

MORMUGAO PORT TRUST
ENGINEERING MECHANICAL DEPARTMENT
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Ref. No.: CME/PD/I (6)/ 2590

Date: 04/02/2022

To,

Dear Sir,

Sub: Budgetary quotation for "Engagement of Consultant for the work of detailed engineering for the augmentation of firefighting facilities at MPT Berth No. 8 of to handle POL products & Chemicals and to make the firefighting system OISD-156 / PESO Compliant".

Mormugao Port Trust (MPT) intends to take up the work of "Engagement of Consultant for the work of detailed engineering for the augmentation of firefighting facilities at MPT Berth No. 8 to handle POL products & Chemicals and to make the firefighting system OISD-156 / PESO Compliant".

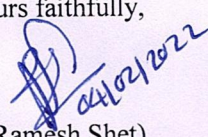
Budgetary offers are invited from reputed, bonafide, resourceful and experienced firms who have experience in Consultancy works for 'Design, erection, installation, testing and commissioning of Firefighting systems for handling POL products, gas and chemicals and at Ports as per OISD/PESO norms.

The technical details of the existing firefighting facility at MPT Berth No.8 and scope for consultancy work including future developments to the Berth are enclosed herewith at Annexure-I & Annexure-II for your perusal.

You are kindly requested to submit your competitive budgetary offer for the same with complete details as per the format enclosed at Annexure-III, within 10 days of receipt of this letter.

You may contact the undersigned for any queries / information in this regard.

Yours faithfully,


(Ramesh Shet)
Executive Engineer (P & D)

Encl.: 1) Technical details & scope of work (Annexure-I, 5 pages)
2) Annexure-II (Drawings 2 pages)
3) Annexure-III (BOQ, 1 page)

Technical details & scope of work**1. Background**

MORMUGAO PORT TRUST (MPT), is one of the oldest Indian Ports located on the west coast of India. MPT, incepted as the seventh Major Port of India in 1963, is an ISO 9001:2000 Certified Port. MPT has been declared ISPS Code Compliant and has been issued the Statement of Compliance of Port Facility for successfully implementing the mandatory provisions of International Ship and Port Facility Security which came into force from 1st July, 2004. **The berth No.8 is having the rated capacity of 5 MTPA of POL cargo, however the permitted capacity is 1.0 MTPA.**

2. Existing Firefighting Facilities at Berth no.8

The Berth no.8 at MPT has 3 nos. Tower monitors, 7 nos. Double Headed Fire hydrants and 7 nos. Jumbo curtain nozzles with motorized valve and orifice plate at oil Berth No.8 of Mormugao Harbor to provide salvaging operations in case of any fire at the berth. The sea water and foam solution is being used as a Fire deterrent. The details of firefighting equipments installed at Berth No. 8 is detailed below:-

a) Remote operated Ground Monitor:

3 nos. Ground monitor capable of discharging 5000 LPM capacity at 12.25 Kg/cm² with a horizontal throw range of 75 meters with horizontal and vertical rotation and with base operation control and remote operation control.

b) Double Headed Hydrant :

7 nos. Double Headed Fire hydrants are capable of discharging flow is 900 LPM @ 7.5 kg/cm² on each head. The Hydrants are situated at a Height of about 1.5M above the Ground level with orifice plates and provided below each hydrant and separate controls fitted with 63 mm instantaneous female coupling on each outlet complete with 2 Nos. hose box with stand of 15 m long hose pipe each with end coupling with nozzles.

c) Jumbo Curtain Nozzles :

7 nos. Jumbo curtain nozzles are with motorized valve and orifice plate which are capable to produce dense water curtain of 20 meter radius, through 180 degree angle in vertical plane discharging at 250 LPM at an inlet pressure of 7 Kg/cm.

d) Specifications of Fire Pumps & Drive Engines

Equip-ment	Qty.	Water Pump Model	Capacity	Water Pump Pressure	Drive Engine Model	Drive Engine Make	Drive Engine HP	Drive Engine RPM	Foam Ratio
Hydrant	2 Nos.	Beacon	11000 LPM	16 Kg/cm ²	VTA-1710-F1	Cummins	650 HP	1900	—
Monitor	2 Nos.	Beacon	6500 LPM	10.5 Kg/cm ²	NT-743-F	Cummins	255 HP	2100	—
Foam	2 Nos.	Rotodel	600 LPM	18 Kg/cm ²	HA-494	Kirloskar	52 HP	1500	6%
Jockey Pump	2 Nos.	Beacon	510 LPM	7 Kg/cm ²	Motor driven	—	—	—	—
DG Set	1 No.	—	100 KVA	—	NT-495-G	Cummins	127 HP	1500	—

The above mentioned pump house equipments were installed in the year 1996. However, Tower monitors, Hydrants, Jumbo curtains and the connecting pipelines (discharge side) were replaced in the year 2018.

Presently, 1 no. Tower monitor, 4 nos. Double Headed Fire hydrants and 4 nos. Jumbo curtain nozzles are out of operation due to collapse of 3 nos. firefighting pipelines supplying water to these equipments. Drawings of the existing system are enclosed at Annexure-II.

3. Future Developments to the MPT POL Berth No.8

- i. As regards to future developments, it is proposed to shift existing POL cargo operations of Indian Oil Corporation and Zuari Agro from MPT Berth No. 10 & 11 to Berth No 8.
- ii. Also 5 acres of land is earmarked for handling of CNG, LNG, and LPG behind MPT Berth No 8.
- iii. The berth is having the rated capacity of 5 MTPA of POL cargo, however the permitted capacity is 1.0 MTPA. At present there is no proposal to re-develop the berth nor increasing the draft.
- iv. As per Aecom report the Projection of Liquid Cargo for the year,

	2025	2035
POL product	1.8 MMPTA	2.7 MMPTA
Chemicals	1.0 MMPTA	1.9 MMPTA

- v. From the data available:-
 - Vessel sizes between 150 to 200 mts. are being handled.
 - Vessel capacities from 20,000 to 50,000 MT are being handled.

4. Other details.

Type of POL cargoes handled such as Aviation oil, Furnace oil, HSD, kerosene Oil, LSHSD, Motor spirit & Phosphoric acid.

- a) OIL - Quantity projections, typical vessel/parcel sizes and liquid bulk commodities for berth 8 are provided at 3(iv) & d(v) above.
- b) GAS - Further reg LPG, LNG several proposals are underfoot, and provisions for same should also be considered as these are green fuels (promoted as a part of national policy)
- c) OTHERS - other liquid bulk commodities may be considered like vegetable oils and specialized liquids (chemicals, molasses etc.)

5. Scope of work:

The scope of services to be provided by the Consultant for the 'Work of detailed engineering for the augmentation of firefighting facilities at MPT Berth No. 8 to handle POL products & Chemicals and to make the firefighting system OISD-156 / PESO Compliant' shall be as follows:

- a) Checking the adequacy and shortcomings of the firefighting system including pumps and other equipment installed at Berth No. 8 in detail for handling **POL products and Chemicals** as per OISD-156 norms/guidelines. The scope shall include proposing new/alternate firefighting design, construction of pump house to meet the requirement, modification of existing firefighting system/pump house etc. **The cost of visits to study the above has to be borne by the consulting Firm.**
- b) Detailed engineering for the Augmentation of Fire Fighting Facilities at MPT Berth No. 8 to handle POL Products and Chemicals including Mechanical, Civil and electrical works on Turnkey basis.
- c) Recommendation of design as per the OISD guidelines and requirements, to make the firefighting system at MPT Berth no: 8, PESO compliant.

- d) Identification of works for which tenders are to be invited on lump sum/turnkey basis. Preparation of Budgetary estimate (Detailed measurement, rate analysis and abstract estimate) based on the design recommended.
- e) Shall submit the single draft tender document based on the identified works (Including Firefighting/Mechanical, Civil & electrical works). On approval of the draft tender document, the consultant shall submit 10 copies of the final tender document duly incorporating the comments of the Port Authority.
- f) Preparation of replies for the pre- bid queries.
- g) Shall assist the employer in Technical bid evaluation, price bid evaluation and recommendations if any.
- h) Shall assist employer in approval of drawings, data sheets, QAPs etc. submitted by the successful bidder (Mechanical/firefighting, electrical & Civil) including Supervision of erection, installation and successful commissioning of the firefighting system.
- i) After the completion of the work, the consultant shall assist employer in the approval of the As Built Drawings submitted by the successful bidder.
- j) Shall obtain on behalf of Employer various statutory approvals that may be required for handing of POL products, Gas and Chemicals at Oil Berth no.8 of MPT. The various statutory authorities are:
- Chief Controller of Explosives, Nagpur, PESO
 - OISD
 - Goa State Pollution Control Board, Panaji.
 - Clearance from Ministry of Environment and Forest, New Delhi
 - Any other approval for Port expansion from time to time.
- k) The cost of all travel in connection with any presentation to be made at any place shall be borne by the consultancy Firm.
- l) To Attend periodical review meetings between the Contractor and Employer
- m) Advise the Authority in selecting alternative proposals for executing an item of work.
- n) Furnish information as may be required by the Employer in connection with the audit remarks, queries from Govt. and other financial agencies etc., till one year after successful completion of the work.
- o) Exercise necessary controls as directed by the Employer and submit reports that may be required by the financing agency/Govt. from time to time.
- p) Each of the above works may involve more than one activity. The Firm shall identify these various activities, their inter-relationships, time required for preparation drawings, submission of data sheets, execution of projects, third party inspection, tests and certification etc. and undertake action on these works as deemed feasible with a view to achieving completion of the project according to the desired time frame.
- q) The Firm shall take into account type of Equipment to be deployed and loading details. Provisions for illumination requirement as per Dock Safety Regulation shall be made by the Firm.

6. Time Schedule

- a) Implementation Schedule:

Sr. No.	Activity	Time
1.	Checking the adequacy and shortcomings of the firefighting system including pumps and other	2 weeks

	equipment installed at MPT Berth No. 8 in detail for handling POL products and Chemicals as per OISD-156 norms / guidelines and to make the firefighting system OISD-156 / PESO Compliant & submission Detailed project report on recommendation of design.	
2.	Submission of Budgetary estimate (Detailed measurement, rate analysis and abstract estimate) & Single Draft tender document for identified works	2 weeks after submission of report on recommendation of design
3.	Submission of Final tender document duly incorporating the observations by the employer.	2 weeks after Submission of Budgetary estimate
4.	Replies to Pre- Bid queries	Within 3 (three) working days from the date of submission of queries by Port
5.	Technical Bid evaluation, Price Bid evaluation & recommendations if any	Within 3 (three)working days from the date of submission of comparison statement by Port
6.	Approval of drawings, Data sheets, QAPs , As Built drawings submitted by vendor	Within 7 (Seven) working days from the date of submission of documents.

- b) The Firms shall strictly adhere to the time frame for the various activities pertaining to the project till the submission of final tender document as detailed above.
- c) The Firm shall identify the various works, their interdependence etc. and determine completion period for the various works with a view to adhering to the total time frame for the project.

7. Terms of Payment to the consultant:

Sr.No.	Milestone	Payment
1.	STAGE 1	
a)	Checking the adequacy and shortcomings of the firefighting system including pumps and other equipment installed at MPT Berth No. 8 in detail for handling POL products and Chemicals as per OISD-156 norms / guidelines and to make the firefighting system OISD-156 / PESO Compliant & submission Detailed project report on recommendation of design.	30 %
b)	On submission of Budgetary estimate (Detailed measurement, rate analysis and abstract estimate) & Single Draft tender document for identified works	
c)	On submission of Final tender document duly incorporating the observations by the employer.	
2.	STAGE 2	
a)	Replies to Pre- Bid queries	30 %
b)	Technical Bid evaluation, Price Bid evaluation & recommendations if any, upto award of work to the successful bidder	
3.	STAGE 3	
a)	On approval of drawings, data sheets, QAPs etc. submitted by the successful bidder (Mechanical/firefighting, electrical, Civil & Marine).	40 %
b)	Supervision of erection, installation, testing and successful commissioning of the firefighting system at MPT Berth no.8 carried out by the Contractor.	
c)	On approval of As build drawings, on obtaining PESO approval for MPT Berth no.8 and handing over the PESO Certificate to MPT.	

NB: The normal terms of payment are 30 days from the day of receipt of undisputed bills completed in all respect and duly authorized by Contractor.

8. Key Personnel

Project Team

It is recommended that the Project Team have the following mix of skills:

- Team Leader
- Firefighting equipment Expert/Mechanical Eng./Electrical Eng.
- Marine Construction Expert

The Detail feasibility Services Team shall consist of the following key personnel (the “**Key Personnel**”) who shall discharge their respective responsibilities as specified below:

KEY PERSONNEL	RESPONSIBILITIES
TEAM LEADER having Mechanical Engineering Background	He shall be responsible for preliminary studies, gap analysis, vetting/arrange to vet all the studies, reports being prepared by his team, tender document, drawings, data sheets, QAP etc. He will guide the team to prepare the report and also arrange discussion with the concerned Engineer of the Port and finalize the Budgetary estimate and Tender document. He shall also be responsible to assist Port in drafting the replies for the pre- bid queries, technical and price bid evaluations. He shall visit Port at least 4 times during the currency of the Detail Engineer Services Contract. He should work from his own office.
FIRE FIGHTING EQUIPMENT EXPERT/ MECHANICAL ENGINEER/ELECTRIC AL ENGINEER	He will be responsible for collecting data of existing firefighting system and propose the detailed design for augmentation of firefighting systems required at MPT Berth No 8 to handle POL products and chemicals as per OISD-156 norms/guidelines, preparation of drawings (Civil, Electrical & Mechanical), finalizing technical specifications in tender documents. He should be well versed in statutory requirements for Firefighting installations viz OISD, PESO, CCOE etc. He shall visit Port at least 4 times during the currency of the Detail Engineer Services Contract and all desk studies shall be carried out from his own office.
MARINE CONSTRUCTION EXPERT	He will be responsible for marine civil construction design, Submission of related drawings. He shall visit Port at least 4 times during the currency of the Detail Engineer Services Contract and all desk studies shall be carried out from his own office.

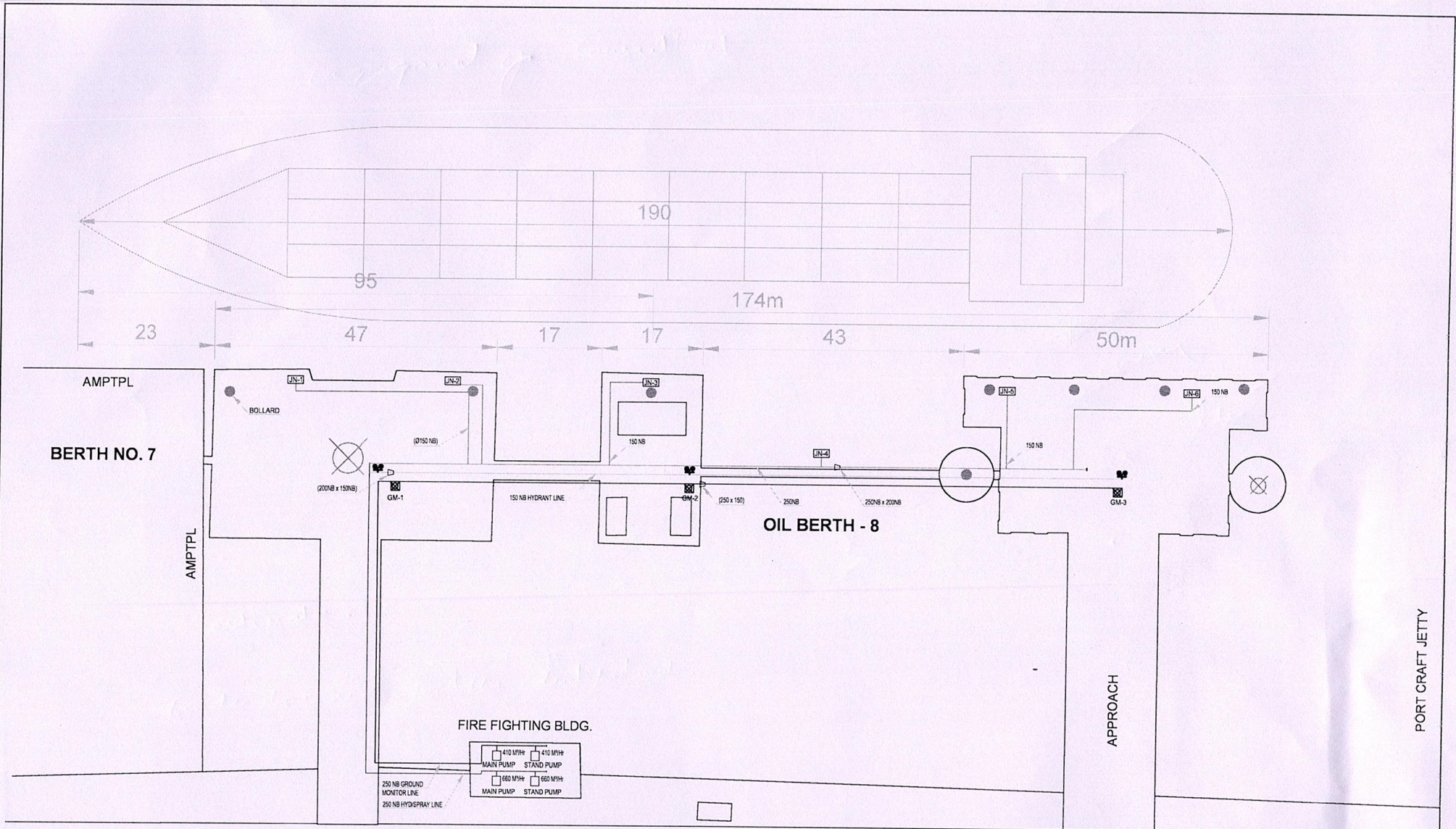
9. Cost of Proposal

The Applicants shall be responsible for all of the costs associated with the preparation of their Proposals and their participation in the Selection Process including subsequent negotiation, visits to the Authority, Project site etc. The Authority will not be responsible or in any way liable for such costs, regardless of the conduct or outcome of the Selection Process.

For any queries / information, please contact Executive Engineer (P & D), Engineering Mechanical Department, MPT.

Tel.: (0832) 2594227 / 2594230 / 2594283.

Email: xenpnd.mgpt@gmail.com



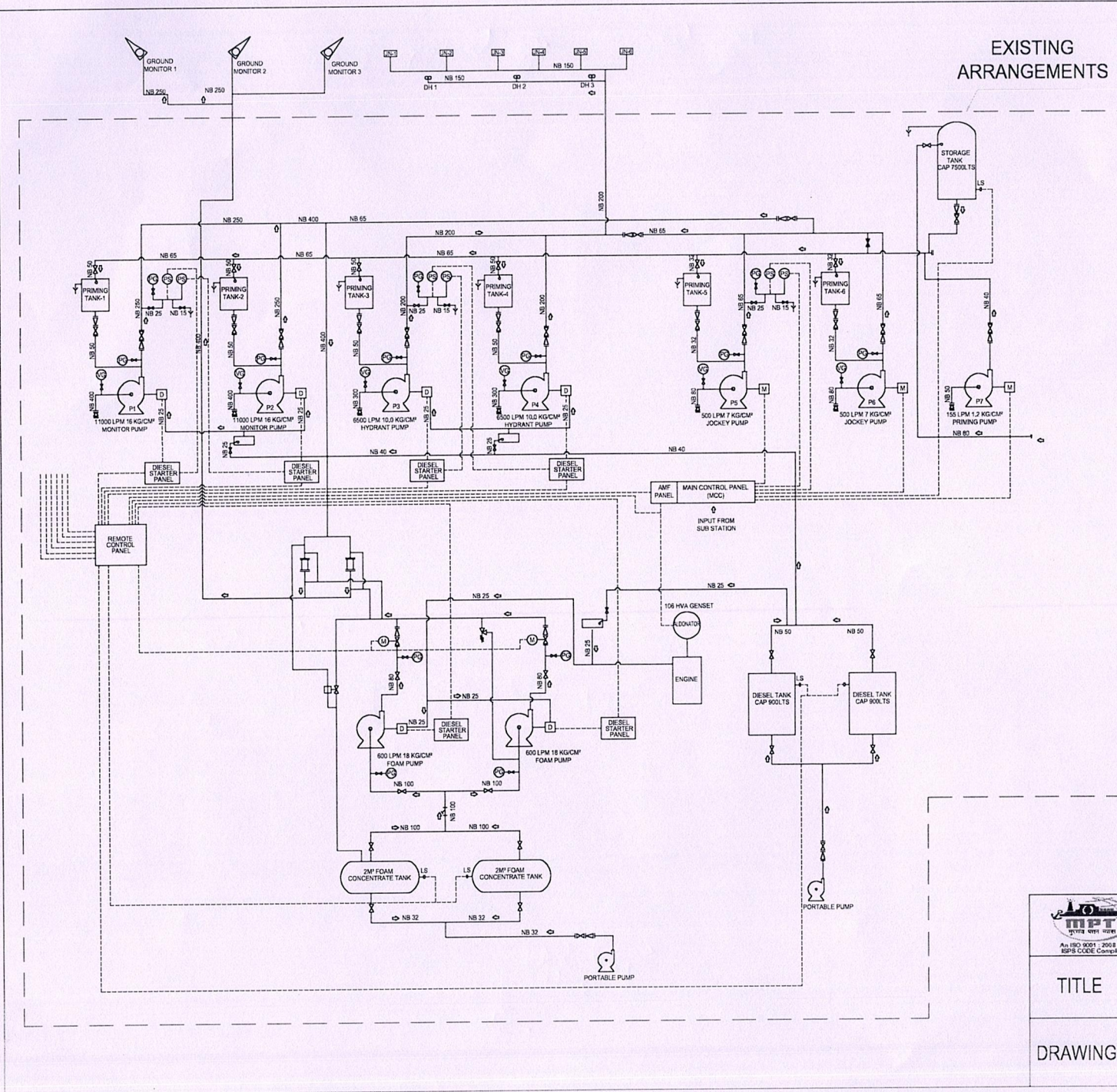
LEGEND-

SYMBOL	QTY	DESCRIPTION	CAPACITY
	3	DOUBLE HYDRANT	900/2 lpm
	6	JN	3000 lpm
	3	GROUND MONITOR	3000 lpm

SYMBOL	DESCRIPTION
	GM LINE
	DH LINE
	HYD/SPRAY COMMON MAIN HEADER
	JN LINE

	MORMUGAO PORT TRUST	
TITLE	GENERAL LAYOUT OF FIRE FIGHTING SYSTEM AT BERTH NO.8	
DRAWING NO.	20170420-1/0	DATE : 20-04-2017

EXISTING ARRANGEMENTS



LEGEND

	FIRE WATER LINE		INST. ELECTRICAL SIGNAL FIRE DETECTION SIGNAL
	VALVE NORMALLY OPEN		VALVE NORMALLY CLOSE
	FOOT VALVE WITH STRAINER		NON RETURN VALVE
	STRAINER		MOTORISED VALVE (CONTROL VALVE)
	PRESSURE SAFETY VALVE		FOAM PROPORTIONER
	PRESSURE GAUGE		PRESSURE SWITCH
	ELECTRIC MOTOR DRIVEN		DIESEL ENGINE DRIVE
	DOUBLE HEAD HYDRANT		GROUND MONITOR
	VALVE FLUSH IN CONNECTION		VALVE FLUSH OUT CONNECTION
	DIAPHRAGM VALVE		FLOAT VALVE
	DRAIN		DIESEL DISTRIBUTION TANK
	LEVEL SWITCH		JUMBO NOZZLE
	VACUUM GAUGE		

 An ISO 9001 : 2008 Port MSPS CODE Compliant	MORMUGAO PORT TRUST	
	FIRE PROTECTION SYSTEM FLOW	
TITLE	DRAWING NO.	DATE : 20-04-2017
	20170420-2/0	

Budgetary quotation for “Engagement of Consultant for the work of detailed engineering for the augmentation of firefighting facilities at MPT Berth No. 8 to handle POL products & Chemicals and to make the firefighting system OISD-156 / PESO Compliant”.

Bill of Quantities (BOQ)

Sr. No.	Description	Unit	Qty.	Amount in figures	Amount in words
1.	a) Checking the adequacy and shortcomings of the firefighting system including pumps and other equipment installed at MPT Berth No. 8 in detail for handling POL products and Chemicals as per OISD-156 norms / guidelines and to make the firefighting system OISD-156 / PESO Compliant & submission Detailed project report on recommendation of design. b) Submission of Budgetary estimate (Detailed measurement, rate analysis and abstract estimate) & Single Draft tender document for identified works. c) Submission of Final tender document duly incorporating the observations by the employer.	Lumpsum	01		
2.	a) Replies to Pre- Bid queries b) Technical Bid evaluation, Price Bid evaluation & recommendations if any, upto award of work to the successful bidder.	Lumpsum	01		
3.	a) Approval of drawings, data sheets, QAPs etc. submitted by the successful bidder (Mechanical/firefighting, electrical, Civil & Marine). b) Supervision of erection, installation, testing and successful commissioning of the firefighting system at MPT Berth no.8 carried out by the Contractor. c) Approval of as build drawings, obtaining PESO approval for MPT Berth no.8 and handing over the PESO Certificate to MPT.	Lumpsum	01		
4.	Applicable GST (to indicate percentage only)	-	-		