

INTEGRATED HEADQUARTERS OF MINISTRY OF DEFENCE (NAVY)
DIRECTORATE OF MARINE ENGINEERING
FAX: 011- 23011352; E-MAIL: dme@navy.gov.in ; TEL: 011-23792796

ACCORD OF AoN FOR LAND BASED TRAINING FACILITY FOR
INTEGRATED PLATFORM MANAGEMENT SYSTEM

1. Refer to Request for Information (RFI) (Ref No. EG/5004/NOPV(I) for procurement of one in number LAND BASED TRAINING FACILITY (LBTF) for REMOTE CONTROL SYSTEM (RCS) fitted onboard a class of **IN** Ships hosted on portal tenders.gov.in on 15 Jun 17.
2. It is hereby informed that Acceptance of Necessity (AoN) by Competent Authority has been accorded for procurement of one in number LAND BASED TRAINING FACILITY (LBTF) for REMOTE CONTROL SYSTEM (RCS) fitted onboard a class of **IN** Ships on 06 Feb 18.
3. **Interested Firms/ Vendors who have not responded to the RFI earlier** may respond quoting this document.
4. This Request for Information (RFI) consists of two parts as indicated below:-
 - (a) **Part I.** The first part of the RFI incorporates operational characteristics and features that should be met by the equipment. A few important technical parameters of the proposed equipment are also mentioned.
 - (b) **Part II.** The second part of the RFI states the methodology of seeking response of vendors. Submission of incomplete response format will render the vendor liable for rejection.

Part-I

5. **The Intended Use of Equipment (Operational Requirements)**. The LBTF will be used for training of personnel on the RCS/ IPMS prior deputing them onboard ships.
6. **Important Parameters**. Brief technical parameters of the proposed LBTF for RCS/ IPMS are placed at Enclosure I. In addition the following details are also required to be mentioned by the firm:-
 - (a) Capability to supply the LBTF as per the broad requirements placed at enclosure.
 - (b) Confirm whether such LBTF has been previously supplied by you to any other organisation / country / navy. Previous experience of supply of similar LBTF with details of organisations to which supplies are being made by you at present.

- (c) Confirm your willingness to conduct Field Evaluation Trails (FET) through computer simulation at IHQ MOD(N), New Delhi.
- (d) Confirm acceptance of the payment terms and other terms and conditions stated in the standard contract document placed Appendix M, Chapter II of DPP 16.
- (e) Indicate the expected delivery period for supply of the LBTF from the date of contract.
- (f) Indicate elements that need to be structured into the costing of the LBTF such as training, comprehensive annual maintenance contract, etc.
- (g) Annual turnover during the preceding 3 years.
- (h) Brief technical details of your proposal for the LBTF.
- (j) **Indigenous Contents** in the proposal being offered by the firm (Refer Para 13, Chapter II of DPP 16).
- (k) Whether the vendor would be able to comply with all provisions of DPP 16 or not. If not, which Para/Clause of DPP would not be agreed to with reasons.
- (l) Willingness for Option clause including the duration for which the Option Clause would be valid.
- (m) Vendors may consider RFI as advance information to obtain requisite government clearances.
- (n) Approximate cost estimation.
- (p) Additional details as deemed appropriate.
- (q) Infrastructure facility for housing the LBTF and Manpower required for operating the LBTF/ Simulator.
- (r) Willingness to provide AMC for a period of 10 yrs. Post completion of warranty period.
- (s) Applicability of any specific standards such as MIL, DEF, ISO, etc.

7. The Vendor is required to confirm that following conditions are acceptable:-

- (a) The solicitation of offers will be as per 'Single Stage-Two Bid System'. It would imply that a 'Request for Proposal' would be issued soliciting the technical and commercial offers together, but in two separate sealed envelopes. The validity of commercial offers would be at least 18 months from the date of submission of offers.
- (b) The technical offers would be evaluated by a Technical Evaluation Committee (TEC) to check its compliance with RFP.
- (c) The equipment of all TEC cleared vendors would be put through **simulation trials** in India on a 'No Cost No Commitment' basis. A staff evaluation would be

carried out by SHQ to analyse the result of field evaluation and shortlist the equipment for introduction into service.

(d) Amongst the vendors cleared by Staff Evaluation, a Commercial Negotiation Committee would decide the lowest cost bidder (L1) and conclude the appropriate contract.

(e) Vendor would be bound to provide product support for time period specified in the RFP, which includes spares and maintenance tools/jigs/fixtures for field and component level repairs.

(f) The vendor would be required to accept the general conditions of contract given in the Standard Contract Document at Chapter VI of DPP 16.

(g) **Integrity Pact (if applicable)**. An integrity pact along with appropriate IPBG is a mandatory requirement in the instant case (Refer Annexure I to Appendix M of Schedule I to Chapter II of DPP 16).

(j) **Performance-cum-Warranty Bond**. A Performance-cum-Warranty Bond of 5% both equal to 5% value of the Contract is required to be submitted after signing of the contract.

Part-II

8. Procedure for Response

(a) Vendors must fill the form of response as given in Appendix B of Chapter II of DPP 16 (also in succeeding pages of this Appendix). Apart from filling details about company, details about the exact product meeting our generic technical specifications should also be carefully filled. Additional literature on the product can also be attached with the form.

(b) The filled form should be dispatched at under mentioned address: -

**The Principal Director of Marine Engineering
Integrated Headquarters of Ministry of Defence (Navy)
Room 306, 'C' Wing Sena Bhawan
New Delhi – 110 011
Fax: 011 – 2301 1352
Email ID: dme@navy.gov.in**

(c) The **last date of acceptance of filled form is Four weeks** from date of publishing of this document. The vendors shortlisted for issue of RFP would be intimated.

9. The Government of India invites responses to this request only from Original Equipment Manufacturers (OEM)/ Authorised Vendors/. The end user of the equipment is the Indian Navy.

10. This information is being issued with no financial commitment and the Ministry of Defence reserves the right to change or vary any part thereof at any stage. The Government of India also reserves the right to withdraw it should it be so necessary at any stage. The acquisition process would be carried out under the provisions of DPP 16.

INFORMATION PROFORMA

1. **Name, Address and Unique ID (if any) of the Vendor/ Company/ Firm.**

_____ (Company profile, in brief, to be attached. In the eventuality of the firm emerging as L1, Contract will be concluded in the name and address of the firm, as indicated here). Vendors are to submit an undertaking that any subsequent proposal for change in name of firm or address, will be intimated to IHQ MoD (N) at the first available opportunity and supporting documents be furnished within five working days of approval by relevant competent authority.

2. Type (Tick the relevant category).

Original Equipment Manufacturer (OEM) Yes/No

Authorised Vendor of foreign Firm Yes/No (attach details, if yes)

Others (give specific details) _____

3. **Contact Details.**

Postal Address: _____

City : _____ State : _____

Pin Code : _____ Tele : _____

Fax : _____ URL/Web Site: _____

Email: _____

4. **Local Branch/Liaison Office in Delhi (if any).**

Name & Address: _____

Pin Code : _____ Tel : _____ Fax : _____ Email : _____

5. **Financial Details.**

(a) Category of Industry (Large/medium/small Scale) : _____

(b) Annual turnover : _____ (in INR)

(c) Number of employees in firm: _____

(d) Details of manufacturing infrastructure : _____

(e) Earlier contracts with Indian Ministry of Defence/Government agencies:

Contract Number	Equipment	Quantity	Cost

6. **Certification by Quality Assurance Organisation.**

Name of Agency	Certification	Applicable from (Date & Year)	Valid till (Date & Year)

7. **Details of Registration.**

Agency	Registration No.	Validity (Date)	Equipment
DGS&D			
DGQA/DGAQA/DGNA I			
OFB			
DRDO			
Any other Government Agency			

8. **Membership of FICCI/ASSOCHAM/CII or other Industrial Associations.**

Name of Organisation

Membership Number

9. **Equipment/Product Profile (to be submitted for each product separately)**

(a) Name of Product: _____

(Should be given category wise for e.g. all products under night vision devices to be mentioned together)

(b) Description (attach technical literature): _____

(c) Whether OEM or Integrator: _____

(d) Name and address of Foreign collaborator (if any): _____

(e) Industrial Licence Number: _____

(f) Indigenous component of the product (in percentage): _____

(g) Status (in service /design & development stage): _____

(h) Production capacity per annum: _____

(j) Countries/agencies where equipment supplied earlier (give details of quantity supplied): _____

(k) Estimated price of the equipment _____.

10. Alternatives for meeting the objectives of the equipment set forth in the RFI.

11. Any other relevant information: _____

12. **Declaration.**

(a) It is certified that the above information is true and any changes will be intimated within five (05) working days of occurrence.

(b) It is certified that design and development in indigenous and belong to the _____ (Vendor) and/ or _____ (its Indian Sub Vendor) certification for 12(b) and (c) is required only if claiming IDDM category.

(c) It is certified that the complete set of design and production drawing are available and source code for all software applications/ programmes are also available with the _____ vendor and that these would be produced for verification when required.

(d) It is certified that in the past that _____ (name of firm) has never been banned/ debarred for doing business dealings with MoD/ Gol/ any other Government organisation and that there is no inquiry going on by CBI/ ED/ any other Government agency against the firm.

Note: - Para 44 and Appendix F of Chapter II of DPP 16 may be referred

(Authorised Signatory)

BROAD REQUIREMENTS FOR SETTING UP A LAND BASED TRAINING FACILITY (LBTF) FOR INTEGRATED PLATFORM MANAGEMENT SYSTEM (IPMS) OF INDIAN NAVAL SHIPS AT INS SHIVAJI, LONAVLA, MAHARASHTRA

1. The Remote Control System (RCS)/ Integrated Platform Management System (IPMS) is fitted on new construction India Naval Ships. The Control System controls and monitors Main Propulsion and Power Generation machinery. In addition, it also controls and monitors other systems such as Fire Main System, Sprinkling System, Prewetting System, Flooding System, Fuel Tank Ballast System, Compressed Air System, Ventilation System, Fuel System, Domestic Fresh and Sea Water Systems, Reverse Osmosis Plants, Air conditioning system, Refrigeration Plants etc.
2. The LBTF should be suitable for training of operators on the RCS/ IPMS of Indian Naval ships. The Operator Consoles of the LBTF should be a replica of the Operator Consoles of the RCS/ IPMS Consoles fitted on the indicated Indian Navy ships with the same look, feel and functionality. The purpose of the LBTF is as follows: -
 - (a) To provide hands-on training to the operators of the Indian Naval Ships in the effective operation of IPMS.
 - (b) To familiarise the operators with normal and emergency procedures in the operation of the IPMS.
3. The LBTF should be based upon the current digital computer and simulation software technologies. Simulation software should be developed using a proven real-time object oriented software environment. The equipment hardware and software are to be compliant to open architecture standards and should not include any proprietary designs or operating systems.
4. The LBTF should include an Instructor Facility for monitoring and control of the training session by the instructor. The Instructor Facility should have the capability to start and stop the training session, freeze, record, replay, backtrack and reset the simulation and the consoles to a selected initial condition. The Instructor's Facility should include soft panel displays of the operator consoles which are updated in near real time as per the status of the hardware consoles. The LBTF should include a trainee evaluation package which should provide an online assessment of the performance of the trainees on the LBTF. The LBTF should include customized lesson plans with a provision to induce faults and emergencies to alter the simulated scenario.

5. Computer Based Training Package. The LBTF should also include an offline Computer Based Training (CBT) Package to train the operators on all aspects of the IPMS including major components, layout, technical details, operation, troubleshooting etc. The LBTF should also include a suitable UPS unit for operation of the LBTF equipment in the event of power failure upto 30 minutes. A Sharable Content Object Reference Model (SCORM) compatible CBT Package is to be provided. The offered CBT modules are to be field-tested and strictly customized to support the training process.

6. 3-D Virtual Reality. The LBTF shall also include a Virtual Reality 3-D Training Module wherein the trainee would be subjected to training in a highly interactive virtual reality environment for familiarisation of engine room systems layout and operation of marine engineering equipment. 3D Projection system consisting of multi-panel LED display units in a curved configuration covering minimum area of 6 feet (H) x 16 feet (L) should be provided for display of (Integrated Multimedia Training Package) IMTP software. Forty number 3D viewing glasses are to be provided along with the projection system. The indicative configuration of the 3D projection system is as follows:-

- (a) Curved LED display to give a realistic view of the compartment.
- (b) Minimum Resolution of 1920x1080 pixel (Full HD).
- (c) System should have facility to project in 2D and 3D modes.
- (d) Connectivity: HDMI A/return channel support, digital optical port, USB and VGA ports should be available in all the 3D panels.
- (e) Scan rate of 200hz or more.
- (f) Sound Dolby digital Plus, DTS 5.1.
- (g) Back support system for holding all the 3D display panels together.
- (h) 3D viewing glasses – 40 nos.
- (j) One CPU for server with latest configuration such as Intel Xenon E3-1225 v3 or higher, with 32 GB RAM or higher, minimum 2TB, Dual LAN network card and suitable graphic cards to handle the 3D projection system.

7. Actual Remote Terminal Unit. Additionally, to the simulator, Remote Terminal Unit (RTU) with similar configuration to that fitted onboard is also required to be supplied. The RTU should be built around a VME 6U customised back plane mounted in chassis and fitted with connectors for terminating field wiring. The RTU should be an exact replica of the ship-borne equipment and is meant to facilitate hands-on experience for the training in maintenance and trouble-shooting. The RTU should automatically run its own Bite In Test (BITE) upon power-up to determine the functional state of all components. The BITE is to be capable of localising faults down to Last Replaceable Unit (LRU) level, including identification of card assemblies and power supplies. If a fault is detected, an audiovisual alarm should be generated at the Multi Function Window (MFW). If the RTU successfully passes BITE, it should connect on to the network. It should be possible to download detailed reports of the BITE function from the local diagnostics serial port. System diagnostics shall run continuously during normal operation of the RTU. Faults detected during normal operation shall generate audiovisual alarms. The following types of alarm are to be incorporated:-

- (a) Communication line failure in either network line.
- (b) EPROM failure.
- (c) Channel input / output failure.
- (d) Serial communication failure.

8. **List of Equipment to be supplied.** Certain equipment to be supplied in addition to the simulator consoles for setting up class room, briefing room and instructor room such as Multimedia PCs, Server PCs, LCD/ LED Screens, Multi functional colour laser printers, whiteboards, chairs, racks, etc will also be required.

9. **Scope.** The indicative scope of supply for the simulator is as follows:-

(a) Following Consoles as Multi Function Workstations (MFW):-

- (i) Bridge Console
- (ii) Machinery Control Console
- (iii) Damage Control Head Quarter (DCHQ) Console
- (iv) Emergency Control Post (ECP) Console
- (v) Engineer Officer Cabin Console
- (vi) Stabiliser Control Console
- (vii) Steering Control Console

(b) Remote Terminal Units (RTU) (2 Nos), similar to that fitted onboard and as per details given at Para 73.

(c) Dual Redundant Gigabit Ethernet Fibre Optic Network comprising of Active Managed Ethernet switches (4 Nos).

(d) Machinery Simulator Console (1 No).

(e) Control System Fault Simulator Console (1 No.)

(f) High resolution colour laser printer (2 Nos).

(g) Event logging printers (2 Nos).

(h) Uninterruptible Power Supplies (AC & DC UPS).

(i) Large Screen Display (2 Nos).

(j) Trainee and Trainer Multi Function Workstations (3 Nos).

(k) Split ACs 1.5 Tonnes (06 Nos).

(l) Multimedia Projector (01 No).

(m) White Board (01 No).

(n) Trainee Chairs (40 Nos).

(p) Instructor Chairs (5 Nos).

(q) Instructor Tables (02 Nos).

(r) Lockers (04 Nos).

10. **Maintenance Training Module Using Virtual Reality.** A maintenance training module using virtual reality/ augmented virtual reality is to be designed and supplied as part of the simulator. The maintenance training module is to include 3D

modelling of assembly & disassembly and periodic routines undertaken, for IPMS/ RCS, Main Engine and Diesel Generator in detail.