



الشركة اللوجستية الأردنية للمرافق النفطية
JORDAN OIL TERMINALS COMPANY

Jordan Oil Terminals Company
Request for Proposals
for
Rehabilitation and Repair of API Storage Tank
No. (2) – Heavy Fuel Oil Tank No. 2

No. 06/2026

Pursuing to Government Purchasing Regulation

No. 008 / 2022

April 2026



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Definitions

ASTPP : Amman Strategic Terminal for Petroleum Products.

AOT : Aqaba Oil Terminal.

HQ : JOTC Head Quarter.

JOTC : Jordan Oil Terminals Company.

JPRC : Jordan Petroleum Refinery Company.

RFP : Request for Proposals.

LPG : Liquified Petroleum Gas.

PFI : Pipe Fabrication Institute

WPS : Welding Procedure Specifications

PQR : Procedure Qualification Record

WPQ : Welder Performance Qualification

HSE : Health, Safety and Environment

ITP : Inspection and Test Plan

NPS : Nominal Pipe Size

DFT : Dry Film Thickness

ASME : American Society of Mechanical Engineers

ASTM : American Society for Testing and Materials

RF : Raised Face

QC : Quality Control

PTW : Permit to Work

SW : Socket Weld

BW : Butt Weld

1. Introduction

1.1 Preamble

Jordan Oil Terminals Company (JOTC) is the first independent, open-access storage provider in Jordan offering world-class storage, handling, transportation, aviation fueling and bunkering services for local and regional clients in the petroleum industry. JOTC offers an integrated set of oil storage and logistics services across Jordan. Additionally, JOTC designs, builds, operates, and maintains its storage terminals to meet and exceed regulatory and international standards.

JOTC's establishment came as part of the Government of Jordan's plan for restructuring and liberalizing the downstream petroleum sector. The plan followed the expiry of Jordan Petroleum Refinery's (JPRC) concession agreement in 2008, which had granted JPRC exclusive rights to refine crude oil, trade, and market petroleum products in Jordan.

Founded in 2015, JOTC is a private shareholding company, wholly owned by the Government of the Hashemite Kingdom of Jordan. JOTC serves two goals in Jordan's energy sector: to guarantee the security of oil supply of Jordan, and to promote competition in the downstream petroleum market through providing its services to customers according to the open-access principles on non-discriminatory basis.

To ensure our services are provided on a fair, reasonable and non-discriminatory basis, we abstain from purchasing, selling, or trading petroleum products in the local market; hence, guaranteeing our status as an independent storage provider.

JOTC, which has its Headquarters (HQ) at Al Abdali-Boulevard, 36 Sulaiman Al Nabulsi St. "2nd " Floor, Amman, Jordan currently owns and operates three facilities/assets. These facilities are:

a) **Aqaba Oil Terminal (AOT):**

AOT Terminal has been especially designed and built to become Jordan's gateway of petroleum products imports. This dynamic, automated terminal has been designed to make the storage and handling of Gasoline and LPG a smooth, hassle-free process. With its current capacity combined with Aqaba's South Terminal, Aqaba Oil & LPG Terminal will be able to meet the current and future demand of petroleum products imports to Jordan, the terminal has been built in accordance with the highest standards of quality and the best international practices. It has (6) floating roof tanks with size of 20,000 m³ each, (3) LPG spheres with size of 3,760 m³ each, and (15) loading bays.

https://www.jotc.com.jo/DetailsPage/JOTIC_En/OurTerminalsEn.aspx?ID=33

b) Amman Strategic Terminal for Petroleum Products (ASTPP):

ASTPP terminal is the biggest reservoir of petroleum products in the Kingdom. Covering Jordan's demand for (34) days, this terminal is Jordan's most strategic asset and will be primarily used for the storage of the country's strategic stock of petroleum products. The Amman Strategic Terminal has state-of-the-art infrastructure installed to meet world-class standards, making it one of the region's most-advanced terminals, this mega terminal total storage capacity is 439,000 m3. It has (14) tanks for petroleum products ranging in size from 18,000 to 34,000 m3, (5) LPG spheres with size of 3,760 m3 each, and (14) loading bays.

https://www.jotc.com.io/DetailsPage/JOTIC_En/OurTerminalsEn.aspx?ID=32

c) Heavy Fuel Oil Tanks in Aqaba Power Thermal Plant:

JOTC own five Heavy fuel oil tanks at Aqaba thermal power plant premises with total capacity 210 thousand tons of HFO.

JOTC hereby request for proposals from a specialized companies with proven documented experience in conducting similar assignments, to provide the following services (hereinafter called "**Services**"): [**Rehabilitation and Repair of API Storage Tank No. (2) – Heavy Fuel Oil Tank No. 2**], More details on the **Services** are provided in the Terms of Reference (**Annex 1**).

This RFP is published in accordance with the **Government Purchasing Regulation No. 08/2022** in addition to the instructions, terms and conditions described herein. Participating Companies should have in-depth knowledge and experience understanding of the key issues and best practices in relevance. Proposals should be comprehensive, and detailed. JOTC is seeking capabilities which will ensure that the objectives of the assignment are achieved effectively.

2. Instructions to Bidders

RFP NO. (No. 06/2026).

1. **The client:** - Jordan Oil Terminals Company (JOTC).
2. **Applicable law:** - the law of the Hashemite Kingdome of Jordan, All aspects of this RFP through and including any contracts that may result shall be governed by the laws of the Hashemite Kingdom of Jordan (HKJ).
3. Bidders must adhere strictly to all requirements of this RFP **and Government purchasing Regulation No. 08/2022 and its instructions.** No changes, substitutions, or other alterations to tender requirements stipulated in this Request for Proposal document will be accepted unless approved in writing by the JOTC.
4. The Bidder shall not submit alternative proposal(s). Alternative proposals will be returned unread.
5. **JOTC** reserves the right to cancel/withdraw this RFP without providing reasons and with no legal or financial implications to **JOTC**.
6. **JOTC** takes no responsibility for the costs of preparing any proposals and will not reimburse any Bidder for the cost of preparing their proposal whether successful or otherwise.
7. Bidders are responsible for the accuracy of information submitted in their proposals. **JOTC** reserves the right to request additional original copies of any relevant documents submitted for review and authentication prior to awarding the contract.
8. The Bidder may modify or withdraw its proposal after submission, provided that written notice of the modification or withdrawal is received by **JOTC** prior to the deadline prescribed for proposal submission. A withdrawal notice may also be sent by email, the notice of withdrawal shall be addressed to **JOTC** at the address in this RFP and bear the contract reference.
9. Bidders are not allowed to contact **JOTC** or their employees on any matter relating to this proposal after the official closing date and till the contract is awarded. Any effort by any Bidders to influence **JOTC** and its employees, in the proposal evaluation, proposal comparison, or contract award decision will result in rejection of the bidder's proposal.

10. **JOTC** will reject a proposal for award if it determines that the bidder has engaged in corrupt or fraudulent practices in competing for the contract in question.
11. This Request for Proposals shall be considered as integral part of the signed contract.
12. Bidders are obliged to submit the tender **bid bond** (bank guarantee or certified bank cheque) covering **3% of the total offer amount**.
13. Upon the contract signature and the award notification, the selected Bidder is requested to submit a **performance guarantee with an amount (10% of the contract amount)**/certified check valid until the completion date of the assignment, after completion awarded bidder shall submit Defect liability bankable guarantee /certified check (**5% of the contract amount**) valid for 2 year.
14. This RFP does not obligate **JOTC** to award a contract for the assignment, **JOTC** reserves the right to change the RFP schedule without notice.

3. Preparation of proposals

In preparing the Proposal, the Bidder is expected to examine the RFP in detail. Material deficiencies in providing the information requested in the RFP may result in rejection of the Proposal.

The Proposal, as well as all correspondence and documents relating to the Proposal exchanged between the bidder and the Client, shall be in English.

The proposals shall remain valid for a period of at least **(120) calendar days** after the proposal submission deadline, it must be stated in submitted proposal that it will remain valid for this period. Once a proposal is accepted during this period, the price quoted in the proposal must remain unchanged for the entire period of the resulting contract unless otherwise agreed during negotiations.

Any information additional to the primary requirements of this RFP and considered necessary shall be provided in the SEPARATE section of the proposal with appropriate reference.

JOTC will make its best effort to complete the negotiations within the proposal's validity period. However, should the need arise, JOTC may request, in writing, all Bidders who submitted Proposals prior to the submission deadline to extend the Proposals' validity period.

4. Submission of Proposals

1. The proposals submission date is **06/04/2026 at 3:00 PM**, online submission only will be accepted.
2. Site visit date on **26/04/2026, at 11:30 AM**, by maximum 2 persons from each contractor (visitors to wear full PPEs suitable for entrance to JOTC terminal, to contact JOTC terminal for more details ahead of the visit).
3. Any questions pertaining to this RFP should be submitted via email to (the procurement department, **procurement@jotc.com.jo**). Questions must be submitted no later than **(27/04/2026 by 03:00 PM, Jordan Local Time)**.
4. Answers will be provided to all no later than **(29/04/2026 by 03:00 PM, Jordan Local Time)** by return email. Answers to all questions raised by any Bidder will be shared with all Bidders to ensure that all relevant parties are operating with the same information.

RFP timeline:

Activity	Activity Date
RFP Released	21-April-26
Last date for purchasing RFP	23-April-26
Site Visit	26-April-26
Written Questions Submitted	27-April-26
Answers to Submitted Questions	29-April-26
Proposals Submission date	6-May-26

4.1 Format of Technical Proposal

The Technical Proposal shall not include any financial information. A Technical Proposal containing material financial information shall be declared non-responsive and his proposal will be rejected.

a. Table of Contents

There must be a table of contents outlining the sections and sub-sections in the proposal including supporting documents.

b. Cover Letter

The cover letter must include the following:

- Company name, address, telephone number, fax number and e-mail address.
- Name of person(s) who will be the principal contact authorized to make commitments for the *Services* Provider.
- Statement declaring the accuracy and completeness of ALL information provided in the RFP including commitments and compliance of conditions and terms by the *Services* Provider.

c. Executive Summary

A summary of the proposal with emphasis on the following:

- Summary of company profile (and consortium partner(s) if any).
- Summary of proposed services and approaches.

d. Technical Approach and Methodology

The Bidder is required to explain their understanding of the assignment objectives, approach to conduct the services, methodology for carrying out the activities and obtaining the expected outputs, and the degree of detail of such outputs, to meet the schedule as well as the quality requirements of the assignment, The Bidder should also highlight the problems/issues being addressed and their importance, and explain the technical approach that would adopt to address them. Furthermore, the Bidder should explain the methodologies proposed and highlight their compatibility with the proposed approach.

Other proposed services, technology choices and recommendations should be made and illustrated in this section too, as appropriate, as well as highlighting other tasks the Bidder deems necessary to guarantee successful implementation of the assignment.

The assignment management methodology shall include but not limited to a chart of the team structure of the proposed team highlighting the name of each member, the general role of each member, resumes (representing the specializations and experiences and period of experience is mandatory) of each member of the project team, including subcontractors.

e. Assignment work Plan

The Bidder must prepare a plan describing, the methods and human and material resources that the Bidder proposes to employ in the execution of all its responsibilities as well as the estimated duration and completion date for each major activity starting from the commencement date, up to the final project completion. The assignment plan must also address the project milestones and the type of documentation/reports.

f. Required documents and eligibility:

The bidder is requested to submit the following documents for the technical evaluation purposes:

1. List of Bidder's reference similar projects in the last **10** years. The list shall contain at least two past projects similar in nature and size to this assignment.
2. Project organizational structure showing names and positions of the proposed key staff.
3. Curriculum Vitas (CVs) and qualification documents of the proposed key staff. The proposed key staff shall include the following as minimum:

- **Project Manager.**

Bachelor's degree in engineering or any related field, with at least 8 years of experience in projects.

- **Project Engineer**

Bachelor's degree in engineering with at least 4 years of projects experience.

- **Project HSE engineer/officer.**

Bachelor's degree or diploma with 3 years of experience as a project HSE officer.

- **Certified welders.**

Welders’ certificates and qualification records need to be provided by the awarded bidder before commencing the onsite work.

4. Project Execution Timeline.

4.2 Format of Financial Proposal

- The Financial Proposal should clearly state all bidders’ costs for the assignment including all professional fees, and estimated expenses on **LUMP SUM Basis**.

The offered Lump Sum price shall be the total amount to be paid by JOTC to the Bidder [in case of award] against delivering the required Service.

- The Bidders are required to state whether its terms and conditions are in accordance with those stated in this RFP and the Government purchasing Regulation No. 08/2022 and its instructions, which has financial implications. Should deviations arise, the Bidders should state the differences and provide explanations. The Bidders are also encouraged to provide any additional information that may make its Financial Proposal more favorable.

Payment terms to be agreed mutually based on clear achievement milestones.

5. Proposals Evaluation

All proposals received against this RFP will be evaluated technically and financially. Technical and Financial Proposals shall be **reviewed by a selected committee and evaluated in accordance with the following procedure:**

5.1 Tender’s and Technical Compliance Sheet.

Bidders shall carefully read each item in the following Tender’s Compliance Sheet and confirm whether they are **Comply** or **not comply** with each listed item. Reference in Bidder’s proposal column shall be filled wherever applicable.

No.	Description	Bidder’s response	
		Comply / Not comply	Reference in Bidder’s proposal
1.	Bidder confirms submitting his offer on EPC Lump Sum fixed price basis.		
2.	Bidder shall at least conduct one similar successful project (API 650 storage tank repair (patching) and rehabilitation including (Bottom plate, shell, roof, Coating. ,...etc).		

No.	Description	Bidder's response	
		Comply / Not comply	Reference in Bidder's proposal
3.	Bidder shall be accountable and responsible for the supply, construction, testing, of the required Repair , testing and rehabilitation of Heavy fuel oil tank No 2 owned by JOTC located in Aqaba Thermal power station and as minimum as per inspection report attached to this RFP issued by Royal scientific society (RSS) and as per Client requirements Annex (1).		
4.	The technical information and requirements provided in this RFP represents JOTC's minimum requirements. Bidder is aware that he is responsible for the completeness of his proposal. Also, the Bidder is aware that he is welcome to visit the Site to collect all necessary information and data required to prepare his technical and financial proposals.		
5.	Bidder is aware that the quantity and size of the construction materials may vary ,The Bidder's lump sum price shall consider such contingencies.		
6.	Bidder shall be responsible for design, supply, construction, testing, and commissioning of any works relevant to this assignment and need to be executed to ensure the performance, operability, and maintainability of the required piping systems even if it is not clearly mentioned in this RFP and as per tank code of repair API 653 .		
7.	The Bidder shall appoint a certified third-party NDT inspection company; the cost of such inspection shall be borne by the Bidder and included in the lump sum price. All inspectors shall be subject to JOTC approval prior to assignment.		
8.	The Bidder shall, at its own cost, provide all construction and repair materials, tools, equipment, and utilities (including electricity, water, etc.), and shall perform all required cleaning and sandblasting necessary for repair and testing.		
9.	Bidder understands the requirement of clause (4.1) in this RFP, and he has attached (to his technical proposal) all required documents including, but not limited to, the following:		
	➤ List of Bidder's reference similar projects in the last 10 years.		
	➤ Project organizational structure showing names and positions of the proposed key staff.		
	➤ Curriculum Vitas (CVs) and qualification documents of the proposed key staff.		
	➤ Certified staff CVs and certification.		
10.	Bidder shall provide all required material certificates and test reports as required in the terms of reference Annex I (scope of work) , especially the material certificates required.		
11.	Bidder is aware that the construction work at site shall be carried out in full compliance with the HSE and Permit to Work (PTW) system requirements adopted.		

No.	Description	Bidder's response	
		Comply / Not comply	Reference in Bidder's proposal
12.	Bidder shall provide warranty against any defect raised in two years of operation starting from the date of project handover to JOTC.		
13.	Bidder confirms his acceptance to all terms and conditions mentioned or referred to in this RFP.		

The bidders' proposals shall be thoroughly evaluated according to the above criteria identifies. The overall evaluation then will be :

Financial Evaluation (100%)	
Cost Reasonableness and Competitiveness (Provided Technical compliance)	100%

5.2 Documentations Required After Award.

After award, the Contractor shall consider providing the following documents as minimum for JOTC review and approval:

- Shop and fabrication drawings and method statements for the required service.
- Material take-off sheets
- Fabrication dossier which shall include all fabrication related documentation including, but not limited to, Welding Procedure Specifications (WPS), Procedure Qualification Record (PQR), Welder Performance Qualification (WPQ), weld maps....etc.
- Inspection and Testing Plan (ITP).

6. Terms and Conditions

6.1 General Terms & Conditions

The following terms and conditions are not negotiable, and all Bidders shall comply by them. Each proposal response should clearly note the bidder's acceptance of the terms and conditions listed below.

- 6.1.1 The Bidders are required to comply with all the instructions, procedures, terms, and conditions described in this document. Failure to do so may cause the proposal to be disqualified and rejected.
- 6.1.2 Bidders must provide all requisite information under this RFP and clearly and concisely respond to all points set out in this RFP. Answers shall be provided to specific questions in a clear and precise manner and must refer, where appropriate, to the page or paragraph number in supporting manuals, documentation, or brochures. Any proposal, which does not fully and comprehensively address this RFP, may be rejected. However, unnecessary elaborate brochures or other presentations beyond that deemed sufficient to present complete and effective Proposals are not encouraged.
- 6.1.3 Where the Bidders are unwilling to accept certain conditions of the RFP Specifications, this non-acceptance must be clearly stated in the proposal.
- 6.1.4 This is an RFP document only, and in no way, obligates JOTC to award any contract. This solicitation is subject to the detailed Terms of Contract and the resultant award will be governed by these specific Terms of Contract detailed hereto.
- 6.1.5 JOTC reserves the right to amend or delete any part of this RFP or any document forming part of this RFP at any time without prior notice in order to give effect to any change in policy or to correct any error, omission, ambiguity or inconsistency that may arise after the issuance of this RFP. In the event of any amendments to this RFP document, all tenderers will be notified accordingly.
- 6.1.6 JOTC reserves the right to approve each member of the assignment team and the right to approve the replacement of any assignment team member (including subcontractors).
- 6.1.7 Following submission of the proposals and their final evaluation, JOTC reserves the right to retain unsuccessful proposals and all related attachments. It is the responsibility of the tenderers to identify any information of a

confidential or proprietary nature contained in its proposal so that it may be handled accordingly.

- 6.1.8 Bidders must adhere strictly to all requirements of this RFP and Government purchasing Regulation No. 8/2022 and its instructions, No changes, substitutions, or other alterations to the technical specifications of requirement stipulated in this Request for proposals document will be accepted unless approved in writing by the JOTC.
- 6.1.9 This RFP contains no contractual proposal of any kind; any proposal submitted will be regarded as a proposal by the Bidders, and not as an acceptance by the tenderers of any proposal by JOTC. No contractual relationship will exist except pursuant to a written contract document signed by the authorised official of the JOTC and by the successful tenderer chosen by the JOTC.

6.2 Financial Terms

The Bidders should take into consideration the following general financial terms when submitting their proposals:

- 6.1.1 All prices should be quoted in Jordanian Dinars.
- 6.1.2 The prices shall be quoted on lump sum basis including all applicable taxes and fees, taking into consideration that the works will be executed in Aqaba.**
- 6.1.3 In no case may the selected tenderer invoke a hiatus or an oversight in the description of the work components in the tender documents or claim inadequate explanations for seeking any price increase or any release from contractual liabilities.
- 6.1.4 The tenderer shall clearly specify in the financial proposal its limitation of liability under this engagement.
- 6.1.5 Prices shall be final and not subject to revision from the time of entering into force of the contract until the end of contractual obligations.
- 6.1.6 Price quotes shall include any necessary service to be provided by the selected Bidders (even if such services are not expressly enumerated) in order to ensure a satisfactory fulfilment of the contract, as well as any other expenses incurred by the selected Bidders, e.g. travel, accommodation, daily subsistence, telecommunication, postal charges.

6.1.7 The proposal shall be signed by the Bidder (a person or persons) duly authorized to bind the Bidder to the contract. The latter authorization shall be indicated by duly legalized power of attorney.

6.3 Negotiations

1. Prior to the expiration of the validity of the proposal, JOTC shall notify the successful Bidder that submitted the highest scoring proposal (based on the technical and financial evaluation) in writing and will invite for contract negotiations. JOTC reserves the right to invite the second ranking tenderers for parallel negotiations.
2. Negotiations will normally take from three to five days. The aim is to reach agreement on all points as defined in this document and to finalise a draft contract by the conclusion of negotiations to be reviewed and signed by both parties.

Annex (1)

Description of the Services

Rehabilitation and Repair of API Storage Tank No. (2) – Heavy Fuel Oil

1. General

The Contractor shall carry out the complete rehabilitation and repair of **API Storage Tank No. (2)** (Heavy Fuel Oil), based on the inspection report issued by RSS. The work shall aim to restore the tank to a safe and operable condition and return it to service in full compliance with API 653 and all applicable codes and standards.

2. Scope of Work

2.1 Preliminaries

- Review and verify the RSS inspection report and site conditions.
- Mobilize all required manpower, certified personnel, tools, equipment, utilities (electricity, water, etc.), and subcontractors.
- Submit method statements, risk assessments, shop drawings, and Inspection & Test Plan (ITP) for approval prior to execution.

2.2 Cleaning and Surface Preparation

- Perform complete tank cleaning, sludge removal, and gas-freeing.
- Carry out internal and external surface preparation, including sandblasting to the specified standard prior to repair and coating.

2.3 Bottom Plate Repairs

- Remove and replace deteriorated bottom plates as identified in the inspection report.
- Execute patching of corroded areas using approved materials.
- Perform all cutting, fitting, welding, and associated works in accordance with applicable standards.

2.4 Roof Repairs

- Carry out all required roof repairs including patching, replacement of damaged sections, and treatment of corroded areas.

2.5 Shell and Structural Repairs

- Repair damaged or corroded shell areas as per the inspection report.
- All welding works shall be performed by certified welders.

2.6 Civil Works

- Execute all required civil work as indicated in the inspection report, including:
 - Foundation repair and stabilization.
 - Sealing and leakage prevention works.

2.7 Coating and Painting

- Apply internal and external coating systems suitable for heavy fuel oil service.
- Surface preparation and coating applications shall comply with approved specifications and manufacturer recommendations.

2.8 Mechanical Works

- Perform all mechanical work including fabrication, installation, repair, and replacement.
- Execute all cutting, welding, patching, and fitting activities required for full rehabilitation.

2.9 Inspection and Testing

- Carry out all required Non-Destructive Testing (NDT) including UT, RT, MT, and PT through an approved third-party inspection company.
- All inspection and testing shall comply with API 653 requirements.
- Perform leak testing and final inspection prior to commissioning.
- Testing mentioned in RSS report (MT) or holiday test, vacuum test shall be done.

3. Contractor Requirements

- The Contractor shall be certified in accordance with API 653.
- All welders shall hold valid certifications.
- A certified third-party NDT inspection company shall be engaged, subject to JOTC approval.
- Full compliance with safety, quality, and environmental requirements is mandatory.

4. Documentation and Submittals

The Contractor shall submit, for approval:

- Material submittals including Mill Test Certificates (MTC).
- Welder qualifications and certifications.
- List of key personnel and their qualifications.
- Shop drawings and as-built drawings.
- Method statements and Inspection & Test Plan (ITP).
- NDT procedures and reports.
- Coating system data sheets and compliance certificates.

5. Resources and Responsibilities

- The Contractor shall provide all necessary manpower, supervision, tools, equipment, machinery, consumables, scaffolding, and testing instruments.
- Provision of all utilities including electricity, water, and compressed air.
- Coordination and management of all subcontractors (e.g., sandblasting, NDT).

6. Completion and Handover

- The tank shall be fully repaired, tested, and certified fit for service.
- Submit complete final documentation dossier including all inspection records, certificates, and as-built drawings.
- Handover the tank in safe, operational condition ready for service.

7. Coating Requirements.

Coating systems shall be fit for service (heavy fuel oil, temperature, immersion conditions), Surface preparation, application, and inspection shall comply with recognized standards (SSPC/NACE), Coating shall not contaminate the stored product or degrade under service conditions, Internal coatings are optional unless required by corrosion assessment or owner specification.

8. Inspection and Testing Requirements.

Welded joints associated with bottom plate patching shall be subject to the following inspection and testing requirements:

- a. All patch plate welds (butt and fillet welds) shall be visually inspected (VT) for 100% of weld length.
- b. Non-Destructive Testing (NDT) shall be carried out in accordance with API 653, including:
 - Vacuum box testing (VBT) for all bottom plate weld seams to verify leak tightness.
 - Magnetic Particle Testing (MT) or Dye Penetrant Testing (PT) for weld surfaces, as applicable.
 - Ultrasonic Testing (UT) where required to verify plate thickness and weld integrity.
- c. Patch plates installed over existing bottom plates shall be tested using vacuum box testing to ensure complete sealing and absence of leakage.

- d. All welders shall be qualified, and welding procedures (WPS/PQR) shall be approved prior to commencement of work.
- e. Inspection and testing shall be witnessed and certified by an approved third-party inspection agency.
- f. Any defects identified during inspection shall be repaired and re-tested until acceptance criteria are met.

Inspection and testing shall be carried out by a qualified and certified ASNT Level II inspector. Qualification documents of the Contractor's and the selected Third-Party inspectors shall be subject to JOTC review and approval.

Contractor quality control team shall be responsible to monitor and follow up the construction works to ensure the workmanship and quality of the works. JOTC representative shall have the right to witness any or all the inspection and testing works at JOTC representative discretion.

Any defects detected during the inspection and testing activities shall be reported to JOTC. The Contractor shall provide JOTC with the proposed remedial actions to be taken by the Contractor to repair such defects.

If the visual or non-destructive tests shows that the weld joint is defected, the weld joint shall be repaired and retested at the Contractor expense.

Codes and Standards

The required new piping systems shall be designed, supplied, constructed, tested and commissioned according to the following codes and standards:

ASME B31.3	: Process Piping
ASME B16.34	: Valves Flanged, Threaded and Welding End
ASME B16.9	: Factory-Made Wrought Buttwelding Fittings
ASME B16.11	: ASME B16.11 Socket Weld End Dimensions
ASME B16.20	: Metallic Gaskets for Pipe Flanges
ASME B16.5	: Pipe Flanges and Flanged Fittings
ASTM A106	: Standard Specification for Seamless Carbon Steel Pipe for High-Temperature Service
ASTM A105	: Standard Specification for Carbon Steel Forgings for Piping Applications
ASTM A234	: Standard Specification for Piping Fittings of Wrought Carbon Steel and Alloy Steel for Moderate and High Temperature Service
ASME BPVC IX	: Welding, Brazing, and Fusing Qualifications
ASME B36.10	: Welded and Seamless Wrought Steel Pipe
PFI ES-3	: Fabrication Tolerances

Appendix (RSS) Report