satisfaction of the AI per Section V of the ASME Code.

8.9 Visual Examination. For ASME B31.1 visual examinations, the Quality Manager is responsible for developing and maintaining the Visual Examination Procedure, FMP2G29.

9.0 Heat Treatment

9.1 Scope. This section will cover the heat treatment procedures and records when such heat treatment is required by the ASME Code.

9.2 Responsibility. Heat treatment will be the responsibility of the Welding Manager and the Direct Supervisor.

9.3 Procedures. Heat treatment procedures will be generated by the Welding Manager and approved by the QM. The procedures will conform to the ASME Code. Thermocouples shall be attached in accordance with an approved procedure.

9.4 Records. The Company will provide records, as noted on the ITR, and the time and temperature charts. The time and temperature charts and the report area of the ITR will be signed and dated by the operator and the QCI or QM.

9.5 Quality Control Review. All records of heat treatment will be reviewed by the QM. The QM will make the heat treatment records available to the AI for his review.

9.6 Equipment. Calibration of heat treatment related equipment is the responsibility of the Direct Supervisor. Calibration shall be done annually. The QM will verify the calibration records. Calibration of oven and controller shall be documented.

10.0 Calibration of Measurement and Test Equipment

10.1 Scope. This section will cover the calibration program of measuring and test equipment.

10.2 Responsibility. The QM will be responsible for this program.

10.3 Equipment. The equipment of the Fisher Controls International, LLC, Valve Division required to be calibrated shall include the pressure gauges used for final hydrostatic testing, micrometers, and the temperature recording instrumentation on the post-weld heat treatment furnace.

The micrometers will be checked and recalibrated against gauge blocks annually or whenever there is any reason to suspect their accuracy and documented.

The temperature recording chart and temperature control apparatus of the post-weld heat treatment furnace will be checked and calibrated annually. Labels with the test dates will be affixed to the recording chart and temperature control apparatus and documented.

Each pressure gauge on the hydrostatic test stand will be serviced and calibrated annually or any time an error is suspected. The test date and initials of the tester will be recorded on labels attached to the dial lens of each pressure gauge. Calibration data and dates will be documented. The traceable master test gauges will be recalibrated every five years. The gauge calibration certificate will be stored with the master test gauges.

When gauges are found to be discrepant, they will be removed and recalibrated or replaced with new calibrated gauges.

The QCI is responsible for calibrating gages and measuring instruments by the calibration due date. All items requiring calibration are identified by marking with a serial number and a listing is available that includes all items requiring calibration.

10.4 Non-Destructive Examination Equipment. The QCI and NDE Level III are responsible for calibrating NDE equipment by the calibration due date.

Calibration of NDE equipment shall be performed in accordance with documented procedures.

11.0 Record Retention

11.1 Scope. This section will cover the retention of records for boiler shop documentation.

11.2 Responsibility. The QM will be responsible for the retention of records.

11.3 Records. The Manufacturer's Data Reports will be kept a minimum of five (5) years. Code required radiographic films and interpretation sheets will be kept for a period of five (5) years. All other *supporting* records will be kept for a *minimum of 5 years* at a place designated by the Company.

11.4 Authorized Inspector. At the time of the signing of the Manufacturer's Data Reports, all documents required by the AI will be made available to him.

11.5 Manufacturer's Data Report. Manufacturer's Data Report copies will be distributed as follows:

1. National Board (if necessary)
2. Customer
3. Authorized Inspection Agency
4. Jurisdictional Authority
5. Company files

11.6 Serial Number. The Serial Number assigned to each boiler component shall be used on all relevant documents specific to that item. The Supervisor, Quality Plans and Specifications is responsible for assuring all requirements are identified for each serial number unit.
Relevant documents are Shop Order, ITR, Assembly Work Order (Exhibit 4), and ATR.

11.7 Certifications. Methods other than written signature or stamp for certification for approval shall be controlled in a manner that requires a user ID and password that will protect against unauthorized use.

12.0 Authorized Inspection

12.1 Scope. This section will cover the Authorized Inspector and his interfacing with the Fisher Controls International, LLC, Valve Division.

12.2 Responsibility. The QM will be responsible for the interface between the AI and the Fisher Controls International, LLC, Valve Division. The QM shall maintain the written agreement with the ASME Authorized Inspection Agency.

12.3 Authorized Inspector. The AI will be an inspector employed by an ASME Accredited Authorized Inspection Agency of record. All inspectors shall have been qualified by a written examination under the rules of any State of the United States or Province of Canada which has adopted the ASME Code, hold a valid National Board *'AI' C*ommission. References to ANI on forms in Exhibits for the purpose of this program mean Authorized inspector (AI).

12.4 Access for Inspector. The AI and his supervisor shall be permitted free access at all times while work on ASME Code items is being performed, *including monitoring of the QC Program on a continual basis,* and to all parts of the manufacturer's shop and subcontractor's facilities. The QM shall keep the AI informed of the progress of the work in process and provide access to the Quality Control Manual.

12.5 Documentation. The AI will have free access to all documents related to Code items being fabricated. AI will sign ATR document review step upon certification of Manufacturer's Data Report.

12.6 Facilities. The AI will be provided a suitable work area and an area for filing his documentation.

12.7 Scheduling. The AI will be notified by the QM in sufficient time to enable him to properly schedule his regular or special inspections.

12.8 Non-Conformities. Non-conformities shall require AI concurrence on proposed repairs or use as is dispositions.

13.0 Table of Contents - Sample Forms

13.1 Scope. This section will describe the sample forms used in documenting the manufacturing and inspection of boiler components. Some forms used in this quality manual are also utilized in other Quality Programs. Where ANI is referenced on specific forms, the AI will utilize that space for ASME Section I activities.

Exhibit 1 – Form 8870

FISHER
Fisher Controls

Specification and Design Review

Review Date: 03 MAR 2006

Fisher Order: 014 -A307201948 Item No.: 2
Serial Number: 17668766, 17668767
Project No.: P-0641357

Fisher Change Order/Date:

Customer Design Spec: N/A

Customer Order No.: 11-E0492

Tag Nos.: SPEC 06201900
20-IB03A

Code/Addenda: Design: ASME Sec. I-2004, 2005 Addenda
Other: ASME B31.1-2001, 2002 Addenda

Water Design P/T: 127 BarG (1842 PSIG) / 120 C (248° F)

Steam Design P/T: 72 BarG (1044 PSIG) / 452 C (846° F)

☐ See Attached Calculation

☒ See Form 8871-DMA/HTC Rev C

☒ See FEA Analysis Report (AN03011)

Body Flange Size: 4

Body Flange ANSI Class: 900

Water Connection Type: RF

Water Connection Size: 1 1/2

Water Connection ANSI Class: 900

Body Mat'l: ASME SA182 F22 CLASS 3

Section I Hydro*: 1566 PSIG

Maximum Allowable Working Pressure: 1044 PSIG at 846°F

Diffuser Head Size: N.A.

Diffuser Head End: N.A.

Diffuser Head Material: N.A.

Diffuser Pipe Size: N.A.

Diffuser Pipe End: N.A.

Diffuser Pipe Material: N.A.

Nipple/Reducer: N.A.

Additional Nipple Size: N.A.

Additional Nipple/Reducer End: N.A.

Additional Nipple/Reducer Material: N.A.

Misc.: N.A.

Special Details:
*Fullfilled by: Body Flange Hydro Test Requirements of
3375 PSIG For 10 Minutes
Water Flange Hydro Test Requirements of
3375 PSIG For 10 Minutes

Controlled Parts: *Pressure Retaining
BODY FLANGE: GA32811X012
WATER FLANGE: GA31611X012

S Stamp Required: ☒ Yes

R Stamp Required: ☐ Yes

REVIEWED/APPROVED BY

Robert L Bade — Product Engineer — 27 APR 2006 — Date

Rick Olson — Quality, Planning & Specifications — 4/27/06 — Date

Linda Ward — Quality Assurance — 4-27-06 — Date

CHANGE ORDER REVIEW

C. O. No.	Product E.	Date	Q. P. & S.	Date	Q. A.	Date

Form 8870M, March 2006

Exhibit 2 – Inspection and Test Report (ITR)

FISHER CONTROLS INTERNATIONAL / INSPECTION AND TEST REPORT (FORM 3126M)

Rep. Order 041-0099136140	Item 0001	MPR / ITR No 9916275-9-1	Rev. 1
Size 2"	Quantity 1	Issued By: Dan Meyer	Date 10/17/05
Part Description DMA-htc		Revised By Dan Meyer	Date 11/28/05
Rough Part No.	Rev	Material Type F91, P22, 410	
Finished Part No GE06575X172	Rev A	Piece Serial No AI6931-1	
NCR / DVR No.'s 035544-1 LW 2-6-06		Code ASME B PVC, Section I 2004 Edition, No Addenda S-Stamp: YES	

HOLD/WITNESS POINTS CUST	HOLD/WITNESS POINTS ANI	Chk If Req	ROUGH STOCK INSPECTION	OPERATION PERFORMED BY AND DATE
		✓	☐ MSS-SP-55 ☐ NUCLEAR ☐ STANDARD HEAT/LOT # SEE MIR	
			VENDOR:	
			☐ MPT ☐ LPT ☐ UT ☐ RT # Patt. No.	J Stull 1-12-06 9615
			PO # Code:	
			PR # S/N	
		✓	STAMP PIECE SERIAL NO. ON PART	

	WELDING/HT/HF	PROCEDURE or REF MPR	Rev	AMEND or REF MPR	Rev	
✓	Fabrication weld complete, less water liner to weld neck flange fab weld	FMP 5C80.5B5B	0			Jack Stuhy 7806 1-12-05 S Knutson 7810 1-18-06
✓	Weld water liner to weld neck flange	FMP 5C79.5A5B3	4			Perry M Duncan 11310 S Knutson 7810 1-19-06
✓	PWHT	FMP 6A1	8	MPR II.B		Perry M Duncan 11310 S Knutson 7810 1-24-06 S Kouns Jr 1-25-06
	INSPECTION / NDE					
✓	MPT/LPT all fabrication welds	FMP 2G31 Appendix B	1			1/31/06
✓	Visually examine all fab welds	FMP 2G29	2			Chuck Michels Jr. 1-31-06
✓	Water flange hydro 9375 psi / 10 minutes	FGS 4L1	AW			S Kouns 2-1-06
✓	Body flange hydro 9375 psi / 10 minutes	FGS 4L1	AW			S Knutson 7810 2-1-06
✓	**FINAL INSPECTION**					L Messer 6631 2-1-06
✓	**Q. A. DOC. VERIFICATION / VENDOR**					

~~HOLD ANI~~ 2-1-06 ~~HOLD ANI~~ 2-1-06

F.C.I.-Q.A. LKW FEB 6 – 2006

COMMENTS:

REVIEWED/APPROVED: (Q P & S)	Tom Ohlfest	DATE 11/28/05
APPROVED: (QA for Appendix B Equip.)	Jim DeGrado Linda Ward 11-29-05	DATE 11/28/05
REVIEWED: (ANI / AI for ASME Sec. III Equip.)		DATE NOV 29 2005

GAGES USED: (use back for additional gages) FC18020, FC18017, FC18015

Exhibit 3 – Disposition Report

FISHER

EMERSON
Process Management

Nonconforming Material Disposition Report

Inventory Organization	VLVS_USA_IO_Marshall own_IA			Date printed	25-OCT-13
Disposition No.	DISP000011238	Sales Order Number		Supplier	KEOKUK STEEL CASTINGS COMPANY
Nonconformance No.	NC000048196	SO Line Number		PO Number	4123212347
Source Owner		CUSTOMER PO		PO Line Number	
Defect Code	3.01	Project Number		PO Release Number	
Cause Description	Failed to meet material requirements	Task Number		PO Shipment	
Disposition	REWORK	**Job**	5158731	Supplier Lot Number	
Disposition Status	CLOSED	**Item**	13B2573X032	PO Receipt Number	
Disposition Quantity	1	Item Description	VALVE BODY,WAFER-A 31A,NPS8,CL150, SPCL	**Component Item**	13B2575X04A
Disposition UOM	Each	Item Material Description	ASME SA351 CF8M FMS20B58	Comp. Item Description	VALVE BODY CSTG,WF-A31A ,NPS8,CL150
Disposition Owner		Pattern Number		Comp.Item Material Desc	ASME SA351 CF8M FMS20B58
Implementation By		Revision		Comp.Pattern Number	HXZ
Entered by User	KETCHAM, MICHAEL	Serial Number	AA000001	Component Revision	
Date Opened	25-OCT-13	Lot Number		Component Lot No.	
Date Closed	25-OCT-13	Heat Number	A123	Component Serial No.	AA000001
Rework Job	5158731	FILE NUMBER		Subinventory	
		CODE		Locator	
		SECTION		License Plate Number	
		EDITION		Value Stream	MTN-NUCLEAR
		ADDENDA		Line Type	
		NUCLEAR CLASS		Order Detailer	
		STAMP		Change Order Detailer	

Disposition Description: **0.25 SAND INCLUSION IN FLANGE FACE**

Rework Operation Description	Rwk Op Seq No.	Rework Dept.	Resource Code
GRIND OUT SAND INCLUSION	119	PROCESS	QUEUE
GRIND OUT SAND INCLUSION	119	PROCESS	DEBUR-0016
INSPECT FLANGE	129	INSPECTION	QUEUE
INSPECT FLANGE	129	INSPECTION	FINAL-INSP

Detailed Description: **0.25 SAND INCLUSION IN FLANGE FACE**

Notes:

Approver Name	MIKE_KETCHAM			HENG_PUNG
Date of Approval	25-OCT-13			25-OCT-13
Approver Title	Quality Assurance	Product Engineer	Nuclear Qualification	Authorized Nuclear Inspector

Exhibit 4 – Assembly Work Order

Job Order

VLVS_USA_IO_Marshalltown_IA

Assembly:
DESIGN_ED/ES/ET_*10199001

Job# : 5147991

Job Qty: 1

Description : CONFIGURED ASSY VLVS.NO.DVC6200.SPRING & DIAPHRAGM.657.8.SST-S41000.CAGE GUIDED.ED
Material :

Drawing Nbr	Drawing Rev	Process Code	Sch Group	Group Tech Code	Comp Date
			MTN-SMALL		11-NOV-13

Process Code Description:

Planner	: MTNSMALL	Accounting Class Code	: S Assembly
Spec . Req	: Job Mass Loaded on 24-SEP-2013 04:09:38 (server timezone)	Print Date	: 11-Oct-13 14:47:04 PM
Sub Inv	: FG	Start Date	: 05-NOV-13
Location	: FG.....	Heat #	:
Proj Nbr	:	Vendor	:
Proj Name	:	Kanban Card #	:
Proj Manager	:		
Proj Admin	:		

Assembly Job Information

Customer Name	: COORS BREWING CO	**Ultimate Destination**	: **US**
Customer PO #	: 20130923LDW1		
Ship Set	: No	Rep Order Number	: 001 -130923LDW1
Arrival Set	: No	Rep Order Line number	: 10
Schedule Date	: 11-NOV-13	JDE Number	:
Promise Date	: 11-NOV-13	Order Type	: Order_TD_US EndUse_USA_VLVS
Cust Req Date	: 11-NOV-13	Sales Order Number	: 1143358
OE Detailer	: No detailer defined	Sales Order Line #	: 1.1
Serial Number Range	: **F000339683 To F000339683**	Shipment Priority	: STANDARD PRIORITY
		Paint	**: STANDARD**

Routing Summary

Op#	Dept	Resource	Op Description	Supplier
10	SM ASSY	SMSTOCK	PULL PARTS	
1099	SM ASSY	SMEIGHT SMSTANDARD	DPSM	
2218	SM ASSY	SMEIGHT	Assemble Valve Body	
4100	SM ASSY	SMEIGHT	Mount FieldVue Series	
5100	SM ASSY	SMEIGHT	Mount Regulators	
8800	INSPECTION	ASSY-INSP	FINAL INSPECTION	

Wip Job / Schedule Attachments

Routing Comments:

Additional Specs

Spec Number	Spec Rev	Spec Name	Specification Details

Component Item Additional Specs

Exhibit 5 – Purchase Order

EMERSON

ISSUED BY:
Fisher Controls International LLC
Tax ID/RFC/VAT: 9900258106

STANDARD PURCHASE ORDER

PO Number	PO Issue Date	Page
4123212347	25-OCT-13	1 / 4

PO Revision 0 — **System-Generated Approved PO Date** 25-OCT-13

Supplier:
KEOKUK STEEL CASTINGS COMPANY
3972 MAIN ST
KEOKUK, IA 52632-2009
United States

Attention: BRENDA JOHNSON
Phone:
Fax:
Email:

Buyer Information
Name: BLATTEL-BRITTON, JOHN M
Phone:
Email: DLEPMADCORACLEWFSTAGE@emerson.com
Fax:

Terms
Payment: 5TH 2ND PROX
Freight: Collect
Delivery: EMR2006
Title Transfer:

THIS PURCHASE ORDER NUMBER AND REVISION, RELEASE NUMBER AND REVISION, AND APPROPRIATE LINE ITEM NUMBER(S) MUST APPEAR ON ALL INVOICES, PACKING LISTS, CARTONS AND CORRESPONDENCE RELATED TO THIS ORDER.

Ship To:
Attn: Receiving
FISHER CONTROLS
INTERNATIONAL LLC
GOVERNOR ROAD PLANT 1309 E
OLIVE ST
MARSHALLTOWN, IA 50158

Bill To:
Attn: Accounts Payable
Fisher Controls International LLC
P.O. Box 29199
St. Louis, MO 63126-9199

CURRENCY: USD

LINE	ITEM NUMBER/REVISION/DESCRIPTION	TAX	Ship Date	Receipt Date	QTY	UOM	UNIT PRICE	EXTENDED PRICE
1	**13B2575X04A Rev # B** VALVE BODY CSTG,WF--A31A,NPS8,CL150 **Pattern:** HXZ **Material:** ASME SA351 CF8M FMS20B58 FMS20B58 Rev # M CONTROLLED COMPOSITION AUSTENITIC STAINLESS STEEL CASTINGS **Process Code:** NU.--,--.01 NU - GENERAL- NUCLEAR UNITED STATES/NORTH AMERICA SOURCED - - - - - - 01 - ACCEPT/Q.A.- SECT III ASME BPVC/10CFR PART 21 APPLIES - REPORTING OF DEFECTS AND NONCONFORMANCES IS MANDATORY **Additional Specs:** CSP-0429048-PPR-1 Rev # A See Specification CSP-0429048-PPR-1 FGS7D4 Rev # H MATL MARKING SYMBOLS FOR CSTGS AND FORGINGS							
	Shipment 1 Address at top of document	N	28-JAN-14	29-JAN-14	1	EACH	[redacted]	[redacted]

TOTAL [redacted]

Adherence to FGS 15B13.0 Rev. A "Supplier Quality Manual" is required
Solid Wood Packing Materials shall comply with ISPM-15 for all international shipments
FGS7E4 Rev C Part marking requirements – mark country of origin per FGS 7E4
WMP11H7 Rev A Solid wood packing materials to comply w/IPPC regulations – USA import instructions

WELD ORDER	PART NO.	PART DESCRIPTION	SHOP ORDER NO.	PIECE S/N	MPR NO.	MPR Rev No	DATE
FISHER CONTROLS	GE06575X212 R (6-2-06)	DMA/AF-2F-HTC	BA7609	BA7609-2	0641357-3	1	5/26/06

MATERIAL WELDED					
	SPECIFICATION	SA335	GRADE	P22	(P5A)
	SPECIFICATION	SA182	GRADE	F22 CL3	(P5A)
	SPECIFICATION		GRADE		
	SPECIFICATION		GRADE		

RECORD HEAT NO., PIECE SERIAL NO., AND WELD MATERIAL FOR EACH WELD JOINT/REPAIR. RECORD WELD JOINT NUMBER(S) IF HEAT NO. OR PIECE SERIAL NO. IS NOT REQUIRED.

OPN NO.	REPAIR NCR-DVR NO	FMP NO.	REV	AMEND. NO.	REV		WELD MATERIAL DATA				
110-1		5C80.9	5			SIZE	3/32	.035			5/26/06 Terry M. Bowers FOREMAN DATE
HEAT NO. OF PART	XABAX5 NECK FLANGE	PIECE S/N				TYPE	ER90S-B3	ER90S-B3			Y. Michalak 6-1-06 INSPECTOR DATE
HEAT NO. COOR. PART	EJ BODY FLANGE	PIECE S/N	BA7609-2			MANUF	Mid Alloy	Mid Alloy			
JOINT DESC.	WELD NECK FLANGE TO BODY FLANGE					HEAT/ LOT	9/1480	9/1508			Knutson 7810 6-1-06
	JT # 1 DWG GE06575					MACH NO.					WELDER DATE

OPN NO.	REPAIR NCR-DVR NO	FMP NO.	REV	AMEND. NO.	REV		WELD MATERIAL DATA				
110-1		5C80.9	5			SIZE	3/32	.035			5/26/06 Terry M. Bowers FOREMAN DATE
HEAT NO. OF PART	EJ BODY FLANGE	PIECE S/N	BA7609-2			TYPE	ER90S-B3	ER90S-B3			Y. Michalak 6-1-06 INSPECTOR DATE
HEAT NO. COOR. PART	339697 PIPE NIPPLE	PIECE S/N				MANUF	Mid Alloy	Mid Alloy			
JOINT DESC.	WELD BODY FLANGE TO PIPE NIPPLE					HEAT/ LOT	9/1480	9/1508			Knutson 7810 6-1-06
	JT # 2 DWG GE06575					MACH NO.					WELDER DATE

OPN NO.	REPAIR NCR-DVR NO	FMP NO.	REV	AMEND. NO.	REV		WELD MATERIAL DATA				
110-1		5C80.9	5			SIZE	3/32	.035			5/26/06 Terry M. Bowers FOREMAN DATE
HEAT NO. OF PART	339697 PIPE NIPPLE	PIECE S/N				TYPE	ER90S-B3	ER90S-B3			Y. Michalak 6-1-06 INSPECTOR DATE
HEAT NO. COOR. PART	508120 NOZZLE MOUNT	PIECE S/N				MANUF	Mid Alloy	Mid Alloy			
JOINT DESC.	WELD PIPE NIPPLE TO NOZZLE MOUNT					HEAT/ LOT	9/1480	9/1508			Knutson 7810 6-1-06
	JT # 3 DWG GE06575					MACH NO.					WELDER DATE

OPN NO.	REPAIR NCR-DVR NO	FMP NO.	REV	AMEND. NO.	REV		WELD MATERIAL DATA				
110-1		5C80.9	5			SIZE	3/32				5/26/06 Terry M. Bowers FOREMAN DATE
HEAT NO. OF PART	20870 WATER LINER	PIECE S/N				TYPE	ER90S-B3				Y. Michalak 6-1-06 INSPECTOR DATE
HEAT NO. COOR. PART	XABAX5 NECK FLANGE	PIECE S/N				MANUF	Mid Alloy				
JOINT DESC.	WELD WATER LINER TO NECK FLANGE					HEAT/ LOT	9/1480				Knutson 7810 6-1-06
	JT # 4 DWG GE06575					MACH NO.					WELDER DATE

F.C.I.-G.A. LKW JUN 2 - 2006

Form 2364K

Exhibit 7 – P4A (Page 1 of 2)

FORM P-4A MANUFACTURER'S DATA REPORT FOR FABRICATED PIPING
As Required by the Provisions of the ASME Code Rules, Section I

P-4A ID No. _____

Page ____ of ____

1. Manufactured by _____
(Name and address of manufacturer)

2. Manufactured for _____
(Name and address of purchaser)

3. Location of installation _____

4. Identification _____ Piping Registration No. _____
(Main steam, boiler feed, blow-off, or other service piping — state which)

Shop Order No. _____ Purchaser's Order No. _____ Boiler Registration No. _____

5. Design Conditions of Piping _____ _____ . Specified by _____
(Pressure) (Temperature) (Name of Co.)

Code Design by _____

6. The chemical and physical properties of all piping meet the requirements of material specifications of the ASME BOILER AND PRESSURE VESSEL CODE. The design conforms to Section I of the ASME BOILER AND PRESSURE VESSEL CODE _____ .
(Year)

Addenda to _____ (if applicable), and Code Cases _____ .
(Date) (Numbers)

7. Description of Piping (include material identifications by ASME specification or other recognized Code designation)

8. Shop Hydrostatic Test _____ .

9. Remarks

CERTIFICATE OF SHOP COMPLIANCE

We certify the statement in this data report to be correct and that all details of design, material, construction, and workmanship of the described piping conform to Section I of the ASME BOILER AND PRESSURE VESSEL CODE.

Our Certificate of Authorization No. _____ to use the (S) or (PP) Designator _____ Expires _____ .

Date _____ Signed _____ by _____
(Manufacturer or Fabricator) (Authorized Representative)

CERTIFICATE OF SHOP INSPECTION

I, the undersigned, holding a valid commission issued by the National Board of Boiler and Pressure Vessel Inspectors and employed by _____ have inspected the piping described in this Manufacturer's Data Report and state that, to the best of my knowledge and belief, the manufacturer has constructed this piping in accordance with the applicable sections of the ASME BOILER AND PRESSURE VESSEL CODE.

By signing this certificate, neither the Inspector nor his employer makes any warranty, expressed or implied, concerning the piping described in this Manufacturer's Data Report. Furthermore, neither the Inspector nor his employer shall be liable in any manner for any personal injury or property damage or a loss of any kind arising from or connected with this inspection.

Date _____

_____ Commission _____
(Authorized Inspector) (National Board Authorized Inspector Commission Number)

(07/17)

Exhibit 7 – P4A (Page 2 of 2)

FORM P-4A P-4A ID No. _____

Manufactured by _____ Page ___ of ___

10. Description of Field Fabrication

11. Field Hydrostatic Test _____ .

CERTIFICATE OF FIELD FABRICATION COMPLIANCE

We certify the statement in this data report to be correct and that all details of design, material, construction, and workmanship of the described piping conform to Section I of the ASME BOILER AND PRESSURE VESSEL CODE.

Our Certificate of Authorization No. _____ to use the (S) or (PP) Designator expires _____ .

Date _____ Signed _____ Name _____

(Authorized Representative) (Fabricator)

CERTIFICATE OF FIELD ASSEMBLY COMPLIANCE

We certify that the field assembly of the described piping conforms with the requirements of Section I of the ASME BOILER AND PRESSURE VESSEL CODE. Our Certificate of Authorization No. _____ to use the (A), (S), or (PP) Designator expires _____ .

Date _____ Signed _____ Name _____

(Authorized Representative) (Assembler)

CERTIFICATE OF FIELD ASSEMBLY INSPECTION

I, the undersigned, holding a valid commission issued by the National Board of Boiler and Pressure Vessel Inspectors and employed by _____

have compared the statements in this Manufacturer's Data Report with the described piping and state that the parts referred to as Data Items _____, not included in the Certificate of Shop Inspection, have been inspected by me and that, to the best of my knowledge and belief, the manufacturer and/or assembler has constructed and assembled this piping in accordance with the applicable sections of the ASME BOILER AND PRESSURE VESSEL CODE. The described piping was inspected and subjected to a hydrostatic test of _____ .

By signing this certificate, neither the Inspector nor his employer makes any warranty, expressed or implied, concerning the piping described in this Manufacturer's Data Report. Furthermore, neither the Inspector nor his employer shall be liable in any manner for any personal injury or property damage or a loss of any kind arising from or connected with this inspection.

Date _____

_____ Commission _____

(Authorized Inspector) (National Board Authorized Inspector Commission Number)

(07/17)

Exhibit 8 (Page 1 of 5) – Assembly Test Report (ATR)

FISHER CONTROLS INTERNATIONAL, LLC / ASSEMBLY TEST REPORT (FORM 3131 Q)

Rep. Order	Item:	APR /ATR No CSP-1331566-ATR-2-1	Rev. 0
Tag Number		Issued By: R. Maxwell	Date 4/15/14
Unit Serial No		Revised By	Date
Customer P.O		Drawing No:	Rev.
Size and Type		Hydro Gauge	

Code **ASME B PVC, Section I** Year/Addenda **2013 Edition** S-Stamp **YES**

Sequence	Hold/Witness Points: Fisher	AI	Customer	Owner	Check if Required	Description	Procedure	Rev.	Amendment or APR Ref	Rev.
					X	Final Inspection				
					X	AI Documentation review				
					X	ASME Stamp				
					X	QA Release				

REVIEWED/APPROVED: (Q P & S) G. Neisess DATE 4/15/14
APPROVED: (QA for Appendix B Equip.) T. McReynolds DATE 4/21/14
REVIEWED: (AI for ASME Sec. I Equip.) DATE

Date: 8/12/2015 12:55:27 PM Page 1 of 4

FISHER CONTROLS International, LLC	REP ORDER NUMBER	ITEM NO.	Valve Serial No	TAG NO.	APR / ATR CSP-1331566-ATR-2-1
	Drawing No:	Rev.	Customer Order Number		ISSUED BY DATE
CODE:	ASME B & PVC, Section I	YEAR/ADDENDA:		S-Stamp	YES Class

Sequence No.	Cust	Owner	ANI	Fisher	Description	X	PROCD /REF APR	REV	AMEND /REF APR	REV	TEST PRESSURE	TIME (MIN)	ALLOW LEAKAGE	FINAL RESULT
	X - If required													
1					Final Inspection	X								

Equipment:	

NCR No.		Date:	

Comments:

Fisher				ANI		Customer		Owner	
Printed Name		Printed name		Printed Name		Printer Name		Printed Name	
Signature	Date	Signature	Date	Signature	Date	Signature	Date	Signature	Date

Exhibit 8 (Page 3 of 5) – Assembly Test Report (ATR)

Date: 8/12/2015 12:55:27 PM Page 2 of 4

FISHER CONTROLS International, LLC	REP ORDER NUMBER	ITEM NO.	Valve Serial No	TAG NO.	APR / ATR CSP-1331566-ATR-2-1
	Drawing No:	Rev.	Customer Order Number	ISSUED BY	DATE
CODE:	ASME B & PVC, Section I	YEAR/ADDENDA:		S-Stamp YES	Class

Sequence No.	X - If required														
	Cust	Owner	ANI	Fisher	Description	X	PROCD /REF APR	REV	AMEND /REF APR	REV	TEST PRESSURE	TIME (MIN)	ALLOW LEAKAGE	FINAL RESULT
2					AI Documentation review	X								

Equipment:

NCR No. **Date:**

Comments:

Fisher			ANI			Customer			Owner		
Printed Name	Printed name		Printed Name			Printer Name			Printed Name		
Signature	Date	Signature	Date	Signature	Date	Signature	Date	Signature	Date	Signature	Date

Exhibit 8 (Page 4 of 5) – Assembly Test Report (ATR)

Date: 8/12/2015 12:55:27 PM Page 3 of 4

FISHER CONTROLS International, LLC	REP ORDER NUMBER	ITEM NO.	Valve Serial No	TAG NO.	APR / ATR CSP-1331566-ATR-2-1
	Drawing No:	Rev.	Customer Order Number	ISSUED BY	DATE
CODE:	ASME B & PVC, Section I	YEAR/ADDENDA:		S-Stamp: YES	Class

Sequence No.	X - If required					X	PROCD /REF APR	REV	AMEND /REF APR	REV	TEST PRESSURE	TIME (MIN)	ALLOW LEAKAGE	FINAL RESULT
	Cust	Owner	ANI	Fisher	Description									
3					ASME Stamp	X								

Equipment:

NCR No. Date:

Comments:

Fisher		ANI		Customer		Owner	
Printed Name	Printed name	Printed Name		Printed Name		Printed Name	
Signature	Date	Signature	Date	Signature	Date	Signature	Date

Exhibit 8 (Page 5 of 5) – Assembly Test Report (ATR)

Date: 8/12/2015 12:55:27 PM Page 4 of 4

FISHER CONTROLS International, LLC	REP ORDER NUMBER	ITEM NO.	Valve Serial No	TAG NO.	APR / ATR CSP-1331566-ATR-2-1
	Drawing No:	Rev.	Customer Order Number		ISSUED BY DATE
CODE:	ASME B & PVC, Section I	YEAR/ADDENDA:		S-Stamp	YES Class

Sequence No.	Description	X	PROCD /REF APR	REV	AMEND /REF APR	REV	TEST PRESSURE	TIME (MIN)	ALLOW LEAKAGE	FINAL RESULT
X - If required										
Cust										
Owner										
ANI										
Fisher										
4	QA Release	X								

Equipment:

NCR No. Date:

Comments:

Fisher			ANI			Customer			Owner		
Printed Name	Printed name		Printed Name			Printer Name			Printed Name		
Signature	Signature	Date	Signature	Date		Signature	Date		Signature	Date	

Exhibit 9 – Material Information Report

Material Information Report

Shop Order: Piece Serial #:

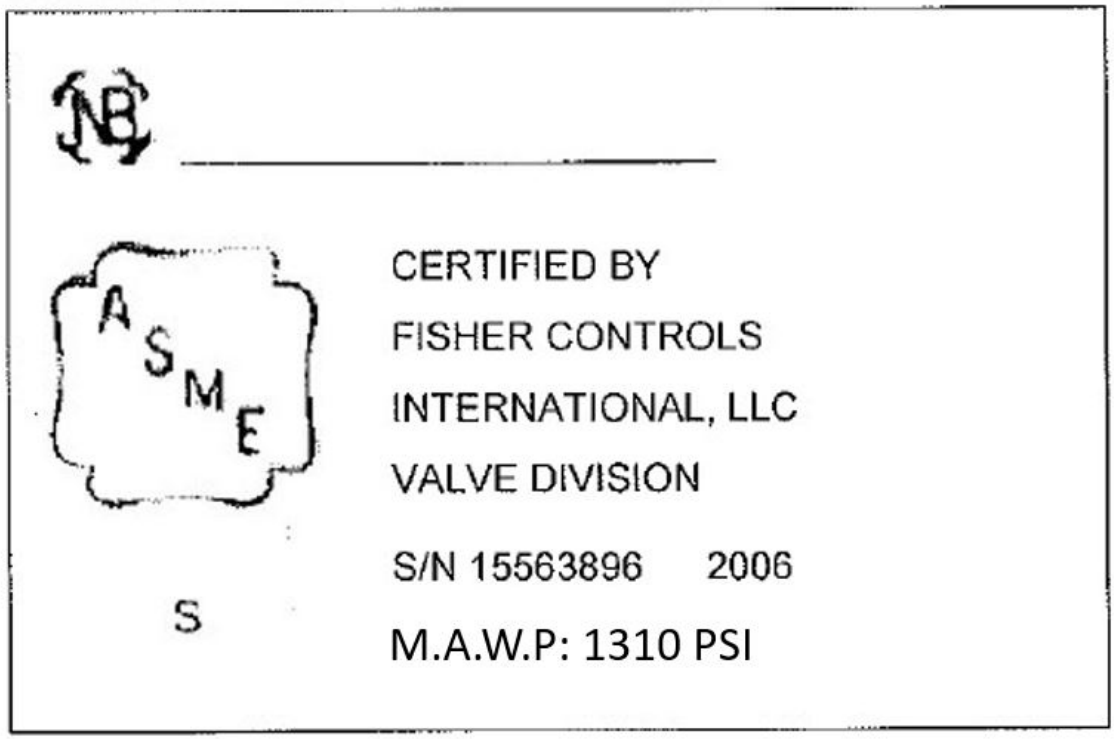
Parent Item

GE06575XF52

DMA/AF-2G-HTC ASSY ~ 2-2500 RF X 4-2500 RF

GE12069X092 MOUNT,NOZZLE,DMA ~ AF28,2 NOZZLES,2,J-BEVEL BWE	1	Piece Serial #: HT/Mat'l #:
GE06571X382 NIPPLE,PIPE,J-BEVEL ~ 2, .44 WALL X 5.25,FROM BAR	1	Piece Serial #: HT/Mat'l #:
GA32814X202 FLANGE,BODY,DMA ~ 4-2500 RF,2.38 OD	1	Piece Serial #: HT/Mat'l #:
GA31115X232 FLANGE,WELD NECK ~ 2-2500 RF SCH XXS MODIFIED	1	Piece Serial #: HT/Mat'l #:
GA29155X572 LINER,WATER ~ 21.00 LENGTH	1	Piece Serial #: HT/Mat'l #:
GA03877X012 SPRAY NOZZLE ASSY ~ AF28	2	Piece Serial #: HT/Mat'l #:

Exhibit 10 – Nameplate Information



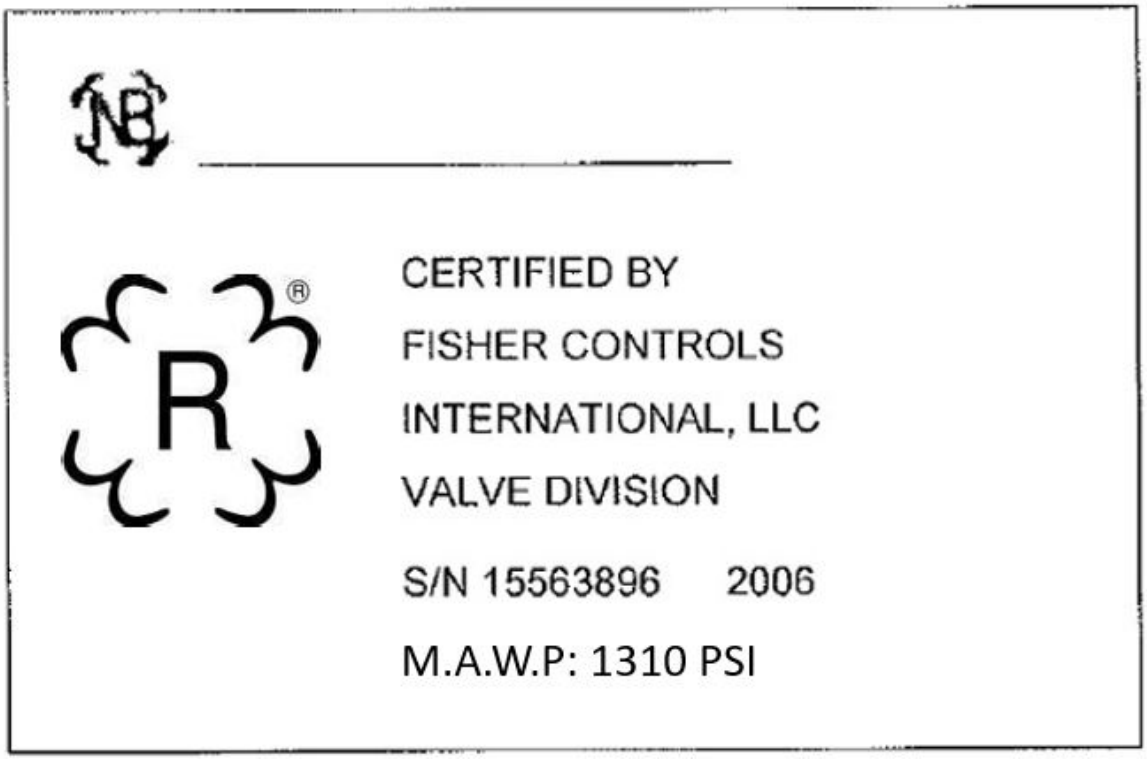


Exhibit 11 – Nonconformance Hold Tag

FISHER

EMERSON
Process Management

Nonconforming Material Report

Date printed: 25-Oct-13

Inventory Org: VLVS_USA_IO_Marshalltown_IA

Nonconformance Number	NC000048196	Sales Order Number		Supplier	KEOKUK STEEL CASTINGS COMPANY
Nonconformance Source	SUPPLIER	SO Line Number		PO Number	4123212347
Nonconformance ItemType	COMPONENT	CUSTOMER PO		PO Line Number	
Nonconformance Status	NEW	Customer		PO Release Number	
Quantity Nonconforming	1	Project Number		Supplier Lot Number	
Defect Code	3.01	Task Number		PO Receipt Number	
Cause Description	Failed to meet material requirements	**Job**	5158731	**Component Item**	13B2575X04A
Entered by User	KETCHAM, MICHAEL	From Op Seq Number	101	Component Item Decription	VALVE BODY CSTG,WF-A31A,NPS8,CL150
Employee Name	KETCHAM, MICHAEL	From Intraoperation Step	Queue	Component Item Material Description	ASME SA351 CF8M FMS20B58
Date Opened	25-OCT-13	Department	STOCKROOM	Component Pattern Number	HXZ
Item	13B2573X032	To Op Seq Number	101	Component Revision	
Item Decription	VALVE BODY,WAFER~A31 A,NPS8,CL150,SPCL	To Intraoperation Step	Reject	Component UOM	Each
Item Material Description	ASME SA351 CF8M FMS20B58	To Department	STOCKROOM	Component Lot Number	
Pattern Number		FILE NUMBER		Component Serial Number	AA000001
Revision		CODE	ASME	Component Subinventory	
Quantity	1	SECTION	III, DIVISION 1	Component Locator	
UOM	Each	EDITION	1998	Subinventory	
Serial Number	AA000001	ADDENDA	1998	Locator	
Lot Number		NUCLEAR CLASS	1	License Plate Number	
Heat Number	A123	STAMP	N	Value Stream	MTN-NUCLEAR
				Line Type	
				Order Detailer	
				Change Order Detailer	

Detailed Description	0.25" SAND INCLUSION IN FLANGE FACE

Exhibit 12 - Welders Log

EN287 / 9606 | ASME IX | AWS D1.1 | Additional information

FISHER

Fisher Controls International LLC
1702 South 12th Ave., Marshaltown, Iowa, 50158
ASME IX - Welder Maintenance Log (WML)
Welderqual

Welder's name	Anderson, Ronald	Welder's picture		Welder's status	Active
ID number	8083				
Date of birth					
Stamp number	S50				
Company name	Fisher Controls International LLC				
Division					

Welding process	Process type	WPQ/WPS number	WQTN/In reference number	Approved/entered by	Date	Expiration date
FCAW	Semi-automatic	RDAC2015GM		(vpq-00843)	16-Jul-2008	16-Aug-2008
GMAW	Semi-automatic	RDAC2015GM		(vpq-00843)	16-Jul-2008	16-Aug-2008
GTAW	Manual	RDA,C79.1,GTAW,SMAW		(vpq-00831)	14-Jul-2008	14-Aug-2008
SMAW	Manual	RDAC79.8SM		(vpq-00841)	14-Jul-2008	14-Jan-2009
		RDA,C79.1,GTAW,SMAW		(vpq-00831)		

GLOSSARY OF TERMS AND DEFINITIONS

TERMS:

ASME	American Society of Mechanical Engineers
Code	ASME Sections I, II (Parts A, C, & D), IV, V, VIII Division 1, IX and NBIC
QM	Quality Manager
QCI	Quality Control Inspector
WPS	Welding Procedure Specification
PQR	Procedure Qualification Record
MTR	Material Test Report
SNT-TC-1A	American Society for Non-Destructive Testing Specification
NBIC	National Board Inspection Code
WPQ	*Welder / Welding Operator Performance Qualification*

DEFINITIONS:

Assembly Work Order	Document that details as built construction.
ITR	Inspection and Test Report- details inspection and test requirements and AI Hold Points in the shop.
ATR	Assembly and Test Report- documents final construction and AI Hold Points at assembly.
Quality Representative	Persons reporting directly or indirectly to Quality Manager.
Foreman	Whenever Foreman and Direct Supervisor are used, they are the same position.
MIR	Material Information Report

15.0 Repair and Alterations

15.1 General

15.1.1 Shop repairs and alterations to boilers and pressure retaining items (i.e. Power Boilers, Heating Boilers, Pressure Vessels and Boiler External Piping), when required by the owner, user, jurisdiction, or Inspector responsible for in-service inspection of the item, shall be made in accordance with the applicable requirements of the National Board Inspection Code (NBIC), jurisdictional requirements, and this manual.

15.1.2 "Repairs", "Alterations" and "Re-rating" are as defined in the NBIC

15.2 Drawings, Design, and Specifications

15.2.1 Drawings (as appropriate), design calculations (for alterations) and specifications shall be prepared, reviewed, and approved in accordance with appropriate Sections of this Manual to describe the repair or alteration in sufficient detail prior to performing any activity.

15.2.2 For alterations and re-ratings, revised calculations shall accompany the applicable National Board Form as referenced in the NBIC, and all documentation shall be subject to acceptance by the Jurisdiction at the location of the installation.

15.3 Repair and Alteration Methods

15.3.1 The repair and alteration methods shall be performed in accordance with all the requirements of this manual. Certain specific exceptions may be taken, or additional requirements may be required as described in this Section of the Manual.

15.3.2 All repairs or alterations to Code vessels are subject to the acceptance of the AI who may require evidence be presented prior to acceptance by the Jurisdiction and insurance carrier of the method and extent of the repair or alteration.

15.3.3 The method of performing repairs and alterations shall be handled as described throughout this manual. The Inspector shall perform the duties and have all the opportunities described throughout this manual for the AI, to assure compliance with the NBIC. The resolution of repair or alteration non-conformity reports shall be the responsibility of the QCI and have prior review by the QM and the Inspector and documented on an NCR.

15.3.4 The QM shall arrange access to the Code item for the Inspector so that those inspections deemed necessary to accept the repair or alteration may be carried out. The QM or QCI shall keep the Inspector informed of the progress or work so he will be available to set his hold points.

15.4 Materials

15.4.1 All material required shall be purchased, received, and controlled as described in the Material Control Section of this manual. Only those materials used in the original construction, or permitted by the original construction Code or Code accepted alternatives may be used.

15.5 Welding, Non-Destructive Examination, and Postweld Heat Treatment

15.5.1 Welding activities shall be carried out as described in the appropriate Section of this Manual.

15.5.2 Preheat shall be performed as stipulated per the qualified Welding Procedure Specification.

15.5.3 Postweld heat treatment shall be performed as required by the original construction Code and the appropriate Section of this Manual.

15.5.4 The NBIC permitted alternatives to postweld heat treatment may be used if postweld heat treatment is inadvisable or impractical, and is acceptable to the Inspector. Examples of these alternative methods of postweld heat treatment or special welding methods are described in the NBIC.

15.6 Non-Destructive Examination

15.6.1 The NDE requirements shall be in accordance with the original construction Code of the pressure retaining item. If the original construction Code is ASME Section I ASME B31.1 or ASME Section VIII Division 1 or 2, then the NDE methods shall be in accordance with the NDE Section of this Manual. Weld repairs and alterations shall be subject to the same NDE requirements of the original welds. When this is not possible or practical, alternative NDE methods acceptable to the Inspector and the Jurisdiction (where required) may be used.

15.7 Pressure Tests

15.7.1 The pressure tests shall be as specified on the ITR and witnessed by the QCI and the Inspector.

15.7.2 Repairs - shall be pressure tested at the minimum pressure required to verify leak tightness integrity using water or other liquid medium.

15.7.3 Replacement parts used in repairs - shall be pressure tested at the maximum allowable working pressure (MAWP) stamped on the pressure retaining item or any other pressure as required by the Jurisdiction using water or other liquid medium.

15.7.4 Alterations - When the alteration activity involves the installation of a replacement part and/or the alteration will impact the design pressure, the design temperature or design rated capacity, then a pressure test as required by the NBIC shall be performed.

15.7.5 The test temperature for pressure testing shall be as follows:

a) The metal temperature shall be in accordance with the requirements of the original construction but shall not be less than 60°F unless the owner provides on the toughness characteristics of the material to indicate the acceptability of a lower test temperature.

b) During close examination, the material temperature shall not exceed 120°F. unless the owner specifies the requirements for a higher test temperature and it is acceptable to the Inspector or Jurisdiction.

15.7.6 The pressure test shall be held for a minimum of 10 minutes prior to examination by the QCI and the Inspector.

15.7.7 When contamination of the pressure retaining item by liquids is possible or when pressure testing is not practical, other methods shall be used as follows:

a) The pressure test may be a pneumatic test provided the QCI receives the concurrence of the Inspector, jurisdictional authority (where required), and the owner. Precautionary requirements of the applicable section of the original Code of construction shall be applied.

b) As an alternative pressure test, NDE methods that verify the integrity of the repair may be used subject to the concurrence of the Inspector and jurisdictional authority (where required) prior to performing the examination. Exclusive use of Visual Examination (VT) is only permitted when a pressure test or alternative NDE are not practicable. The use of VT shall be limited to routine repairs and acceptable to the AI and Jurisdiction (where required). As a minimum, VT shall be performed on the root weld layer and final weld surface. Other weld layers shall be examined as identified by the AI and Jurisdiction (where required). Personnel completing VT shall be qualified and certified by a nationally recognized standard acceptable to the Jurisdiction and FMP2J1. Direct VT shall be completed in accordance with FMP2G29.

15.8 Acceptance, stamping, and documentation

15.8.1 The QCI shall stamp or attach a nameplate adjacent to the original stamping in accordance with the NBIC, only when authorized by the Inspector. After the stamping is completed, the QCI shall return the stamp to the QM who shall maintain custody and control of the “R” Symbol.

15.8.2 Upon completion of a shop or field repair/alteration activity, the QCI reviews all documentation for compliance with the NBIC. If acceptable, the QCI shall prepare and certify the applicable NBIC Report Form from final records:

a) Form R-1, Repair
b) Form R-2, Alterations

15.8.3 The final records and applicable NBIC Report Form are presented to the Inspector for review and certification when he is satisfied all Code of construction and NBIC requirements have been met.

15.8.4 The QM shall distribute legible copies of the NBIC Report Form together with attachments to the owner or user, the Inspector, the Jurisdiction (if required), and the AIA responsible for in-service inspection. One copy will be placed in the job file for retention.

15.8.5 If required by the jurisdiction, the original of the NBIC Report Form (with attachments) shall be transmitted to the National Board within 30 days after certification.

15.8.6 All records referenced in this section are available for review by the Inspector. A sequential log shall be maintained for all R Forms that are registered with the National Board. R Forms, and all supporting documentation, shall be retained for 5 years.

15.9 Definitions

15.9.1 Inspector:

An individual who holds a valid and current National Board Commission *with 'R' Endorsement*. The Inspector shall be employed by one of the following National Board Accredited AIA:

a) A Jurisdictional AIA.
b) The National Board Accredited AIA on contract/agreement maintained by the QM to perform repair or alteration per the NBIC.
c) The Authorized Inspection Agency which insures the pressure retaining item.

NOTE: The Inspector making the acceptance inspection should be the same Inspector who authorized the repair or alteration, but in all cases shall be an employee of the same organization as that of the Inspector that authorized the repair or alteration.

15.9.2 Routine Repairs

Prior to performing routine repairs, this organization shall determine that routine repairs are acceptable to the Jurisdiction where the work is to be performed. The Jurisdiction may mandate specific additional requirements not directly specified in the NBIC.

a) Acceptable routine repairs are listed below.
   1) Welded repair or replacement of valves, fittings, tubes or pipes five inch Nominal Pipe Size (NPS) in diameter and under where neither postweld heat treatment nor NDE other than visual is required by the original code of construction, and their attachments.
   2) The addition or repair of non-load bearing attachments to pressure retaining items where postweld heat treatment is not required.
   3) Weld build-up of wasted areas in shells and heads not exceeding 100 square inches or 25% of nominal wall thickness or 1/2 inch, whichever is less.
   4) Corrosion resistance weld overlay not exceeding 100 square inches.
   5) *Seal Welding, a mechanical connection for leak tightness where by design, pressure retaining capability is not dependent on weld for strength and no post-weld heat treatment is required.*

b) Routine repairs under this organization shall be performed per this Quality Control system, however, the requirement for in-process involvement of the Inspector and stamping may be waived if allowed by the Jurisdiction and the Inspector.

c) The Routine Repairs shall be documented on applicable Form R-1 Repair form with a statement in the remarks: “Routine Repair”.

15.10 Unidentified Material Testing Requirements

If the existing material cannot be verified (unknown), the “R” Certificate Holder shall perform a chemical analysis and hardness testing, as a minimum, of the unknown material to verify its weldability and strength or may elect to qualify a weld procedure. If there is a question with regard to the weldability characteristics of the material, then competent technical advice should be obtained.