151 GERON WILLIAMSON ROAD LYONS, GEORGIA 30436 PHONE: 912.403.3333

QUALITY CONTROL MANUAL

CERTIFIED ENERGY, INC.

FOR SHOP AND FIELD REPAIR AND ALTERATION TO METALLIC PRESSURE-RETAINING ITEMS IN ACCORDANCE WITH THE REQUIREMENTS OF THE NATIONAL BOARD INSPECTION CODE AND JURISDICTIONAL REQUIREMENTS

FIRST EDITION

Certified Energy Inc.

HEAVY INDUSTRIAL CONTRACTOR

Controlled
Uncontrolled

Manual number _____

TABLE OF CONTENTS

APPROVED BY: _____

Quality Control Manager Date

ACCEPTED BY: _____

Repair Inspector Date

GLOSSARY OF TERMS

Alteration

Defined as any change in the item described on the original Manufacturer's Data Report (MDR) which affects the pressure containing capability of the pressure-retaining item. Nonphysical changes such as an increase in the maximum allowable working pressure (internal or external), increase in design temperature, or a reduction in minimum temperature of a pressure-retaining item shall be considered an alteration.

ASME Code

The American Society of Mechanical Engineers Boiler and Pressure Vessel Code published by that Society, including addenda and Code Cases, approved by the associated ASME Board.

Authorized Inspection Agency (AIA)

For purposes of the scope of work outlined herein, An AIA shall be either:

a. A jurisdictional authority as defined in the National Board Constitution; or

b. An entity that is accredited by the National Board meeting the qualification and duties of NB-360 for New Construction or NB-369 for Inservice.

Fabrication –

As used throughout this Quality Control Manual, the word 'Fabrication' is intended to mean any applicable repair or alteration activity such as welding, fitting, forming, etc.

Jurisdiction

A governmental entity with the power, right, or authority to interpret and enforce ordinances pertaining to boilers, pressure vessels, or other pressure-retaining items. It includes National Board member jurisdictions defined as "jurisdictional authorities".

Repair Inspector –

An individual who is currently employed by an Authorized Inspection Agency and either;

1. holds both an active National Board Inservice Inspector Commission and an R Endorsement, or
2. holds both an active National Board Authorized Inspector Commission and an R Endorsement.

NBIC

The National Board Inspection Code published by The National Board of Boiler and Pressure Vessel Inspectors.

Original code of construction

Documents promulgated by recognized national standard writing bodies that contain technical requirements for construction of pressure-retaining items or equivalent to which the pressure-retaining item was certified by the original manufacturer.

Pressure-Retaining Item (PRI)

Any boiler, pressure vessel, piping, or material used for containment of pressure, either internal or external. The pressure may be obtained from an external source, or by the application of heat from a direct source, or any combination thereof.

Repair

The work necessary to restore a pressure-retaining item to a safe and satisfactory operating condition.

Re-rating –

See the definition of 'Alteration'

Routine Repairs

Routine repairs, as defined in the NBIC, are repairs for which the requirements for in-process involvement by the Repair Inspector and stamping by the "R" Certificate Holder may be waived as determined appropriate by the jurisdiction and the Repair Inspector. All other applicable requirements of the Code shall be met.

STATEMENT OF AUTHORITY AND RESPONSIBILITY

The Management of Certified Energy, Inc. fully supports the program is committed to meeting all of the requirements outlined in this Quality Control Manual. All shop and field metallic repairs and alterations that are mandated by the customer specifications and jurisdictional requirements shall be carried out by this organization to the requirements of the NBIC and the applicable jurisdiction.

As used throughout this Quality Control System the term "Code" shall include the applicable requirements of the original code of construction, ASME, NBIC and jurisdictional rules.

The Quality Control Manager (QCM) has full support of the management, and is responsible for the preparation, revision, approval, and issuance of the Quality Control Manual and the administration and implementation of the Quality Control System in the shop and field. The Quality Control Manager is assigned the responsibility, the authority, and the organizational freedom to identify Quality Control problems, stop work if necessary, initiate, recommend, and provide solutions.

Certifications include: authorization, approval and certification. Certifications will only be by written signature/initial and written date. At this time, certifications other than written will not be allowed. If in the future, the President of Certified Energy, Inc. decides to allow certification methods other than written, this Quality Control Manual will be revised to describe the controls and safeguards to be employed to ensure the integrity of the certification.

When required by context in this Quality Control Manual, the feminine or masculine gender shall be treated as such other gender as appropriate.

Each individual is responsible for their assigned activities. They may delegate the performance of their duties to competent or qualified individuals as appropriate, but the responsibility shall not be delegated.

Any unresolved disagreement with the Quality Control Manager in regard to implementation of this Quality Control System shall be brought to the President of Certified Energy, Inc. for resolution, and shall not conflict with code, jurisdiction/regulatory authority or Quality Control Manual requirements.

_____

PRESIDENT
Certified Energy, Inc.

Date_____

MANUAL CONTROL

4.1 MANUAL CONTROL

4.1.1 This Quality Control Manual shall be prepared and approved by the Quality Control Manager and submitted to the Repair Inspector for review and acceptance prior to issuance and implementation. The approval of the Quality Control Manager and the acceptance of the Repair Inspector are shown on the Table of Contents page.

4.1.2 The Quality Control Manager shall review the NBIC editions at the time of issue for possible changes to this Quality Control Manual. If revisions to this Quality Control Manual are necessary, they shall be incorporated within 6 months from issue date. The Quality Control Manager shall document this review by generating a memo-to-file, or as an alternative he may initial and date the inside cover page of the new edition.

4.1.3 The Quality Control Manager shall process revisions by complete section with the revision level noted on the Table of Contents and in the footer of each section, except for the Exhibits section. The Exhibit section will be revised by individual exhibit with the revision level noted on the Exhibit Index table of contents page and in the footer of each exhibit. The latest revised text will be highlighted by ***bold italicized*** font.

4.1.4 The Quality Control Manager will maintain and issue controlled copies of this Quality Control Manual and its revisions. This issuance will be shown on the List of Manual Holders (Exhibit 1). Each controlled Quality Control Manual will bear the same control number on its Cover Page as is shown on the List of Manual Holders.

4.1.5 Uncontrolled Quality Control Manuals, as indicated on the Cover Page, may be issued to external parties upon request and will be current at the time of issue but will not be updated to include subsequent revisions or editions. Uncontrolled copies shall not be issued to Certified Energy, Inc. employees.

4.1.6 A controlled copy of the Quality Control Manual is available to the Repair Inspector at the shop and field site where Code activities are being carried out.

4.1.7 The Quality Control Manager, at his discretion, may change the edition level (Noted on the Cover Page) of the Quality Control Manual, at which time the revision level will revert back to zero (0) and bold italiziced font will revert to plain font.

SCOPE OF WORK / ORGANIZATION

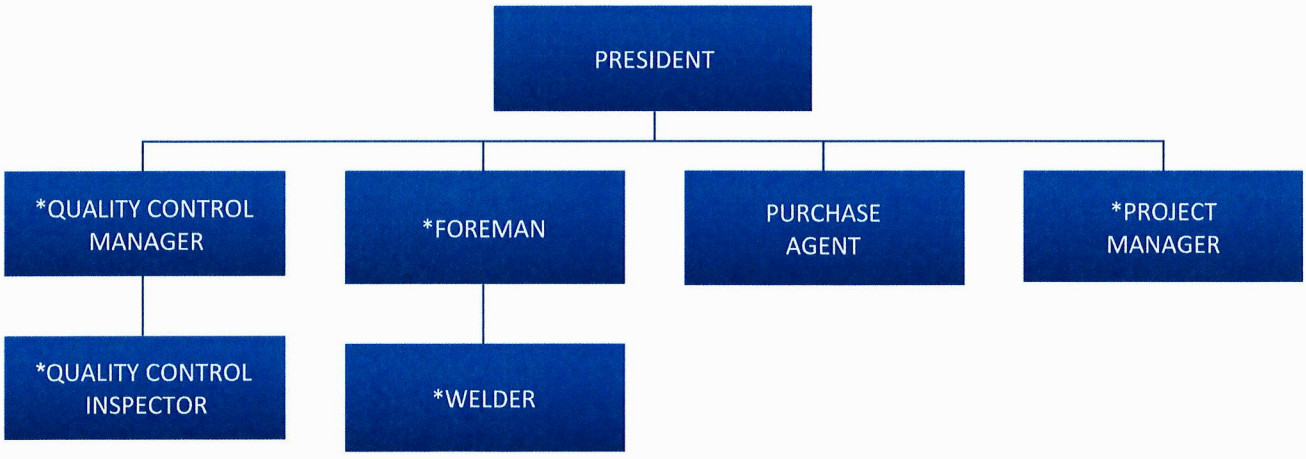
5.1 SCOPE OF WORK

5.1.1 Shop and field repairs and alterations to metallic pressure-retaining items (PRI) such as ASME Code Section I and Section IV Boilers, Section B31.1 Power Piping, Section VIII Div 1 Pressure Vessels, and non-ASME code items will be performed in accordance with the rules of the applicable code of construction, NBIC, jurisdictional requirements and this Quality Control Manual.

5.1.2 The Project Manager shall determine the requirements that pertain to the specific construction code for the equipment being repaired or altered. When the standard governing the original construction is the ASME Code, repairs and alterations to pressure-retaining items shall conform, insofar as possible, to the section and edition of the ASME Code most applicable to the work planned. When the standard governing the original construction is not the ASME Code, repairs or alterations shall conform, insofar as possible to the edition of the construction standard or specification most applicable to the work. Where this is not possible or practicable, it is permissible to use other Codes, standards, or specifications, including the ASME Code, provided Certified Energy, Inc. has the concurrence of the Repair Inspector and the jurisdiction where the pressure-retaining item is installed.

5.2 ORGANIZATION

5.2.1 The purpose of the Organization Chart contained in this section is to show the structural reporting of individuals responsible for the Quality Control System and levels of involved responsibility that assure the Quality Control System will meet the requirements of the NBIC.



* = May be involved with both shop and field activities

DRAWINGS, DESIGN CALCULATIONS AND SPECIFICATIONS

6.1 ORDER ENTRY

6.1.1 The Quality Control Manager shall assign the job number to be used to identify applicable design and fabrication documents related to the work.

6.2 DESIGN by Certified Energy, Inc.

6.2.1 Upon receipt of a request for repair or alteration to be performed by Certified Energy, Inc., the Project Manager prepares the design calculations (as required) and specification requirements. If appropriate, a drawing shall be prepared to describe the repair or alteration. Drawings shall include sufficient information to satisfactorily perform the repair or alteration. A separate Bill of Material (Exhibit 3) shall be prepared for material that is not listed on the drawing.

6.2.2 These functions may be subcontracted. If subcontracted, the Project Manager will review the design documents for technical content, and the Quality Control Manager will review them for compliance to the Code. Any discrepancies are brought to the attention of the originator of the design for correction. Certified Energy, Inc. takes full responsibility for all subcontracted design.

6.2.3 Completed design documents as listed above are submitted to the Quality Control Manager for review. When the design meets Code requirements, the Project Manager and Quality Control Manager will approve each document.

6.3 DESIGN BY OTHERS

6.3.1 When design documents are provided to Certified Energy, Inc. by others, the Project Manager will review them for technical content. The Quality Control Manager will review them for compliance to the Code. Any discrepancies are brought to the attention of the originator of the design for correction.

6.3.2 When the design meets Code requirements, the Project Manager and Quality Control Manager will approve each document.

6.4 DISTRIBUTION

6.4.1 The Quality Control Manager will release the job by distributing a copy of the approved drawing and associated fabrication documents to the Foreman and discussing the scope of work. The Foreman will then distribute the documents to the Welder and discuss the scope of work and fabrication requirements.

6.4.2 Revisions to the design documents are processed in the same manner as the originals. Superseded documents are retrieved and destroyed by the Quality Control Manager except that the superseded copy shall be marked "Void" or some other marking that clearly indicates that they have been superseded.

6.5 RETENTION OF DESIGN DOCUMENTS

6.5.1 Drawings, design calculations, and specifications are maintained in accordance with Section 15 of this Quality Control Manual.

MATERIAL CONTROL

7.1 MATERIAL

7.1.1 The Quality Control Manager shall verify the identification of existing materials and the identification of new material. The identification of the existing materials shall derive from original data, drawings, or pressure-retaining item records. If the existing material cannot be verified, the Quality Control Manager 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 welding procedure.

7.1.2 Only material used for the original code of construction or acceptable alternates shall be used in making the repair or alteration. The materials used in making repairs or alterations shall conform insofar as possible to the original code of construction, construction standard or code selected, including the material specification requirements used for the work planned. The use of used material or Parts is prohibited.

7.1.3 When a Manufacturer's Data Report is required by the original construction standard, a copy of the original Manufacturer's Data Report shall be obtained for use in the repair or alteration. When the original Manufacturer's Data Report cannot be obtained, agreements on the method of identifying the original material and establishing a basis for the repair or alteration shall be obtained from the Repair Inspector and the jurisdiction, when required.

7.2 SHOP AND FIELD MATERIAL REQUISITION

7.2.1 The Quality Control Manager shall prepare a Purchase Order (PO) (Exhibit 4) from the approved material listed on the drawing or a separate Bill of Material as applicable.

7.2.2 Weld material may be ordered as stock without the use of a Purchase Order and may not be necessarily shown on the drawing or the Bill of Material.

7.2.3 As applicable, the Purchase Order shall contain the material specification, grade/type/alloy, certification, and product marking requirements, special testing, material test report requirements, and any other applicable requirements of the original code of construction.

7.2.4 The Quality Control Manager will initial and date the Purchase Order upon completion. The Purchase Order is then forwarded to the Purchase Agent to distribute to the selected vendor.

7.2.5 The Quality Control Manager will forward a copy of the Purchase Order to the Quality Control Inspector for use during receiving inspection.

7.2.6 Additional material requested by the shop or field is procured as described above.

7.2.7 Revisions to Purchase Orders are processed in the same manner as the original.

7.3 RECEIVING INSPECTION

7.3.1 All Code material received at the shop or field site is placed in a hold area pending receiving inspection. The Quality Control Inspector, using a copy of the Purchase Order, examines all Code material for condition, quantity, and identification marking to provide acceptability to the Purchase Order.

7.3.2 A Receiving Inspection Report (Exhibit 5) is completed for all Code material. The Quality Control Inspector will record the dimensional findings and all existing material identification markings on the Receiving Inspection Report. Upon completion he will initial and date and forward it to the Quality Control Manager.

7.3.3 Weld material may be received as stock. Weld material may be received without the use of a Receiving Inspection Report. If this method is chosen, the Quality Control Inspector will verify proper material marking on the container against the applicable specification requirements listed in ASME Code Section II Part C. If acceptable, he will place the weld material into the code weld storage. The act of placing the weld material into storage releases it for fabrication.

7.3.4 For product forms which the code of construction requires a material test report, the Quality Control Manager reviews the material test report against the requirements listed in ASME Code Section II. If the material test report is acceptable, he will approve the material test report.

7.3.5 The Quality Control Manager shall verify the dimensions and the original product marking against the material specification or material standard as applicable.

7.3.6 If the dimensions, the product marking, and if applicable, the material test report meets Code requirements the Quality Control Manager will approve the Receiving Inspection Report.

7.3.7 The Quality Control Inspector will then mark the material with the Purchase Order number and either place the material in stock, or if ordered for a job he will also mark the material with the job number and release the material for use.

7.3.8 Small items that are marked with the required original material identification may be placed in bags, boxes, or bins until assigned to a job in lieu of marking them with a Purchase Order number. Prior to releasing to a job, the Quality Control Inspector shall mark these items with the job number. If the item is too small, the job number shall be identified on the container.

7.3.9 Material that does not meet all Purchase Order and/or applicable Code requirements is retained in the hold area and controlled as described in Section 9 of this Quality Control Manual.

7.3.10 Prior to obliteration of the original material identification or when cutting Code material into two or more pieces, the original material identification is transferred to each piece by the Welder. As an alternative, a coded marking, which is traceable to the original material identification may be assigned by the Quality Control Inspector then transferred by the Welder. The coded marking shall be derived from the Material Traceability Log (Exhibit 5A). The method of marking shall be acceptable to the Repair Inspector.

7.3.11 Substitution of material will be allowed only after verification of design acceptability by the Quality Control Manager, Project Manager and concurrence of the Repair Inspector. Any approved material substitutions will be procured in the same manner required for the original.

7.3.12 The QC Manager is responsible for verifying that no replacement material or Parts that have previously been in service or considered as used material are utilized in performing repairs and alterations.

7.4 STOCK MATERIAL

7.4.1 Stock material that is not identified with the Purchase Order number shall be received as described above using procurement documents if available. Stock material that is identified with a Purchase Order number will be verified to meet the current Code requirements prior to use. Upon acceptance, the Quality Control Inspector shall mark the material with the job number and release the material for use.

7.5 CUSTOMER SUPPLIED MATERIAL

7.5.1 All material supplied by the customer is received and inspected as described in paragraph 7.3 above. A Bill of Material and a Receiving Inspection Report are used during receiving inspection to assure Code compliance. Upon acceptance, the Quality Control Inspector shall mark the material with the job number and release the material for use.

7.5.2 Certified Energy, Inc. retains Code responsibility for customer supplied material.

7.6 RETENTION

7.6.1 Material control documents are maintained in accordance with Section 15 of this Quality Control Manual.

METHODS OF CARRYING OUT REPAIRS AND ALTERATIONS

8.1 REPAIR & ALTERATION PROCEDURES

8.1.1 Shop and field repair and alteration of pressure-retaining items is controlled by means of the Traveler (Exhibit 2 / 2A), prepared by the Quality Control Manager. The Traveler contains the various document reviews, the stages of fabrication, inspection, examination, and testing requirements. The Traveler also contains space for the initials and date of the Quality Control Manager and the Repair Inspector for those operations that are complete and acceptable.

8.1.2 The method of repairs or alterations to pressure-retaining items are subject to the acceptance of a Repair Inspector prior to the start of work. The Repair Inspector's authorization to perform a repair or alteration shall be obtained by the Quality Control Manager. The Repair Inspector shall determine that the method of repair or alteration is acceptable.

8.1.3 The Quality Control Manager shall arrange access to the Repair Inspector for all drawings, design calculations, specifications, procedures, Travelers, repair or alteration procedures, test results and other documents as necessary to ensure compliance with the National Board Inspection Code. The Quality Control Manager and the Repair Inspector will initial and date the block on the Traveler to document this review. At a minimum, hold points shall be established to assure that all Code required inspections by Certified Energy, Inc. and the Repair Inspector are performed. Repair Inspector hold points may be given verbally and indicated on the Traveler by the Quality Control Manager. At the discretion of the Repair Inspector, commencement of work may begin, and the review of the Traveler and other supporting documentation may be postponed until the first visit.

8.1.4 The Quality Control Manager shall notify the Repair Inspector of work progress and give notification in advance of approaching hold points as designated on the Traveler. Work shall not proceed beyond the Repair Inspector's hold points until acceptance of the operation is denoted on the Traveler.

8.1.5 Under certain conditions, postweld heat treatment, in accordance with the original code of construction, may be inadvisable or impractical. In such instances, the alternative welding methods outlined in the NBIC are permitted. Competent technical advice shall be obtained from the manufacturer of the pressure-retaining item or from another qualified source. This advice will be especially necessary if abnormal service conditions exist as outlined in the NBIC.

8.1.6 Under certain conditions, nondestructive examination, in accordance with the original code of construction, may not be possible or practicable. In such instances, the alternative nondestructive methods outlined in the NBIC acceptable to the Repair Inspector and the Jurisdiction, where required, may be used.

8.2 ROUTINE REPAIRS

8.2.1 Routine Repairs as defined in the NBIC may be performed when acceptable to the jurisdiction and the Repair Inspector.

8.2.2 Routine Repairs are repairs for which the requirements for in-process involvement by the Repair Inspector and stamping by Certified Energy, Inc. may be waived as determined appropriate by the jurisdiction and the Repair Inspector. All other applicable requirements of the Code shall be met. Prior to performing Routine Repairs, the Quality Control Manager shall ensure that the routine repair is accepted by the Repair Inspector and the jurisdiction where the pressure-retaining item is installed. Subject to the acceptance of the jurisdiction, the Repair Inspector may give approval for Routine Repairs prior to the start of work.

8.2.3 The Quality Control Manager is responsible for all duties of the Repair Inspector if in-process involvement of the Repair Inspector has been waived.

8.2.4 The Repair Inspector, with the knowledge and understanding of jurisdictional requirements, shall be responsible for meeting jurisdictional requirements and the requirements of the NBIC.

8.2.5 The Routine Repairs shall be documented on Form R1 Report of Repair with a statement in the remarks section: "Routine Repair".

8.3 INTEGRITY OF REPAIRS AND ALTERATIONS

8.3.1 The integrity of repairs and alterations shall be verified by one, or a combination of the examination and test methods outlined in the NBIC.

8.3.2 Testing methods used shall be suitable for providing meaningful results to verify the integrity of the repair or alteration.

8.3.3 The examinations and test methods will be administered by the Foreman as outlined on the Traveler.

8.3.4 When pressure testing, at least one directly connected calibrated pressure gage visible to the operator controlling the pressure test shall be used for the pressure test. If a dial indicating pressure gage is used, the range shall be about double the intended maximum test pressure but in no case less than one and one half (1-1/2) nor more than four (4) times that pressure. Digital reading pressure gages having a wider range of pressure may be used provided the readings give the same or greater degree of accuracy as obtained with the dial pressure gages.

8.3.5 For pressure testing of a field repair or alteration, the facility's in-house pressure gage may be used in lieu of a Certified Energy, Inc.'s gage, if the facility's gage has been calibrated within the previous year. If a dial indicating pressure gage is used, it shall meet the requirements of paragraph 8.3.4 above. If this method is chosen, the Quality Control Inspector shall obtain objective evidence of the calibration for that gage.

8.4 FINAL INSPECTION

8.4.1 When a repair or alteration of a pressure-retaining item is complete, the Quality Control Inspector and the Repair Inspector will perform their final inspection.

8.4.2 The Repair Inspector shall authorize the stamping when satisfied that all applicable Code requirements have been met.

8.4.3 The Quality Control Manager shall maintain custody and control of the "R" Stamp in the shop and field. The Quality Control Manager shall stamp or attach a nameplate adjacent to the original stamping in accordance with the NBIC, only when authorized by the Repair Inspector.

8.4.4 The abbreviation 'CEI' may be stamped on the pressure-retaining item or on the nameplate as appropriate, in lieu of Certified Energy, Inc..

8.4.5 If necessary to remove the original Manufacturer's nameplate or stamping, the Repair Inspector will, subject to jurisdiction approval, witness the making of a rubbing or facsimile of the stamping, witness the obliteration or removal of the original stamping, witness transfer of the nameplate or stamping to a new location on the component, and ensure its location is identified on the Form "R" Report. The ASME Certification Mark / Code symbol shall not be restamped unless allowed by the original code of construction.

8.5 RECORDS

8.5.1 All records are collected at the end of the repair or alteration and maintained in accordance with Section 15 of this Quality Control Manual.

8.6 NONCONFORMITIES

8.6.1 All nonconformities found during the repair or alteration are controlled as described in Section 9 of this Quality Control Manual.

CORRECTION OF NONCONFORMITIES

9.1 IDENTIFICATION OF NONCONFORMITIES

9.1.1 A nonconformance is any condition that does not comply with the applicable rules of the NBIC, construction code, jurisdictional requirements, this Quality Control Manual, or other specified requirements. Nonconformance must be corrected or eliminated before the repaired or altered component can be considered to be in compliance.

9.1.2 It is the duty of all Certified Energy, Inc. employees to report nonconformities to their supervisor who shall notify the Quality Control Inspector. The Quality Control Inspector shall verify the nonconforming condition, and if applicable will tag the item with a hold tag or mark the item 'hold'. The Quality Control Inspector will then generate a Nonconformance Report (NCR) (Exhibit 6). If practical the nonconforming item shall be moved to a segregated area.

9.2 DISPOSITIONS

9.2.1 USEASIS: When the disposition is use-as-is, the Quality Control Manager will consult with and obtain the approval of the Project Manager and concurrence of the Repair Inspector. Any required revisions to drawings, calculations, and procurement documents will be controlled as described in this Quality Control Manual.

9.2.2 REPAIR: When the disposition requires repair, the method and extent of the repair shall be approved by the Quality Control Manager and accepted by the Repair Inspector. The method and extent of the repair shall be documented on the Nonconformance Report.

9.2.3 RETURN TO VENDOR: When the disposition is return to vendor, the Quality Control Manager shall verify that the item has been removed from the work area, if possible, and is clearly marked to prevent its inadvertent use prior to return.

9.2.4 OTHER: The Quality Control Inspector shall present all nonconforming dispositions that don't fit into a category listed above to the Quality Control Manager for review and approval. If applicable, the Quality Control Manager shall obtain concurrence of the Repair Inspector.

9.3 CORRECTION OF NONCONFORMITIES

9.3.1 The Nonconformance Report, together with the recommended disposition signed by the Quality Control Inspector is forwarded to the Quality Control Manager for review and approval. The Project Manager will provide technical assistance and approval if applicable.

9.3.2 Upon correction, the Quality Control Inspector shall reinspect the item as dispositioned above. When Code requirements and the dispositions have been met he will forward the Nonconformance Report to the Quality Control Manager for final close-out, and if applicable to the Repair Inspector for concurrence. After the nonconformance has been resolved the Quality Control Inspector will remove the hold tag or the marking and release the item from the nonconforming status.

9.3.3 As applicable, the Quality Control Inspector will record the NCR number either on the Traveler or the Receiving Inspection Report.

9.3.4 Nonconformance Reports are maintained in accordance with Section 15 of this Quality Control Manual.

WELDING CONTROL

10.1 GENERAL

10.1.1 All welding shall be performed using Welding Procedure Specifications (WPS) and Welders qualified in accordance with ASME Code Section IX. The welding shall meet the applicable requirements of the NBIC and the applicable code of construction.

10.1.2 Personnel performing supervisory activities for welding procedure and performance qualification activities shall be designated by the President with responsibility for supervising the welding of test coupons. This individual shall also have a satisfactory level of competence. As a minimum, this individual shall be qualified by education, experience, or training in the following areas:

a. knowledge of the requirements of ASME Code Section IX for the qualification of procedures and/or joining personnel
b. knowledge of the organization's quality program
c. the scope, complexity, or special nature of the activities to which oversight is to be provided. For a candidate to qualify as a welding supervisor, a minimum of 2 years welding supervisory experience is required to assess sufficient knowledge of welding technology and Code requirements.

Welding supervisory duties as described above, shall not be delegated to a non-qualified individual.

The Quality Control Manager shall maintain a record containing objective evidence of the qualifications, training, or experience.

10.2 WELDING PROCEDURE SPECIFICATION

10.2.1 Welding Procedure Specifications are written by the Quality Control Manager and test welds are made under the Quality Control Manager's full supervision and control. Preparation and testing of the required specimens are performed to the requirements of ASME Code Section IX by a testing laboratory. The recorded variables, and the test report results are reviewed by the Quality Control Manager. If acceptable, he will prepare and certify the Procedure Qualification Record (PQR). Original copies of certified Procedure Qualification Records are maintained by the Quality Control Manager.

10.2.2 The Quality Control Manager will ensure that Welding Procedure Specifications are available to the Welders in the work area.

10.2.3 Welding Procedure Specifications are revised when there is a change in a nonessential variable and requalified when there is a change in an essential or required supplementary essential variable.

10.2.4 Standard Welding Procedure Specifications listed in the NBIC may be used as an alternative, provided the Quality Control Manager accepts, by certification, full responsibility for the application of the Standard Welding Procedure Specification in conformance with the application as stated in the Standard Welding Procedure Specification. When using Standard Welding Procedure Specifications all variables listed are considered essential and, therefore, deviations, modifications, amendments, or revisions are prohibited.

10.3 QUALIFICATION OF WELDERS

10.3.1 All Welders to be used for welding on pressure-retaining items are qualified in accordance with the requirements of ASME Code Section IX under the full supervision and control of the Quality Control Manager. The preparation and testing of the required specimens is performed in-house or by a testing laboratory. The recorded variables, and the test report results are reviewed by the Quality Control Manager. If acceptable, he will prepare and certify the Welder Performance Qualification (WPQ).

10.3.2 The Quality Control Manager shall provide copies of the WPQ records to the Foreman for their respective Welders in the work area.

10.3.3 The Quality Control Manager shall make the WPQ records available to the Repair Inspector for review.

10.4 EXPIRATION AND REVOCATION OF QUALIFICATION

a. CONTINUITY: The performance qualification of a welder shall remain valid, provided no greater than 6 months have passed since the qualified welding process was last used under the supervision and control of the qualifying or participating organization(s), by the

    (1) Welder using manual or semiautomatic welding, or

b. REVOCATION: When there is a specific reason to question the Welder's ability to make welds that meet the specification, the qualifications that support the welding that is being performed shall be revoked. All other qualifications not questioned will remain in effect.

10.5 MAINTENANCE OF WELDER QUALIFICATIONS

10.5.1 Each Welder is listed on the Welder Continuity Log (Exhibit 7) maintained by the Quality Control Manager from data provided by the Foreman. The Quality Control Manager determines from the log when a Welder's qualification is about to expire.

10.6 WELDING

10.6.1 The Foreman is responsible for verifying that all Welders are qualified and for instructing them in the Welding Procedure Specification they are to use as listed on the Traveler and/or the drawing.

10.6.2 The Quality Control Manager shall issue each qualified Welder a unique identification mark. The Welder shall stamp the identification on or adjacent to and at intervals of not more than 36" along the welds which he makes. (For ASME Section VIII Div 1 code of construction, the limitation of stamping of a steel plate shall be ¼" and over in thickness and in nonferrous plates ½" and over in thickness.) As an alternative to such stamping, the Welder's identification may be entered on the Traveler for each weld joint made. If the stamping method is chosen, the welder's name or identification shall be entered on the Traveler, a weld map or the drawing.

10.6.3 Tack welds whether left in place or removed are made by using a qualified Welding Procedure Specification.

10.6.4 Tack welds left in place are made by qualified Welders using a qualified Welding Procedure Specification.

10.6.5 If a Welder making the tack weld that is left in place, is not the same Welder that finishes the weld, that Welder shall identify each tacked joint as described in paragraph 10.6.2 above.

10.6.6 Tack welds left in place shall be properly prepared for inclusion into the weld, visually examined by the Welder, and if found defective shall be removed.

10.6.7 Tack welds made by subcotractors shall be fully removed.

10.7 WELDING MATERIAL

10.7.1 Welding material is visually inspected by the Welder prior to use to ensure that it is flagged or marked with the AWS classification in accordance with the Welding Procedure Specification.

10.7.2 All welding material is stored in a dry storage area and issued to the work areas by the Foreman.

10.7.3 Low hydrogen coated electrodes will be received and stored in sealed containers. When the containers are opened the electrodes are placed in heated ovens maintained at the temperature recommended by the electrode manufacturer, or as specified in ASME Code Section II, Part C.

10.7.4 Low hydrogen electrodes are obtained by the Welder only in a quantity sufficient to complete the weld or for a period of a half shift, whichever is less. When maintained in heated portable ovens the period is extended indefinitely.

10.7.5 Unconsumed low hydrogen electrodes that are not maintained in a heated portable oven are inspected for damage, cleanliness, and identification by the Welder. If acceptable the electrodes are separated and designated for non-code use. Unacceptable electrodes will be disposed of.

10.8 WELDING RECORDS

10.8.1 Welding documents are maintained in accordance with Section 15 of this Quality Control Manual.

NONDESTRUCTIVE EXAMINATION

11.1 GENERAL

11.1.1 Nondestructive Examination (NDE) requirements, including technique, extent of coverage, procedures, personnel qualification, and acceptance criteria, shall be in accordance with the original code of construction for the pressure-retaining item.

11.1.2 Weld repairs and alterations shall be subjected to the same nondestructive examination requirements as the original welds. Where this is not possible or practicable, alternative NDE methods that are outlined in the NBIC may be used. Any alternative NDE method used shall be acceptable to the Repair Inspector and if applicable, the jurisdiction where the pressure-retaining item is installed.

11.1.3 All Nondestructive Examination required by the Code may be performed by NDE subcontractors, whose written practice and personnel qualifications have been reviewed and accepted by the Quality Control Manager.

11.1.4 Certified Energy, Inc. may choose to perform some visual examinations (VT) and liquid penetrant (PT) examinations. These examinations will be performed using procedures approved by the Quality Control Manager and utilizing certified in-house personnel.

11.2 NDE PROCEDURES

11.2.1 All procedures are detailed enough to provide the technique to meet ASME Code Section V requirements and they are accepted for use by the Quality Control Manager.

11.2.2 All NDE procedures shall be demonstrated to the satisfaction of the Repair Inspector and shall be documented prior to use.

11.2.3 All subcontracted NDE is performed using written procedures that have been prepared and accepted by a Level III Examiner certified in the specific method.

11.3 SUBCONTRACTED NDE PERSONNEL

11.3.1 Subcontracted NDE personnel shall be qualified and certified in acccordance with the requirements of the original code of construction. When this is not practicable, NDE personnel may be qualified and certified in accordance with their employer's Written Practice. ASNT SNT-TC-1A (2006) or ANSI/ASNT CP-189 (2006) shall be used as a guideline for employers to establish their Written Practice. The Quality Control Manager will review and accept the qualification records of the subcontracted Level III examiner to assure that he has the training and experience and is certified for the methods in accordance with the written practice. The Quality Control Manager will also review and accept the certification record of each Level I and II examiner prior to performing any examination to ensure that they are certified by the Level III examiner.

11.3.2 Subcontracted NDE personnel qualification records are made available to the Repair Inspector for review.

11.4 NDE REPORTS

11.4.1 All radiographs and reports of NDE are reviewed and accepted, as applicable, by the Quality Control Manager and maintained in accordance with Section 15 of this Quality Control Manual. All radiographs and reports of NDE are made available to the Repair Inspector.

11.5 QUALIFICATION OF CERTIFIED ENERGY, INC. NDE PERSONNEL

11.5.1 NDE personnel who perform in-house PT and VT examinations per ASME Code Section B31.1 shall be qualified and certified by the Quality Control Manager in accordance with the following paragraphs.

- Instruction in the fundamentals of the nondestructive examination method.

- Onthejob training to familiarize the NDE personnel with the appearance and interpretation of indications of weld defects. The length of this training shall be sufficient to assure adequate assimilation of the knowledge required. Previous work experience may be substituted for this training.

- An eye examination shall be performed at least once each year to determine optical capability of NDE personnel to perform the required examinations. This test is given to assure the natural or corrected near distance acuity such that they are capable of reading standard J-1 letters on standard Jaeger test type charts for near vision. Equivalent near vision tests are acceptable.

- Upon completion of the above, the NDE personnel shall be given an oral or written examination, and a performance examination by the Quality Control Manager to determine if the NDE personnel are qualified to perform the required examinations and interpretation of results.

Certified NDE personnel whose work has not included performance of a specific examination method for a period of one year or more are recertified only after completing the requirements described in paragraph 11.5.1 above.

Personnel qualified to AWS QC1 – 'Standard for Qualification and Certification of Welding Inspectors' may be used as an alternate to the above VT examiner certification requirements. However, the annual J1 visual acuity requirement of ASME Section V, Article 9, shall apply.

11.5.2 Examiners who perform liquid penetrant examinations per ASME Code Sections I and VIII-1 are qualified and certified in accordance with ASME Code Section I Appendix A-270 and ASME Code Section VIII Div 1 Appendix 8.

11.5.3 Upon completion, the Quality Control Manager shall document all training and certify each examiner to be competent.

11.5.4 In-house NDE personnel qualification records are made available to the Repair Inspector for review.

HEAT TREATMENT

12.1 GENERAL

12.1.1 All heat treatment, such as, pre-heat; annealing; normalizing; austenitizing; tempering; postweld heat treatment, etc., shall be applied as required by the applicable Code requirements.

12.1.2 Heat treatment, other than pre-heat is performed by a subcontractor. The Quality Control Manager will either provide a company-generated procedure or review the subcontractor's procedure and verify the equipment calibration.

12.2 POSTWELD HEAT TREATMENT

12.2.1 All postweld heat treatment (PWHT) is performed as specified in a written procedure approved by the Quality Control Manager. At a minimum, the procedure will describe the placement of thermocouples, method of attachment and removal, heating and cooling rates, and the time at temperature.

12.3 OFF-SITE PWHT

12.3.1 All items that are postweld heat treated off-site will be appropriately marked by the Quality Control Inspector to maintain identification and traceability of the item.

12.3.2 The Quality Control Inspector shall inspect all items upon return for damage and identification. This inspection shall be logged on the Traveler. Nonconforming items will be controlled as described in Section 9 of this Quality Control Manual.

12.4 HEAT TREATMENT RECORDS

12.4.1 Postweld heat treatment records submitted by the subcontractor shall be a chart or record which records the conditions and items treated.

12.4.2 Heat treatment records are reviewed and approved by the Quality Control Manager.

12.4.3 Heat treatment records, including procedures, are submitted to the Repair Inspector for review.

12.4.4 Heat treatment records are maintained in accordance with Section 15 of this Quality Control Manual.

CALIBRATION

13.1 GENERAL

13.1.1 All measurement, test, and examination equipment used for acceptance of pressure-retaining items shall be calibrated in accordance with this section.

13.1.2 The requirements of this section are not pertinent to measurement devices such as oven thermometers, rulers, tape measures, weld gages, fit-up gages, squares, and levels.

13.1.3 Calibration of measuring and testing equipment used by subcontractors shall be verified by the Quality Control Manager.

13.2 CALIBRATION PROCEDURE

13.2.1 The Quality Control Manager will assign a unique serial number to each item of measurement, test, and examination equipment which requires calibration. The serial number will be identified on the item or if the item is too small it shall be identified on the equipment container.

13.2.2 The Quality Control Manager is responsible for maintaining all equipment in calibration, unless out of service and clearly tagged or marked to prevent inadvertent use.

13.2.3 Each piece of calibrated equipment shall be listed on a Calibration Log maintained by the Quality Control Manager.

13.2.4 Calibration may be performed in-house or by a testing laboratory.

13.2.5 Pressure gages used for final pressure tests are calibrated against a standard dead-weight tester or a calibrated master gage annually or prior to use. Gages shall be recalibrated at any time that there is reason to believe that they are in error. In-house standards, when used will be maintained in a protected environment and calibrated based on the frequency of calibration noted on the Calibration Log (Exhibit 8). They will also be calibrated when there is reason to believe that they are in error.

13.2.6 Linear measuring devices shall be calibrated annually. As an alternative they may be verified against a calibrated standard prior to each use. If this method is chosen, the calibration frequency for the standard shall be indefinite unless deterioration, corrosion or erosion is evident.

13.2.7 The frequency of calibration for other equipment is as required by the applicable code of construction or if not addressed in the Code, as recommended by the equipment manufacturer or from experience with the equipment.

13.2.8 With the exception of calibration standard blocks, all calibrated equipment shall be identified through the use of a calibration label attached to the equipment or the equipment container if too small for the label to be attached. The label shall show the date calibrated and the due date.

13.3 DISCREPANT EQUIPMENT

13.3.1 When equipment requiring calibration is found to be out of calibration it shall be removed from service by the Quality Control Manager.

13.3.2 All pressure-retaining items checked with equipment that is out of calibration shall be considered as nonconforming and controlled per Section 9 of this Quality Control Manual.

13.4 RECORD RETENTION

13.4.1 Calibration documents are maintained in accordance with Section 15 of this Quality Control Manual.

REPAIR INSPECTOR

14.1 REPAIR INSPECTOR

14.1.1 The Repair Inspector is an individual designated by an Authorized Inspection Agency and is either;

a. a holder of both an active National Board Inservice Inspector Commission and an R Endorsement, or
b. a holder of both an active National Board Authorized Inspector Commission and an R Endorsement.

14.1.2 Before any work is started the acceptance of the method of the repair/alteration must be obtained from the Repair Inspector. The Repair Inspector will make the required inspections and confirm the original code of construction and NBIC compliance by signing the applicable Form "R" Report upon completion of the work.

14.1.3 The Quality Control Manager is the company's liaison with the Authorized Inspection Agency and the Repair Inspector.

14.1.4 The Repair Inspector shall have access to all records and documents referenced in this Quality Control Manual.

14.1.5 The Repair Inspector and the Repair Inspector Supervisor shall be provided with free access to all areas where work is being performed on pressure-retaining items and to such parts of all plants and facilities that are concerned with the manufacture and supply of pressure-retaining parts or materials, as requested.

14.1.6 A controlled copy of the Quality Control Manual is available to the Repair Inspector at the shop and field site where Code activities are being carried out.

14.1.7 The Quality Control Manager will provide any assistance requested by the Repair Inspector during the monitoring of the Quality Control System and to the Repair Inspector Supervisor during any National Board Audit.

RECORDS RETENTION

15.1 REPORT OF REPAIR/ALTERATION (Form "R" Report)

15.1.1 All records referenced in this Quality Control Manual are available for review by the Repair Inspector.

15.1.2 All specific job records are collected at the completion of the repair or alteration of the pressure-retaining item and reviewed by the Quality Control Manager. The Quality Control Manager shall prepare and certify the applicable Form "R" Report (*) from final records.

(*) applicable Form "R" Report:
a) FORM R1 Report of Repair,
b) FORM R2 Report of Alteration, or
c) FORM R4 Report Supplementary Sheet for additional data.

15.1.3 The final records and applicable Form "R" Reports are presented to the Repair Inspector for review and certification when all code of construction and NBIC requirements have been met.

15.1.4 The Quality Control Manager shall distribute and maintain the Form "R" Report as described below.

DISTRIBUTION OF FORM R-1
Legible copies of completed Form R-1 Report, together with attachments, shall be distributed to the owner or user and Jurisdiction, if required, and shall be provided to the Repair Inspector and the inservice Authorized Inspection Agency of the pressure-retaining item upon request.

DISTRIBUTION OF FORM R-2
Legible copies of the completed Form R-2, together with attachments, shall be distributed to the owner-user, the "R" Certificate Holder responsible for the design, and the Jurisdiction, if required, and shall be provided to the Repair Inspector and the inservice Authorized Inspection Agency of the pressure-retaining item upon request.

15.2 RECORD RETENTION

15.2.1 The Quality Control Manager shall maintain a log or multiple logs documenting unique and sequentially numbered Form "R" reports that are registered with the National Board. The logs shall include, as a minimum; each form's unique registration number, type (R-1, R-2, etc.), description of work performed, date of acceptance by the Authorized Inspection Agency, and date the report was submitted to the National Board. The Quality Control Manager shall maintain all Form "R" Reports and all supporting records and documentation substantiating the summary of the work, including the Welder Continuity Log. These records shall be easily retrievable and maintained in a storage file or the applicable job file for a minimum period of five years.

EXHIBIT INDEX

EXHIBIT	NUMBER	REV	DATE
LIST OF MANUAL HOLDERS	1	0	11/14/2021
TRAVELER	2	0	11/14/2021
SUPPLEMENTAL TRAVELER	2A	0	11/14/2021
BILL OF MATERIAL	3	0	11/14/2021
PURCHASE ORDER	4	0	11/14/2021
RECEIVING INSPECTION REPORT	5	0	11/14/2021
MATERIAL TRACEABILITY LOG	5A	0	11/14/2021
NONCONFORMANCE REPORT	6	0	11/14/2021
WELDER CONTINUITY LOG	7	0	11/14/2021
CALIBRATION LOG	8	0	11/14/2021

CERTIFIED ENERGY, INC.
LIST OF MANUAL HOLDERS **EDITION LEVEL ___**

NAME	TITLE	MANUAL NO.	REV LEV	DATE

TRAVELER

TRAVELER									PAGE 1 OF 1
BRIEF SCOPE OF WORK:									
JOB NUMBER:	**CODE OF CONST:**	ASME VIII-1	**QC**			**REPAIR INSPECTOR**			**NCR No.** / **NCR CLOSED** ☐ yes ☐ no
DOCUMENT REVIEW			Hold Point	Initials	Date	Hold Point	Initials	Date	
Traveler Review			☐			☐			**QC Remarks:**
Drawing Review			☐			☐			
Calculation Review			☐			☐			
Verification of Material			☐			☐			
Weld Document Review			☐			☐			
UNIT INSPECTION			**QC**			**REPAIR INSPECTOR**			**Repair Inspector Remarks:**
			Hold Point	Initials	Date	Hold Point	Initials	Date	
☒ Liquid Pressure Test ☐ Air Test ☐ Alternative method ____ psi @ ____ deg f Pressure Gage No. ____			☐			☐			
PWHT ☐ Yes ☐ No Preheat: ☐ Yes ☐ No deg:			☐			☐			
NDE Requirements: Type: PT: ☐ MT: ☐ RT: ☐ UT: ☐ VT: ☐ N/A ☒ Root ☐ Fill ☐ Final ☐ Volumetric: ☐ Procedure No.:			☐			☐			
Final Inspection ☐ Internal ☐ External			☐			☐			
Data Report & Stamping			☐			☐			

			Fit-Up Inspection						**Final Weld Inspection**					
			QC			REPAIR INSPECTOR			QC			REPAIR INSPECTOR		
Weld No.	WPS	Welder ID	Hold Point	Initials	Date	Hold Point	Initials	Date	Hold Point	Initials	Date	Hold Point	Initials	Date
			☐			☐			☐			☐		
			☐			☐			☐			☐		
			☐			☐			☐			☐		
			☐			☐			☐			☐		
			☐			☐			☐			☐		
			☐			☐			☐			☐		

OTHER DIRECTIVES								
	ASSIGNED TO:	**DESCRIPTION**	QC	DATE	REP INSP	DATE	**REMARKS**	
1								
2								
3								

SUPPLEMENTAL TRAVELER

SUPPLEMENTAL TRAVELER													PAGE OF	
			Fit-Up Inspection						Final Weld Inspection					
			QC			REPAIR INSPECTOR			QC			REPAIR INSPECTOR		
Weld No.	WPS	Welder ID	Hold Point	Initials	Date	Hold Point	Initials	Date	Hold Point	Initials	Date	Hold Point	Initials	Date
			☐			☐			☐			☐		
			☐			☐			☐			☐		
			☐			☐			☐			☐		
			☐			☐			☐			☐		
			☐			☐			☐			☐		
			☐			☐			☐			☐		
			☐			☐			☐			☐		
			☐			☐			☐			☐		
			☐			☐			☐			☐		
			☐			☐			☐			☐		
			☐			☐			☐			☐		
			☐			☐			☐			☐		
			☐			☐			☐			☐		
			☐			☐			☐			☐		
			☐			☐			☐			☐		
			☐			☐			☐			☐		
			☐			☐			☐			☐		
			☐			☐			☐			☐		
			☐			☐			☐			☐		

OTHER DIRECTIVES							
	ASSIGNED TO:	DESCRIPTION	QC	DATE	INSP	DATE	REMARKS
1							
2							
3							
4							
5							
6							
7							

BILL OF MATERIAL

BILL OF MATERIAL					
JOB NUMBER:					
QTY	**UNIT**	**DESCRIPTION/SPEC**	**VENDOR**	**PO NUMBER**	**MATERIAL ID**

PURCHASE ORDER

Certified Energy Inc.

151 Geron Williamson Rd
Lyons, GA 30436

Purchase Order

Date	P.O. No.	Quote #
11/9/2021	17-2071	

Vendor	Ship To:
	Certified Energy Inc 151 Geron Williamson Road Lyons, GA 30436

E-mail
Brittney@certifiedenergyinc.com

Description	Qty	Rate	Amount
		Total	$0.00

RECEIVING INSPECTION REPORT

RECEIVING INSPECTION REPORT				
JOB NO.		**VENDOR:**	
PO.		**DATE:**	

QUANTITY:
PRODUCT: SPECIFICATION: GRADE/TYPE FITTING:

DIMENSIONS: Th Width: Th Length: Th Diameter: Th Other:

VISUAL INSPECTION ACCEPTABLE: B16 DIMENSIONS ACCEPTABLE:

ACTUAL MATERIAL MARKING:

MARKING ACCEPTABLE TO SPECIFICATION/STANDARD: MTR/CofC ACCEPTABLE TO SPECIFICATION:

☐ ACCEPT / ☐ REJECT COMMENTS:

QUALITY CONTROL:	Initials / Date

JOB NO.		**VENDOR:**	
PO.		**DATE:**	

QUANTITY:
PRODUCT: SPECIFICATION: GRADE/TYPE FITTING:

DIMENSIONS: Th Width: Th Length: Th Diameter: Th Other:

VISUAL INSPECTION ACCEPTABLE: B16 DIMENSIONS ACCEPTABLE:

ACTUAL MATERIAL MARKING:

MARKING ACCEPTABLE TO SPECIFICATION/STANDARD: MTR/CofC ACCEPTABLE TO SPECIFICATION:

☐ ACCEPT / ☐ REJECT COMMENTS:

QUALITY CONTROL:	Initials / Date

JOB NO.		**VENDOR:**	
PO.		**DATE:**	

QUANTITY:
PRODUCT: SPECIFICATION: GRADE/TYPE FITTING:

DIMENSIONS: Th Width: Th Length: Th Diameter: Th Other:

VISUAL INSPECTION ACCEPTABLE: B16 DIMENSIONS ACCEPTABLE:

ACTUAL MATERIAL MARKING:

MARKING ACCEPTABLE TO SPECIFICATION/STANDARD: MTR/CofC ACCEPTABLE TO SPECIFICATION:

☐ ACCEPT / ☐ REJECT COMMENTS:

QUALITY CONTROL:	Initials / Date

MATERIAL APPROVAL:

QC MANAGER:	Initials / Date

MATERIAL TRACEABILITY LOG

PRODUCT	TRACE CODE	DATE ASSIGNED	PO NO.	ORIGINAL PRODUCT MARKING	MTR / CofC YES	MTR / CofC NO
					☐	☐
					☐	☐
					☐	☐
					☐	☐
					☐	☐
					☐	☐
					☐	☐
					☐	☐
					☐	☐
					☐	☐
					☐	☐
					☐	☐
					☐	☐
					☐	☐
					☐	☐
					☐	☐
					☐	☐
					☐	☐
					☐	☐
					☐	☐
					☐	☐
					☐	☐
					☐	☐
					☐	☐

NONCONFORMANCE REPORT

NCR No.		DATE:	
JOB No.		OTHER:	
ITEM DESCRIPTION:			
DESCRIPTION OF NONCONFORMANCE:			
RECOMMENDED DISPOSITION			
☐ USE-AS-IS	☐ REPAIR	☐ RETURN TO VENDOR	☐ OTHER
QC INSPECTOR:		DATE:	
DISPOSITION APPROVAL /ACCEPTANCE			
PROJECT MANAGER APPROVAL:		DATE:	
QUALITY CONTROL MGR APPROVAL:		DATE:	
REPAIR INSPECTOR ACCEPTANCE:		DATE:	
DISPOSITION COMPLETED			
COMPLETED DISPOSITION AS RECOMMENDED? Yes ☐ No ☐ COMMENTS:			
QUALITY CONTROL MGR APPROVAL:		DATE:	
REPAIR INSPECTOR ACCEPTANCE:		DATE:	

WELDER CONTINUITY LOG

WELDER NAME: **IDENTIFICATION:**

DATE(S) QUALIFIED: **PROCESS:**

YEAR	2021	2022	2023	2024	2025
MONTH					
JANUARY					
FEBRUARY					
MARCH					
APRIL					
MAY					
JUNE					
JULY					
AUGUST					
SEPTEMBER					
OCTOBER					
NOVEMBER					
DECEMBER					
REMARKS					

CALIBRATION LOG

EQUIPMENT DESCRIPTION	SERIAL NO.	DATE CALIBRATED	NEXT DUE DATE	COMMENTS