

[CompanyName]

[CompanyAddress1]
[CompanyPhone]

Pipe Fabrication and Installation Quality Manual

Operating Policies of the [CompanyName] Quality System

Management acceptance

This Quality Manual has been reviewed and accepted

Endorsed By: (Name / Title)	[PresidentName], President		
Signature:	<i>[PresidentName]</i>	Date:	[Date]

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QUALITY MANUAL

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2. PERSONNEL QUALIFICATIONS

2.1. OVERVIEW

The Quality Manager qualifies employee capabilities to ensure that they are capable of completely carrying out their assigned quality responsibilities including the following capabilities:

- Knowledge of Company quality standards
- Knowledge of job responsibilities and authority
- Demonstrated skills and knowledge
- Demonstrated ability
- Demonstrated results
- Required training
- Required experience

The Quality Manager also evaluates independent contractor personnel on the same standards that apply to employees.

2.2. PERSONNEL CERTIFICATION AND QUALIFICATION REQUIREMENTS

Personnel certifications are required for the following:

Certification or License Title	Reference Standard No.	Reference Standard Title
Ultrasonic Inspectors	ASNT SNT-TC-1A	Personnel Qualification and Certification in Nondestructive Testing

2.3. QUALIFICATION OF [COMPANYNAME] VISUAL, MT, OR PT PERSONNEL

QC Inspectors who perform VT, MT, or PT examinations on ASME Code Section VIII, Div. 1 welds are qualified and certified for each method in accordance with the following minimum requirements:

- Instruction by the Level III or Quality Manager in the fundamentals of the NDE method.
- On the job training to familiarize the candidate with the appearance and interpretation of indications of weld defects. The length of such training shall be sufficient to assure adequate assimilation of the knowledge required.
- Candidates already qualified in one method may, at the discretion of the Quality Manager, be exempt from this training for other methods.
- A visual acuity examination performed at least annually to determine the optical capability of the candidate to read Jaeger 1 letters at a distance of not less than 12", and to distinguish the contrast between colors.

Upon completion of the above, the candidate is given an oral or written examination and a performance examination by the Quality Manager to determine if he is qualified to perform the examination and interpret the results

Certification records of each QC Inspector who performs NDE examination shall be signed and dated by the Quality Manager and placed in the examiner's file.

Certified NDE Personnel who have not performed a specific examination method for a period of one year or more are recertified only after successfully completing the examinations described above.

Substantial changes in procedures or equipment used require recertification of NDE personnel as determined by the Quality Manager.

The following criteria may be used as an alternative to the above requirements, as applicable for the method:

- Qualification to AWS QC1, Standard for Qualification and Certification of Welding Inspectors, with the addition of the requirements above.
- Recommended Practice ASNT SNT-TC-1A - Current Code accepted edition, qualification of Nondestructive Testing Personnel

2.4. QUALIFICATION OF WELDERS AND WELDING OPERATORS

All welders and welding operators are qualified to the ASME code Section used for construction & ASME Section IX, under the full supervision of the QC inspector with test results reviewed and approved by the Quality Manager. The Quality Manager prepares and certifies the Welder Performance Qualification Record or Welding Operator Performance Qualification Test form (WPQ/WOPQ), which documents the performance essential variables actually used for test welds, and the ranges qualified for production welding by these variables. The WPQ/WOPQ will also include results of visual inspection.

A WPQ/WOPQ is also required for the welder who welded the test welds used to qualify a WPS or to re-qualify, based on the performance essential variables used. The original WPQ/WOPQ's are retained in the Quality Manager's files.

The Quality Manager approves the qualification of all welders before they begin welding on a specific project.

2.5. QUALIFICATION OF WELDERS FOR SPECIFIC WELDING CODES

When indicated on the welding procedure, the Quality Manager approves qualification of welders to the specific welding procedure.

2.6. QUALIFICATION OF WELDERS FOR SPECIFIC WELDING PROCEDURES

When indicated on the welding procedure, the Quality Manager approves qualification of welders to the specific welding procedure.

2.7. MAINTENANCE OF WELDER AND WELDING OPERATOR QUALIFICATIONS

Each qualified welder is listed on the Welder's Continuity Log in the Standard Operating Procedures section of this Quality Manual. The Quality Manager the Welder Continuity Log from data provided by the QC Inspector. The record indicates the last date each welder and welding operator has welded in each process for which they are qualified.

The Quality Manager determines from the Welder's Continuity Log when a welder's qualification will expire, so as to ensure production welding is performed, or they are re-qualified.

2.7.1. RETESTING BASED ON QUALITY OF WORK

In addition to welder certification, welding personnel may be required to be retested based on the following criteria:

- An interview of the welder
- Increased visual inspection for a limited time period

- Observation of the welding, or a simplified weld test developed to evaluate the issue of concern
- Requalification in compliance with Clause 6 or Clause 10 for tubulars of the D1.1/D1.1 M code

2.7.2. RETESTING BASED ON QUALIFICATION EXPIRATION

If evidence cannot be supplied that shows a welder, welding operator, or tack welder has used the welding process within the last six months, he or she is not considered qualified to weld using that process without new qualification testing.

2.8. CERTIFIED WELDING INSPECTOR REQUIREMENTS

Certified welding inspectors must be certified by the American Society of Mechanical Engineers to ASME Standards for ASME Certification of Welding Inspectors to the applicable code that applies to the inspections they perform.

The Quality Manager approves the qualification of all certified welding inspectors.

2.9. NDE WELDING INSPECTOR REQUIREMENTS

Radiographic Interpreters shall be certified in accordance with ASME, Specification for the Qualification of Radiographic Interpreters.

Non-Radiographic NDE welding inspectors must be certified by the American Society of Mechanical Engineers Standard for ASME Certification of Welding Inspectors to the applicable code that applies to the inspections they perform.

The Quality Manager approves the qualification of all NDE welding inspectors.

9. WELDING CONTROL

9.1. OVERVIEW

All welding on code work is performed using Welding Procedure Specifications (WPS) and welders/welding operators qualified in accordance with the applicable construction code section and ASME Section IX.

9.2. WELDING PROCEDURE SPECIFICATIONS (WPS)

Welding procedure specifications shall be qualified and approved in accordance with the applicable ASME B&PV codes Section IX, AWS Welding code(s) or Specification(s) (i.e., D1.1., D1.5) or AWS B2.1, *Specification for Welding Procedure and Performance Qualification*.

When the governing Welding code(s) mandates that welding procedures be qualified by test, the [CompanyName] shall have PQRs that support the applicable WPSs. When prequalified WPSs or Standard Welding Procedure Specifications (SWPSs) published by the AWS are permitted, PQRs are not required.

The Quality Manager or a Certified Welding Inspector (CWI) reviews and approves the welding procedure before being used in production welding operations.

Revisions to the WPSs and PQRs are controlled by the Quality Manager according by the document and record control procedures specified in the relevant section of this Quality Manual.

The applicable WPSs shall be available to welders or welding operators during testing and production welding.

The Quality Manager is responsible for selecting and assigning welding procedures. The Quality Manager or qualified designee shall ensure that welding procedures are listed on applicable shop fabrication drawings.

9.3. STANDARD WELDING PROCEDURE SPECIFICATIONS (SWPS)

Standard Weld Procedure Specifications which have been qualified by AWS and accepted for use by ASME can be used for fabrication and installation of ASME pressure vessels. Prior to use, these procedures shall be demonstrated in accordance with ASME, Section IX, Article V and accepted (signed) by the Quality Manager.

9.4. WELDER ID

Each qualified welder is issued a unique stamp (stencil) by the Quality Manager with which to identify each weld made. When conditions prevent the stamping of welds, the QC Inspector enters the stencil on the Supplemental Traveler for each joint welded, or the QC Inspector will record all stencils for each weld joint on an as-built drawing.

9.5. TACK WELDS

Tack welds, whether left in place or completely removed, are made by qualified welders using a qualified procedure.

If left in place, the ends of each tack weld are ground to ensure complete fusion into the final weld, and the welder's symbol is recorded on the Supplemental Traveler or as-built drawing.

10. MATERIAL CONTROLS

10.1. MATERIAL SPECIFICATIONS

The Quality Manager ensures that all types of materials and equipment that affect quality are identified and controlled.

The Quality Manager evaluates the expected use of materials and equipment and identifies types of materials and equipment that may affect project quality. For each item, the Quality Manager sets specifications for their intended use, including:

- Compliance to contract requirements
- Compliance to code and industry standards and listing requirements
- Structural integrity
- Performance
- Durability
- Appearance
- Product identification for traceability.

The Quality Manager identifies controlled material and equipment that apply to the project.

The Quality Manager ensures that purchase orders for listed materials and equipment include the relevant specifications as required.

Only approved materials are used in the fabrication and installation process.

10.1.1. BILL OF MATERIALS

The Quality Manager prepares a Bill of Materials (BOM) listing the raw materials, sub-assemblies, intermediate assemblies, sub-components, parts, and the quantities for each manufacturing project.

10.2. WORK PROCESS SPECIFICATIONS

The Quality Manager ensures that work processes are controlled to ensure that the specified requirements are met. When appropriate, the Quality Manager will specify project quality standards for work processes that may include:

- References to documented procedures such as manufacturer's installation instructions
- Procedures for carrying out process steps
- Methods to monitor and control processes and characteristics
- Acceptability criteria for workmanship
- Tools, techniques and methods to be used to achieve the specified requirements.

10.3. APPLICATION OF MULTIPLE SOURCES OF SPECIFICATIONS

Should multiple sources of specifications apply to a work task, the higher level of specification applies. When there are equal levels of specifications that conflict, the specifications are applied in this order:

- Submittals approved by the customer
- Contract technical specifications
- Contract drawings
- Government regulations that exceed requirements of items below
- [CompanyName] quality specifications, including subcontract specifications

- [CompanyName] Quality Manual
- Product installation instructions
- Industry standards
- Generally accepted practices

Should multiple sources of conflicting specifications apply to a project, the Quality Manager defines the standards that apply to the specific project on the Project Quality Plan.

10.4. WELDING MATERIAL

10.4.1. LOW HYDROGEN

Low hydrogen coated electrodes are received and stored in hermetically sealed containers. When opened, the electrodes are placed in a heated oven maintained at the temperature recommended by their Manufacturer or ASME, Section II, Part C.

Coated Low Hydrogen type electrodes are issued only in a quantity sufficient to complete the weld or for a period of four hours whichever is less.

Unused Low Hydrogen type coated electrodes which have been out of the hot box are scrapped or used for non-code work. Damaged or unidentified electrodes are scrapped or used for non-code work.

10.5. MATERIAL RECEIVING INSPECTION

The Superintendent or qualified receiving inspector inspects materials for conformance to the purchase order and project quality requirements. The receiving inspection includes a verification that the

- Correct material has been received
- The material is identified and meets the traceability requirements for the material
- Material certifications and/or test reports meet the specified requirements if required
- Materials are tested and approved for the specific application if required

10.5.1. SOURCE INSPECTIONS

Source quality inspections are required when quality characteristics cannot or will not be verified during subsequent processing. The Quality Manager determines if a source inspection is necessary to validate supplier quality before materials are delivered to the project jobsite.

The Superintendent ensures that each work task that uses the source inspected materials proceed only the material has been accepted by the source inspection.

10.6. MATERIAL INSPECTION AND TEST STATUS

The status of each material quality control inspection or test is clearly marked by tape, tag, or other easily observable signal to ensure that only items that pass quality inspections are used.

For each quality-controlled material, the Quality Manager determines the appropriate method for identifying quality inspection and test status.

10.7. MATERIAL STORAGE

The Superintendent ensures that all materials received and inspected will be stored and handled in a manner that protects them from damage, moisture, dirt and intrusion of foreign materials.

Stored materials will be segregated to prevent cross contamination and limit losses should a delivery be rejected.

Welding material is issued to welders by the Shop/Field foreman.

Delivery of materials will be planned according to the work progress to minimize storage on site, where there are higher possibilities of damages and deterioration of materials.

10.7.1. FILLER MATERIALS

Filler materials of different filler metal types, sizes and heat numbers (if applicable) will be labeled and stored separately to prevent intermixing.

Filler materials will be stored in a controlled environment to prevent contamination and degradation. The storage environment will conform to any elevated temperature holding requirements of the filler metal manufacturer and the applicable code or filler metal specification.

10.8. CONTROL OF CUSTOMER PROPERTY

Care will be exercised for customer property used by or under [CompanyName] control. [CompanyName] will identify, inspect, verify, control, and protect customer property with the procedures that apply to company purchased materials. If any customer property is lost, damage, or otherwise found to be unsuitable for use [CompanyName] will report this to the customer.

10.9. CONTROLLED USE OF MATERIALS

The Superintendent ensures that fabrication and installation use only materials specified in the contract technical specifications, contract drawings, and approved submittals. Substitutions are made only by agreement of the customer and documented by a Change Order. A Change Order form is included in section 12 Sample Forms in this Quality Manual. For more details, see section 11.4 Contract Submittals in this Quality Manual.

The Superintendent ensures that each work task that uses the inspected materials proceed only after the material has been accepted by the material quality inspection or test if required.

Materials that are defective, deteriorated, damaged, or not approved are not used. The Superintendent clearly marks such materials for non-use or otherwise holds them aside.

10.9.1. CONTROLLED PRODUCT USE AND INSTALLATION

[CompanyName] fabrication and installation activities conform to manufacturers' product use and installation instructions that apply to the fabrication and installation process.

When installing a product, the Superintendent has access to all applicable product installation instructions.

10.10. CONTROLLED MATERIAL IDENTIFICATION AND TRACEABILITY

The Quality Manager determines types of project materials that require quality controls.

For each type of quality-controlled material, the Quality Manager determines lot control traceability requirements, if any, and specifies the means of lot identification. Identification methods may include physical labels, tags, markings and/or attached certification documents.

When lot-controlled materials are received, the Superintendent verifies that materials have the specified lot identifications.

The Superintendent maintains lot identification at all production phases from receipt, through production, installation, or assembly, to final completion. Acceptable methods for preserving lot identification include physically preserving observable lot identifications, using an MRP system to record incoming lot-controlled materials and to track materials used in production, recording the lot identification on a work task quality inspection form or other work record, or collecting the physical lot identifier as a record along with supplemented with location.

If lot-controlled materials are without lot identification, the Superintendent deems the materials as nonconforming and segregates them and/or clearly marks them to prevent inadvertent use. The Superintendent treats the material according to the company policy for nonconformances. Only the Quality Manager can reidentify or recertify the materials.

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12. WELD EXAMINATION AND INSPECTION PROGRAM

12.1. FABRICATION

Fabrication of code items is controlled using a Traveler prepared by the QC Inspector from the drawings, which lists the sequence of Fabrication, examination, inspection and test operations for each item in the space provided.

The QC Inspector reviews the Traveler with the Welding Inspector and establishes the required Hold Points. The QC Inspector and the Welding Inspector initial and date the Traveler in the space provided to document the review and release the Traveler to start Fabrication. Fabrication cannot proceed past a Welding Inspector's Hold Point without Welding Inspector's concurrence. This will be documented on the Traveler by the Welding Inspector during his next visit.

The Traveler contains columns for the initials and date of the QC Inspector on the applicable line for those operations accepted, and for the Welding Inspector to initial and date in the column provided to signify acceptance of those operations. The Supplementary Traveler can be used to establish hold points for fit up and final inspection of welding.

12.2. FINAL INSPECTIONS

When Fabrication or assembly is completed, the QC Inspector performs a final inspection and initials and dates the Traveler when the item meets all dimensional and code requirements.

The Welding Inspector will make a final inspection immediately following the hydrostatic test if required. For parts not tested until field assembly is completed, final inspection is done after Fabrication of the part is completed.

When a shell is not provided with an opening or other means of access to inspect internal surfaces, an inspection point for the QC Inspector and Welding Inspector will be shown on the Traveler to permit internal inspection before starting the final closure weld or bolted joint..

12.3. WELDING INSPECTION AND TESTING STANDARDS

Weld Inspections and tests assess conformance to welding industry standards including:

Welding Inspection and Testing Standards		
Reference Standard Title	Reference Standard No.	Description
Material verification of high-strength bolts, nuts and washers	AISC 360 Section A3.3 and applicable ASTM material Standards	Identification markings to conform to ASTM standards specified in the approved construction documents
Material verification of weld filler materials	AISC 360, Section A3.5 and applicable AWS A5 documents	Identification markings to conform to AWS specification in the approved construction documents
Inspection of high-strength bolting	AISC 360, Section M2.5	Inspection of high-strength bolting
Material verification of structural steel and cold-formed steel deck	AISC 360, Section M5.5 and applicable ASTM material standards	For structural steel, identification markings to conform to AISC 360

Ultrasonic Testing Method	ASNT SNT-TC-1A Q&A Bk C	Ultrasonic weld inspecting techniques
Standard Practice for Contact Ultrasonic Testing of Weldments	ASTM E 164	Ultrasonic Inspection
Standard Practice for Liquid Penetrant Examination for General Industry	ASTM E 165	Liquid Penetrant Inspection
Standard Guide for Magnetic Particle Testing	ASTM E 709	Magnetic Particle Inspection
Standard Guide for Radiographic Examination	ASTM E 94. D	Radiographic Inspection

12.4. HYDROSTATIC TESTS

code required hydrostatic tests are performed and are witnessed by the QC Inspector and Welding Inspector following a preliminary test to determine and repair any leakage.

The QC Inspector will verify that the Welding Inspector has been notified sufficiently in advance of each test so that the test is witnessed, and inspections are completed.

Pressure Vessels designed to ASME, Section VIII, Div. 1 shall:

- be tested at 1.3 times the MAWP times Stress cold/Stress hot
- use dial indicating or digital reading pressure gages shall meet the requirements of ASME Section VIII, Div. 1, paragraph UG-99.
- be subjected to pressure tests using water at not less than ambient temperature, but in no case less than 30 degree above MDMT.

Boilers and Power Piping designed to ASME Section I and ASME B31.1 shall:

- be tested at 1-1/2 times MAWP stamped on the boiler.
- use of dial indicating, or digital reading pressure gages shall meet the requirements of ASME Section I, paragraph PG-99.
- be subjected to pressure tests using water at not less than ambient
- temperature, but in no case less than 70°F.

When the pressure test meets code requirements and is accepted by the QC Inspector and the Welding Inspector, they will initial and date the Traveler in the space designating the test as their mandatory inspection/hold point and complete the Pressure Test Report.

Upon completion of test and final inspection, the Traveler and supporting documents are returned to the Quality Manager for review and filing as described in Section 22 of this Manual.

12.5. PNEUMATIC TESTS

When code required hydrostatic tests are unable to be performed because the equipment is not designed or supported for weight of water, or when testing liquid would not be tolerated) a pneumatic test may be performed with customer, Welding Inspector, and jurisdictional approval.

Pneumatic tests are completed after required NDE examination per ASME Section VIII, Div. 1. Pneumatic testing will not be conducted on ASME Section I items or B31.1 piping.

Pneumatic pressure tests will be conducted:

- Per ASME Section VIII, Div. 1, paragraph UG-101.
- Where the pneumatic test pressure at every point in the shell or system shall be equal to 1.1 times the MAWP multiplied by Stress cold/Stress hot.
- With metal temperature maintained at least 30 degrees above MDMT, and about 60°F.

12.6. TEST GAUGES

At least one directly connected calibrated indicating test gauge, visible to the operator controlling the pressure located at the highest available connection, and having a dial range of at least double the intended maximum test pressure but not less than:

- 1 ½ nor more than 2 times that pressure, shall be used for pressure testing items from ASME B31.1 and ASME Section I.
- 1 ½ nor more than 4 times that pressure, shall be used for pressure testing items from ASME Section VIII Div. 1.

An additional indicating gauge may be necessary to allow the pressure to be visible to the operator at all times during the test, and to prevent excessive pressure being applied.

Digital reading gauges having a wider range of pressure may be used, provided the readings give the same or greater degree of accuracy as with dial indicating type pressure gauges.

12.7. WELD INSPECTION AND TEST STATUS

The inspector identifies final acceptance or rejection of the work either by marking on the work or with other recording methods.

Final product acceptance inspection shall be indicated by permanent stamping or marking adjacent to the weld or must be unambiguously identified in the inspection report.

12.8. WELD INSPECTION RECORDS

The inspector shall make a record of the inspection which shall include the following information:

- Unique part identifier (serial number, shop order, or batch number)
- Drawing number and revision
- Procedure and applicable acceptance criteria
- Inspector identity and date of inspection
- Record of defect findings
- Nominal
- Actual
- Tolerance

The Inspector will record inspection results on the Visual Weld Inspection Report or other form if approved by the contract Engineer.

13. NONDESTRUCTIVE EXAMINATION

13.1. OVERVIEW

Nondestructive Examination (NDE) required by the Code is specified on the Traveler and drawings, and is performed by a qualified NDE subcontractor, whose written procedures, personnel qualifications and certifications and equipment calibration records have been reviewed and approved by the Quality Manager. Some NDE activities (PT, MT, and VT) may be performed in-house after approval of NDE procedures and personnel qualifications by the Quality Manager.

13.2. SUBCONTRACTED NDE PROCEDURES

All NDE performed by the NDE subcontractor is performed using written procedures that are approved by a Level III Examiner qualified in the method and appointed by letter by the Quality Manager as the Company Level III.

When procedures meet ASME Section V requirements, they are approved by the Quality Manager with his signature and date.

All NDE procedures are submitted to the Welding Inspector for his review and acceptance after they have been proven by actual demonstration to the satisfaction of the Welding Inspector.

13.3. SUBCONTRACTOR NDE PERSONNEL

The Quality Manager will review and approve qualification records after he has assured himself that subcontracted NDE personnel used on code work have the training, experience, qualifications and are certified for the methods, including to SNT-TC-1A current Code accepted Edition requirements, in accordance with their employers Written Practice and the Code.

NDE personnel qualification records are available for review by the Welding Inspector, who may request re-qualification if he has reason to question an examiner's ability to perform the examination.

Copies of the following Subcontractor NDE personnel qualification and certification records for all examiners performing Code NDE are kept on file by the Quality Manager, and made available for review:

- Name, level of certification and examination method.
- Educational background and experience of examiner.
- Statement indicating satisfactory completion of training in accordance with the employer's written practice
- Results of annual visual acuity examination.
- Copies of current examinations, or documentation or successful completion of examinations in each method qualified.
- Composite grades, or documented grades for each of the above examinations.
- Dates of each certification and or recertification in each method qualified, and dates of assignment to NDE.
- Signature of the Employer's designated representative.

13.4. NDE RECORDS

All reports of NDE, including RT film, are reviewed and accepted by the Level II/III NDE subcontractor and the Quality Manager before submittal to the Welding Inspector for acceptance.

14. HEAT TREATMENT

14.1. OVERVIEW

When heat treatment required, which is limited to post weld heat treatment (PWHT) for stress relieving welds, will be performed by a subcontractor.

The Quality Manager will review and approve the subcontractor's PWHT controls, equipment and calibration records.

14.2. POST WELD HEAT TREATMENT (PWHT) PROCEDURES

All PWHT, if required, is performed in accordance with the applicable section of the ASME Code and as specified by the Quality Manager, using subcontractor procedures approved by the

Quality Manager, which describes the placement of thermocouples, method of attachment and removal, temperature gradients for heating and cooling, time at temperature and required records as a minimum.

14.3. PWHT RECORDS

All PWHT records shall be actual furnace charts or charts from recording equipment used with electric resistant coils which record temperature gradients for heating and cooling time, the conditions, identification of thermocouples and items heat treated, and be signed by the furnace operator. These records shall include calibration records of recording equipment.

PWHT records are reviewed and approved by the Quality Manager when the procedures meet code and procedure requirements.

PWHT records are submitted to the Welding Inspector for review and acceptance and filed in the job file.

14.4. RECEIVING INSPECTIONS

When PWHT items are returned from the subcontractor's facility, the QC Inspector examines each one for damage and loss of identification. Nonconforming items are controlled as described in Section 19 of this Manual.

20. RECORD AND DOCUMENT CONTROLS

20.1. OVERVIEW

[CompanyName] ensures that quality related documents and records are created, current versions are in use, complete, identifiable, and stored properly.

20.2. QUALITY SYSTEM DOCUMENTS

20.2.1. QUALITY MANUAL

The Quality Manager maintains the [CompanyName] Quality Manual that documents [CompanyName] quality policies. Each policy identifies the titles of personnel responsible.

The Quality Manager ensures that the Quality Manual and documents related to a work task are accessible to personnel performing the work.

The Quality Manager maintains, improves, and updates the manual as necessary. At least annually, the Quality Manager determines if updated versions of standards and product installation instructions are available. If so, the Quality Manager updates the Quality System documentation accordingly.

The President approves revisions to the Quality Manual, then signs and dates the cover.

20.3. DOCUMENT CONTROLS

The Quality Manager assigns a new version number to each version of quality system documents, including the Quality Manual.

The Quality Manager and President control all company-wide quality system documents including:

- Approval of all quality system documents and for adequacy prior to issue or reissue.
- Ensures that applicable documents are available and usable at points of use
- Prevents unintended use of obsolete documents

The Quality Manager controls project-specific quality system documents including:

- Approval of all project quality documents and for adequacy prior to issue or reissue.
- Ensures that applicable documents are available and usable at points of use
- Prevents unintended use of obsolete documents

20.3.1. CONTROL OF SYSTEM DOCUMENTS

The Quality Manager controls documents related to the [CompanyName] Quality System including:

- Quality Manual
- Quality System Procedures
- Project Management Procedures (including interface and coordination with customers and regulatory agencies with jurisdiction over jobsites)
- Government regulations
- Industry standards
- Procurement specifications

The Quality Manager ensures that records of the distribution of Quality System documents are kept. When new versions are distributed, obsolete versions are destroyed or controlled to prevent inadvertent use.

20.4. RECORD CONTROL AND RETENTION

The Quality Manager verifies records for conformance to the Quality System Requirements and approves all Quality System records.

Records demonstrating conformance with, and operation of the Quality System are retrievable for at least five years. The Quality Manager verifies records for conformance to the Quality System Requirements.

20.4.1. QUALITY SYSTEM RECORDS CONTROL

The Quality Manager verifies the completeness, accuracy, and retention of project-specific Quality System records including:

- Annual reviews
- Quality improvement records

20.4.2. PROJECT RECORDS CONTROL

The Quality Manager verifies the completeness, accuracy, and retention of project-specific Quality System records including:

- Inspection and test records
- Quality submittals to the customer
- Project quality system audits
- Management reviews
- Calibration certificates
- Daily log reports
- Incident reports
- Redline drawings
- Qualified personnel approvals
- Qualified subcontractor approvals
- Quality improvement records
- Project Quality records specified by customer contract, or contract technical specifications

20.4.3. WELDING QUALITY RECORDS, FORMS, AND REPORTS

The Quality Manager collects all records described in this QC Manual at the completion of the job, and reviews them for completeness, correctness and Code compliance before preparing the Manufacturers' Data Report.

The Quality Manager verifies the completeness, accuracy, and retention of project-specific welding records including:

- Welder Performance Qualification Records (WPQRS)
- Welding Procedure Specifications (WPSS)
- Procedure Qualification Records (PQRS)
- Material Test Reports (MTRS) (when required by the contract, governing AWS code or specification)
- Nondestructive Examination (NDE) reports (when required by the contract, governing AWS code, or specification)

- Nondestructive Examination Personnel Qualification Records
- Weld Identification Reports (Weld Mapping) when required
- Record of Final Inspection (I.E., Traveler, Inspection Record, Check Off List)
- Heat Treatment Records (When Required by The Contract, Governing AWS, ASME, Or Specification)
- Receiving Material Inspection Reports
- Nonconformance Reports (NCRS) and dispositions
- Calibration Records of Test Equipment
- Internal Quality Audit Rep
- Manufacturers' Data Reports and Manufacturers' Partial Data Reports
- Manufacturing drawings
- Design calculations including and applicable proof tests d. Material Test Reports and/or material certifications
- Pressure parts documentation and certifications
- Continuity records
- RT film and RT and UT reports and any other Code required NDE records
- Repair procedure and records
- Process Control sheets (Traveler)
- Heat Treat records and test results/Post Weld heat treatment records
- Hydro-test records
- Proof Testing
- Transfer Forms

The Quality Manager assigns record control responsibilities and document location that apply to a specific project.

Project Quality Records will be maintained for a minimum of five years or more as specified by project specifications, or by the Quality Manager for a specific project. Project Quality Records will be filed in the project office during the project. After the project is complete, project records will be stored in file storage area of the main office.

FORMS

[CompanyName] Controlled Materials Form	60
[CompanyName] Metals Material Receiving Inspection Report	61
[CompanyName] Material Inspection and Receiving Report	62
[CompanyName] Quality Inspection and Test Plan	63
[CompanyName] Inspection and Test Report.....	64
[CompanyName] Welder Continuity Log.....	65
[CompanyName] Test Equipment Calibration Plan and Log	66
[CompanyName] Daily Production Report	67
[CompanyName] Work Task Inspection Form	68
[CompanyName] Subcontractor and Supplier Certifications and Licenses.....	69
Form QW-484A Welding Operator Qualification	70
Form QW-484B Welding Operator Qualification	71
Form QW-483 Welding Procedure Qualification Record	72
Form P-4A Welded Piping Inspection	74
Form P-4B Assembled Piping Inspection	76

[CompanyName] Controlled Materials Form				
Contract ID	Contract Name	Preparer	Date	
[ProjectNumber]	[ProjectName]			

Contract Section/ Activity ID	Material	Intended Use (If description is necessary)	Lot Traceability Requirements	Method for identification of Approved Inspection Status

[CompanyName] Metals Material Receiving Inspection Report				
Project ID	Project Name	P.O.#	Supplier	Receipt Date
[ProjectNumber]	[ProjectName]			
Type of Material (i.e., steel plate)	Material Description (Nominal dimensions)	Heat Number/ Serial Number/Markings	Condition / Damage	Color Code Marking
Receiving Inspector Approval Signature / Date		Government Representative Name/Approval Date		
				<input type="checkbox"/> Material Receiving Inspection Passed

[CompanyName] Material Inspection and Receiving Report								
Contract ID	Contract Name	Purchase Order No.	Supplier			Bill of Lading No.	Date	
[ProjectNumber]	[ProjectName]							
Item No.	Stock/Part No.	Description	Quantity Received	Condition	Marking	Accept	Conditional Use	Reject
						<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
						<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
						<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
						<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
						<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
						<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Receiving Quality Control								
<p>ACCEPTANCE</p> <p>Listed items have been accepted by me or under my supervision</p> <p><input type="checkbox"/> Conform to contract specifications EXCEPT as noted herein or on supporting documents.</p> <p><input type="checkbox"/> Received in apparent good condition EXCEPT as noted</p> <p>Signature of authorized person and date: _____</p>								
<p>EXCEPTIONS:</p>								

Form P-4A Welded Piping Inspection

FORM P-4A MANUFACTURER'S DATA REPORT FOR FABRICATED PIPING As Required by the Provisions of the ASME Code Rules, Section I			
1. Manufactured by _____ <small>(Name and address of manufacturer)</small>	Order No. _____	P-4A ID No. _____	
2. Manufactured for _____ <small>(Name and address of purchaser)</small>	Order No. _____		
3. Location of installation _____	Boiler Registration No. _____		
4. Identification _____ <small>(Main steam, boiler feed, blow-off, or other service piping — state which)</small>	Piping Registration No. _____		
5. Design Conditions of Piping _____ <small>(Pressure) (Temperature)</small>	Specified by _____ <small>(Name of Co.)</small>		
Code Design by _____			
6. The chemical and physical properties of all piping meet the requirements of material specifications of the ASME BOILER AND PRESSURE VESSEL CODE. The construction and workmanship conform to Section I of the ASME BOILER AND PRESSURE VESSEL CODE _____ <small>(Year)</small>			
Addenda to _____ <small>(Date)</small> (if applicable), and Code Cases _____ <small>(Number)</small>			
7. Description of Piping (include material identifications by ASME specification or other recognized Code designation)			
8. Shop Hydrostatic Test _____			
9. Remarks			
CERTIFICATE OF SHOP COMPLIANCE			
We certify the statement in this data report to be correct and that all details of design, material, construction, and workmanship of the described piping conform to Section I of the ASME BOILER AND PRESSURE VESSEL CODE.			
Our Certificate of Authorization No. _____ to use the (S) or (PP) Designator _____ Expires _____			
Date _____ <small>(mm/dd/yyyy)</small>	Signed _____ <small>(Manufacturer or Fabricator)</small>	by _____ <small>(Authorized Representative)</small>	
CERTIFICATE OF SHOP INSPECTION			
I, the undersigned, holding a valid commission issued by the National Board of Boiler and Pressure Vessel Inspectors and employed by _____			
_____ have inspected the piping described in this Manufacturer's Data Report and state that, to the best of my knowledge and belief, the manufacturer has constructed this piping in accordance with the applicable sections of the ASME BOILER AND PRESSURE VESSEL CODE.			
By signing this certificate, neither the Inspector nor his employer makes any warranty, expressed or implied, concerning the piping described in this Manufacturer's Data Report. Furthermore, neither the Inspector nor his employer shall be liable in any manner for any personal injury or property damage or a loss of any kind arising from or connected with this inspection.			
Date _____ <small>(mm/dd/yyyy)</small>			
_____ <small>(Authorized Inspector)</small>		Commission _____ <small>(National Board Commission Number and Endorsement)</small>	
(07/11)			

FORM P-4A	
P-4A ID No. _____	
10. Description of Field Fabrication <div style="background-color: #e0e0e0; height: 50px; width: 100%;"></div>	
11. Field Hydrostatic Test _____	
<p style="text-align: center;">CERTIFICATE OF FIELD FABRICATION COMPLIANCE</p> <p>We certify the statement in this data report to be correct and that all details of design, material, construction, and workmanship of the described piping conform to Section I of the ASME BOILER AND PRESSURE VESSEL CODE.</p> <p>Our Certificate of Authorization No. _____ to use the (S) or (PP) Designator expires _____.</p> <p>Date _____ Signed _____ Name _____</p> <p style="text-align: center;"><small>(mm/dd/yyyy) (Authorized Representative) (Fabricator)</small></p>	
<p style="text-align: center;">CERTIFICATE OF FIELD ASSEMBLY COMPLIANCE</p> <p>We certify that the field assembly of the described piping conforms with the requirements of Section I of the ASME BOILER AND PRESSURE VESSEL CODE. Our Certificate of Authorization No. _____ to use the (A), (S), or (PP) Designator expires _____.</p> <p>Date _____ Signed _____ Name _____</p> <p style="text-align: center;"><small>(mm/dd/yyyy) (Authorized Representative) (Assembler)</small></p>	
<p style="text-align: center;">CERTIFICATE OF FIELD ASSEMBLY INSPECTION</p> <p>I, the undersigned, holding a valid commission issued by the National Board of Boiler and Pressure Vessel Inspectors and employed by _____</p> <p>have compared the statements in this Manufacturer's Data Report with the described piping and state that the parts referred to as Data Items _____, not included in the Certificate of Shop Inspection, have been inspected by me and that, to the best of my knowledge and belief, the manufacturer and/or assembler has constructed and assembled this piping in accordance with the applicable sections of the ASME BOILER AND PRESSURE VESSEL CODE. The described piping was inspected and subjected to a hydrostatic test of _____.</p> <p>By signing this certificate, neither the Inspector nor his employer makes any warranty, expressed or implied, concerning the piping described in this Manufacturer's Data Report. Furthermore, neither the Inspector nor his employer shall be liable in any manner for any personal injury or property damage or a loss of any kind arising from or connected with this inspection.</p> <p>Date _____</p> <p style="text-align: center;"><small>(mm/dd/yyyy)</small></p> <p>_____ <small>(Authorized Inspector)</small> Commission _____ <small>(National Board Commission Number and Endorsement)</small></p>	

<http://files.asme.org/asmeorg/Codes/Publications/BPVC/10716.pdf>



For More Information:

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www.firsttimequalityplans.com

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