

QUALITY CONTROL MANUAL

FOR THE FABRICATION OF: BOILERS AND PRESSURE VESSELS IN ACCORDANCE WITH ASME

**SECTION I, SECTION VIII DIVISION 1, B31.1 AND REPAIRS AND ALTERATIONS IN
ACCORDANCE WITH THE NATIONAL BOARD INSPECTION CODE IN SHOP AND FIELD.**

EDITION 1

MANUAL OF:

Genesis Metal Corp.

**8255 Hwy. 16
Beggs, OK 74421**

And field sites controlled by the above location

UNCONTROLLED COPY NO. _____

Issued to: _____

Date Issued: _____

Quality Control Manual Edition 1 Revision 1

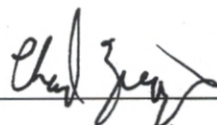
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Q.C.:



Date:

8/21/13

A.I.:



Date:

8-21-13

Section 1: Statement of Company Policy

1.1

STATEMENT OF COMPANY POLICY

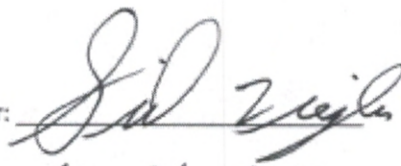
It is the policy of Genesis Metal Corp. using the controls outlined in this Quality Control Manual to manufacture products to the highest possible standards of quality. This Manual will be used also to establish that all products concerned will conform to the requirements set forth in Section I, B31.1 and VIII, Division 1 of the A.S.M.E. and the N.B.I.C. Code

It is stated that the Quality Control Manager shall have the authority and responsibility for the establishment and maintenance of this quality control system, the responsibility of recognizing quality control problems and the authority and organizational freedom to initiate, recommend and provide solutions to these problems. The Quality Control Manager has the authority to stop work and control processing.

It shall be the responsibility of the Quality Control Manager to keep the Manual up to date on all changes or revisions and see that they are accepted by the Authorized Inspector before they are implemented.

If a difference of opinion exists between Engineering, Production or Quality Control, I shall make the final Resolution without compromise to the Code or this Manual.

General Manager:

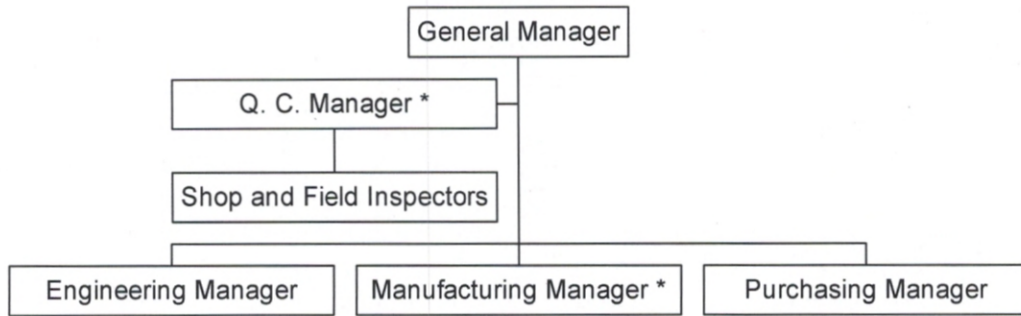


Date: 10-31-2012

Section 2: Organizational Chart

2.1

Organizational Chart



Whenever a responsibility is assigned to a department within the text of this manual, it shall refer to the department head. Departmental heads have the authority to delegate these functions to others within their departments, yet the responsibility still lies with the department head to facilitate proper activity, completeness, and overall accuracy.

*Responsible for both shop and field locations.

Section 3: Control of the Quality Control Manual

3.1 The Q. C. Manager is responsible for preparation, revision, distribution and implementation of the Quality Control Manual and the control of it. The Authorized Inspector must accept all revisions to this manual. The manual will be revised by section, except Exhibits which will be by page. Review and acceptance will be documented on the Table of Contents prior to implementation.

A complete updated copy of the Quality Control Manual shall be available to the Authorized Inspector (AI).

Controlled copies of the Quality Control Manual will be assigned by number and issued to those personnel listed on the Registry of the Quality Control Manual (Exhibit No. 9).

Uncontrolled Quality Manuals are up-to-date on the date of issue, and will be issued on an as needed basis. These manuals will be plainly marked on the title page as Uncontrolled.

Section 4: Scope

- 4.1** This Quality Program establishes the procedures and requirements for the control and documentation of the quality during the fabrication of products to be stamped with the applicable ASME Certification Mark, and repairs and alterations of pressure retaining parts.

Section 5: Drawings, Calculations, and Specifications Control

5.1 Purpose

This section will establish the manner in which drawings, calculations, and specifications and their revisions are prepared, reviewed, approved and controlled.

5.2 General

Engineering functions will be subcontracted. The Engineering Manager will be responsible for preparation and revisions to the drawings and Bill of Materials when not supplied by the customer.

The Quality Control Manager has the overall responsibility for all drawings, calculations, NDE requirements and Bills of Material. They will be reviewed for Code Compliance and if approved, signed and dated by the Quality Control Manager.

5.3 Drawing Control

The Quality Control Manager shall be responsible for hand delivering all drawings and revisions to the Foreman. The Manufacturing Engineer shall be responsible for hand delivering all drawings and revisions to the respective person assigned to the job and shall pick up obsolete drawings and destroy all with the exception of one copy marked "VOID". A copy of all drawings shall be filed in the Quality Control Manager's job file.

When a drawing is revised, the Quality Control Manager will indicate the revision number on the drawings. A copy of all drawings and revisions shall be presented to the Authorized Inspector by the Quality Control Manager. Drawings shall contain as a minimum: Code of Construction, Welding Details, Design Parameters, Hydro Test Pressure, required NDE, and Heat Treatment. This information may be listed on the drawing, or contained on the cover sheet attached to the drawing.

Section 5: Drawings, Calculations, and Specifications Control

(Continued)

5.4 Calculations

A copy of all calculations for design shall be filed in the Quality Control Manager's job file and shall be presented to the Authorized Inspector for his review and acceptance.

5.5 Specification Control

Where the Engineering and Materials are specified and provided by the customer, the Quality Control Manager shall have the overall responsibility for the review of the documents, drawings, and calculations which shall be signed and dated by the Quality Control Manager when accepted.

Section 6: Material Control

6.1 Material Purchasing

All material purchased by the Purchasing Manager for use in the manufacture of a code item must be among those listed in Section II, Part D of the code. All Code material except welding material must be purchased by written Purchase Order (Exhibit No 10). All Purchase Orders must be prepared from the Bill of Material furnished by the Purchasing Manager. Any substitution of material requires engineering approval and A.I. concurrence. All code material will be purchased to ASME SA, SB, SFA requirements. For ASME Section VIII Division 1, all cold formed carbon and low alloy steel pressure boundary parts will meet the requirements of paragraph UG- 79. For ASME Section I, all cold formed austenitic stainless steel pressure boundary parts will meet the requirements of paragraph PG-19. The head manufacturer will certify that all heads meet the forming tolerances of paragraph UG- 81 Section VIII Div. 1, and shall be so stated on the Purchase Order. When a Material Test Report or Certificate of Conformance is required, the Purchase Order will state "Material Test Report required" or "Certificate of Compliance required". When further material testing is required the QC. Manager shall review test results to the applicable code for compliance and maintain results in the job file.

6.2 Material Inspection

All incoming code material shall be inspected by the Q. C. Manager using a copy of the Purchase Order or Bill of Material as soon as possible to provide early detection of faulty material and early replacement of same. Material shall be inspected and processed as follows:

1. Inspect for damage or defect
2. Verify markings per material specs.
3. Verify thickness and size according to the purchase order and applicable code
4. Identify rejected material with a "Reject Tag" (Exhibit No. 6) and record the reason for rejection.
5. Verification of the need for any additional material testing as required by the Code.

The Q. C. Manager will be responsible for review and acceptance of all Material Test Reports and Certificates of Compliance to the requirements of the applicable code section. If acceptable he shall initial and date these documents. The documents will then be filed in the job file for future reference.

Section 6: Material Control (Continued)

6.3 Material Identification

If the items at receiving are found to satisfy the Code, Purchase Order, Bill of Material, and Material Certification requirements, and no defects or damage is noted, the acceptable item will be identified by Job Number applied with a paint stick. Miscellaneous pressure part shall be marked with the name or trademark of the manufacturer and such other markings as are required by the applicable code. Items that do not comply with Code, Purchase Order, and Material Certification or if defects or damage is found, shall be segregated and identified with a Hold Tag (Exhibit No. 4) and handled in accordance with Section 3 of this manual. Material identification will be transferred prior to cutting into two or more pieces on all A.S.M.E. Material in a manner acceptable to Authorized Inspector. Plate for A.S.M.E. Section I vessels shall have the complete Mill Stamping Transferred. The Quality Control Manager or his designee will be responsible for maintaining traceability by transferring Material Identification and Heat Numbers.

6.4 Material Storage

All acceptable Code Material shall be segregated from unacceptable material. Unacceptable material shall be identified with a hold tag attached in plain view. Any nonconforming material determined to be rejectable shall be segregated and identified with a hold tag and removed from the Code Fabrication area.

A Purchase Order will not be used on customer supplied material. Material will be received and accepted by use of the Bill of Material. Initials and date on the Bill of Material will show compliance.

Section 7: Examination and Inspection

7.1 By Quality Control Personnel

The Q. C. Manager shall examine the work in process as required to maintain code quality materials and workmanship. The shop and/or field inspector at each inspection point shall initial the Shop Traveler. Reference Section 8 of this manual for procedures when nonconformities are discovered.

7.2 By the Authorized Inspector

Prior to the beginning of fabrication, the Q. C. Manager will inform the A. I. when fabrication is to begin. Also prior to fabrication, drawings & calculations are to be reviewed by the A.I. During this time, the A.I. can designate hold points. These specific points will be indicated on the Shop Traveler by an asterisk. (Exhibit No. 2) Initialing and dating the checklist will indicate the A. I. acceptance. When fabrication has progressed to this point, the Q. C. Manager will inform the A. I. of reaching the A. I. hold points.

7.3 Hydrostatic Testing

The final hydrostatic test shall be prepared by Manufacturing Manager and witnessed by the Q. C. Manager. The Q. C. Manager shall assure that the proper gauge is used during the test. Dial range of pressure gauges used in the above tests will be graduated over a range of approx. twice the maximum test pressure but in no case will the range be less than 1.5 times nor more than 4 times the intended maximum test pressure. The Q. C. Manager will perform a visual inspection of all welded joints during the test to assure there are no leaks. The hydrostatic test is to be witnessed by the A. I. after being accepted by Q. C. Manager.

Section 7: Examination and Inspection (continued)

7.4 Verification and Control

7.4.1 The Q.C. Manager is responsible for the control of ASME Certification Mark when it is not in use

7.4.2 The Q.C. Manager is responsible for verifying all Data Reports and Nameplate Stamping prior to submitting to the A.I. for review.

7.4.3 For ASME Section VIII Division 1 Stamping may be applied with the authorization of the A.I. For ASME Section I Stamping must be applied in the presence of the A.I.

Section 8: Corrections of Non-Conformities

8.1 Definition

Nonconformity: Any Condition which does not comply with the applicable rules of the code, QC Manual or other specified requirements. Nonconformities must be resolved before the completed component can be considered to comply with the Code.

8.2 Use of Exhibits No 4, 5 & 6

When non-conformity is discovered in material or workmanship the Q. C. Manager will place a "Hold Tag" on the item. (Exhibit No. 4) The Engineering Manager will be required to determine if the item is to be repaired, rejected, or used as is. This plan will be presented to the A. I. for approval of the corrective action. If the item can be repaired, the Q. C. Manager will remove the "Hold tag" and Place a "Repair tag" on the item. (Exhibit No. 5) The Q. C. Manager will consult with the A. I. to determine what corrective action will be taken. If the Item can't be repaired, the Q. C. Manager will remove the "Hold tag" and place a "Reject tag" on the item and be responsible for properly disposing of the rejected item. (Exhibit No. 6)

8.3 Corrective Action

All repairs shall be performed in accordance with the applicable code section. Defects in material may be repaired provided the concurrence of the A. I. is first obtained for the method and extent of repairs so that he can establish "Hold" points. Removal of hold tags by the Q. C. Manager releases the item(s) to be placed back into fabrication.

8.4 Use of Exhibit # 3

The Q.C. Manager shall keep a record of all non-conformities and subsequent corrective action taken. Nonconformance Report (Exhibit No. 3) in each instance the appropriate portion or portions will be completed and signed by all parties involved. Before a repaired item is released the Q. C. Manager will sign the approval section and obtain the acceptance of the A. I.

Section 9: Welding

9.1 Welding Material

9.1.1 Scope

All welding material shall conform to requirements of the A.S.M.E. Code Sections II and IX and any additional requirements of the applicable code sections.

9.1.2 Purpose

This section will establish the manner in which welding material will be purchased, inspected, stored, and controlled as per the requirements of Section IX of the A.S.M.E. Code.

9.1.3 General

The Purchasing Manager shall be responsible for purchasing all welding material in accordance with Section I, Section II, Section VIII, Div. 1, and Section IX of the A.S.M.E. Code. All welding material will be ordered to SFA specifications when applicable. The Quality Control Manager shall be responsible for the inspection of all welding material. The Manufacturing Manager shall be responsible for control, storage, and issuing of all welding material.

9.1.4 Purchasing

The Purchasing Manager shall be responsible for ordering all welding materials, as instructed by the Manufacturing Manager of Genesis Metal Corp. and preparing the Purchase Order, when instructed. Weld material may also be purchased by verbal order.

Section 9: Welding (continued)

9.1.5 Inspection and Storage

All welding material shall be inspected when received by the Quality Control Manager. Identification shall be checked to assure that the correct material has been received. All welding material shall be stored in a controlled area protected from damage and at environmental conditions recommended by the material manufacturer. Welding material received in damaged containers, or later damaged, shall be scrapped or returned to the vendor. Stub ends shall be discarded.

9.1.6 Control

The Manufacturing Manager shall disburse all welding material. Low Hydrogen rods are ordered to be supplied in sealed containers, if acceptable; electrodes shall be placed in holding ovens immediately after the containers are opened. No more than a (4) supply of rods shall be issued. Any rod found to be damaged or unidentifiable shall be discarded.

****NOTE:** At this time, Genesis Metal Corp. does not employ the use of SMAW welding electrodes for A.S.M.E. Code Fabrication. If in the future these electrodes are used, then the handling and storage will be controlled as stated in this section.

9.2 Welding Procedures and Welders Qualifications

9.2.1 Purpose

This section will establish the manner in which welding procedures will be prepared and qualified and who is responsible for the qualification of welders.

9.2.2 General

The Quality Control Manager shall be responsible for the preparation, qualification, and certification of all Welding Procedure Specifications and Procedure Qualification Records, and all revision on Welding Procedure Specifications. The Quality Control Manager shall be responsible for the qualification of all welders.

Section 9: Welding (continued)

9.2.3 Welding Procedure Specification

One Welding Procedure Specification (WPS) shall be prepared for each procedure used. Each WPS shall be qualified by one or more Procedure Qualification Record(s) (PQR). Each Welding WPS and PQR shall bear a separate number and will be qualified in accordance with Section I, Section VIII Div. I, and Section IX of the A.S.M.E. Code.

The properly documented WPS and PQR will be kept in the welding file located in the Quality Control Manager's office and a copy shall be available to the welder and Authorized Inspector at all times. The Authorized Inspector may request re-qualification of weld procedures or welders.

The Quality Control Manager will assign all WPS to jobs.

Copies of WPS are available at all times in the welding area for welders.

9.2.4 Welder Qualifications

The Welder and Welder Operator Qualification Test will be in accordance with Section I, Section VII, Div. 1, and Section IX of the A.S.M.E. Code. The Quality Control Manager will establish which tests are required to qualify each welder to the various welding procedures. The Welder's Test coupon will be examined by Radiography or physical test and recorded by the Quality Control Manager. The Quality Control Manager shall be responsible for maintaining a record of all welders and certifying the Welder Performance Qualification Records. A copy shall be issued to the Manufacturing Manager and the original maintained in the Quality Control Office. It shall show the date and the results of test and the identifying symbol assigned to each welder. A Welders Log and Continuity Record (Exhibit No. 7) shall be kept by the Quality Control Manager to indicate their continuity of welding in a specific process, within a six (6) month period. The Manufacturing Manager is responsible for instructing and supervising all welders.

Section 9: Welding (continued)

9.2.5 Welding Symbols

All welders shall be assigned a symbol to use for identification when they become qualified. This symbol shall be stamped next to the welds at intervals of not more than three (3) feet or a record kept for each welded joint or connection.

9.2.6 Tack Welds

All Tack Welds shall be made by Qualified Welders using a qualified procedure. Tack welds shall be visually examined and if found to be defective shall be removed. The start and stopping ends of all Tack welds shall be properly prepared by grinding or other suitable means, prior to incorporation into the final weld. Tack welds performed by subcontractors shall be removed.

9.3 Name Change

9.3.1 Genesis Metal Corp. assumes all responsibility and controls of all welding procedure specifications, and welders qualified by Econo-Fab Piping Inc.

Section 10: Non-Destructive Examinations

10.1 Purpose

This section shall establish the responsibility for the manner in which non-destructive examination procedures and personnel are qualified and certified.

10.2 General

The Quality Control Manager shall be responsible for approval of non-destructive examination services and personnel. Liquid penetrant examination and Visual examinations may be performed by Genesis Metal Corp. in accordance with approved written procedures. All other NDE will be performed by an outside subcontractor.

10.3 Procedure

1. UT, MT, PT, and RT examinations shall be performed to written procedures.
2. All NDE procedures shall be approved by a Level III Examiner. Examination results shall be evaluated and interpreted by a Level II or Level III Examiner. NDE procedures will be reviewed by the Q.C. Manager and all acceptable NDE Procedures shall be made available to the Authorized Inspector. These procedures shall be demonstrated to the satisfaction of the Authorized Inspector.
3. All NDE procedures, when required by A.S.M.E. Code will comply with the applicable A.S.M.E. Code Section. The Quality Control Manager shall be responsible for the final acceptance of all NDE reports and film.
4. Results of all NDE interpretation sheets will be made available to the Authorized Inspector for his review and acceptance.

Section 10: Non-Destructive Examinations (Continued)

10.4 Personnel

Personnel files for NDE examiners shall meet requirements of the current accepted edition of SNT-TC-1A.

The company will appoint the subcontractor Level III Examiner as the company's Level III by letter from the General Manager of Genesis Metal Corp. and have a letter of acceptance on file. The following records shall be maintained on file by Genesis Metal Corp.: NDE personnel Qualifications, Certifications, NDE Procedures, and written practice by subcontractors.

The Authorized Inspector shall have the right to require re-qualification of the NDE personnel and procedures.

In house PT may be performed to a qualified written procedure certified by the Quality Control Manager to meet T-150, Section V. All in house PT personnel may be qualified to written procedure, tested, and qualified in accordance with A.S.M.E. Section VIII, Div. 1 Appendix 8 and A.S.M.E. Section I A-270.

Section 11: Heat Treatment

11.1 Purpose

This section shall establish the manner by which heat treatment shall be conducted and documented.

11.2 General

Heat Treatment shall be subcontracted to a qualified outside company. The Quality Control Manager shall be responsible for reviewing and acceptance of all procedures and current furnace calibration records prior to use.

11.3 Procedure

Heat Treat Procedures shall be supplied by the Quality Control Manager. The Procedure shall specify the method, time, temperature, thermocouple placement and control temperature to a specified range.

11.4 Documentation

A written procedure shall be prepared and issued by the Quality Control Manager. The procedure shall require the subcontractor to furnish records that show the following as appropriate:

- Strip chart containing heating, holding, and cooling time's temperature.
- Piece identification
- Thermocouple placement
- Equipment Calibration
- Name of Heat Treatment firm
- Date of heat treatment
- Signature of responsible official of the Heat Treatment firm
- Furnace Number(s)

11.5 Inspection

All returned heat treated items shall be inspected by the Quality Control Manager for physical damage and proper identification.

Section 12: Calibrations of Measurement and Test Equipment

12.1 Inspection and Test Equipment

All equipment used in inspection and testing shall be handled and stored in a manner, which will not jeopardize their intended function. Such equipment includes but is not limited to hydrostatic test gauges and micrometers. A subcontractor shall calibrate all hydrostatic test gauges used in the testing of any ASME Code work to maintain their accuracy. Gauges shall be re-calibrated at any time there is reason to believe they are in error, but in no case longer than one (1) year. All micrometers and calipers shall be checked by zeroing before and after use. These verifications shall not be recorded. All pressure gauges shall be permanently identified by serial number. These shall be recorded on the Gauge Calibration Log (Exhibit No. 8). A sticker reflecting the date of calibration and due date will be placed on the pressure gauges.

12.2 Calibration Records

The Q. C. Manager is responsible for recording and maintaining the Gauge Calibration Log. (Exhibit No 8) This form and the subcontractor's certification shall be kept updated and retained by the Q. C. Manager. The Gauge Calibration Log shall be available to the A. I. The A. I. may call for re-calibration if he has reason to question the accuracy of the gauges.

Section 13: Records Retention

13.1 Scope

Genesis Metal Corp. shall have a system to maintain the records for each Code Fabricated Product.

13.2 Policy

All forms, drawings, NDE test reports and data reports will be retained in accordance with A.S.M.E. Code Section I, ASME Section VIII Div.1, Appendix 10-13 or National Board Inspection Code standards.

It shall be the responsibility of the Quality Control Manager to maintain records.

National Board Serial Numbers shall be controlled and issued in sequential order beginning with the number one (1) without skips or gaps of unused numbers or duplication by the Quality Control Manager. The National Board number will be issued at the time of completion. He shall maintain a record of issuance showing date issued type of item to be used upon, the manufacturer's serial number and the National Board Number assigned. The Quality Control Manager shall also maintain and submit to the National Board the original of all Manufacturers' Data Reports for stamped items when required. Manufacturer's Data Reports shall be submitted within sixty (60) days of certification.

As a minimum, Data Reports not registered with the National Board and RT film Reader Sheets for Section I items shall be retained for five (5) years.

Manufacturer's Data Reports shall be properly prepared and checked by the Quality Control Manager for correctness and certified (with pen) only after assuring himself that requirements of the applicable Code Sections have been satisfied and each Data Report is correct.

The Quality Control Manager is responsible for the distribution of Manufacturer's Data Reports according to the applicable code.

Section 14: Authorized Inspector

14.1 Authorized Inspector

The Authorized Inspector (AI) is an employee of an Authorized Inspection Agency, as defined in the A.S.M.E. and National Board Code with which the certificate holder has a contract or agreement to supply Inspection Services. Hold Points are designated and inserted into the shop traveler by the Authorized Inspector before releasing to the shop. Manufacturing will not proceed beyond these points without AI sign off. The AI shall have access to and be furnished all drawings, calibrations, specifications, procedures, records, test results and other documents as are required to perform his duties in accordance with the applicable Section of the Code. A current copy of the Quality Control Manual is made available to the AI for his use. Corrective actions relative to non-conforming materials (including fabrication errors) are subject to review and concurrence by the AI. The AI shall witness final Hydrostatic Test required by the applicable section of the Code. The AI shall carry out such examinations as are deemed necessary during and/or following these tests and authorized and verify the application of the A.S.M.E. Certification Mark. The A.I and their supervisor shall be provided free access to all areas while work on Code jobs are in progress. The A.I. may at his option, require re-qualification of NDE and welding procedure or personnel, including those of subcontractor, if there is any doubt as to their ability to perform properly.

Section 15: Field Site Fabrication

15.1 Field locations

All field fabrications will be done in accordance with the applicable Code, jurisdictional, and Quality system procedures as outlined in this manual. Genesis Metal Corp. personnel will control all work.

15.2 Authorized Inspector

The acceptance of the A. I. shall be obtained prior to the start of fabrication at any field location.

Field fabrication will be controlled as referenced in Section 1 through 15 of this manual with the following exceptions:

- **Section 5**

The Q. C. Manager will deliver drawings, calculations, and their revisions to the field.

- **Section 6**

Materials for use at the field site locations may be ordered by the Manufacturing Manager using the Bill of Material/sample cut list supplied by the Purchasing Manager.

Section 16: Oklahoma Addendum

16.1 Scope

This section addresses the additional requirements for repairs and alterations performed on pressure retaining items in the State of Oklahoma.

16.2 Policy

It is the policy of Genesis Metal Corporation to comply with the requirements listed in this section for all repairs and alterations performed on pressure retaining items in the State of Oklahoma.

16.3 Definitions

OKLAHOMA FORM R-2: (Report of welded Repairs) is the Oklahoma Report to be used (if a National Board Report Form is not used) for routine repairs to pressure retaining items operating in the State of Oklahoma.

REPORT FORM: When this term is used in the text of this section, it shall mean the appropriate National Board Report Form or the Oklahoma Form R-2.

Section 16: Oklahoma Addendum (Continued)

16.4 Responsibilities

16.4.1

1. It shall be the responsibility of the QA/QC Manager to obtain and maintain a current Oklahoma license to make welded repairs. This license shall be renewed annually.
2. Prior to the start of a repair or alteration the QA/QC Manager shall be responsible for contacting the Oklahoma Bureau of Boiler Inspection, notifying them of the repair or alteration, and obtaining from them the "Repair Number" to be shown on the Report Form.
3. Re-rating of a pressure-retaining item shall be done only after the requirements of the National Board Inspection Code have been met to the satisfaction of the Oklahoma Department of Labor.
4. In the case of alterations, where the original Manufacturer's Data Report cannot be obtained, the Chief Inspector of the Oklahoma Department of Labor must be contacted for approval of the procedures to be used to assure compliance with the National Board Inspection Code and jurisdictional requirements.
5. The QA/QC Manager shall be responsible for preparing, certifying, and distributing the application Report Forms.
6. Repairs to be considered "routine repairs" as defined by the National Board Inspection Code, must be documented as such by the repairing firm and the Authorized Inspector giving approval of such repairs.
7. Oklahoma Form R-2 may be used in lieu of the National Board R-1 to satisfy these requirements.
(Note) The National Board may not accept the Oklahoma form R-2 for their records. When there is any doubt, the National Board form R-1 shall be used.
8. Legible copies of the completed Report Form shall be distributed to the user and to the Jurisdictional Authority.

Section 17: Repairs and Alterations

17.1 Scope

This section is applicable to repairs and alterations performed in accordance with the National Board Inspection Code and Jurisdictional Requirements.

17.2 Definitions

For the purpose of applying the rules of the National Board Inspection Code, the following definitions of the terms used herein shall apply.

17.2.1 Alteration

Any change in the item described on the original Manufacturers' Data Report, which affects the pressure containing item. Non-physical changes, such as an increase of the maximum allowable work pressure (internal or external or design temperature shall be considered an alteration). A reduction in Minimum temperature shall also be considered an alteration.

17.2.2 A.S.M.E. – The American Society of Mechanical Engineers

A.S.M.E. Code – The American Society of Mechanical Engineers Boiler and Pressure Vessel Code published by the Society, including Addenda and Code Cases, approved by Council.

17.2.3 Repair

The work necessary to restore a pressure-containing item to a safe and satisfactory operating condition provided there is no deviation from the original design.

17.2.4 Rerating

The increase of the maximum allowable working pressure or temperature of a pressure-containing item, regardless of whether or not physical work is carried out on pressure retaining item, rerating shall be considered an alteration.

Section 17: Repairs and Alterations (continued)

17.3 General

Repairs and alterations shall be performed in accordance with the requirements of the National Board Inspection Code, this quality control system manual and jurisdictional requirements.

17.4 Responsibilities

The Quality Control Manager shall assure overall responsibility for the performance of repairs and alterations and for originating the construction procedures necessary to direct the course of work. The method of repairs or alterations shall be made available to the Inspector responsible for the inspection of the item. The Quality Control Manager shall make available to the Inspector proposed procedures for the method and extent of repair or alterations, including all examinations and tests to be performed. Under no circumstances shall work be started or work scope changed without authorization of the Inspector.

17.5 Materials

The materials used in making repairs or alterations shall conform to the requirements of the original construction standard. If the company provides the materials that procurement, inspection and handling of material shall be in accordance with the applicable section of this manual. If the material is provided by others, they shall provide sufficient documentation for acceptance of material by the Quality Control Manager and Inspector.

17.6 Fabrication

All welding, non-destructive examinations and heat treatment (as required) shall be in accordance with the requirements of the NATIONAL BOARD INSPECTION CODE and shall conform to the applicable sections of this manual.

Section 17: Repairs and Alterations (continued)

17.7 Testing

Pressure tests shall conform to the requirements of NATIONAL BOARD INSPECTION CODE and shall be witnessed by the Inspector and the Quality Control Inspector. When pressure testing is not practical, the Quality Control Manager shall obtain the approval of the Inspector and, where required, the Jurisdiction to conduct alternative testing as outlined in the N.B.I.C. This approval must be obtained before performing any alternative examinations or testing.

17.8 Stamping

1. Stamping of the National Board "R" repair symbol, shall be applied only on the completion of a repair or alteration and only with the knowledge and authorization of the Inspector.
2. All repairs or alteration stampings and/or nameplates shall be applied or attached adjacent to the original manufacturer stamping or nameplate.
3. When a repair or alteration requires removal of that part of the item bearing the Original Code Stamping, the Inspector subject to the approval of the Jurisdiction shall witness the making the Facsimile of Stamping the obliteration of the old Stamping and the transfer of such Stamping to the new part. When the Stamping is on the nameplate the Inspector shall witness the transfer of the nameplate to the new part.
4. The original Code Symbol Stamping shall not be re-stamped and relocation of the Stamping or Nameplate shall be described on the appropriate N.B.I.C. Form. The Quality Control Manager is responsible for the custody and use of THE NATIONAL BOARD "R" Stamp.

Section 17: Repairs and Alterations (continued)

17.9 Reporting

When A.S.M.E. is the original construction code, major replacement pressure parts for which manufacturer data reports are required, shall be fabricated and inspected to the requirement of applicable A.S.M.E. Code Section, stamped with the applicable Certification Mark and the word "Part" and reported on the appropriate Manufacturer Partial Data Report. When such parts are added to the item being repaired or altered, partial data reports submitted therewith shall be part of the complete N.B.I.C. form and shall be attached thereto.

When the original code of construction is other than A.S.M.E., pressure parts fabricated by welding shall be manufactured, inspected, and stamped as required by the original code of construction. The manufacturer shall be certified as required by the original code of construction and shall supply the certification required by that code.

When it is not possible or practical to obtain replacement pressure parts as described above the organization fabricating the part may have a National Board Certificate of Authorization. Such replacement parts shall be documented on N.B.I.C. forms R-3 and the "R" symbol Stamping applied as described in appendix 2 of the N.B.I.C.

The Quality Control Manager shall prepare, certify, and present to the Inspector for his signature, the completed N.B.I.C. form appropriate for the work.

Section 17: Repairs and Alterations (continued)

17.10 Alterations

Reports of Alteration shall be distributed as follows:

- 1 copy – Owner/User
- 1 copy – Jurisdictional Authority
- 1 copy – Inspection Agency responsible for in-service inspection of the item to be altered
- 1 Original – National Board if the item is so registered

If registered the R-2 Form shall be listed on the R-Form Log (Exhibit O)

A copy of the Original Manufacturers Data Report, appropriate Material Certifications and Supplementary Manufacturers Data Reports shall be attached to and made part of the completed report of Alteration.

17.11 Repairs

Reports of Repair shall be distributed when required as follows:

- 1 copy – Owner/User
- 1 copy – Jurisdictional Authority

17.12 Distribution of Forms

The Quality Control Manager shall distribute the completed reports as required by the N.B.I.C.



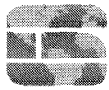
8255 Hwy. 16 Beggs, OK 74421

918-267-5901

918-267-5902

Customer:

Job No.:[illegible]



Shop Traveler

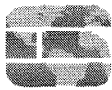
Genesis Metal Job #:

Job Description:

Customer:

Customer PO #:

	Client QC	QC Department	A.I.
Job Number			
Drawing Number			
National Board Number			
Calculation			
Welding Procedure Specification			
Procedure Qualification Record			
Inspection of Fittings			
Mill Test Report			
Pipe Surface			
Alignment			
Welder Symbol			
Welding Appearance			
Post Weld Treatment			
Internal Inspection			
NDE			
Hydro Test			
Name Plate Attached / Stamping			
Data Report Signed			



GENESIS METAL CORP

Address:

8255 Hwy. 16 Beggs, OK 74421

Phone:

918-267-5901

Fax:

918-267-5902

Nonconformance Report

NCR #:

Initiator:

Date:

Job No.:

Part No.:

Serial No.:

Nat'l Board No.:

Nonconformance:

Recommended Disposition:

Q.C. Manager

Date:

Authorized Inspector:

Date:

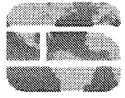
Corrective Action Taken:

Q.C. Manager

Date:

Authorized Inspector:

Date:



GENESIS METAL CORP

Address: 8255 Hwy. 16 Beggs, OK 74421

Phone: 918-267-5901

Fax: 918-267-5902

Hold Tag

Job No.:

P.O. No.:

Part No.:

Serial No.:

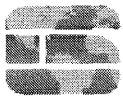
Part Name:

No. of Pieces Affected:

Reason:

Inspector:

Date:



GENESIS METAL CORP

Address:

8255 Hwy. 16 Beggs, OK 74421

Phone:

918-267-5901

Fax:

918-267-5902

Repair Tag

Customer:

Job No.:

Serial No.:

Part No.:

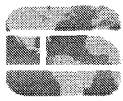
Part Description:

P.O. No.:

Repair Method:

Inspector:

Date:



GENESIS METAL CORP

Address:

8255 Hwy. 16 Beggs, OK 74421

Phone:

918-267-5901

Fax:

918-267-5902

Reject Tag

Customer:

Job No.:

Serial No.:

Part No.:

Part Name:

No. of Parts Rejected:

Reason:

Inspector:

Date:

WELDERS LOG AND CONTINUITY RECORD

[illegible]



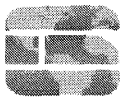
8255 Hwy. 16 Beggs, OK 74421

918-267-5901

918-267-5902

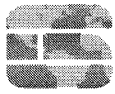
Gauge Calibration Log

[illegible]



Registry of The Quality Control Manual

Issued To:	Controlled Copy Number:	Edition & Revision:	Date:



GENESIS METAL CORP

PURCHASE ORDER

Address: 8255 Hwy. 16 Beggs, OK 74421
Phone: 918-267-5901
Fax: 918-267-5902

PO Date: _____
Terms: _____
FOB: _____
Ship / Pick-Up: _____

Purchase Order #: _____

TO:

Address Correspondence To:

Name: _____
Email: _____

Sales Tax Permit #: _____

Item:	Qty:	Description	Unit Price:	Amount:
1				\$0.00
2				\$0.00
3				\$0.00
4				\$0.00
5				\$0.00
6				\$0.00
7				\$0.00
8				\$0.00
9				\$0.00
10				\$0.00
11				\$0.00
12				\$0.00
13				\$0.00
14				\$0.00
15				\$0.00
16				\$0.00
17				\$0.00
18				\$0.00
19				\$0.00
20				\$0.00
21				\$0.00
22				\$0.00
23				\$0.00
24				\$0.00
25				\$0.00
			Shipping	
			Tax	
			Other	
			Page Total:	\$0.00

Ship Attn: _____
Genesis Metal Corp.

Approved By: _____

Date: _____

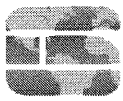
Exhibit: #10



Address: 8255 Hwy. 16 Beggs, OK 74421
Phone: 918-267-5901
Fax: 918-267-5902

National Board Number Log

[illegible]



GENESIS METAL CORP

Address:

8255 Hwy. 16 Beggs, OK 74421

Phone:

918-267-5901

Fax:

918-267-5902

Sample Cut List

Job #: _____

Date: _____

	Drawing #:	Item #:	Quantity:	Description:
1				
2				
3				
4				
5				
6				
7				
8				
9				
10				
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32				

