REQUEST FOR PROPOSAL

INSPECTIONS ON STS QUAY CRANES
AT MALTA FREEPORT TERMINALS LTD

APRIL 2022

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1. Introduction

Malta Freeport Terminals Ltd (MFTL) is calling for proposals and offers for Crane inspections on some of its Ship to Shore Cranes.

- Structural Inspections to be carried out on 4 plus an **Optional** additional inspection on another 4 QCs;
- **Optional** Detailed Crane inspections reviewing all mechanisms and mechanical components such as brakes, couplings, gearboxes, rollers, sheaves etc;
- **Optional** Rail inspections on 4 – 10 quay cranes;
- **Optional** Boom Wire Rope Inspections on 9 quay cranes using visual method and optionally via magnetoscopic examination;

QC 20, 23 (x 2) Family, referred on the drawings with Project No. ZP05-599 have been in service since 2006.

QC 25 – 28 (x 4) Family, referred on the drawings with Project No. ZP07-1046 have been in service since 2009.

QC 29 – 32 (x 4) Family, referred on the drawings with Project No. ZP147-2189 have been in service since 2015.

The contract will be a turnkey contract and the Contractor must take responsibility of the realisation of the whole project.

The Tender documentation is composed of the following documents:

- Request for Proposal
- Crane technical documentation
- Detailed Price List

The options and prices can be triggered either at the signature of the contract or within a period of six (6) months after the signature of the contract, with a minimum notice period of eight weeks before the start of the operations on site.

2. Scope of Work

The scope of works shall include the following points:

2.1 Structural Inspections

i. QC 29 – 32 (x4)

Inspection of Structural Areas in full Compliance with Manufacturer's Structural Inspection Plan (SIP)

The Contractor shall carry out on each of the 4 QCs, the full scope of the Structural Inspection Plan (SIP) as required by the crane Manufacturer, ZPMC as applicable for the 6yrs and optionally the additional inspections required for the 12 years plan as well.

After familiarising with the SIP, Contractor shall provide a detailed Gantt Chart explaining how the plan could be executed including the mandatory 6 years and optional 12 years requirement.

In the offer, a table shall be prepared by the Bidder, showing what the Manufacturer has required for the particular inspection location and how the Bidder proposes to carry out the inspection. Systems that would still allow inspections to be carried out without the need to remove the paint eg. Using ACFM, Phased Array or others. Justification of the equivalence of the efficacy of the test method when compared with the Manufacturer's requirement should also be provided. Information provided shall also indicate type of NDT and % of area to be checked per inspection point.

ii. QC 29 – 32 (x4) Optional

Prepare a model of the crane in order to analyse the critical structural members and confirm / update Manufacturer's Structural Inspection Plan for future use.

The Bidder will propose a necessary study to enable a model to be prepared of the crane which model would enable identification of the critical structural members and establish the level of stress on such members.

- Analyse the extreme stress level of each assembly and their factor of stress spectrum, issued from the outputs of the design calculations from the manufacturer, from the detailed drawing of the assemblies.
- Consider the actual cycles carried out on the particular cranes over the life of the crane.
- The manufacturing control quality plan, depending on their execution and the final inspection quality plan.

- The Manufacturer's periodic inspection plan provided with the equipment
- The visual inspection and the Contractor's experience

This would help the Bidder to carry out a detailed review of the Manufacturer's Structural Inspection Plan and propose updates to this plan if they result.

iii. QC 20, 23 (x2)

Inspection of Structural Areas in full Compliance with Manufacturer's Structural Inspection Plan (SIP)

The Contractor shall carry out on x 2 QCs, the full scope of the Structural Inspection Plan (SIP) as required by the crane Manufacturer, ZPMC as applicable for the 3,6 and 12 yrs.

After familiarising with the SIP, Contractor shall provide a detailed Gantt chart explaining how the plan could be executed.

In the offer, a table shall be prepared by the Bidder, showing what the Manufacturer has required for the particular inspection location and how the Bidder proposes to carry out the inspection. Systems that would still allow inspections to be carried out without the need to remove the paint eg. Using ACFM, Phased Array or others. Justification of the equivalence of the efficacy of the test method when compared with the Manufacturer's requirement should also be provided. Information provided shall also indicate type of NDT and % of area to be checked per inspection point.

iv. QC 26, 27 plus optional QC 25 and 28 - a) x2 or b) x4

Inspection of Structural Areas in full Compliance with Manufacturer's Structural Inspection Plan (SIP)

The Contractor shall carry out on x 2 QCs or optionally on x4, the full scope of the Structural Inspection Plan (SIP) as required by the crane Manufacturer, ZPMC as applicable for the 6 and 12 yrs.

After familiarising with the SIP, Contractor shall provide a detailed Gantt chart explaining how the plan could be executed.

In the offer, a table shall be prepared by the Bidder, showing what the Manufacturer has required for the particular inspection location and how the Bidder proposes to carry out the inspection. Systems that would allow inspections to be carried out without the need to remove the paint eg. Using

ACFM, Phased Array or others. Justification of the equivalence of the efficacy of the test method when compared with the Manufacturer's requirement should also be provided. Information provided shall also indicate type of NDT and % of area to be checked per inspection point.

All NDT specified in 2.1.1, 2.1.2, 2.1.3 2.1.4 shall be realised by a certified surveyor, fully qualified for the NDT methods utilised (MPI, Ultra Sonic, ACFM, Phased Array, endoscopy, etc.)

All instruments used must be calibrated and calibration certificates must be provided.

The Contractor is responsible to provide all necessary means of access when needed.

The Contractor will deliver an Inspection Report for each crane, including for each area inspected:

- Details of the inspection realized, and instrumentation used
- Results of the inspection including NDT outcomes
- Pictures to illustrate
- Exact location of the area on a drawing
- Summary Report including areas requiring rectification and the priorities
- Provide up to 15 detailed different welding procedures covering same amount of areas to be rectified

2.2 Mechanisms, Components and General Crane Inspection

i. Optional QC 20, 23, 25 to 32 (x10) Crane Inspection

The Contractor shall carry out Detailed Crane inspection reviewing, mechanisms and mechanical components such as brakes, couplings, gearboxes, rollers, sheaves etc.

ii. Optional QC 20, 23, 25 to 31, 32 (x10) Trolley Rail Inspection

The Contractor shall carry out Detailed Trolley Rail inspection reviewing rail alignment, major dimension check, measuring of vibrations from cabin while travelling empty and with load plus determine clearances of guide rollers from rail clips at different areas.

iii. Optional QCs 20, 23, 25 to 32 (x 10) Boom wire ropes inspection

The Contractor shall quote separately the detailed inspection of the crane boom wire rope. This option shall include a visual inspection and an NDT inspection via magnetoscopic method of the ropes in order to detect any potential external / internal failure of the ropes.

100% of the rope length must be inspected.

The Contractor will provide a detailed report of the inspection carried as well as a recommendation regarding rope remaining life-time.

The Contractor will detail in his proposal the inspection and NDT methods to be utilized.

Specification of Installed Wire Ropes may be viewed in the relevant folder in the Appendix on the following drawings:

QC 20 – 23 Refer to Drawing No. J206A0900, Item No. B4

QC 25 – 28 Refer to Drawing No. J341A2300, Item No. B4

QC 29 – 32 Refer to Drawing No. J618A2300, Item No. B4

3. Method of Execution

The Contractor is expected to possess the necessary technical expertise for the realization of the scope of work.

Subcontractors to be used by the Contractor must be clearly identified and approved by MFT.

A Method Statement and Risk assessment for all the works to be performed on site must be provided by the Contractor and approved by MFT, including subcontracted works.

4. Time-Frame for Execution of works

Time frame for the execution of the works on site will be reviewed at the signature of the agreement and subject to confirmation 4 weeks prior to the start of the work.

5. Documentation

The following documentation is available upon request in Appendix:

- Crane specification and general arrangement
- Terminal layout

Additional technical documentation can be provided to bidders upon request.

6. Price

The contract prices shall include the following:

- The scope of work as defined in the present document
- All necessary tools, equipment and means of access to carry onsite inspections
- Travelling and Lodging costs
- A soft copy and a hard copy of all reports. An Excel / MS-Word version of the Inspection plans must be provided.

7. Bidding Process

i. Site visit & Clarifications

A site visit can be organised for bidders upon request. Bidders should contact the following to organise accordingly:

Mr. Ivan Curmi:

ivan.curmi@maltafreeport.com.mt

+356 99490798

Mr. Quentin Layet

quentin.layet@maltafreeport.com.mt

+356 99064926

ii. Clarifications / questions

All requests for clarifications must be sent by email to the below addresses:

engineering.managers@maltafreeport.com.mt

chris.bartolo@maltafreeport.com.mt

denise.falzon@maltafreeport.com.mt

MFTL will do its best to answer in the shortest time-frame.

iii. Time Frame

Site visits have to take place before June 16th.

The Bids must be received by MFT by June 30th at the latest and can be received in either soft or hard copy. Any offer received after the closing date will be rejected.

Hard copies are to be sent to:

Malta Freeport Terminals Ltd

Mr. Chris Bartolo

Purchasing Department

Freeport centre, Port of Marsaxlokk

Kalafrana BBG3011,

Malta

Soft copies to be sent to:

purchasing.manager@maltafreeport.com.mt

iv. Contents of the bids

The bids must enclose the following contents:

- Presentation of the bidder
- Experience and references of the bidder in similar projects
- A technical proposal detailing the methodology to be used and all technical choices proposed by the bidder for each stage with justification
- List and presentation of its subcontractors
- Detailed time schedule of each stage of the project and showing the idle time of the cranes for the inspections
- The organisation to be set in place to realise the project (on site and remotely)
- An example of report realised by the bidder for similar project
- A Financial Offer including the Detailed Price table provided in the RFQ fulfilled and signed. The excel file must be provided by the bidder.

v. Evaluation criteria

The offers will be evaluated according to the following criteria:

- Financial Offer

  ‘EBP21-001_BoQ-Structural inspection of QCs at MFTL.xls’ to be fulfilled

- Technical Proposal and experience of the Bidder

Time frame to realize the work and requested idle time of the equipment.