



REQUEST FOR PROPOSAL
BY
MINISTRY OF DEFENCE
GOVERNMENT OF INDIA
FOR PROCUREMENT AND SETTING UP OF
TWO (02) DSRV SIMULATORS

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The contents of this RFP must not be disclosed to unauthorised persons and must be used only for
the purpose of submission of Bids.

This document contains 110 pages including cover page and Appendices.

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File No: TM(M)/0025/DSMAQ/DSRV SIM

Additional Director General
Acquisition Technical (M & S)
Room No. 5, D II Wing
Ground Floor, Sena Bhawan
New Delhi-110011

16 Feb 23

To,

**REQUEST FOR TECHNICAL AND COMMERCIAL PROPOSAL FOR
PROCUREMENT AND SETTING UP OF TWO DSRV SIMULATORS
CATEGORY: BUY (INDIAN-IDDMM)**

Dear Sir/Madam,

1. The Ministry of Defence, Government of India, intends to procure 02 (two) DSRV Simulators under Buy (Indian-IDDMM) Categorisation and seeks participation in the procurement process from prospective Bidders subject to requirements in succeeding paragraphs.

Synopsis

2. **Broad Description of Equipment/System.** The DSRV Simulators would provide realistic hands-on training and work-up of individuals and crew for effectively handling the Remotely Operated Vehicle (ROV) and Submarine Rescue Vessel (SRV) of the Deep Submergence Rescue Vessel System with the Indian Navy. The simulators would be positioned at Mumbai and Vizag at the Base Infrastructure Facilities of Submarine Rescue Unit (West) {SRU(W)} and Submarine Rescue Unit (East) {SRU(E)} respectively and would consist of the following main components: -

- (a) The Training Simulator should be a fully functional replica of the SRV having a motion platform with Virtual six Degrees of Freedom (no actual/ physical motion control) and a Front Facia replica of the ROV Control Station with no motion requirement.
- (b) Adaptors and connections for Ventilation and Air Conditioning (VAC).
- (c) An Instructor Station.

(d) A Briefing and Debriefing facility.

(e) A Technical facility which will accommodate all electrical and electronic components.

3. The salient aspects and timelines of the acquisition are tabulated below. In case of any variation in the details furnished below or in any Annexures with that mentioned in the RFP, information furnished in the main body of the RFP at referred Paragraph is to be followed.

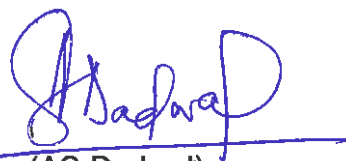
Ser No.	Description	Details	Reference Para of the RFP
(a)	Equipment/System required	DSRV Simulator	1, 2 (Main letter)
(b)	Quantity Required	02 (two)	1(Main letter)
(c)	Categorisation of Procurement	Buy (Indian-IDDM)	1(Main letter), 6 (Part I) App 'G' - Para 1.2
(d)	Minimum IC Content required	50%	7 (Part I)
(e)	Place(s) of Delivery	Mumbai & 16/ Visakhapatnam	App 'F' - 1.1
(f)	Warranty Period	24 (Twenty Four) Months including maintenance	11 (Part I), 33 (Part II), App 'C' - Para 2, App 'E' - Para 1, App 'E' Annex IV - Para 2
(g)	CMC Period, if any	10 (Ten) Years (post two years of Warranty which will be inclusive of maintenance)	33, 34 (Part II), App 'E' - Para 3, App 'E' Annex IV - Para 2
(h)	EMD Amount	NIL	-
(j)	Last date for submission of Pre-bid queries	08 MAR 2024	-
(k)	Date and time for Pre-bid meeting	01 APR 2024 1100 HRS	23 (Part I)
(l)	Last date and time for Bid Submission	10 MAY 2024 1200 HRS	24 (Part I)

4. This Request for Proposal (RFP) consists of following four parts: -

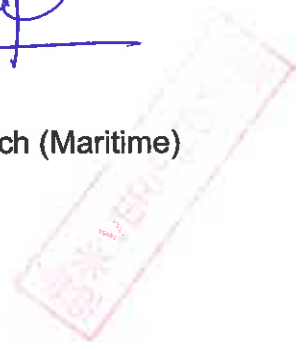
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5. The Government of India invites responses to this request only from Original Equipment Manufacturers (OEM) or Authorised Vendors or Government Sponsored Export Agencies (applicable in the case of countries where domestic laws do not permit direct export by OEM) subject to the condition that in cases where the same equipment is offered by more than one of the aforementioned parties, preference would be given to the OEM.
6. The end user of the equipment is the Indian Armed Forces.
7. This RFP is being issued with no financial commitment; and the Ministry of Defence reserves the right to withdraw the RFP and change or vary any part thereof or foreclose the procurement case at any stage. The Government of India also reserves the right to disqualify any Bidder should it be so necessary at any stage on grounds of National Security.
8. This RFP is non-transferable.
9. In addition to various Appendices and their Annexures, attached with this RFP, reference to various paragraphs of DAP-2020 has been made in the RFP. The DAP - 2020 is an open domain document that is available at Gol, MoD website www.mod.nic.in.
10. The receipt of the RFP may please be acknowledged.

Yours faithfully



(AS Dadwal)
Commodore
DDG Acq Tech (Maritime)



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Disclaimer

This RFP is neither an agreement and nor an offer by the MoD to the prospective Bidders or any other person. The purpose of this RFP is to provide interested parties with information that may be useful to them in submitting their proposals pursuant to this RFP. This RFP includes statements, which reflect various assumptions and assessments arrived at by the MoD in relation to the Project. This RFP document and any assumptions, assessments and statements made herein do not purport to contain all the information that each Bidder may require. The Bidder shall bear all its costs associated with or relating to the preparation and submission of proposal pursuant to this RFP. Wherever necessary, MoD reserves the right to amend or supplement the information, assessment or assumptions contained in this RFP. The MoD reserves the right to withdraw the RFP or foreclose the procurement case at any stage. The issuance of this RFP does not imply that the MoD is bound to shortlist a Bidder for the Project. The MoD also reserves the right to disqualify any Bidder should it be so necessary at any stage on grounds of National Security.

PART I – GENERAL REQUIREMENTS

1. This part consists of the general requirement of the Goods (also referred as equipment/systems/deliverables) and Services, hereafter collectively referred as 'Deliverables', the numbers required, the time frame for deliveries, conditions of usage and maintenance, requirement for training, Engineering Support Package (ESP) and warranty/guarantee conditions, etc. It includes the procedure and the date & time for submission of bids.

Non-Disclosure

2. The Bidding documents, including this RFP and all attached documents provided by the MoD, are and shall remain or become the property of the MoD. These are transmitted to the Bidders solely for the purpose of preparation and the submission of a proposal in accordance herewith. Bidders are to treat all information as strictly confidential and shall not use it for any purpose other than for preparation and submission of their proposal. The provisions of this Para shall also apply mutatis mutandis to Bids and all other documents submitted by the Bidders, and the MoD will not return to the Bidders any proposal, document or any information provided along therewith (except unopened Commercial Bid as relevant).

3. Information relating to the examination, clarification, evaluation and recommendation for the Bidders shall not be disclosed to any person who is not officially concerned with the process, or concerning the Bidding Process. The MoD will treat all information, submitted as part of the Bid, in confidence and will require all those who have access to such material to treat the same in confidence. MoD may not divulge any such information unless it is directed to do so by any statutory entity that has the power under law to require its disclosure or is to enforce or assert any right or privilege of the statutory entity and/ or MoD or as may be required by law or in connection with any legal process.

4. **Confidentiality of Information.** No party shall disclose any information to any 'Third Party' concerning the matters under this RFP generally. In particular, any information identified as 'Proprietary' in nature by the disclosing party shall be kept strictly confidential by the receiving party and shall not be disclosed to any third party without the prior written consent of the original disclosing party. This clause shall apply to the sub-contractors, consultants, advisors or the employees engaged by a party with equal force.

Business Eligibility

5. **Undertaking by Bidders.**

(a) The Bidder will submit an undertaking that they are currently not banned / debarred / suspended from doing business dealings with Government of India /

any other government organisation and that there is no investigation going on by MoD against them. In case of ever having been banned / debarred / suspended from doing business dealings with MoD/any other government organization, in the past, the Bidder will furnish details of such ban / debarment along with copy of government letter under which this ban / debarment / suspension was lifted / revoked. The Bidder shall also declare that their sub-contractor(s)/supplier(s)/technology partner(s) are not Suspended or Debarred by Ministry of Defence. In case the sub-contractor(s)/supplier(s)/ technology partner(s) of the Bidder are Suspended or Debarred by Ministry of Defence, the Bidder shall indicate the same with justification for participation of such sub-contractor(s)/supplier(s)/ technology partner(s) in the procurement case.

(b) Subsequent to submission of bids if any sub-contractor(s)/supplier(s)/technology partner(s) of the Bidder is Suspended or Debarred by Ministry of Defence, the Bidder shall intimate the Ministry of Defence regarding Suspension or Debarment of its sub-contractor(s)/supplier(s)/technology partner(s) within two weeks of such order being made public.

6. **Pre-Qualification Criteria {for multi-vendor cases in Buy (Indian-IDD), Buy (Indian) and Buy & Make (Indian) cases}**. The detailed Pre-Qualification criteria for the Bidders for participation in the instant procurement case are placed at **Appendix J** to this RFP. The procurement case will be earmarked for MSMEs, provided there are at least two or more MSMEs, who qualify Technical Evaluation and accordingly the Commercial bids will be opened. Firms are required to submit their valid MSME certificate along with Technical Bid. All Bidders are to submit details as per the criteria along with the Technical Bids. These would be evaluated by the TEC.

7. **Indigenous Content**. For the purposes of this RFP and the acquisition contract (if any) signed by the Ministry of Defence with a successful Bidder, indigenous content shall be as defined under **Para 8 of Chapter I** and **Para 1 of Appendix B to Chapter I** of DAP 2020. In addition, reporting requirements for prime (main) Bidders (and for sub-contractors/suppliers/technology partners reporting to higher stages/tiers) shall be as prescribed under **Para 4 to 7 of Appendix B to Chapter I** of DAP 2020. The right to audit Bidder/ sub-contractors/suppliers/technology partners shall vest in the Ministry of Defence as prescribed under **Para 10**; and aspects of delivery, certification, payments, withholding of payments and imposition of penalties shall be as prescribed under **Para 11 to 15** thereof. Furthermore, Bidders in 'Buy (Indian IDD)', 'will be required to submit their indigenisation plan in respect of indigenous content as stipulated in **Para 4 to 7 of Appendix B to Chapter I** and **Para 39** of Chapter II of DAP 2020. The DAP 2020 is available at MoD, Gol website (www.mod.nic.in) for reference and free download.

8. **Year of Production**. Deliverables (including major equipment)/ equipment/ systems] supplied under the contract should be of latest manufacture i.e manufactured after the date of Contract with unused components/assemblies/sub-assemblies, conforming to the current production standard and should have 100% of the defined life

(other than permitted running hours during assembly/acceptance trials) at the time of delivery. Deviations, if any, should be clearly brought out by the Bidder in the Technical Proposal.

9. **Delivery Schedule.** The delivery schedule of equipment and services along with the relevant payment stages is specified at **Annexure V to Appendix F.**

10. Once the contract is concluded and the delivery schedule is established, the Bidder shall adhere to it and ensure continuity of supply of deliverables and their components under the contract.

11. **Warranty.** The deliverables supplied shall carry a warranty for 24 months from date of successful completion of Acceptance trials by the Buyer. Warranty Clause is given at **Appendix C** to this RFP.

12. **In Service Life/Shelf Life.** The In Service/Shelf Life of the deliverables shall be stipulated in the offer. In case of shelf life, the relevant storage conditions should be clearly specified.

13. **Product Support.** The Bidder would be bound by a condition in the contract that he is in a position to provide product support in terms of maintenance, materials and spares for a minimum period of 25 (Twenty Five) years. Even after the said mandatory period, the Bidder would be bound to give at least two years notice to the Government of India prior to closing the production line so as to enable a Lifetime Buy of all spares before closure of the said production line. This, however, shall not restrict the Buyer from directly sourcing sub- equipment/sub-assembly and spares from their respective OEMs/sub-vendors on completion of warranty. In case the sub-equipment/sub-assembly/parts require tuning/calibration/integration by the Bidder prior replacement, the same is to be undertaken by the Bidder at fair and reasonable cost, as mutually agreed between Buyer and Bidder.

14. **Obsolescence Management Plan.** An actionable Obsolescence management plan is to be proposed by the Bidder along with the mechanism for intimation of notification of obsolescence. The modalities of the mechanism for intimation of notification would be deliberated during CNC. The mutually agreed mechanism for intimation would form an integral part of the contract. All upgrades and modifications carried out on the equipment during the next years or during its life cycle must be intimated to the SHQ as per the agreed mechanism.

15. **Training of Crew and Maintenance Personnel.** A training package for training of operators, and maintenance personnel to undertake operation and maintenance of equipment, along with tools and test jigs would be required to be carried out in English language. This training shall be designed to give the operators and maintainers necessary knowledge and skills to operate & maintain equipment ('O level). The syllabus will be defined by the Bidder in consultation with the Buyer. The maintenance training will be imparted to the satisfaction of the Buyer and Bidder will ensure that the

training content and period will be to impart working proficiency up to the required level. All training requirements such as training aids, projection system, complete equipment with accessories / optionals, technical literature, spares, test equipment / test set up, training handouts, power point presentations, Computer Based Training (CBT), Documentation, Simulators etc will be catered by the Bidder.

16. The Bidder would provide the following training to the personnel of the Buyer based on agreed terms of contract.

(a) **Operator Training.** Operator training for duration 30 days (in working days), for 20 personnel per system is to be provided at Buyer premises.

(b) **Repair and Maintenance Course.** Maintenance training for duration 30 days (in Working days) , for 20 personnel at Buyer premises is to be undertaken for Field level repairs.

(c) The above training should meet the needs of repair & maintenance of the complete equipment, test set up, assemblies/sub-assemblies as per the stipulated repair philosophy.

17. **Government Regulations.** It may be confirmed that there are no Government restrictions or limitations in the country of the Bidder or countries from which subcomponents are being procured and/or for the export of any part of the deliverables being supplied.

18. It may be further confirmed that all national and international obligations relevant to transfer of conventional arms of the country of the supplier or countries from which parts and components are being procured, have been taken into account for the duration of the contract. Accordingly, thereafter there would be no review, revocation or suppression of Defence export license and other related clearance issues to the supplier for the contract that could impinge on the continuity of supply of items and their parts or components under the contract.

19. **Patent Rights.** The Bidder should confirm that there are no infringements of any Patent Rights in accordance with the laws prevailing in their respective countries. The bidders are required to indicate the details of any proprietary software being utilised for the DSRV simulator, the origin / IPR for the software, along with details of Licenses if any.

20. **Integrity Pact.** In the subject RFP, the vendor is required to sign and submit Pre-Contract Integrity Pact (PCIP), given at **Annexure I to Appendix H.**

21. **Fall Clause.** If the equipment being offered by the Bidder has been supplied/contracted with any organisation, public/private in India, the details of the same may be furnished in the technical as well as commercial offers. The Bidders are required to give a written undertaking that they have not supplied/is not supplying the similar

systems or subsystems at a price lower than that offered in the present bid to any other Ministry/Department of the Government of India and if the similar system has been supplied at a lower price, then the details regarding the cost, time of supply and quantities be included as part of the commercial offer. In case of non-disclosure, if it is found at any stage that the similar system or subsystem was supplied by the Bidder to any other Ministry/Department of the Government of India at a lower price, then that very price, will be applicable to the present case and with due allowance for elapsed time, the difference in the cost would be refunded to the Buyer, if the contract has already been concluded.

Bid Timelines

22. Any queries/clarifications to this RFP may be sent to this office by 08 MAR 2024
A copy of the same may also be sent to:-

The Commodore (Submarine Acquisitions)
Directorate of Submarine Acquisitions
Room No 120, 'C' Wing
Sena Bhawan
Rajaji Marg
New Delhi – 110011
Tel: 011-23010096; Fax: 011-23010830

23. **Pre-Bid Meeting.** A pre-bid meeting will be organised by SHQ at 1100 hrs on 01 APR 2024 at NHQ Conference Hall to answer any queries or clarify doubts regarding submission of proposals. The Bidder or his authorised representative is requested to attend. Necessary details may be sent a week in advance to NHQ/DSMAQ -to facilitate obtaining of security clearance.

24. **Submission of Bids.** The Technical and Commercial Proposals along with IP and should be sealed separately in three separate envelopes clearly indicating Commercial/ Technical/ IP as applicable, and then put in one envelope and sealed (**all the envelopes should clearly state the letter No of RFP and the name of equipment and Bidder name**) and submitted to the undersigned at the following address by 1200 hrs on 10 MAY 2024:-

The Commodore (Submarine Acquisition)
Naval Headquarters
Directorate of Submarine Acquisition (DSMAQ)
Room No. 121, 'C' Wing, 1st Floor
Sena Bhawan
Rajaji Marg
New Delhi-110011
Tel: 011-23010096, Fax: 011-23010830

25. Offer opening by an Offer opening committee will be held at 1500 hrs on 10 MAY 24 at the same venue as indicated at Para 23 above. The Bidder or his authorised representative is welcome to be present at the opening of the proposals. Necessary details may be sent at least one week in advance to facilitate obtaining of security clearance.

PART II – TECHNICAL REQUIREMENTS

26. The second part of the RFP incorporates the aspects of SQRs describing the technical parameters of the proposed equipment, and the environmental parameters for functioning. The operational characteristics and features that should be met by the equipment are elucidated at **Appendix A** to this RFP and the Compliance Table at **Appendix B** to this RFP.

27. **Operational Characteristics and Features.** The broad operational characteristics including Essential Parameters 'A' and features that are to be met by the equipment are elucidated at **Appendix A** to this RFP.

28. **Technical Offer.** The Technical Offer must enable detailed understanding of the functioning and characteristics of the equipment as a whole and each sub system independently. It must include the performance parameters as listed at **Appendix A** to this RFP and any other information pertaining to the technical specifications of the equipment considered important/ relevant by the Bidder. The technical proposal should also include maintenance schedules to achieve maximum life and expected life of each assembly/subassembly (or Line Replaceable Unit (LRU)/Shop Replaceable Unit (SRU)), storage conditions/environment condition recommended and the resultant guaranteed in-service/shelf life. The range and depth of spares included in the proposal should be supported by necessary reliability and prediction model or authenticated by past data on the similar equipment in use.

29. If there is any associated optional equipment on offer that should also be indicated separately along with the benefit that are likely to accrue by procuring such optional equipment. Should the Bidder be contemplating any upgrades or modifications to the equipment being offered, the details regarding these should also be included in the Technical Proposal.

30. **Technical Details.**

(a) The technical details should be factual, comprehensive and include specifications of the offered system/equipment against broad requirements listed in **Appendix A** to this RFP.

(b) Insufficient or incomplete details may lead to rejection of the offer. Mere indication of compliance may be construed as incomplete information unless system's specific technical details are available in the offer. A format of the compliance table for the technical parameters and other conditions of RFP is attached as **Appendix B** to this RFP.

31. The technical offer should have a separate detachable compliance table as per format given at **Appendix B** to this RFP stating specific answers to all the parameters as listed at **Appendix A** to this RFP. It is mandatory to append answers to all the parameters listed in **Appendix A** to this RFP. Four copies of the Technical Proposal should be submitted (along with one soft copy), however only one copy of the commercial proposal is required.

32. **Malicious Code Certificate.** The Bidder is required to submit a 'Malicious Code Certificate' (only for Electronic items and Software) along with the Technical Proposal. The format is placed at **Appendix D** to this RFP.

33. **Product Support (ESP/ CMC)** After the warranty period, of 24 months post successful completion of Acceptance Trials the system would be repaired and maintained under CMC by the Seller. The duration of CMC is 10 (ten) years as per the repair and maintenance philosophy at **Appendix E** to this RFP. The information on Engineering Support Package that is required to be provided is enclosed at Annexure I to VI to **Appendix E** to this RFP. The CMC must also be submitted separately by the Bidder with technical aspects being included in the technical offer and commercial aspects being included in the commercial offer.

34. **Repair and Maintenance Philosophy / Comprehensive Annual Maintenance Contract.** The repair and maintenance of DSRV Simulators, will be catered through Comprehensive Maintenance Contract (CMC), as per the details given at **Appendix E**. The information that is required to be provided as part of Technical Offer is enclosed at **Annexure I to III to Appendix E**. The vendor is required to submit proposal for post warranty **CMC for 10 (Ten) years, inclusive of all spares**. The CMC would include requisite periodic maintenance, defect rectification and calibration (as elaborated at **Appendix E and Annexure IV to Appendix E**). During the period of Warranty, the Seller would undertake all preventive and corrective maintenance including cleaning / upkeep as required for CMC. The details of CMC proposals must also be submitted separately by the vendor with technical aspects being included in the technical offer and commercial aspects being included in the commercial offer. An onsite technical support will be required to be made available by the OEM during the entire period of Warranty and CMC.

35. **Operation and Maintenance.** The operation of the Training Facility and the conduct of the training at DSRV Simulators will be undertaken by respective Submarine Rescue Units at Mumbai and Vishakhapatnam.

36. The vendor is required to provide Itemised Spare Parts Price List (Prices to be indicated only in the commercial offer), list of optional equipment and the likely consumption rate of the spares based on the exploitation pattern of the equipment. The vendor would have to finalise the terms for the life time product support in the current contract only.

37. **Active Technology Obsolescence Management.** Bidder is to indicate the methodology on how the Bidder intends to undertake Active Obsolescence Management through life cycle of equipment which would include upgradation of system/ subsystem/ units on completion of its fair service life. The Bidder/OEM also intimate Buyer on likely technology obsolescence of various shall sub-assemblies/units/modules of equipment through an Annual Bulletin. In case of impending obsolescence of components, bulletin should specify either alternate item or option for life- time buy as under: -

(a) The Bidder/OEM will notify the Buyer not less than two years before the closure of its equipment for provision production line about the intention to close production of equipment for provision purchasing spare parts, before closure of the said production line.

(b) Three years prior to completion of design/service life of equipment, the Bidder/OEM will submit techno-commercial proposal for upgradation of equipment, wherever applicable, to mitigate technology obsolescence and for ensuring product support for next 15 years (or any other period as applicable).

Evaluation of Technical Offers

38. The Technical Offer submitted by the Bidder will be evaluated by a Technical Evaluation Committee (TEC) to confirm that the equipment being offered meets the Essential Parameters as elaborated at **Appendix A**.

Quality Assurance Instructions & Technical Evaluation Plan

39. Bidder is to submit Draft Acceptance Test Procedure (ATP) within six months post signing of contract Based on the draft ATP, the ATP will be finalised by Board of Officers nominated by *IN* against approved QAP document. Bidder would be required to provide Quality Assurance Plans (QAP) i.e tests undertaken to assure quality & reliability. All relevant tests to check compliance to various safety guidelines including provisions laid down in SQRs are required to be undertaken. Pre Dispatch Inspection (PDI) of the stores needs to be carried out by the Buyer's QA agency at the premises of the vendor. It shall be ensured that there are no repetition of QA tests in PDI and JRI. The JRI would normally be restricted to quantitative checks only, except where check proof is required to be carried out.

Marking and Packaging

40. **Marking of Deliverables.** The Bidder shall ensure that each deliverable is marked clearly and indelibly, as follows:-

- (a) In accordance with the requirements specified in the RFP or if no such requirement is specified, with the indicated codification number or alternative reference number specified.
- (b) Ensure that any marking method used does not have a detrimental effect on the strength, serviceability or corrosion resistance of the deliverables.
- (c) Where the deliverables have a limited shelf life, with the cure date/date of manufacture or expiry date expressed as months and years.

41. Where it is not possible to mark a deliverable with the required particulars, these should be included on the package in which the deliverable is packed.

42. **Packaging of Deliverables.** The Bidder shall pack or have packed the deliverables, as applicable:-

- (a) In accordance with DEFSTAN 81-041 (Part 1)/STANAG-4280 or equivalent Military Standard.
- (b) To ensure that each deliverable may be transported in an undamaged and serviceable condition.

43. The Bidder shall ensure that each package containing the deliverable is labeled to include:-

- (a) The name and address of the consigner and consignee including
 - (i) The delivery destination/address if not of the consignee
 - (ii) Transit destination/address (for aggregation/disaggregation, onward shipment etc).
- (b) The description and quantity of the deliverables.
- (c) The full part number in accordance with codification details or as per following: -
 - (i) The makers part, catalogue, serial, batch number, as appropriate.

(ii) The contract number.

(d) Any statutory hazard markings and any handling markings including the mass of any package which exceeds 3 kgs.

(e) The Packaging Label (military J, N or P, special H, commercial A, C etc) (specify reference to DEFSTAN 81-041 (Part 1)/STANAG-4280 or equivalent Military Standard.)

PART III - COMMERCIAL REQUIREMENTS

44. The third part of the RFP consists of the commercial clauses and Standard clauses of contract. The bidders are required to give confirmation of their acceptance of these clauses.

Commercial Bid

45. The Bidder is requested to take into consideration the ***Commercial Clauses and Payment Terms*** given at **Appendix F** to this RFP while formulating the Commercial Offers. The bidders are required to quote their price in Price bid format given in **Appendix G** to this RFP.

46. Commercial offers will be opened only of the Bidder whose equipment is short-listed, after technical evaluation trials. The Commercial Offer must be firm and fixed and should be valid for at least 18 months from the last date of bid submission.

Commercial Bid Opening

47. The Commercial Offers will be opened by the Contract Negotiation Committee (CNC) and if Bidder desires he may depute his representative, duly authorised in writing, to be present at the time of opening of the offers.

48. The date, time and venue fixed for this purpose will be intimated separately after the evaluations are completed.

49. The CNC will determine the lowest bidder (L1).

Additional Aspects

50. **Standard Conditions of RFP.** The Government of India desires that all actions regarding procurement of any equipment are totally transparent and carried out as per established procedures. The bidder is required to accept our standard conditions furnished at **Appendix H** to this RFP regarding Agents, penalty for use of undue influence and Integrity Pact, access to books of accounts, arbitration and clauses related to Law. These conditions along with other clauses of the Contract form the Standard Contract Document (as at **Chapter VI of DAP 2020**) indicates the general conditions of contract that would be the guideline for all acquisitions. The draft contract would be prepared as per these guidelines.

PART IV: BID EVALUATION AND ACCEPTANCE CRITERIA

51. A list of documents/details to be submitted along with the bids is placed at **Appendix K** as a reference to help in completeness of bid and meeting the procurement process schedule.

52. The bids shall be unconditional and unqualified. Any condition or qualification or any other stipulation contained in the bid shall render the bid liable to rejection as a non-responsive bid.

53. The bid and all communications in relation to or concerning the bidding documents shall be in English language.

54. **Evaluation and Acceptance Process.**

(a) **Evaluation of Technical Proposals.** The technical proposals forwarded by the Bidders will be evaluated by a Technical Evaluation Committee (TEC). The TEC will examine the extent of variations/differences, if any, in the technical characteristics of the equipment offered by various Bidders with reference to the QRs and prepare a "Compliance Statement" for shortlisting the Bidders.

(b) **Evaluation of Commercial Bid.** The Commercial bids of only those bidders will be opened, whose technical bids have been cleared by TEC; Comparison of bids would be done on the basis of Evaluation criteria given in **Appendix G** to this RFP. The L-1 bidder would be determined by Contract Negotiation Committee (CNC) on the basis of **Appendix G** to this RFP. Only L-1 bidder would be invited for negotiations by CNC.

(c) **Contract Conclusion / Placement of Order (as applicable).** The successful conclusion of CNC will be followed by contract conclusion/placement of order.

Appendix A

(Refers to Para 26, 27, 28, 30(a), 31, & 38 (Part II) of RFP)

OPERATIONAL CHARACTERISTICS AND FEATURES

1. **Role.** The primary role of DSRV Simulator is to impart realistic hands-on training and work-up of individuals and crew for effectively handling the Remotely Operated Vehicle (ROV) and Submarine Rescue Vessel (SRV) of the Deep Submergence Rescue Vessel System with the Indian Navy.
2. **Application.** DSRV simulators are to be set up at Submarine Rescue Units at East and West Coasts (One on each Coast).
3. **Type.** The Simulators for ROV and SRV and associated requirements shall comprise the following:-
 - (a) The Training Simulator should be a fully functional replica of the SRV having a motion platform with ***Virtual six Degrees of Freedom (no actual/ physical motion control)*** and a Front Facia replica of the ROV Control Station with **no motion requirement**. The Training simulators should have the same look, feel, functionalities, man-machine interface and response time of the ROV and SRV. The following facilities will be contained within the simulator:-
 - (i) Replica of the SRV with appearance and configuration of equipment similar to those with Indian Navy's DSRV and dynamic characteristics of defined equipment and the platform as per design (the required internal facilities are described subsequently).
 - (ii) Adaptors and connections for Ventilation and Air Conditioning (VAC) of the simulator from an external VAC System.
 - (b) An Instructor Station.
 - (c) A Briefing and Debriefing facility with capability to record and replay simulation sessions.
 - (d) A Technical facility which will accommodate all electrical and electronic components not required to be located at the operator, trainer, trainee stations, and components of the VAC system, storage facility for documentation and spares,

fault detection, fault localization and fault analysis components and a maintainer station.

4. The Simulators for ROV and SRV to enable functioning as per desired characteristics and safety of operation will include the facilities as follows:-

(a) The dimensions of the complete simulator complex will not be more than 08m X 06m area, with vertical stacking of compartments or 34.5m x 8.5m with a single stack or containers. Portable containerized and modular sections may be designed to overcome the limitation of the space constraint.

(b) Suitable Ventilation and Air Conditioning (VAC) will be provided for the entire Simulator Complex including installation of the facility in outdoor environment. Temperature of 18-20°C at all times should be maintained at all times in the complex.

(c) Suitable Local Area Network (LAN) will interconnect all devices of the Training Simulator including Instructor station, Briefing and Debriefing facility and the Technical facility for conducting, monitoring and analyzing training, uploading tasks, fault analysis and BITE tests.

(d) Suitable safety arrangements will cater for electrical safety, mechanical and motion safety, high temperature safety etc.

(e) The Simulators for ROV and SRV should include but not be limited to all furniture, lighting, broadcast, and communication means for all the stations and facilities. The Training Simulator should also include all unrelated mock-ups required to replicate the near real environment in the motion platform as existing in the DSRV's ROV and SRV.

(f) A courseware and trainee evaluation package which should provide an assessment of the performance of the trainees.

5. The Simulators for ROV and SRV would have the following broad capabilities for training: -

(a) Various programmed scenarios for the following:-

(i) Familiarisation with the functioning of the ROV and SRV.

(ii) Conduct of basic submarine rescue drills.

- (iii) Conduct of crew training.
- (iv) Conduct of emergency procedures.

(b) **Annexure I to Appendix A** to this RFP is to be referred for elaboration on scenarios for DSRV Simulators.

(c) Suitable provision in 3D to enable *IN* to design and modify the training scenarios (as per training requirements). Some of the sample training scenarios may be as follows: -

- (i) Simulation of varied underwater objects like submarine, ship/ aircraft wrecks as targets for SRV and ROV survey.
- (ii) Capability to simulate dynamic effects of underwater current/ swell / Sea States etc. on the target and SRV/ ROV.
- (iii) Ability to simulate relative motion of Mother Ship (MOSHIP) (through instructor console) and corresponding shift in position post surfacing for recovery, for conducting training in SRV and ROV recovery drills with varying sea conditions on surface and underwater.

ESSENTIAL PARAMETERS

Operational Parameters

6. The broad operational parameters of the DSRV Simulators are as mentioned below:-

<u>Sr</u>	<u>Attribute</u>	<u>Value / Remarks</u>
Simulator for Submarine Rescue Vessel (SRV) of DSRV		
(a)	Training Stations/ Consoles	The system should be user friendly and menu driven with displays as per actuals for visual appreciation with <i>Virtual six Degrees of Freedom (no actual/ physical motion control)</i> . The system should be able to simulate the launch, deployment, mating and recovery of the SRV in different sea conditions. The training stations should

<u>Sr</u>	<u>Attribute</u>	<u>Value / Remarks</u>
		<p>comprise of both Trainee and Trainer consoles. The trainee console would be for the operation and trainer for inducing scenarios and should also have the facility to playback the recorded Trainee console's actions. It should comprise of following posts/ controls: -</p> <p>(i) COO/ LARS operator console where launch/recovery drills are carried out.</p> <p>(ii) SRV command Module, where piloting of SRV is undertaken.</p> <p>(iii) SRV Rescue Chamber, where operations like trimming and opening of rescue hatch etc are carried out.</p> <p>(iv) Three interlinked consoles (multiple screens for realistic simulation) be provisioned for SRV training station.</p> <p>(v) The COO/ LARS operator console can additionally operate as tracking system console post diving of SRV.</p>
(b)	Trainer's Console	<p>The environment and target parameters should be able to be set from the Trainer's Console. This should also have controls for the Deck Manager/ Chief Operations Officer and the LARS Operator to undertake their specific actions on the LARS Deck to enable launch of the SRV in varying sea conditions. The Trainer's console should be provisioned for LARS Remote Control Panel, permitting the instructor station to induce defects/ emergency during launch/ recovery operations.</p>
(c)	SRV Command Module Display Console	<p>The SRV Command Module Display Console (<i>for surface and dived condition</i>) should display the simulation of manoeuvring, sensors, controls and communications, similar to that in an actual SRV.</p>
(d)	Functions/ Capabilities	<p>The SRV Simulator should be able to perform the following functions: -</p> <p>(i) Allow Pilots and Rescue Chamber Operator (RCO) to become familiar with the vehicle's systems and their operation. These include:-</p> <p>(aa) Pre and post dive procedures.</p> <p>(ab) Launch and Recovery of SRV.</p>

<u>Sr</u>	<u>Attribute</u>	<u>Value / Remarks</u>
		<p>(ac) Home onto the DISSUB location with the help of its integral Sonar as well as its 'Pinger Locator'.</p> <p>(ad) Execution of Standard Operating Procedures <i>iaw</i> user provided documentation.</p> <p>(ae) Dry transfer operating procedures.</p> <p>(af) Life support management emergency procedures.</p> <p>(ii) Simulate Voice Communication between CM and RC compartment. Also simulate Voice communication between the Mother Ship (MOSHIP) {Bridge, Deck, Gemini/surface craft etc} and SRV using the Under Water Telephone (UWT).</p> <p>(iii) Simulate Launch procedure of DSRV from Launch and Recovery System (LARS), Main lift point disengaging mechanism, Aft tow point disengaging mechanism. This will provide training value to the LARS operators.</p> <p>(iv) Simulate surface control on a console for surface run for DSRV till it reaches Diving position {Thrusters control, Operation of Vents, Blowing of tanks and inflation of Inflatable Freeboard Extender (IFE)}.</p> <p>(v) Simulate controls for dived manoeuvring (Thrusters control, Operation of Vents, Blowing of tanks).</p> <p>(vi) Simulate Operation of soft seal system.</p> <p>(vii) Simulate Life Support Monitoring (Oxygen system).</p> <p>(viii) High Fidelity Simulation of Sonar, Camera display, Navigation Display (<i>comprising of Gyro, Doppler Velocity Log, Sonar display, Depth Gauge</i>), Emergency buoy, Xenon flasher.</p> <p>(ix) Simulate mating of the SRV on a target and Simulated DISSUB.</p>

<u>Sr</u>	<u>Attribute</u>	<u>Value / Remarks</u>
		(x) Simulate surface/ dived emergencies on systems/ sub-systems.
Simulator for Remotely Operated Vehicle (ROV) of DSRV		
(e)	Training Stations/ Consoles	The system should be able to simulate the deployment of ROV in different sea conditions with selectable simulated targets, selectable environmental conditions and different classes of simulated submarines as targets. The System should comprise of two stations i.e. Trainer's Console and the ROV Control Cabin Display Station.
(f)	Trainer's Console	The Trainer's Console should be capable to set the environment, target parameters and scenarios.
(g)	ROV Control Cabin Display Station	The ROV Control Cabin Display Station should be interfaced with the Display System in the ROV Control Cabin for visualization of the settings and environment fed in the Trainers Console.
(h)	Functions/ Capabilities	<p>The ROV simulator should be able to perform following tasks:-</p> <p>(i) Complete replica of the ROV System console with control joystick, full ROV power switching and tether control, ancillary and tooling equipment control panels and controls of the (Schilling/ Hydrolek) manipulator and grabber.</p> <p>(ii) Six LCD monitors provided as viewing screens selectable to show simulated ROV camera pictures, sonar displays, system settings and diagnostics.</p> <p>(iii) A separate desk and PC console to be positioned behind the trainees for the instructor to control and log the simulated scenarios or adjust any ROV or environmental settings whilst being able to view the ROV monitors and advise the trainees.</p> <p>(iv) Should easily be configured to depict various levels of visibility, sonar noise, bottom type, surface action and water current conditions.</p> <p>(v) Multiple camera view, virtual 3-D image rotation and zoom features should allow real time viewing of all major equipment and task in hand.</p>

<u>Sr</u>	<u>Attribute</u>	<u>Value / Remarks</u>
		<p>(vi) Provision to simulate various equipment failures in response to hard collisions and excessive pull on the umbilical.</p> <p>(vii) The system should be able to provide for trainees to practice the Standard Operating Procedures <i>iaw</i> user provided documentation.</p>

Technical Parameters

7. **SRV Simulator.** The technical specifications for the SRV simulator is to be in accordance with the SRV characteristics and the limits of the same are as tabulated below:-

<u>Ser.</u>	<u>Specification</u>	<u>Parameters</u>
(a)	Maximum Depth of Operation	650 m.
(b)	Operating Speed	<p>(i) Maximum Dived Speed (ahead) – not less than 3.0 kn.</p> <p>(ii) Maximum Dived Speed (astern) – not less than 3.0 kn.</p> <p>(iii) Maximum Lateral Speed - not less than 0.5 kn.</p> <p>(iv) Maximum Vertical Speed - not less than 1kn.</p>
(c)	Operating Conditions	Should be suitable for undertaking operations upto Sea State 4 and 2 Kn sea current.
(d)	Conditions for Mating with DISSUB	<p>(i) Max trim - 45 °</p> <p>(ii) Max list - 45°</p>
(e)	Main Propulsion	<p>(i) The thruster (joystick) with centralized control in the control panel of SRV simulator is to be designed in such a way that it simulates the actual movement of the SRV.</p> <p>(ii) Provision for Secondary Control.</p> <p>(iii) Thrusters should facilitate DSRV operations under specified operating conditions including mating with DISSUB.</p>

<u>Ser.</u>	<u>Specification</u>	<u>Parameters</u>
(f)	DSRV Control	(i) Dual Redundant Control System. (ii) Provision for emergency control in case of failure of primary control.
(g)	Integral DSRV Tools	(i) The SRV Simulator should be provided with two manipulator arms. (ii) Manipulator arms should facilitate performance of various submarine rescue related tasks such as clearing cables from the vicinity of escape hatch.
(h)	Navigation and Control Equipment	The SRV Simulator is to be equipped with simulations of the following navigation aids of specifications suitable for undertaking SRV Simulator operations safely under specified operating conditions:- (i) Auto Pilot System. (ii) Inclometers. (iii) Echo Sounder. (iv) Doppler log. (v) Gyro compass. (vi) Depth gauges (Mechanical and Electronic). (vii) Navigation Sonar. (viii) Pinger homing/location system (intended to home on to location of acoustic pinger dropped at DISSUB location by ROV or other means and distress pinger of IN submarines). Details (Latitude and Longitude) of the Areas of Operation of DSRV (at least four different areas) will be provided to the firms to incorporate the topographic details in the simulator from the commercially available Electronic charts.

8. **ROV Simulator.** The technical specifications for ROV Simulators are to be in line with the ROV of the DSRV System and the same are as tabulated below:-

<u>Ser.</u>	<u>Specification</u>	<u>Parameters</u>
(a)	Sea State	Deployment and recovery in Sea State 4.
(b)	Time on Task	Minimum 4 hrs at 3 kn.
(c)	Operating Depth	Should be capable of operating at depths upto 1000m in currents upto 2.5 kn within a radius of 200m (or more) from the mother ship.

Ser.	Specification	Parameters
(d)	Speed	The ROV should have minimum speeds as follows:- - Ahead/Astern-3.0 kn - Lateral-1.5 kn - Vertical Up/Dn- 1.0 kn
(e)	Manoeuverability	Control of ROV in all planes (forward, reverse, sideways, up & down) in current upto 3 kn.
(f)	Weight	Capability to set the ROV Neutral or positively buoyant by the Trainer.
(g)	Video Camera	Color video camera capable of full tilt/pan as appropriate to the design and for identification of contacts.
(h)	Identification Sonar	Sonar should be capable of target recognition in zero visibility. Details of the Sonar will be provided to the firms.
(j)	Search Sonar	Capable of identifying small contacts at approximately 100m. Details of the Sonar will be provided to the firms.
(k)	Sensors/payload	(i) Compass, depth meter and deployed cable meter. (ii) Acoustic camera for investigation of contact in poor/nil visibility conditions. (iii) Provision of two manipulator arms along with associated tooling to undertake underwater operations in support of DISSUB rescue operations. (iv) Facility for water jetting and intensification of hydraulics for tooling operation.
(l)	Console	(i) Self-contained and standalone console to control the ROV. The operator shall be able to control all sensors, accessories and system function from this console. (ii) Two Stations to be provided with corresponding displays for the ROV Pilot and Tool Operator.
(m)	Video Recorder	System should be equipped with a digital video recorder for recording 3 channels simultaneously for analysis and training.

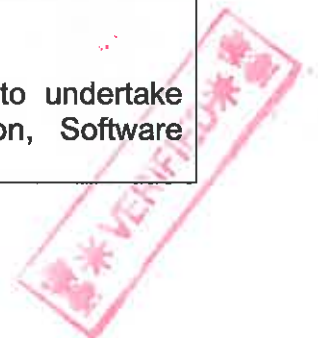
<u>Ser.</u>	<u>Specification</u>	<u>Parameters</u>
(n)	Launch and Recovery Arrangement	Suitable arrangement for providing training on Launch and Recovery procedure by means of a display and control console for LARS.

9. **Common for both Simulators.**

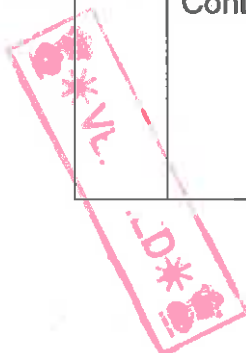
<u>Ser.</u>	<u>Specification</u>	<u>Parameters</u>
(a)	Power Supply	<p>(i) Simulators are to be powered from a main supply with an emergency and back-up supply for safety and redundancy reasons.</p> <p>(ii) Automatic glitch-free switchover from main to emergency supply and back.</p> <p>(iii) Operate on 440V or 220V, 50Hz, 01 Phase or 03 Phase power supply.</p> <p>(iv) UPS unit to provide reliable and filtered power supply throughout.</p> <p>(v) UPS is to provide back-up for operation of the simulator equipment in the event of power failure till such time that the simulator shuts down and reverts to initial condition.</p> <p>(vi) All power convertor, stabilisation and shaping hardware from mains are to be provided and shall be based on static power circuitry.</p>
(b)	Safety Arrangements	<p>The Simulators for ROV and SRV should have the following minimum safety arrangements as per design:-</p> <p>(i) Motion warning lights.</p> <p>(ii) Emergency STOP buttons with redundancy.</p> <p>(iii) Automated fire detection system for simulator complex as also for the spaces housing the associated systems.</p> <p>(iv) Adequate portable fire extinguishers suitably placed for simulator complex and Front Facia (Extinguishers used should be commercially available in India / available in IN).</p> <p>(v) Suitable arrangements need to be provided in the Simulators for ROV and SRV in design to ensure that electrical hazards to personnel are prevented. Further, suitable protection is to be</p>

<u>Ser.</u>	<u>Specification</u>	<u>Parameters</u>
		provided to personnel from moving parts as well as components which may reach higher temperature.
(c)	Application Software	<p>The software should enable the following:-</p> <ul style="list-style-type: none"> (i) Simulation of dynamic behaviour of the ROV and SRV of the Indian Navy's DSRV. (ii) Simulation of ROV Console. (iii) Simulation of SRV Console. (iv) Training Management. (v) Recording, replay and briefing and debriefing features. (vi) On-line and off-line processing of training sessions. (vii) Editing, modification, generation of training scenario. (viii) Generation of Training Session Report. (ix) Online and Offline Built In Test Equipment (BITE). (x) Identify defects and failures in the Simulators. (xi) Application software used in simulators should be upgradable to higher versions..
(d)	Data Recording System	<p>The Data Recording System should cater for the following requirements:-</p> <ul style="list-style-type: none"> (i) A facility to record and replay all simulated parameters and data relevant to the operation of Simulators for ROV and SRV along with video and audio footage of the training session for a minimum duration of ten hours.

<u>Ser.</u>	<u>Specification</u>	<u>Parameters</u>
		<p>(ii) Facility for backing up the recorded training session in the system's hard disk and provision to transfer the same onto portable storage media in encrypted form.</p> <p>(iii) There should be a facility to replay training scenarios and training sessions from the system's hard disk or from previously stored portable digital media.</p>
(e)	Software Requirements	<p>(i) A reliable and robust software environment shall be used.</p> <p>(ii) The latest version of software installed similar to Indian Navy's DSRV is to be loaded and used on the simulators to replicate the DSRV. The software of the DSRV system is a propriety item the details of which are not available with the Indian Navy. Hence the firm should be able to develop a software which will replicate the functionality of the DSRV system.</p> <p>(iii) The simulation models generated using the above environment shall reside in the simulation computer and provide high fidelity (with resolution and least count similar to onboard systems and equipment) simulation models of the DSRV's main and auxiliary machinery.</p> <p>(iv) All system software required for operation of the simulator, fault detection, fault analysis, fault localisation, network connectivity etc. are to be supplied as a back-up on suitable storage media to cater for the contingency of system failure due to software malfunction/corruption.</p> <p>(v) System should have regular updates.</p>
(f)	Software Development and Documentation	<p>(i) The software development and software documentation is to be in accordance with IEEE 12207 or equivalent standard.</p> <p>(ii) The firm would be required to undertake Software Verification and Validation, Software Quality Assurance (SQA).</p>



<u>Ser.</u>	<u>Specification</u>	<u>Parameters</u>
		<p>(iii) One set of documentation each for Training Simulator and Front Facia in hard copy and soft copy (in IETM format or prevailing latest format as specified by <i>IN</i>). The applicable specification shall be equivalent or superior to the following standards:-</p> <p>(aa) JSS-0251-I for documentation of simulators.</p> <p>(ab) IEEE 12207: 2008 on Software Life Cycle processes.</p> <p>(ac) IEEE 730: 2002 on Software Quality Assurance Plan.</p> <p>(ad) IEEE 830: 1993 on Software Requirement Specifications.</p> <p>(ae) IEEE 828: 1998 on Software Configuration Management Plans.</p> <p>(af) IEEE 1012: 1998 on Software Verification and Validation.</p> <p>(ag) IEEE 1028: 1998 on Software Reviews and Audits.</p> <p>(ah) ISO/ IEC 15288: 2015 on System Life Cycle Processes.</p>
(g)	Design Data	The vendor is to provide design data viz. cycle fatigue, material composition, MTBF and MTTR of critical components of the motion platform viz. (but not limited to) motors, hydraulic system, simulator consoles, control consoles, PLC cabinets, training aids, ventilation and air conditioning.
(h)	Configuration Control	<p>(i) The configuration control of the Simulators for ROV and SRV system is to be maintained.</p> <p>(ii) The Configuration Baseline Document (CBD) Version 1 is to be submitted prior to Factory Acceptance Trials (FATs).</p>



<u>Ser.</u>	<u>Specification</u>	<u>Parameters</u>
		(iii) Final Configuration Baseline Document (CBD) Version 2 is to be submitted within two months of completion of On-Site Acceptance Trials (OSATs), incorporating all hardware and software changes undertaken up to OSATs stage.

MAINTAINABILITY AND ERGONOMICS PARAMETERS

10. General Characteristics.

<u>Sr</u>	<u>Attribute</u>	<u>Value / Remarks</u>
(a)	Hardware Requirements	<p>The compliance to various industrial and military standards related to hardware should be indicated. The hardware and technical approach shall comprise the main elements listed herein under:-</p> <p>(i) <u>Operator Consoles.</u> These shall be replica consoles (ROV and SRV consoles) with the same design, look and feel as the onboard consoles realised with ruggedised commercial off-the-shelf (COTS) components. The consoles should be packaged with necessary simulator electronics so that cable lengths are reduced to the maximum extent practicable. Soft panels shall not be used in lieu of control elements as these do not provide the maximum realism required for operator training.</p> <p>(ii) <u>Training Simulator Design.</u> The Simulators for ROV and SRV shall be designed using open architecture. If more than one electronic card cage is used, these shall be interconnected using the Ethernet. The Simulators for ROV and SRV shall interface with the simulation computer using the Ethernet.</p> <p>(iii) <u>Simulation Computer.</u> The simulation computers for Simulators of ROV and SRV shall be a commercial off-the-shelf (COTS) item made by a reputed firm and supportable locally in India.</p>

Sr	Attribute	Value / Remarks
		(iv) Safe Locker. Provision is to be made for a safe locker for stowage of sensitive data such as software CDs, trainee data etc.
(b)	Lifting Arrangement	(i) Units weighing more than 40 kgs shall be provided with collar eyebolts or suitable lifting arrangements. (ii) Provision is to be made for securing arrangement on the unit for the eyebolts, after the unit has been installed. (iii) Provision is to be made for facilitating lifting of equipment by forklift.
(c)	Material Used	(i) The material used should be suitable for tropical climate (0° C to 50° C, upto 95% humidity) in coastal areas. (ii) Corrosion resistant surface protection coatings are to be used. (iii) The utilization of indigenous military material, its availability in the country, equivalent source/ code, sourcing of material etc. are to be indicated.

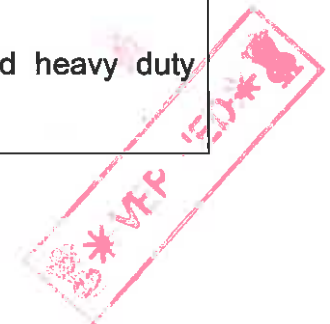
11. **Operating Conditions.**

Sr	Attribute	Value / Remarks
(a)	Environmental Specifications	The Simulators for ROV and SRV should comply with following standards and specifications or equivalent standards:- (i) Shock and vibration specifications in accordance with European Standard 2006/42/CE or nearest equivalent standard as per industrial norms in country of OEM and/or designer. (ii) Only the components mounted on dynamic motion platform should be capable of withstanding vibration and shock standards as specified above. (iii) All components used for Simulators for ROV and SRV should be capable of withstanding the

Sr	Attribute	Value / Remarks
		<p>tropical climate. The system should be capable of withstanding following ambient temperature conditions:-</p> <p>(aa) For Operation: 0° C to 35° C, upto 90% humidity</p> <p>(ab) For Storage: 0° C to 48° C, upto 95% humidity</p>
(b)	Exploitation Pattern	<p>The Simulators for ROV and SRV should be robust and rugged to support extended operations for minimum duration as follows:-</p> <p>(i) 10 hours per day.</p> <p>(ii) 15 days in a calendar month.</p> <p>(iii) 180 days in a year.</p>

12. **Physical Attributes.**

Sr	Attribute	Value / Remarks
(a)	Life	<p>(i) The Simulators for ROV and SRV should have a service life of at least twenty five (25) years.</p> <p>(ii) The vendor shall undertake to provide product support for twenty five (25) years including for porting of application software in line with the commercially available upgrades of computers and Operating System (OS) etc. on expiry of service life of computers or end of support for Operating System, as applicable.</p>
(b)	Hardware	<p>The minimum hardware that needs to be provided for each Briefing and Debriefing facility for the Simulators for ROV and SRV to achieve the above mentioned functionality are as follows:-</p> <p>(i) Furniture for seating ten (10) personnel at each facility.</p> <p>(ii) One contemporary LED based heavy duty projector at each facility.</p>



Sr	Attribute	Value / Remarks
		<p>(iii) Two contemporary networked PC stations at each facility to control the briefing/debriefing along with accessories.</p> <p>(iv) Two contemporary LED TV screens of size 55 inches or above with HDTV or better functions at each facility.</p> <p>(v) One contemporary smart board with all accessories at each facility.</p> <p>(vi) One remote controlled white screen for video projector at each facility.</p>
(c)	Technical Facility	<p>The Simulators for ROV and SRV should have exclusive Technical facilities. Each of the technical facility shall comprise the following requirements:-</p> <p>(i) Accommodate all the electronic and electrical devices located outside training, trainer and instructor station (<i>COTS computers, storage disks, audio and video distribution matrix etc.</i>).</p> <p>(ii) Provision for storing the following:-</p> <p>(aa) Documentation (both hard copies and in digital format) and back-up software.</p> <p>(ab) Onsite spares and tools.</p> <p>(ac) Main and emergency power supply distribution boards etc.</p> <p>(iii) A maintainer post should be provided with appropriate jigs and test benches for onsite fault analysis and repair.</p> <p>(iv) The facility should accommodate the requisite support arrangements that would ensure seamless operation and maintenance of the simulator.</p> <p>(v) Ventilation and Air conditioning units (central to the facility) should also be housed inside the technical facility.</p>

Sr	Attribute	Value / Remarks
		(vi) Facility to carry out calibration of instrumentation of the simulator to check conformity with actual behaviour as per equipment fitted on DSRV.
(d)	Instructor Station	<p>The Simulators for ROV and SRV shall have an exclusive Instructor Station. The Instructor Station should be managed by up to two trainers or instructors. The Station will have instructor control console(s) mounted in the Instructor Station and provide the means for following:-</p> <ul style="list-style-type: none"> (i) Managing training sessions with pre-defined and stored training scenarios. (ii) Editing and modifying training scenarios prior to and during training session. (iii) Starting and Stopping the training session, freeze, record, replay, backtrack, reset the simulation to a desired time frame or to initial condition. (iv) Insert or delete failures, accidental events or modify environmental parameters prior to or during training session. (v) Create and load a snapshot. (vi) Recording and storing of new training scenarios. (vii) Execute training scenarios. (viii) Play one scenario or several scenarios simultaneously. (ix) See the screens and consoles to observe trainees' actions and operate local commands on simulated installations. (x) View a current training session and stop the training session when required. (xi) Watch and listen to the current training session by video (display screens) and audio

Sr	Attribute	Value / Remarks
		<p>(actual audio, with an option to mute) for evaluation and safety purpose. The recordings of the display screens of the trainee and the actual audio of the trainees is required for playback and training purpose. The overall recording of the trainee stations with the help of CCTV camera is also required.</p> <p>(xii) Communicate with the trainees by audio means.</p> <p>(xiii) There should also be a provision to modify and or enhance the training content by the Trainer (or the Instructor).</p>
(e)	Briefing and Debriefing Station	<p>The Simulators for ROV and SRV should have an exclusive Briefing and Debriefing Station. MFCCs form the main component of the DSRV. The same needs to be replicated for basic training value in the simulators also. Details of the MFCCs will be provided to the firms. The essential facilities to be provided in the Station are to cater for the following requirements:-</p> <p>(i) Brief the trainees (<i>minimum capacity of at least 10 trainees and 02 training staff</i>) about training session to be played. This should include the environmental conditions, tactical situation and objective of the session.</p> <p>(ii) Replay the concluded training session, including earlier recorded sessions.</p> <p>(iii) Pause, rewind, fast forward the elapsed training sessions at various speeds.</p> <p>(iv) Replay the audio and video recording of the trainees in the motion platform during an elapsed training session.</p> <p>(v) Station to include suitable movies for understanding of operation of equipment, rescue situations, actions to be taken in case of emergencies.</p>



Sr	Attribute	Value / Remarks
		<p>(vi) Display snapshots (with the time and state of the platform with respect to course, speed, depth) of the scenario within the simulator and any of the Multi-Function Control Consoles (MFCCs) operated by the trainees.</p> <p>(vii) Data analysis tools for training sessions to compare data from database and provide comparative analysis reports to ascertain progress of a particular training session or trainee (as applicable).</p> <p>(viii) User profiles for all trainees should be maintained, that shall carry information of scenarios a trainee has completed, training time and individual performances of each trainee.</p>

13. **Maintainability and Reliability.**

Sr	Attribute	Value / Remarks
(a)	MTBF and MTTR	The system should be designed for high MTBF (not less than 1000 hrs) and low MTTR (not to exceed 60 minutes). The vendor is to furnish MTBF and MTTR values.
(b)	Built-in Test Equipment	<p>(i) The design of the system shall include an integrated built-in test (BIT) facility to enable offline and online monitoring, fault-diagnosis, automatic fault localisation and failure identification such as to identify, locate and indicate to the instructor and maintainer any fault that has occurred in the simulator during operation in all modes.</p> <p>(ii) The BIT shall isolate at least 95% of all detected faults to one PCB, Line Replaceable Unit (LRU) and 100% of all detected faults to two or three PCBs, LRUs.</p> <p>(iii) BIT messages shall be displayed on the instructor's screen. This should include facility to test and calibrate all subsystems of the Simulators for ROV and SRV.</p>

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Sr	Attribute	Value / Remarks
(c)	Test and Software Loading Terminal	<p>(i) A suitable PC and Laptop based Test and Software Loading Maintenance Terminal is to be provided with the Simulators for ROV and SRV to facilitate checks of the system and reloading of system software.</p> <p>(ii) Back up copy of software is to be provided with each of the software loading terminal.</p>
(d)	Test and Workshop Equipment	<p>The test and workshop equipment to be supplied for Simulators for ROV and SRV are as follows:-</p> <p>(i) Equipment that would be needed for undertaking pre-operation checks and routine preventive maintenance.</p> <p>(ii) Specific to Type Test Equipment (STTE, along with Maintenance and Diagnostic Laptop with backup software) that would be needed to undertake repairs of the system.</p> <p>(iii) Equipment required for carrying out detailed analysis of defects.</p> <p>(iv) Backup copy of all software shall be supplied.</p>
(e)	System Architecture	<p>(i) Based on modern and latest technology computers and simulation software technologies. Distributed architecture systems shall be used for all electronics and computer resources with provisions for upgrade of software and hardware.</p> <p>(ii) The equipment hardware and software is to be designed with open architecture with a modular approach where software design should be independent of the hardware design. The proposed solution should be configured around technologies which have already been used in similar submarine motion control and platform machinery simulator applications.</p> <p>(iii) The system is to be designed with dual redundancy for main processors and other important functions. Further, the system shall be designed such that the features viz., fault</p>

Sr	Attribute	Value / Remarks
		<p>tolerance, graceful degradation, interchangeability, commonality, standardisation etc. are given due importance.</p> <p>(iv) An Ethernet network with dual redundancy is to be provided for various consoles of the Instructor Station, Motion Platform, Technical facility and Briefing/Debriefing facility to operate.</p>

14. **Ergonomics.**

Sr	Attribute	Value / Remarks
(a)	Inter-changeability/ Commonality	<p>(i) The level of commonality achieved within the system at the Module, Sub module level, PCB level and Component level should be specified.</p> <p>(ii) The system should be designed such that the PCBs, modules (similar in physical construction and functions), are interchangeable within the system.</p>
(b)	Ease of Maintenance	The systems shall be designed with modularity of hardware and software. The design should cater for easy accessibility of all panels (particularly top, side and rear panels) and test points for ease of checks and maintenance. Cabinets are to be designed to ensure sufficient cooling and circulation of air.
(c)	Man Machine Interface (MMI)	The MMI of Training Consoles should be identical to the MMI of ROV and SRV of DSRV system with Indian Navy. The MMI of Instructor Consoles and Briefing and Debriefing facility should be user friendly identical to the MMI of ROV and SRV of DSRV system with Indian Navy.

ESSENTIAL PARAMETERS - B

Nil

ENHANCED PERFORMANCE PARAMETERS (EPP)

Nil



Annexure I to Appendix A
(Refers to Para 30(a) (Part II) of RFP}

SCENARIOS FOR DSRV SYSTEM SIMULATOR

1. The simulator for DSRV System would need to cater for the following conditions: -
 - (a) Limitations for SRV operations
 - (i) Max speed of operation – 3 Kn
 - (ii) Max underwater current – upto 2.5 Kn
 - (iii) Max list/ trim of Distressed Submarine (DISSUB) – upto 45 °
 - (b) The simulator should provide the operator the leeway in changing the following parameters as required by the operator for each scenarios:-
 - (i) Angle of list of DISSUB.
 - (ii) Angle of trim of DISSUB.
 - (iii) Simultaneous input of list/ trim of DISSUB.
 - (iv) Placement of debris on the hull of DISSUB.
 - (v) The type of submarine placed as DISSUB.
 - (c) The simulation area should also have areas comprising of flat surfaces and undulations/ gradient with bottom as soft mud, rocky sub strata etc. so as to cater to the requirement of attitude of the DISSUB stated in the various scenarios.
 - (d) The simulation area sea bed should have (but not limited to) a depth gradient of atleast 100 m every 0.5 Cable.
 - (e) The option of placement of a type of submarine at a location in the simulation area such that the DISSUB automatically attains the required list and trim, based on the gradient and bottom type at the position, is a desirable feature.
 - (f) Provision to introduce underwater current upto 2.5kn at the location of the DISSUB during setup of a scenario. Provision to alter the underwater current while the simulation is in progress.

2. The indicative/ likely scenarios envisaged for the simulator are as follows: -

- (a) **Scenario 1**. Submarine disabled at 200 m depth with zero list and trim.
- (b) **Scenario 2**. Submarine disabled at 200 m depth with zero trim and list to port (angle of list and underwater current will be as decided by operator).
- (c) **Scenario 3**. Submarine disabled at 200 m depth with zero trim and list to stbd (angle of list and underwater current will be as decided by operator).
- (d) **Scenario 4**. Submarine disabled at 200 m depth with zero list and trim by forward (angle of trim and underwater current will be as decided by operator).
- (e) **Scenario 5**. Submarine disabled at 200 m depth with zero list and trim by aft (angle of trim and underwater current will be as decided by operator).
- (f) **Scenario 6**. Submarine disabled at 200 m depth with simultaneous list and trim (angle of list, trim and underwater current will be as decided by operator).
- (g) **Scenario 7**. Submarine disabled at 400 m depth with zero list and trim.
- (h) **Scenario 8**. Submarine disabled at 400 m depth with zero trim and list to port (angle of list and underwater current will be as decided by operator).
- (j) **Scenario 9**. Submarine disabled at 400 m depth with zero trim and list to stbd (angle of list and underwater current will be as decided by operator).
- (k) **Scenario 10**. Submarine disabled at 400 m with zero list and trim by fwd (angle of trim and underwater current will be as decided by operator).
- (l) **Scenario 11**. Submarine disabled at 400 m with zero list and trim by aft (angle of trim and underwater current will be as decided by operator).
- (m) **Scenario 12**. Submarine disabled at 400 m depth with simultaneous list and trim (angle of list, trim and underwater current will be as decided by operator).
- (n) **Scenario 13**. Submarine disabled at 650 m depth with zero list and trim.
- (p) **Scenario 14**. Submarine disabled at 650 m depth with zero trim and list to port (angle of list and underwater current will be as decided by operator).
- (q) **Scenario 15**. Submarine disabled at 400 m depth with zero trim and list to stbd (angle of list and underwater current will be as decided by operator).

- (r) **Scenario 16.** Submarine disabled at 400 m with zero list and trim by fwd (angle of trim and underwater current will be as decided by operator).
- (s) **Scenario 17.** Submarine disabled at 400 m with zero list and trim by aft (angle of trim and underwater current will be as decided by operator).
- (t) **Scenario 18.** Submarine disabled at 500 m with simultaneous list and trim (angle of list, trim and underwater current will be as decided by the operator).

Note :

- (a) In addition to the above scenarios, the simulator should cater for at least 30 more scenarios for various combinations of depth, list and trim.
- (b) In all the above scenarios provision for placing debris on the DISSUB is required to be available so as to enable training for ROV and SRV Crew. Additionally, provision of Tracking System inputs for the trainee and trainers console will be required to enable introduction of emergencies and change of environmental parameters to enhance training value in each scenario.

Appendix B

(Refers to Para 26, 30(b) & 31 (Part II) of RFP)

COMPLIANCE TABLE FOR DSRV SIMULATORS

Ser No	Requirement as per the RFP	Compliance/ Partial Compliance	Indicate references of Paras/Sub Paras of the Main Technical Document
1.	General Conditions of RFP (Part I, II, III, IV)		
2.	Technical Parameters as per Appendix A of RFP.		
3.	Commercial Parameters as per Appendix F and Annexures I – V to Appendix F of RFP.		
4.	Performance-cum-Warranty Bank Guarantee as per Para 2 of Appendix F of RFP		
5.	Advance Payment Bank Guarantee as per Para 1.4.1 of Appendix F of RFP		

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Appendix C

(Refers to Para 11 (Part I) of RFP)

WARRANTY CLAUSE

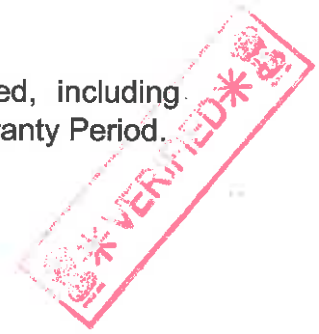
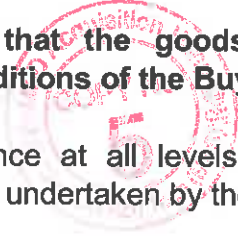
1. The **SELLER** warrants that the goods/services supplied under this contract conform to technical specifications prescribed and shall perform according to the said Technical Specifications.
2. The **SELLER** warrants for a period of 24 months post successful completion of Acceptance Trials that the goods/stores/services supplied under this contract and each component used in the manufacture thereof should be free from all types of defects/failures (including latent and patent defects).
3. If within the period of warranty, the goods/stores are reported by the **BUYER** to have failed to perform as per the specifications, the **SELLER** shall either replace or rectify the same free of charge, maximum within 15 working days of notification of such defect by the **BUYER** provided that the goods are used and maintained by the **BUYER** as per instructions contained in the Operating Manual. Warranty of the equipment would be extended by such duration of downtime. Record of the down time would be maintained by user in log book. Spares and all consumables required for warranty repairs shall be provided free of cost by **SELLER**. **All activities including diagnosis, rectification, calibration, transportation etc, required for making equipment serviceable and available would be the SELLER's responsibility.** The **SELLER** also undertakes to diagnose, test, adjust, calibrate and repair/replace the goods/equipment arising due to accidents by neglect or misuse by the operator or damage due to transportation of the goods during the warranty period, at the cost mutually agreed to between the **BUYER** and the **SELLER**. The **SELLER** shall intimate the assignable cause of the failures.
4. **SELLER** hereby warrants that necessary service and repair backup during the warranty period, including routine maintenance beyond Unit Level, shall be provided by the **SELLER** and he will ensure that the **cumulative downtime period for the equipment does not exceed 36 days of the warranty period.**
5. If a particular equipment/goods fails frequently and/or, the cumulative down time exceeds 05% of the warranty period, that complete item/equipment shall be replaced free of cost by the **SELLER** within a stipulated period of 15 days of receipt of the notification from the **BUYER** duly modified/upgraded through design improvement in all equipment supplied/yet to be supplied and ESP supplied/yet to be supplied.

6. **SELLER shall associate technical personnel of maintenance agency and QA of BUYER during warranty repair and shall provide complete details of defect, reasons and remedial actions for averting recurrence of such defects.**

7. In case the complete delivery of the Engineering Support Package is delayed beyond the period stipulated in this contract, then the **SELLER** undertakes that the warranty period for the goods/stores shall be extended to that extent.

8. **The SELLER warrants that the goods supplied will conform to the Temperature and Humidity conditions of the Buyer Country.**

9. Comprehensive maintenance at all levels and repairs if required, including replacement of spare parts will be undertaken by the Seller during the Warranty Period.



Appendix D

(Refers to Para 32 (Part II) of the RFP)

CERTIFICATE: MALICIOUS CODE

(To be rendered on the Company Letter head)

1. This is to certify that the Hardware and the Software being offered, as part of the Contract, does not contain embedded malicious code that would activate procedures to:-
 - (a) Inhibit the desired and designed function of the equipment.
 - (b) Cause physical damage to the user or equipment during the exploitation.
 - (c) Tap information resident or transient in the equipment/ networks.
2. The firm will be considered to be in breach of the procurement contract, in case physical damage, loss of information or infringements related to copyright and Intellectual Property Rights (IPRs) are caused due to activation of any such malicious code in embedded software.

(Signed)

Designation/Name/Address of firm

Date:

Place:



Appendix E

(Refers to Para 33 & 34 (Part II) of RFP)

PRODUCT SUPPORT

1. **Maintenance Philosophy.** The system will be under two year warranty period (including maintenance) followed by Ten years of comprehensive All Inclusive Annual Maintenance Contract by the OEM. During this period, all levels of maintenance and repairs will be undertaken by the OEM at the unit / factory premises.
2. AMC by means of Comprehensive Maintenance Services is to be provided by the vendor, which will include, but not limited to all corrective and preventive maintenance of the systems, equipment and machinery in satisfactory working order and 'Planned Preventive Maintenance' (PPM), repairs, servicing, calibration and replacement of defective parts, sub-assemblies, equipment; preservation and de-preservation as applicable.
3. All efforts are required to be made to obviate down-time of the Training Facility, on account of 'break-down' of any of the systems/ equipment, through meticulously drawn PPM based set of routines. All minor defects should be rectified within three days of occurrence and all major defects within seven days of occurrence. Maximum downtime of 30 working days per year is allowed for maintenance routines and defect rectification of DSRV Simulators. These routines and the defect rectification (as required) would be required to be undertaken by the vendor as part of the CMC. The scope of the CMC would include services, spares, maintenance and calibration of the complete DSRV Simulators, supplied by the vendor, for a period of 10 years, post warranty.
4. Preventive maintenance as per the recommendations of the manufacturers of the systems/ equipment/ assemblies/ sub-assemblies including calibration of equipment (as per OEM recommendations), will be carried out on time by the Seller. Maintenance routines over and above the manufacturer's recommendation as desired by the Indian Navy, Seller or the OEM will be included in the maintenance schedule and the same carried out by the Seller. All associated computer and paper work including spares consumption data management, defect analysis, etc. will be undertaken by the Seller. Seller will ensure availability of adequate number of suitable trained staff on site at all times. As soon as malfunctioning of any system/ sub-system/ equipment is reported, the Seller would be required to rectify the reported defects.
5. Procurement and replacement of defective parts and consumables would be arranged by the Seller at no extra cost to the Indian Navy.
6. All consumables for the facility including all types of lubricants and spares are to be supplied by the SELLER at no additional costs for conduct of all equipment trials and delivery acceptance trials till commissioning. First refilling of all consumables for the



facility, lubricants and spares post commissioning of the facility are to be supplied by the SELLER at no additional costs.

7. Sub-contracting of maintenance work, if required, will be only to OEMs or authorised OEM approved firms and Seller will bear full responsibility of the work done by the sub-contractor. The safety of the employees including the contractual staff will be the responsibility of the Seller, including damages to life and property. Associated insurance / liability cover to the Seller's employees and sub-contractors personnel, if any, will be the responsibility of the Seller.

8. The scope of CMC including the list of maintenance routines, requirement of calibration of equipment (as required as per design) and spares required for the services/ repairs would be drawn up by the Seller, in accordance with OEM recommendations, in respect of systems, equipment and machinery contained in the DSRV Simulators and would be submitted to the IHQ MoD (N) for approval. The details of maintenance routines/ requirement of calibration of equipment should be listed as per the suggested format at **Annexure III** to this Appendix.

9. The Seller would be responsible for Obsolescence Management of equipment and spares throughout the Life of the Simulator. The CMC would include both the hardware and the software components of the simulator and the associated equipment. The upgradation of IT hardware and software would be responsibility of SELLER under the CMC.

10. The stocking of consumables and spares should ensure hassle free operation of the simulator keeping in mind the consumption rate and the envisaged / history of spares requirement. In any case the Seller should ensure a minimum stocking of the following:-

- (a) One month stock for consumables.
- (b) Complete list of 'Ready use' spares as agreed with the Buyer.

11. **Technical Literature.** All necessary technical literature would also be submitted by the Seller. The details of technical literature to be supplied with the system should be listed as per the suggested format at **Annexure I** to this Appendix. This should be provided with both Technical and Commercial Proposals. The cost column may be left blank in the Technical Proposal.

12. A team of 20 (twenty) *IN* personnel for supervising and evaluating the training is required to be trained on the operation of systems, machinery and equipment installed in the DSRV Simulators. The Seller shall arrange to provide training to the staff for the operation of equipment, systems and units during trials and prior to commissioning of the DSRV Simulators. The training curriculum (as recommended by the concerned OEMs) would be submitted to the Buyer, for approval. The details of training aggregate should be listed as per the suggested format at **Annexure III** to this Appendix.

13. The maintenance routines and consumables shall be mutually reviewed every two years post commissioning to incorporate lessons learnt during operation. The periodicity of reviewing of spares could be reduced by the Buyer, if necessary, to harmonise the list with the lessons learnt.

14. **Miscellaneous Aspects** The following may also be noted: -

(a) **Embedded Software**. The details of systems/subsystems with devices or components having embedded software is to be made available to the IN. Details of these modules with resident software, and, part number of memory modules and backup software needs to be delivered. At least two copies of backup software would be required.

(b) **Operating System and Application Software**. A copy of the operating system and application software need to be provided in order to establish back up and repair support for these systems after completion of acceptance trials.

Engineering Support Package (ESP)

15. ESP is the basic engineering support the Seller needs to provide to the Buyer for undertaking essential repairs and maintenance of the equipment during its exploitation. These repairs and maintenance would be in consonance with the Maintenance Philosophy enunciated above. ESP would constitute the following aspects:-

- (a) Only List of Spares is to be provided
- (b) SMTs/STEs test set-up.
- (c) Technical Documentation.
- (d) Training.

16. **Spares**. The spares are required to be categorized in four categories as follows:-

- (a) Manufactured by Bidder as OEM and can be sourced as per Part No.
- (b) Bought out items and customized by the OEM for the specific purpose and such customization would require OEM intervention.



(c) Bought out from other OEMs/Third Party as specialised items and used without any customization. Such items can be sourced by quoting their Part No./Identification No. as given by OEM/Third Party and directly utilised.

(d) General Engineering items/COTs which can be sourced by stating the relevant standards and item description.

17. **Technical Documentation.** The Bidder will be required to provide the technical literature preferably in IETM (Interactive Electronic Training Manuals) in Level 4 format or higher. The details of technical literature to be supplied with the system should be listed as per the suggested format at Annexure III to this Appendix. This should be provided with both Technical and Commercial Proposals. The cost column may be left blank in the Technical Proposal. An illustrated list of documents which may be submitted by the Seller is as under:-

(a) User Handbook/Operators Manual in English and Hindi.

(b) Technical Manuals. (as per governing JSG/Guide for other technologies)

(i) **Part I.** Tech description, specifications, functioning of various systems.

(ii) **Part II.** Inspection/Maintenance tasks repair procedures, materials used, fault diagnosis and use of Special Maintenance Tools(SMTs)/Special Test Equipment (STEs).

(iii) **Part III.** Procedure for assembly/disassembly, repair up to component level, safety precautions.

(iv) **Part IV.** Part list with drawing reference and List of SMTs/STEs Test Bench.

(v) Rotable list, norms of consumption, mandatory/ non-mandatory spares list for each system.

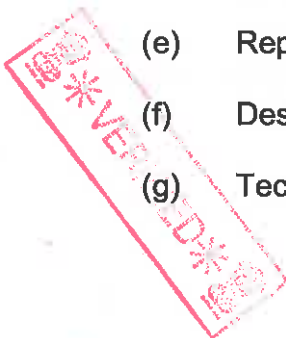
(c) Table of Tools & Equipment (TOTE) & carried spares.

(d) Complete Equipment Schedule.

(e) Repair and Servicing schedule.

(f) Design Specifications.

(g) Technical Manual on STE with drawing references.



- (h) Condemnation limits.
- (j) Packing specifications /instructions.
- (k) Any additional information suggested by the OEM.

18. **Details of OEMs.** For major / complex equipment, a large number of other OEMs may also be involved in manufacture of various systems/sub systems / support equipment. Details of such OEMs will also be intimated by the Bidder as per table below:-

Table - Format for Submitting Details of OEMs

Ser No	Equipment	Part No	OEM	Contact Details (Tel/Fax/Email)	Details of Government License to OEMs

19. **Training.** A training package for operators, operator trainers and maintenance personnel to undertake operation and maintenance of equipment QA personnel for QA of equipment as stipulated in respective contract, along with tools and test jigs training would be required to be carried out in English language. Requirements such as training aids, technical literature, spares, test equipment, test set up, charts, training handouts, power point presentations, Computer Based Training (CBT), Documentation, Simulators etc will be provided by the Seller for the conduct of training. Training should preferably be conducted during before the induction of the equipment. The Seller will provide the Operator training, for the duration, strength and locations specified in the RFP and Contract. The following may also be noted:

- (a) The requirement of training and associated equipment must be clearly specified in Part I and details should be placed as per **Annexure IV** to this Appendix.
- (b) The costs for aggregates and training must only be indicated in the commercial proposal.
- (c) Sufficiency clause in terms of installation material and spares should also be included.

Annual Maintenance Contracts

20. The CMCs would be provided by the OEM / licensed entity / OEM authorised representative and would commence on completion of warranty period.



21. **Comprehensive Maintenance Contracts (CMC)**. Comprehensive Maintenance Contracts are concluded for a pre-determined period in multiples of Annum. The scope of CMC, in addition to services of the Specialists, include provisioning of spares, tools and equipment as required for Maintenance and Repair of the equipment. In this arrangement, the OEM will ensure that the down time of the equipment does not exceed the minimum period stipulated in the CMC. CMC will include all corrective and preventive maintenance of the systems, equipment and machinery in satisfactory working order and 'Planned Preventive Maintenance' (PPM), repairs, servicing, calibration, replacement of defective parts, sub-assemblies, equipment, preservation /de-preservation as applicable. All equipment supplied under the proposed contract will be maintained on site by the Seller. CMC will ensure performance of the equipment in the range and accuracies as set in equipment Technical Manual. The equipment proposed to be under CMC would be listed along with their locations. An equipment repair Log book will be maintained to keep a record of the equipment down time during defect rectification. The scope of work would also involve the following:-

(a) **Preventive Maintenance**. The maintenance of the equipment is to be carried out by the Bidder at the Buyer premises. The equipment will be maintained as per the OEM specified maintenance schedules and equipment manuals. However, the number of visits by the Bidder to the customer premises should be at least once a quarter or as agreed to in the contract. The preventive maintenance team visiting the unit should be composite and possess sufficient expertise and spares to carry out preventive maintenance activities and resolve any pending unserviceability issues of the equipment.

(b) **Breakdown Maintenance**. In addition to preventive maintenance, the Bidder will also be responsible to undertake breakdown maintenance of the equipment. Defects on the equipment as and when observed, will be intimated to the Bidder by telephone/ fax. The Bidder will depute a team for undertaking repairs of the equipment within two working days from the reporting of the defect, in order to make the equipment operational. The Bidder will need to diagnose, test, adjust, calibrate and repair / replace the goods/equipment during the CMC period. However, defective hard disks, strong devices, if any, of the equipment, will not be returned to the Bidder and would be retained for destruction / safe custody. The downtime of the equipment will commence from the time a defect is reported by the user and the log of the same would be maintained.

(c) **Calibration**. Periodic inspection and calibration services as set forth in the equipment manual shall be provided by the Bidder, to ensure operational availability of the equipment. Requisite certificates may be rendered whenever major repairs/maintenance on equipment is undertaken.



(d) **Spares.** Supply of all parts (spares sourced from the OEM/OEM authorised vendor), including consumables, if any and material required for the optimal performance of the equipment as per the designed specifications mentioned in the equipment manual would be the responsibility of the Bidder.

(e) **Software.** The Bidder will provide support for maintenance of the software(s) during the period of CMC and would include the following:-

- (i) Upgrades, patches, fixes to the OS and the Application software.
- (ii) Back-up and restoration of software, as and when required.
- (iii) No malware certificate.
- (iv) Version of the software and IV & V (Independent verification and validation) certificate as per the applicable CMM Level, depending on the criticality of the equipment.
- (v) Method of checking the health of the software and debugging methods.

(f) **Obsolescence Management.** The obsolescence management for the equipment delivered under the scope of contract would form part of CMC Services. The obsolescence management will include providing "Form, Fit and Function" replacement of any system/sub system rendered obsolete during the period of CMC.

(g) The Terms of References for CMC are placed at **Annexure IV to Appendix E.**

Active Technology Obsolescence Management

22. OEM will indicate his methodology to undertake Active Obsolescence Management through life cycle of equipment which would include upgradation of systems/ subsystems/ units on completion of its fair service life. The Bidder/OEM (as applicable) shall also intimate the Buyer on likely technology obsolescence of various sub-assemblies/units/modules of equipment through an Annual Bulletin. In case of impending obsolescence of components, bulletin should specify either alternate item or option for

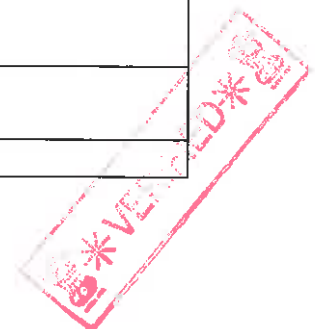
life- time buy as under:-

(a) The Bidder/OEM (as applicable) will notify the Buyer not less than three years before the closure of its production line about the intention to close production of equipment for provision of purchasing spare parts, before closure of the said production line.

(b) Three years prior to completion of design/service life of equipment, the Bidder/OEM (as applicable) will submit techno-commercial proposal for upgradation of equipment, wherever applicable, to mitigate technology obsolescence and for ensuring product support for next 15 years.

Annexure I to Appendix E(Refers to Para 34 (Part II) of RFP and
Para 11 of Appendix E)**TECHNICAL LITERATURE****Equipment: DSRV Simulators**

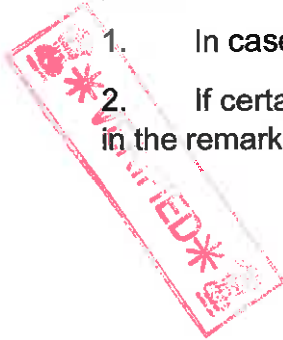
Ser	Technical Literature	Unit Cost	No. of copies	Total Cost	Remarks
1.	User Handbook/operators Manual		04 sets		
2.	Design details and inspections reports pertaining to construction of Civil Structure including labs.		04 sets		
3.	Technical Manual (a) Part-I. Tech Description, Specifications, functioning of various Systems (b) Part-II. Inspection/ Maintenance tasks, Repair procedures, Materials used, Fault diagnostics and use of Special Maintenance tools (SMT's)/ Special Test Equipment (STE's) (c) Part III. Procedure assembly/ disassembly, for major repairs, safety precautions. (d) Part IV. (i) Part List with drawing Reference (ii) List of SMT/STE's with Test Bench		04 sets		
4.	Manufacturer's Recommended List of Spares (MRLS) with NSNs (NATO Stock Nos) (where applicable)		04 sets		
5.	Illustrated Spare Part List (ISPL)		04 sets		
6.	Technical Manual on STE with drawing reference.		04 sets		
7.	DSRV SIMULATORS Exercise Manuals		15 sets		
8.	Guarantee Certificates.		02 set		



<u>Ser</u>	<u>Technical Literature</u>	<u>Unit Cost</u>	<u>No. of copies</u>	<u>Total Cost</u>	<u>Remarks</u>
9.	Quality Assurance / Trials Reports.		02 set		
10.	Equipment list, their shelf life (if any), OEM, authorised OEM firms.		02 sets		
11.	Safety Procedures for operation		10 sets		
12.	CD's on the above Tech literature		04 sets		
13.	Any Other (Specify)		-		

Notes: -

1. In case any additional equipment is used their tech literature will be included.
2. If certain technical literature is being provided free of cost it should be indicated in the remarks column.



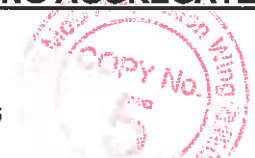
Annexure II to Appendix E
(Refers to Para 34 (Part II) of RFP)

TRAINING AGGREGATES

1. **Equipment:** DSRV Simulators

<u>S No</u>	<u>Description of Training</u>	<u>Scale for Equipment</u>	<u>Unit Cost</u>	<u>Total Cost</u>	<u>Remarks</u>
(a)	Computer based training package based on interactive multimedia to include:- (i) Full graphics, Animation test and sound. (ii) Symptoms-faults correlation (expert system)	Two Sets			
(b)	Training Aids to include:- (i) Charts (ii) Slides (iii) Training Brochures (iv) Training Work Models (v) Blow up diagram (vi) Video films	Two sets			
(c)	Cost of training in India at buyers premises:- Training for 20 personnel				Number of trainees as mentioned at Para 16 of RFP
(d)	Any other				

Total Cost:

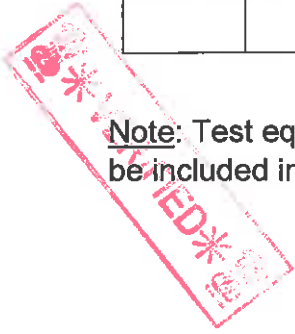


Annexure III to Appendix E
(Refers to Para 34 (Part II) of
RFP and Para 8 of Appendix E)

MAINTENANCE ROUTINES/ SERVICES/ CALIBRATION OF EQUIPMENT

Sr.	Equipment	Services/ Maintenance/ Routines/ Calibration	Periodicity	Remarks

Note: Test equipment that may be required 'on-site' for calibrating the equipment should be included in the list above.



Annexure IV to Appendix E
(Refers to Para 34 ((Part II) of
RFP and Para 21(g) of Appendix
E)

**TERMS OF REFERENCE FOR CMC FOR
DSRV SIMULATOR**

1. The various terms and conditions of proposed CMC are enumerated in succeeding paragraphs. The **Seller** should undertake maintenance and repair of the DSRV Simulators. The Seller shall provide following services:-

- (a) Maintenance and upkeep of: -
- (i) System Hardware
 - (ii) System Software
- (b) Periodic Preventive Maintenance
- (c) Breakdown Maintenance

2. **Duration of CMC.** The CMC would commence post completion of two years of warranty period. The duration of CMC would be Ten (10) years.

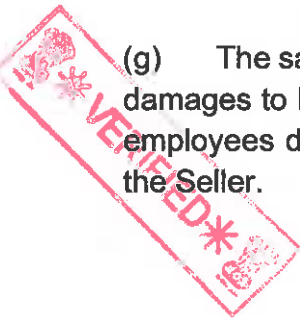
3. **Responsibilities of Buyer.** The Buyer shall provide full access of the equipment to SELLER's authorized representatives. The responsibilities of the Indian Navy / SRUs shall be as follows: -

- (a) Provide proper earthing /lightning requirements at site.
- (b) Provide stabilized AC mains power supply.
- (c) The trained user shall be able to carry out first level diagnostics as per BITE facility available with the equipment and restrict repair of the equipment to the extent of replacement of faulty subsystem only from the stock of spares maintained by the supplier at the respective unit.

- (d) *IN* Reps shall not undertake any investigation/repairs at sub system level.
- (e) Maintenance of equipment log book of Reference System supplied for fault diagnosis.
- (f) A representative of the Buyer must be present at site at all times when services are being performed by the Service provider on site.
- (g) The Buyer shall communicate any faults in the DSRV Simulator to the Seller via Fax/Letter/Email/Telephonically.

4. **Responsibilities of Seller.** The Seller shall:-

- (a) Keep the equipment in good working condition through preventive and corrective maintenance.
- (b) The Seller is to undertake a periodic health audit and carry out Preventive Maintenance of the DSRV Simulator.
- (c) Ensure availability of minimum One service engineer at all times at the DSRV Simulators.
- (d) Seller will provide the obsolescence management and upgradation plan atleast two months prior to completion of CMC contract along with proposed solutions.
- (e) Seller shall rectify the defects projected within 15 working days of intimation by the BUYER.
- (f) Seller will bear full responsibility of the work done by its employees deputed for undertaking the CMC.
- (g) The safety of the employees will be the responsibility of the Seller, including damages to life and property. Associated insurance / liability cover to the Seller's employees deputed for undertaking the CMC, if any, will be the responsibility of the Seller.



(h) The seller is to provide a list of consumables and Ready Use spares required for hassle free operation of the DSRV Simulators keeping in mind the consumption rate and the envisaged / history of spares requirement.

(j) The Seller would ensure a minimum stocking of the following:-

(i) One month stock for consumables.

(ii) Complete list of 'Ready use' spares as agreed with the Buyer.

(k) The Seller shall bear the cost for any Hardware and Software upgradation within the CMC duration.

(l) **Software.** The Bidder will provide support for maintenance of the software(s) during the period of CMC and would include the following: -

(i) Upgrades, patches, fixes to the OS and the Application software.

(ii) Back-up and restoration of software, as and when required.

(iii) No malware certificates.

(iv) Version of the software (Independent verification and validation) certificate as per the applicable CMM Level.

(v) Method of checking the health of the software and debugging methods.

(m) **Liquidation of Defects in Warranty.** Seller shall liquidate all existing warranty defects prior commencement of the CMC.

5. **Repair Philosophy.** The Seller shall provide Product Support in the form of CMC. The repair philosophy for the various constituents of the system will be as follows:-

(a) If within the CMC Period, the Equipment fails to perform as per its specifications, the Seller shall rectify the defects through replacement or repair free of charge within 10 working days of notification of such defects.

(b) The defects shall be intimated to the Buyer and repairs/replacement shall be carried out within 15 working days of reporting the defects.



(c) The Seller will ensure that down time does not exceed 10 working days of the CMC period at any one time and not exceeding a cumulative period of 5% (18 days) of CMC Period on yearly basis.

(d) Replacement of all faulty / failed component(s) / spare(s) / module(s) / motherboards / processors / display etc. including all accessories supplied as part of the DSRV Simulators shall be replaced or rectified free of cost during the CMC.

(e) The Seller shall maintain a stock of spares based on statistical data regarding the observed failure rates and the same are to be used for carrying out Defect Rectification (DR).

(f) Maintenance routines over and above the manufacturer's recommendation as desired by the Indian Navy will be included in the maintenance schedule and the same carried out by the Seller. All associated computer and paper work including spares consumption data management, defect analysis, etc will be undertaken by the Seller.

(g) If the defects are not attended to within 15 working days, a down time compensation @0.5% of the CMC cost of the respective year per week of delay or part thereof will be levied for respective system. In case required spares are not available in stock, the down time shall be a maximum of 14 working days else down time compensation @0.5% of the CMC cost of the respective year per week of delay or part thereof shall be levied to a maximum of 10% of the CMC Value for respective system.

(h) The Response time (RT) for undertaking Defect Identification (DI)/ Defect Rectification (DR) post receipt of complaint from BUYER does not include following components for downtime calculations: -

(i) The time elapsed for obtaining Gate Pass / security clearance for access.

(ii) The time elapsed due to power or environmental failures.

(iii) Time taken to recover the system from failures due to power/ environment failures.

(iv) Time taken for scheduled maintenance / trouble shooting either for preventive purposes or improvement in function of the system.



(v) Time taken for reconfiguration or other planned downtime situations.

(j) **Exclusion from CMC.** The following are not covered under CMC services:-

(i) Any unauthorized modification or operation.

(ii) Defects resulting from water Ingress units/corroded units/ units with missing screws and bolts/unauthorized opening of units/ altered modifications by operator.

6. **Preventive Maintenance.** The preventive maintenance requirements as per approved maintenance schedules are to be met as follows: -

(a) The Seller will carry out preventive maintenance atleast once in every Quarter (or as per defined maintenance schedule).

(b) The Seller will conduct one Training Program on preventive maintenance (once every year), to impart knowledge regarding upkeep of the Hardware and Software.

7. **Satisfactory Performance Certificate.** The units {SRUW and SRU(E)} where the DSRV Simulators are envisaged to be fitted shall provide Satisfactory Performance Certificate on behalf of the Buyer on completion of services every year.

8. **Payment for CMC.** The payment for CMC would be made on half yearly basis for each system post submission of the following documents: -

(a) Ink signed invoice by the Seller.

(b) Satisfactory Performance Certificate signed by the Seller and the Buyer reps.

9. **Technical Documentation.** All necessary changes in the documentation (Technical and Operators manual) for changes carried out on hardware and software of the equipment will be provided by the Seller.



10. The maintenance routines and consumables shall be mutually reviewed every year post commissioning, to incorporate lessons learnt during operation. The periodicity of reviewing of spares could be reduced by the Buyer, if necessary, to harmonise the list with the lessons learnt.

11. **Obsolescence Management.** The obsolescence management for the equipment delivered under the scope of contract would form part of CMC Services. The obsolescence management will include providing "Form, Fit and Function" replacement of any system/sub system rendered obsolete during the period of CMC.

12. **Termination of the CMC.** The Buyer reserves its right to terminate the CMC at any time without assigning any reason after giving a notice of six months. The Seller will not be entitled to claim any compensation against such termination. However, while terminating the CMC, if any payment is due to the Seller for maintenance services already performed in terms of the CMC, the same would be paid to it on pro rata basis.

Appendix F

(Refers to Para 45 (Part III) of RFP)

COMMERCIAL CLAUSES**1. Payment Terms****1.1 INCOTERMS for Delivery**

1.1.1 The delivery of goods will be based on DDP INCOTERMS-2020 to Submarine Rescue Unit's Base Infrastructure Facilities at Mumbai and Vishakhapatnam, India with ultimate consignee as Material Superintendent/ Controller Warehousing (CWH), Mumbai and Vishakhapatnam.

1.2. Currency of Payment

1.2.1 Indian bidders should submit their bids in Indian Rupees.

1.3 Contract Price and Requirement of Bank Guarantees

1.3.1. **Total Contract Price.** The Total Contract Price will be the final price negotiated by CNC including taxes and duties applicable at the time of signing of Contract.

1.3.2 **Base Contract Price.** The Base Contract Price will be considered as Total Contract Price excluding taxes and duties applicable at the time of signing of Contract and excluding the Total Price of CMC.

1.3.3 **Bank Guarantee(s).** For the purpose of payment of Advances to the Bidder and submission of various Bank Guarantees by the Bidder i.e Advance Payment Bank Guarantee (APBG) and Additional Bank Guarantee (ABG), as applicable, Base Contract price will be considered. For Performance cum Warranty Bank Guarantee (PWBG), Total Contract Price including taxes and duties is to be considered.

1.3.4 For orders with CMC, an additional Performance Bank Guarantee (PBG) is to be submitted by the Bidder for which the Total Price of CMC for contracted duration will be considered.

1.3.5 All Bank Guarantee(s) requirements viz Advance Payment Bank Guarantee (APBG), Performance-cum-Warranty Bank Guarantee (PWBG), Additional Bank Guarantee (ABG), Performance Bank Guarantee (PBG) etc are to be submitted as per following: -

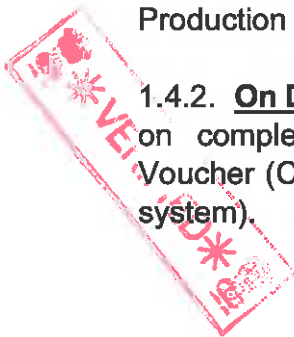


1.3.5.1 **Indian Bidder.** In case of Indian Bidders, the Bank Guarantee(s) shall be from any Indian Public or Private Scheduled Commercial Bank.

1.4 **Payment to Indian Bidders.** The schedule for payments will be based on the Buyers requirements, enumerated at succeeding Paragraphs. The summary of delivery schedule, payments to be made and schedule of submission/release of Advance Bank guarantee (s), as applicable, is specified at Annexure V to Appendix F.

1.4.1. **Advance Payment** Fifteen (15)% of the Base Contract Price for DSRV simulator excluding the CMC price shall be paid within thirty (30) days of submission of claim and a Bank Guarantee for the equivalent amount, subject to correction and acceptability of the documents submitted. The prescribed format of the Advance Payment Bank Guarantee (APBG) is placed at Annexure II to Appendix F. The Advance Payment Bank Guarantee (APBG) will be deemed to be proportionately and automatically reduced until full extinction along with and prorata to value of each delivery, as evidenced by corresponding copy of document proving delivery and invoices of goods/services supplied/provided. The date of delivery would be reckoned from the date of release of Advance Payment by the Buyer to the Seller (T₀) provided the Seller submits the documents mandated by the DAP for release of advance by the Buyer within 45 days of signing of contract. In the event of the Seller not submitting the said documents within 45 days of signing of contract, the period between the 45 day and actual submission of documents will be excluded from the actual date of advance payment to arrive at the delivery date. In case, no advance is to be paid, the date for reckoning date of delivery would be the date of signing of contract. This clause will not be applicable in cases wherein Advance payment is released after FOPM is successfully validated. In such cases, date of accord of Bulk Production Clearance will be date for reckoning date of delivery.

1.4.2. **On Delivery.** 20 % of the contract price of deliverables shall be paid on completion of Installation post delivery and issue of Certified Receipt Voucher (CRV) issued by the Buyer for each system (total 40 % for both system).



1.4.3 Stage-wise Payments.

1.4.3.1 The payments will be done in stages as under: -

Sl	Activity	Scheme for Payment
(a)	Signing of contract	15% of the Base contract price as defined at Para 1.3.2 of Appendix F to the RFP
(b)	Provision of Infrastructure for both Simulators	20% of the Base contract price as defined at Para 1.3.2 of Appendix F to the RFP
(c)	Delivery, and Installation of of 1 st Simulator with spares/ documentation/ Training Aids	20%
(d)	User Acceptance Trials of 1 st Simulator	7.5%
(e)	Delivery, and Installation of 1 nd Simulator with spares/ documentation/ Training Aids	20%
(f)	User Acceptance Trials of 1 nd Simulator	7.5%
(g)	Completion of Warranty Period of 1 st Simulator	5%
(h)	Completion of Warranty Period of 1 nd Simulator	5%

1.4.3.2 For stages mentioned above, payments will be released based upon the Completion certificate for all activities mentioned therein given by Buyer's representative.

1.4.4 CMC Payments. Half-yearly payments will be made by PCDA/CDA on submission of User clearance certificate through issue of ECS.

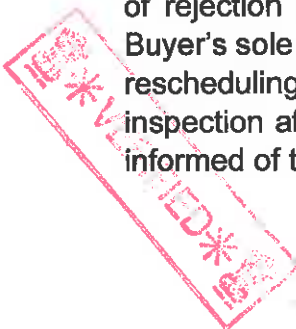
1.4.5 Payment of Taxes and Duties. Payment of taxes, duties and statutory levies will be made on submission of requisite documentary proof to Paying authority. Reimbursement of taxes and duties will be as per rates and amounts indicated in the commercial bid/contract or as per actuals whichever is lower.

1.4.6 **Exchange Rate Variation.** Exchange Rate variation shall be applicable for Rupee contracts with Indian Vendors, based on RFPs issued under all categories of capital acquisitions mentioned at Para 8 to 12 of Chapter I of DAP. The indigenous & import components as also the various currencies (of the import components) for ERV purposes, must be determined in advance. The guidelines on protection of Exchange Rate Variation are given at **Annexure I to this Appendix.**

2. **Performance-cum-Warranty Bank Guarantee Clause.** A Performance-cum-Warranty Bank Guarantee (PWBG) of **3%** of value of the Total Contract Price including taxes and duties would be furnished by the Bidder in the form of a Bank Guarantee to sequentially act as Performance Bank guarantee till the delivery and as Warranty Bank Guarantee on delivery. The PWBG shall be submitted by the Bidder within one month of signing of contract and shall be valid for a period, until three months beyond the warranty period, as specified in the RFP. If at any stage, the Performance Guarantee is invoked by the Buyer either in full or in part, the Bidder shall make good the shortfall in PWBG within 30 days by an additional Bank Guarantee for equivalent amount. In the event of failure to submit the required Bank Guarantee against invoked Performance Guarantee, equivalent amount will be withheld from the next stage payment till the shortfall in the Bank Guarantee is made good by the Bidder. The prescribed format of the Performance-cum-Warranty Bank Guarantee is placed at **Annexure III to Appendix F.**

3. **Performance Bank Guarantee for CMC.** The SELLER will be required to furnish a Performance Guarantee by the way of a Bank Guarantee of a sum equal to 3% of the Annual Drawl of CMC value 30 days prior to commencement of CMC. Performance Bank Guarantee should be valid for one year and will be renewed every year till completion of CMC. In case, the annual CMC cost is different for different years of CMC, maximum annual CMC cost will be considered for the purpose of determination of value of performance guarantee. Additionally, the last performance bank guarantee shall be valid for a period of 90 days after completion of CMC. The format of the Performance Bank Guarantee is to be as per **Annexure III to Appendix F.**

4. **Inspection.** Pre Dispatch Inspection (PDI) would be at the discretion of the Buyer. If it is PDI, the Bidder Should intimate at least 45 days prior to the day when the equipment is to be offered for PDI to enable Buyer's personnel to be available for inspection. All the expenses towards PDI will be borne by the Bidder except transportation and accommodation of Buyer's PDI team, which will be deputed at Buyer' expense. In case of rejection of Goods during PDI, re-PDI will be undertaken at Bidder's premises at Buyer's sole discretion. In the event of a failed PDI, the Bidder shall consult the Buyer for rescheduling re-PDI. In case of JRI, the representative of the Seller may be present for inspection after the equipment reaches the concerned destination. The Seller would be informed of the date for JRI.

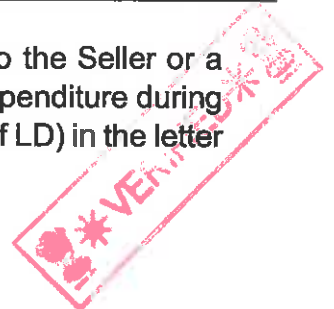


5. **Liquidated Damages (LD)**. In the event of the Bidder's failure to submit the Documents, supply the stores/ goods, perform services, conduct trials, installation of equipment, training as per schedule specified in this contract, the BUYER may, at his discretion withhold cost of the specific lot/batch or 1% of the Project cost, whichever is higher, until the completion of the contract. The BUYER may also deduct from the SELLER as agreed, liquidated damages to the sum of 1/100 of the delay percentage {Delay percentage = (Period of Delay in Delivery in Weeks) x 100 / (Delivery Period in weeks as per contract)} of the Base Contract Price of the delayed/ undelivered stores/ services mentioned above for every week of delay or part of a week, subject to the maximum value of the Liquidated Damages being not higher than 10 % of the contract price of the value of delayed stores/ services (Any extension given by the Buyer for delay attributable to Buyer or Force Majeure Clause to be factored in delivery period).

6. **Payment Deductions and Damages for Shortfalls in CMC Services**

If the defects are not attended to within 15 working days, a down time compensation @0.5% of the CMC cost of the respective year per week of delay or part thereof will be levied for respective system. In case required spares are not available in stock, the down time shall be a maximum of 14 working days else down time compensation @0.5% of the CMC cost of the respective year per week of delay or part thereof shall be levied to a maximum of 10% of the CMC Value for respective system.

7. **Denial Clause**. In case the delay in delivery is attributable to the Seller or a non-force majeure event, the Buyer may protect himself against extra expenditure during the extended period by stipulating a denial clause (over and above levy of LD) in the letter



informing the Seller of extension of the delivery period. In the denial clause, any increase in statutory duties and/or upward rise in prices due to the Price Variation Clause (PVC) and/or any adverse fluctuation in foreign exchange are to be borne by the Seller during the extended delivery period, while the Buyer reserves his right to get any benefit of downward revisions in statutory duties, PVC and foreign exchange rate. Thus, PVC, other variations and foreign exchange clauses operate only during the original delivery period. The format for extension of delivery period/performance notice under the Denial clause is at **Annexure V to Appendix F.**

Annexure I to Appendix F
(Refers to Para 1.4.6 of Appendix F)

GUIDELINES FOR PROTECTION OF EXCHANGE RATE VARIATION IN CONTRACTS

1. Parameters to be kept in view while formulation ERV Clause.

(a) In contracts with Indian Vendors in all categories of capital acquisitions where there is an import content, ERV clause will be provided. However, ERV clause shall not be applicable to contracts in following conditions:-

- (i) The delivery period is less than one year; or
- (ii) The rate of exchange variation is within the band of +/- 2.5%.

(b) ERV clause will be framed according to the specific requirements of the contract. While calling for information at the RFP stage/formulation of ERV clauses in the contracts, the following factors are to be taken into consideration depending upon the requirements of the individual contracts:-

- (i) Year wise and major currency wise import break up is to be indicated.
- (ii) Detailed time schedule for procurement of imported material/Services and their value at the FE rates adopted for the contract is to be furnished by the vendor as per the format given below:-

YEAR	TOTAL COST OF IMPORTED MATERIAL/SERVICES (In rupees)	FE CONTENT-OUT FLOW (equivalent in rupees ₹ in crore)			
		DOLLAR DENOMINATED	EURO DENOMINATED	POUNDS DENOMINATED	OTHER CURRENCIES DENOMINATED (as applicable)



--	--	--	--	--	--

(iii) ERV clause will not be applicable in case delivery periods for imported content are subsequently to be refixed/extended unless the reasons for delivery period extension are attributable to the buyer.

(iv) For purposes of ensuring uniformity, the Base Exchange Rate on the ERV reckoning date will be adopted for each of the major foreign currencies. The Base Exchange Rate will be the BC Selling Rate of the Parliament Street Branch of State Bank of India, New Delhi. The ERV reckoning date will be the last date of submission of commercial bids as per RFP. In cases where Option Clause is exercised, the date of reckoning of ERV will be the last date of submission of bids for the RFP of the Original Procurement Case.

(v) ERV clause in the contract is to clearly indicate that ERV is payable/refundable depending upon exchange rate as prevalent on the date of transaction with reference to Base Exchange Rate on the ERV reckoning date.

(vi) Other issues which are peculiar to the contract.

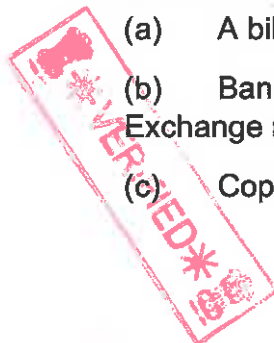
2. Methodology For Claiming ERV

"The prices finalised in the contract are based on the **base** exchange rates indicated in the contract. The year-wise amount of foreign exchange component of the imported items as indicated in the contract shall be adjusted for the impact of exchange Rate Variation of the Rupee based on the exchange rate prevailing on the date of each transaction, as notified by the SBI, Parliament Street Branch, New Delhi. The impact of notified Exchange Rate Variation shall be computed on an yearly basis for the outflow as tabulated in Annexure..... (The table at Para 1(b) (ii) is to be an Annexure to the contract) and shall be paid/refunded before the end of the financial year based on the certification of Finance Head of the concerned Division.....".

3. Paying authority is to undertake a pre-audit of the documents before payment.

4. Documentation for Claiming ERV. The following documents would need to be submitted in support of the claim on account of ERV:-

- (a) A bill of ERV claim enclosing worksheet.
- (b) Banker's Certificate/debit advice detailing Foreign Exchange paid and Exchange rate as on date of transaction.
- (c) Copies of import orders placed on the suppliers.



(d) Invoice of supplier for the relevant import orders



Annexure II to Appendix F
 (Refers to Para 1.4.1 of Appendix F)

BANK GUARANTEE FORMAT FOR ADVANCE

To

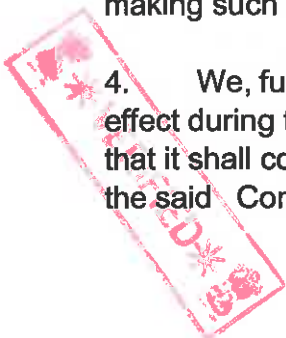
The _____
 Ministry of _____
 Government of India
 _____ (complete postal address of the beneficiary)

1. "Whereas President of India represented by the _____ Ministry of _____ Government of India (hereinafter referred to as BUYER) have entered into a Contract _____ No. _____ (No. of Contract), dated _____ (Date of Contract) with M/s _____ (Name of SELLER) (referred to as SELLER) and whereas according to the said Contract the BUYER has undertaken to make an advance payment of Rs/ US \$/Euro/PS £/Yen/AUD/SGD _____ being payment of _____ % of the total value of Rs/ US \$/Euro/PS £/Yen/AUD/SGD _____ of the said Contract, against issuance of an advance guarantee by a bank."

2. We _____ (indicate the name of the bank) do hereby undertake to pay the amounts due and payable under this guarantee without any demur, merely on a demand from the BUYER intimating that the SELLER is in breach of the Contractual obligations stipulated in the said Contract. Any such demand made on the bank shall be conclusive as regards the amount due and payable by the Bank under this guarantee. However, our total liability under this guarantee shall be restricted to an amount not exceeding Rs/ US \$/Euro/PS £/Yen/AUD/SGD _____.

3. We undertake to pay to the BUYER any money so demanded notwithstanding any dispute or disputes raised by the SELLER in any suit or proceedings pending before any Court or Tribunal relating thereto our liability under this present being absolute and unequivocal. The payment so made by us under this bond shall be valid discharge of our liability for payment there under and the SELLER shall have no claim against us for making such payment.

4. We, further agree that the guarantee herein contained shall remain in full force and effect during the period that would be taken for the performance of the said Contract and that it shall continue to be enforceable till all the dues of the BUYER under or by virtue of the said Contract have been fully paid and its claims satisfied or discharged



or till _____ office / Department / Ministry of _____ certifies that the terms and conditions of the said Contract have been fully and properly carried out by the said SELLER and accordingly discharges this guarantee.

5. We, further agree with the BUYER that the BUYER shall have the fullest liberty without our consent and without affecting in any manner our obligations hereunder to vary any of the terms and conditions of the said Contract or to extend time of performance by the said SELLER from time to time or to postpone for any time or from time to time any of the powers exercisable by the BUYER against the said SELLER and to forbear or enforce any of the terms and conditions relating to the said Contract and we shall not be relieved from our liability by reason of any such variation, Amendment issued vide MoD ID No. 4(50)/D(Acq)/08 dated 20.06.2016 or extension being granted to the said SELLER or for any forbearance, act or omission on the part of the BUYER or indulgence by the BUYER to the said SELLER or by any such matter or thing whatsoever which under law relating to sureties would, but for this provision, have effect of so relieving us.

6. The amount of this guarantee will be progressively reduced by (percentage of advance) _____ of total value of each part shipment/services against the stage payment released by the BUYER for that shipment/services made by the SELLER and presentation to us of the payment documents.

7. This guarantee will not be discharged due to the change in the constitution of the bank or the BUYER/SELLER.

8. We, undertake not to revoke this guarantee during the currency except with the previous consent of the BUYER in writing.

9. Notwithstanding anything contained herein above:-

(a) Our liability under this Guarantee shall not exceed Rs/ US \$/Euro/PS £/Yen/AUD/SGD _____ (in words) _____.

(b) This Bank Guarantee shall remain valid until _____ (hereinafter the expiry date of this guarantee) the Bank Guarantee will cease to be valid after _____ irrespective whether the Original Guarantee is returned to us or not.

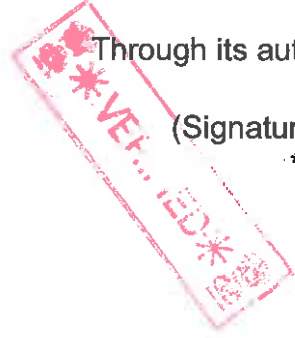
(c) We are liable to pay guaranteed amount or any part thereof under this Bank Guarantee only and only if you serve upon us a written demand or a claim in writing on or before _____ (Expiry Date).

Dated the _____ day of _____ (month and year)



Place :

Signed and delivered by _____ (Name of the bank)



Through its authorised signatory

(Signature with seal)

Annexure III to Appendix F
(Refers to Para 2 & 3 of Appendix F)

BANK GUARANTEE FORMAT FOR PERFORMANCE-CUM-WARRANTY

To

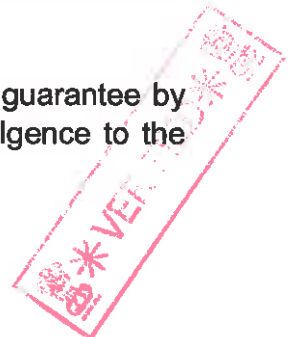
The _____
Ministry of _____
Government of India _____
_____ (complete postal address of the beneficiary)

Dear Sir,

1. Whereas President of India represented by the _____ Ministry of _____, Government of India (hereinafter referred to as BUYER) have entered into a Contract No. _____ dated _____ (hereinafter referred to as the said Contract) with M/s. _____ (hereinafter referred to as the SELLER) for supply of goods as per Contract to the said BUYER and whereas the SELLER has undertaken to produce a bank guarantee amounting to Rs/ US \$/Euro/PS£/Yen/AUD/SGD _____ which is 5% of the Total Contract Price (including taxes and duties) to cover 5% of Total Contract Price (including taxes and duties) each for Performance and Warranty in sequence, to secure its obligations towards Performance-cum- Warranty to the BUYERS.

2. We, the _____ bank hereby expressly, irrevocably and unreservedly undertake the guarantee as principal obligors on behalf the SELLER that, in the event that the BUYER declares to us that the amount claimed is due by way of loss or damage caused to or would be caused or suffered by the BUYER by reason of breach/failure to perform by the said SELLER of any of the terms and conditions in the Contract related to Performance and Warranty clauses, we will pay you, on demand and without demur, all and any sum up to {5% of Total Contract Price (including taxes and duties)} _____ Rupees/ US \$/Euro/PS £/Yen/AUD/SGD only at any instance under this Guarantee. Your written demand shall be conclusive evidence to us that such repayment is due under the terms of the said Contract. We shall not be entitled to ask you to establish your claim or claims under this guarantee but will pay the same forthwith without any protest or demur. We undertake to effect payment upon receipt of such written demand.

3. We shall not be discharged or released from the undertaking and guarantee by any arrangements, variations made between you and the SELLER, indulgence to the



SELLER by you, or by any alterations in the obligations of the SELLER or by any forbearance whether as to payment, time performance or otherwise.

4. We further agree that any such demand made by the BUYER on the Bank shall be conclusive, binding, absolute and unequivocal notwithstanding any difference or dispute or controversy that may exist or arise between you and the SELLER or any other person.

5. In no case shall the amount of this guarantee be increased.

6. This Performance-cum-Warranty guarantee shall remain valid for a period until three months beyond the warranty period as specified in the Contract i.e. up to _____.

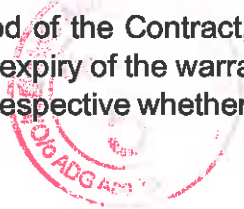
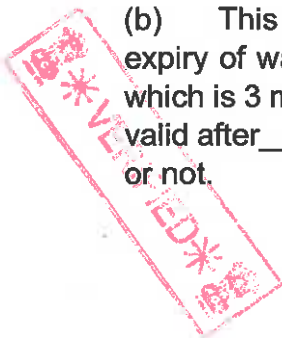
7. Subject to the terms of this Bank Guarantee, the issuing bank hereby irrevocably authorizes the beneficiary to draw the amount of up to Rs/ US \$/Euro/PS £/Yen/AUD/SGD _____ {5% of Total Contract Price (including taxes and duties)} for breach/failure to perform by the SELLER of any of the terms and conditions of the Contract related to performance and warranty clause. Partial drawings and multiple drawings under this Bank Guarantee are allowed within the above stated cumulative amount subject to each such drawing not exceeding 5% of the Total Contract Price (including taxes and duties) (Rs/ US\$/Euro/PS £/Yen/AUD/SGD _____ only) (Mention BG amount).

8. This guarantee shall be continuing guarantee and shall not be discharged by any change in the constitution of the Bank or in the constitution of M/s . We undertake not to revoke this guarantee during the currency except with previous consent of BUYER in writing.

9. Notwithstanding anything contained herein above:

(a) Our liability under this Guarantee shall not exceed Rs/ US \$/Euro/PS £/Yen/AUD/SGD _____ (Rupees _____ only (in words)).

(b) This Bank Guarantee shall remain valid until 3 months from the date of expiry of warranty period of the Contract, i.e up to _____ (mention the date) which is 3 months after expiry of the warranty period and the BG shall cease to be valid after _____ irrespective whether the Original Guarantee is returned to us or not.

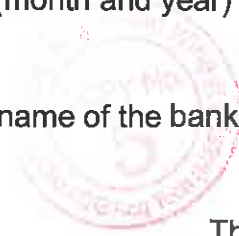


(c) We are liable to pay guaranteed amount or any part thereof under this Bank Guarantee only and only if you serve upon us a written demand or a claim in writing on or before _____ (Expiry Date).

Dated the _____ day of _____ (month and year)

Place :

Signed and delivered by _____ (name of the bank)



Through its authorised signatory
(Signature with seal)



Annexure IV to Appendix F
(Refers to Para 7 of Appendix F)

FORMAT FOR EXTENSION OF DELIVERY PERIOD/PERFORMANCE NOTICE

Name of the Procuring Entity.....

Extension of Delivery Period/Performance Notice

To
M/s (name and address of firm)

Sub: Contract No..... dated.....for the supply of.....

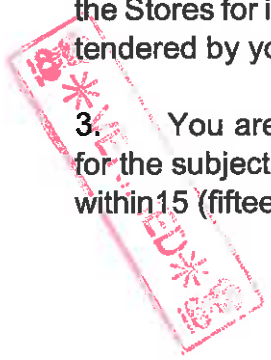
Ref: Your letter no. dated:

Dear Sir,

1. You have failed to deliver {the (fill in qty.) of Stores/the entire quantity of Stores} within the contract delivery period [as last extended up to] (fill in date). In your letter under reply you have asked for [further] extension of time for delivery. In view of the circumstances stated in your said letter, the time for delivery is extended from (fill in date) to (fill in date).

2. Please note that notwithstanding the grant of this extension in terms of Clause (fill in clause number) of the subject contract an amount equivalent to % (.....per cent) of the delivered price of the delayed goods for each week of delay or part thereof (subject to the ceiling as provided in the aforesaid clause) beyond the original contract delivery date/the last unconditionally re-fixed delivery date (as & if applicable), viz., (fill in date) will be recovered from you as liquidated damages. You may now tender the Stores for inspection [balance of the Stores] in terms of this letter. Stores if any already tendered by you for inspection but not inspected will be now inspected accordingly.

3. You are also required to extend the validity period of the performance guarantee for the subject contract from (fill in present validity date) to (fill in required extended date) within 15 (fifteen) days of issue of this amendment letter.



4. The above extension of delivery date will also be subject to the following Denial Clause: -

(a) That no increases in price on account of any statutory increase in or fresh Imposition of customs duty, GST or on account of any other taxes/duty, including custom duty), leviable in respect of the Stores specified in the said contract which takes place after (insert the original delivery date) shall be admissible on such of the said Stores, as are delivered after the said date; and,

(b) That notwithstanding any stipulation in the contract for increase in price on any other ground including foreign exchange rate variation, no such increase which takes place after (insert the reckoning date as per DAP 2020) shall be admissible on such of the said Stores as are delivered after the said date.

(c) But nevertheless, the Buyer shall be entitled to the benefit of any decrease in price on account of reduction in or remission of customs duty, GST or on account of any other Tax or duty or on any other ground as stipulated in the price variation clause or foreign exchange rate variation which takes place after (insert the original delivery date).

5. All other terms and conditions of the contract remain unaltered. This is without any prejudice to Buyer's rights under the terms and conditions of the subject contract.

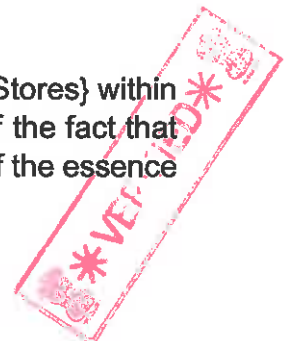
6. Please intimate your unconditional acceptance of this amendment letter within 10 (ten) days of the issue of this letter failing which the contract will be cancelled at your risk and expense without any further reference to you.

Yours faithfully,
(Authorised Officer)
Duly authorised,
for and on behalf of
The President of India

Note: Select one option within { } brackets; delete portion within [] brackets, if not applicable; fill in () brackets. Brackets and this note are not to be typed.

Substitute following first para instead of first para in format above, for issuing a performance notice.

1. You have failed to deliver {the (fill in qty.) of Stores/the entire quantity of Stores} within the contract delivery period [as last extended up to] (fill in date). In spite of the fact that the time of delivery of the goods stipulated in the contract is deemed to be of the essence



of the contract, it appears that (fill in the outstanding quantity) are still outstanding even though the date of delivery has expired. Although not bound to do so, the time for delivery is extended from (fill in date) to (fill in date) and you are requested to note that in the event of your failure to deliver the goods within the delivery period as hereby extended, the contract shall be cancelled for the outstanding goods at your risk and cost.

Annexure V to Appendix F
(Refers to Para 9 (Part I) of RFP
and Para 1.4 of Appendix F)

DELIVERY SCHEDULE AND STAGES OF PAYMENT

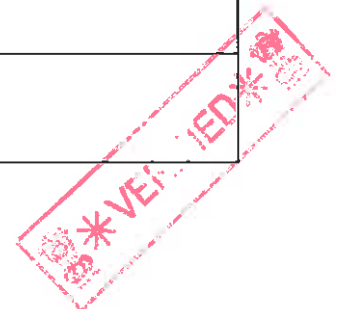
1. The broad Delivery schedule of 02 x DSRV Simulators would be as follows:-

Ser	Item	Timeline
(a)	Effective Date of Contract	T ₀
(b)	Provision of Infrastructure for both Simulators	T ₀ + 14 M
(c)	Delivery and Installation of 1 st Simulator with spares/ documentation/ Training Aids	T ₀ + 20 M
(d)	User Acceptance Trials of 1 st Simulator	T ₀ + 26 M
(e)	Delivery and Installation of 2 nd Simulator with spares/ documentation/ Training Aids	T ₀ + 26 M
(f)	User Acceptance Trials of 2 nd Simulator	T ₀ + 32 M

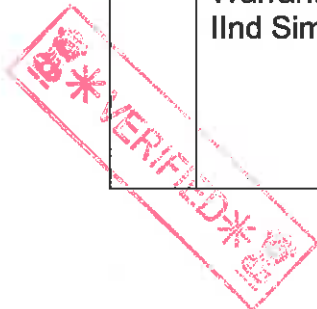
{{T₀ – refer to Para 1.4.1 of Appendix F (pg - 70)}}

2. The details of the payment schedule are as enumerated below

SI	Activity	Delivery Timelines (T₀ + Wks)	Scheme for Payment	Scheme for submission and Return of Advance Payment Bank Guarantees
(a)	Effective date of contract	T ₀	15% of the total contract price	APBG of equivalent amount to be submitted
(b)	Provision of Infrastructure for both Simulators	Within T ₀ + 14 M	20% of the total contract price (10% per Infrastructure)	
(c)	Delivery and Installation of 1 st Simulator with	Within T ₀ + 20 M	20%	



Sl	Activity	Delivery Timelines (T ₀ + Wks)	Scheme for Payment	Scheme for submission and Return of Advance Payment Bank Guarantees
	documentation/ Training Aids			
(d)	User Acceptance Trials of I st Simulator	Within T ₀ + 26 M	7.5%	
(e)	Delivery and Installation of II nd Simulator with documentation/ Training Aids	Within T ₀ + 26 M	20%	
(f)	User Acceptance Trials of II nd Simulator	Within T ₀ + 32 M	7.5%	
(g)	Completion of Warranty Period of Ist Simulator		5%	
(h)	Completion of Warranty Period of II nd Simulator		5%	APBG is to be returned on completion of successful User Acceptance Trials of both Simulators



Appendix G

(Refers to Para 45 (Part III) &
54(b) (Part IV) of RFP)

EVALUATION CRITERIA AND PRICE BID FORMAT**1. Evaluation Criteria.** The guidelines for evaluation of Bids will be as follows: -

1.1. Only those Bids will be evaluated, which are found to be fulfilling all the eligibility and qualifying requirements of the RFP, both technically and commercially. The bidder, whose price is arrived as lowest as per Evaluation criteria given in this Appendix, will be declared as L-1 bidder by Buyer.

1.2 In 'Buy (Indian-IDDM)', 'Buy (Indian)' and 'Buy& Make Indian' Cases.

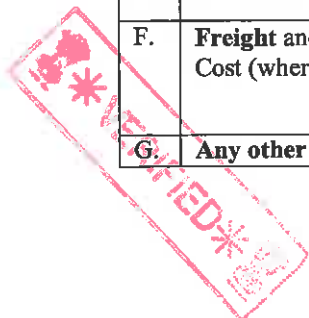
1.2.1 **Where DCF Technique as Given in Para 3 is Applicable.** DCF technique will be applied on quoted cost of all items including taxes and duties payable to Central/State/Local Governments to ascertain the NPV which would be used for determining L1 bidder, but with exclusion of BNE items sourced from common single source in accordance with Para 107 of Chapter II of DAP-20. The scope of BNE cost shall include the basic cost of the Main Equipment and OEM Training, Training Aggregates, Documentation, SMT/STE, Freight and OBS as applicable/as indicated in the RFP, which are exclusively sourced from the nominated vendor (OEM). No other cost including the cost of items sourced directly from third parties and the cost of activities jointly undertaken by the Bidder/Bidder's sub vendor and the nominated vendor (OEM) or any third parties are to be included in the BNE cost. BNE rate would also be separately negotiated. However, payment will be made after adding the actual cost of BNE, at the time of purchase from OFB/DPSU/Private vendor, to the L1 cost determined as mentioned above.

1.3 Custom duty on input materials shall not be loaded by the Indian Bidders in their price bids, if they are exempted under the existing Notifications. In such cases, necessary Custom Duty Exemption Certificate (CDEC) shall be issued by the Buyer. In cases where Custom Duty is not exempted, Basic Custom Duty on input material is to be included in the cost of Basic Equipment, Installation/Commissioning/Integration, BNE, ToT, MRLS, SMT, STE, ESP and any other item listed at Column (ii) of Para 2 below.

1.4 If there is a discrepancy between the unit price and the total price that is obtained by multiplying the unit price and quantity, the unit price will prevail and the total price will be corrected based on indicative rates of taxes and duties at columns (vi) and (vii) of Para 2 below. If there is a discrepancy between words and figures, the amount in words will prevail for calculation of price.

2. **Price Bid Format.** The Price Bid Format is given below and Bidders are required to fill this correctly with full details. No column of the Bid format has to be left blank. The clubbing of serials/sub serials to indicate a consolidated cost is not acceptable. Columns of 'quantity', 'unit cost', 'total cost (including all taxes and duties)', 'GST/IGST (%) and Custom Duty (%) are to be filled up with '0', 'positive numerical values' or 'Not Applicable' at every row as applicable. If any column is not applicable and intentionally left blank, the reason for the same has to be clearly indicated in the remarks column.

Ser	Items	Qty	Unit Cost	Total Cost (iii) x (iv)	Indicative Rate of Taxes & Duties used to arrive at Total Cost (as applicable)		Total Cost (including all taxes & duties) (v) + (vi) + (vii)	Remarks
					GST/IGST (%)	Custom Duty (%)		
(i)	(ii)	(iii)	(iv)	(v)	(vi)	(vii)	(viii)	(ix)
A.	Cost of Basic Equipment . Full break-up details may be given.							
B.	Cost of Installation / Commissioning/ Integration (where applicable)							
C.	Cost of Operator's Manual and Technical Literature (in English Language) including Illustrated Spare Parts List as per Annexure I to Appendix E.							
D.	Cost of Training Aids such as simulators, cut out models, films, charts etc as recommended by the supplier.							
E.	Cost of recommended period of Training excluding the cost of travel and boarding and lodging.							
F.	Freight and Transit Insurance Cost (where applicable).							
G.	Any other cost (to be specified).							



H.	CMC Cost giving year-wise break-up							
J.	Total Cost (Total of Serial A to J)							
K.	Foreign Exchange component of the proposal. (for Indian Vendors only)							This will be with reference to Para 2 of Annexure I to Appendix F.

Note: Taxes and Duties. All Indirect Taxes and Duties will be paid at actuals or as indicated in the Commercial bid by the Bidder. In case of any change in the tax structure/rates by BUYER's Government, only incremental/decremented change will be paid.

3. **Evaluation of Bids by DCF Technique** (Note: This clause is to be included only if there is AMC/CMC/PBL/LCSC clause or any other condition in RFP, resulting in different cash outflows in successive years) -

3.1 Net Present Value (NPV) is a variant of DCF method, which will be used by the Buyer for evaluation of Bids. The Net Present Value of a Bid will be equal to the sum of the present values of all the cash flows associated with it. The following formula will be used for calculating NPV of a bid –

$$NPV_n = \sum_{t=1}^n \frac{At}{(1+r)^t}$$

Where,

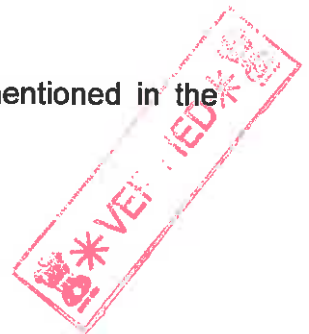
NPV = Net Present Value

At = Expected cash flow occurring at the end of year 't' as mentioned in the Payment schedule of Bid

n = Duration of cash flow stream

r = Discounting Rate

t = The period after which payment is done



The bid with the lowest NPV would be selected.

3.2. The Discounting rate will be 8%". (Note-This will be the Government of India's lending rate on loans given to state governments, as notified by Budget Division of Ministry of Finance annually)

3.3. **Structuring Cash Flows for Tenders/ Bids Received in the Same Currency.** The cash outflows as shown in price bids will be taken into consideration. NPV of different bids will be calculated using the formula given above and the one having lowest NPV will be selected as L-1.

Appendix H

(Refers to Para 50 (Part III) of RFP)

STANDARD CONDITIONS OF RFP**LAW**

1. The present Contract shall be considered and made in accordance to the laws of Republic of India.

ARBITRATION

(For Indian Private Vendors)

2.1 All disputes or differences arising out of or in connection with the present Contract, including the one connected with the validity of the present Contract or any part thereof, shall be settled by bilateral discussions.

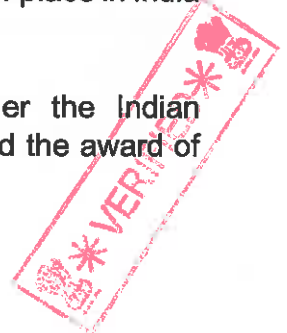
2.2 Any dispute, disagreement of question arising out of or relating to this Contract or relating to construction or performance (except as to any matter the decision or determination whereof is provided for by these conditions), which cannot be settled amicably, shall within sixty (60) days or such longer period as may be mutually agreed upon, from the date on which either party informs the other in writing by a notice that such dispute, disagreement or question exists, will be referred to the Arbitration Tribunal consisting of three arbitrators.

2.3 Within sixty (60) days of the receipt of the said Notice, one arbitrator shall be nominated in writing by SELLER and one arbitrator shall be nominated by BUYER.

2.4 The third arbitrator, shall be nominated by the parties within ninety (90) days of the receipt of the notice mentioned above, failing which the third arbitrator may be nominated under the provision of Indian Arbitration and Conciliation Act, 1996 (as amended from time to time) or by dispute resolution institutions like Indian Council of Arbitration or ICADR, at the request of either party, but the said nomination would be after consultation with both the parties. The arbitrator nominated under this Clause shall not be regarded nor act as an umpire.

2.5 The Arbitration Tribunal shall have its seat in New Delhi or such other place in India as may be decided by the arbitrator.

2.6 The Arbitration Proceedings shall be conducted in India under the Indian Arbitration and Conciliation Act, 1996 (as amended from time to time) and the award of such Arbitration Tribunal shall be enforceable in Indian Courts only.



2.7 The decision of the majority of the arbitrators shall be final and binding on the parties to this contract.

2.8 Each party shall bear its own cost of preparing and presenting its case. The cost of arbitration including the fees and expenses of the third arbitrator shall be shared equally by the SELLER and the BUYER.

2.9 In the event of a vacancy caused in the office of the arbitrators, the party which nominated such arbitrator, shall be entitled to nominate another in his place and the arbitration proceedings shall continue from the stage they were left by the retiring arbitrator.

2.10 In the event of one of the parties failing to nominate its arbitrator within sixty (60) days as above or if any of the parties does not nominate another arbitrator within sixty (60) days of the place of arbitrator falling vacant, then the other party shall be entitled after due notice of at least thirty (30) days to request dispute resolution institutions in India like Indian Council of Arbitration and ICADR to nominate another arbitrator as above.

2.11 If the place of the third arbitrator falls vacant, his substitute shall be nominated according to the provisions herein above stipulated.

2.12 The parties shall continue to perform their respective obligations under this contract during the pendency of the arbitration proceedings except in so far as such obligations are the subject matter of the said arbitration proceedings.

ARBITRATION
(For Central & State PSEs)

3. In the event of any dispute or difference relating to the interpretation and application of the provisions of the contracts, such dispute or difference shall be referred by either party for Arbitration to the sole Arbitrator in the Department of Public Enterprises to be nominated by the Secretary to the Government of India in-charge of the Department of Public Enterprises. The Arbitration and Conciliation Act, 1996 (as amended from time to time) shall not be applicable to arbitration under this clause. The award of the Arbitrator shall be binding upon the parties to the dispute, provided, however, any party aggrieved by such award may make a further reference for setting aside or revision of the award to the Law Secretary, Department of Legal Affairs, Ministry of Law & Justice, Government of India. Upon such reference the dispute shall be decided by the Law Secretary or the Special Secretary/Additional Secretary, when so authorised by the Law Secretary, whose decision shall bind the Parties finally and conclusively. The Parties to the dispute will share equally the cost of arbitration as intimated by the Arbitrator.

FORCE MAJEURE

4.1 Should any force majeure circumstances arise, each of the contracting party shall be excused for the non-fulfilment or for the delayed fulfilment of any of its contractual obligations, if the affected party within (45 days) of its occurrence informs in a written form the other party.

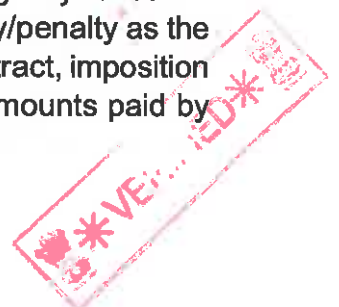
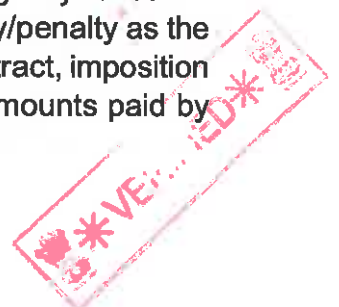
4.2 Force majeure shall mean fires, floods, natural disasters or other acts such as war, turmoil, strikes, sabotage, explosions, beyond the control of either party.

4.3 Provided the acts of The Government or any state parties of the seller which may affect the discharge of the Seller's obligation under the contract shall not be treated as Force Majeure.

PENALTY FOR USE OF UNDUE INFLUENCE

5.1 The Seller undertakes that he has not given, offered or promised to give, directly or indirectly any gift, consideration, reward, commission, fees brokerage or inducement to any person in service of the Buyer or otherwise in procuring the Contracts or forbearing to do or for having done or for borne to do any act in relation to the obtaining or execution of the Contract or any other Contract with the Government for showing or forbearing to show favour or disfavour to any person in relation to the Contract or any other Contract with the Government. Any breach of the aforesaid undertaking by the seller or any one employed by him or acting on his behalf (whether with or without the knowledge of the seller) or the commission of any offence by the seller or anyone employed by him or acting on his behalf, as defined in Chapter IX of the Indian Penal Code, 1860 or the Prevention of Corruption Act, 1988 or any other Act enacted for the prevention of corruption shall entitle the Buyer to cancel the contract and all or any other contracts with the seller and recover from the seller the amount of any loss arising from such cancellation. A decision of the buyer or his nominee to the effect that a breach of the undertaking had been committed shall be final and binding on the Seller.

5.2 Giving or offering of any gift, bribe or inducement or any attempt at any such act on behalf of the seller towards any officer/employee of the buyer or to any other person in a position to influence any officer/employee of the Buyer for showing any favour in relation to this or any other contract, shall render the Seller to such liability/penalty as the Buyer may deem proper, including but not limited to termination of the contract, imposition of penal damages, forfeiture of the Bank Guarantee and refund of the amounts paid by the Buyer.



INTEGRITY PACT

6. Further signing of an 'Integrity Pact' would be considered between government department and the bidder for schemes exceeding ₹ 20 Crores. The Integrity Pact is a binding agreement between the agency and bidders for specific contracts in which the agency promises that it will not accept bribes during the procurement process and bidders promise that they will not offer bribes. Under the IP, the bidders for specific services or contracts agree with the procurement agency or office to carry out the procurement in a specified manner. The essential elements of the IP are as follows:-

(a) A pact (contract) between the Government of India (Ministry of Defence) (the authority or the "principal") and those companies submitting a tender for this specific activity (the "bidders");

(b) An undertaking by the principal that its officials will not demand or accept any bribes, gifts, etc., with appropriate disciplinary or criminal sanctions in case of violation;

(c) A statement by each bidder that it has not paid and will not pay, any bribes;

(d) An undertaking by each bidder that he shall not pay any amount as gift, reward, fees, commission or consideration to such person, party, firm or institution (including Agents and other as well as family members, etc., of officials), directly or indirectly, in connection with the contract in question. All payments made to the Agent 12 months prior to tender submission would be disclosed at the time of tender submission and thereafter an annual report of payments would be submitted during the procurement process or upon demand of the MoD.

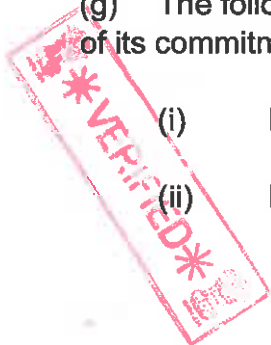
(e) The explicit acceptance by each bidder that the no-bribery commitment and the disclosure obligation as well as the attendant sanctions remain in force for the winning bidder until the contract has been fully executed;

(f) Undertakings on behalf of a bidding company will be made "in the name and on behalf of the company's chief executive officer";

(g) The following set of sanctions shall be enforced for any violation by a bidder of its commitments or undertakings:

(i) Denial or loss of contract;

(ii) Forfeiture of the Guarantee for Performance-cum-Warranty Bond;



- (iii) Payment to the Buyer of any such amount paid as gift, reward, fees or consideration along with interest at the rate of 2% per annum above LIBOR rate.
- (iv) Refund of all sums already paid by the Buyer along with interest at the rate of 2% per annum above LIBOR rate.
- (v) Recovery of such amount, referred to in (iii) and (iv) above, from other contracts of the Seller with the Government of India.
- (vi) At the discretion of the Buyer, the Seller shall be liable for action as per extant policy on Putting on Hold, Suspension and Debarment of Entities.
- (h) Bidders are also advised to have a company code of conduct (clearly rejecting the use of bribes and other unethical behavior) and a compliance program for the implementation of the code of conduct throughout the company.
- (j) The draft Pre-Contract Integrity Pact is attached as **Annexure I to this Appendix**. The vendors are required to sign them and submit separately along with the technical and commercial offers.

AGENTS

7. The Seller confirms and declares to the Buyer that the Seller is the original manufacturer of the stores referred to in this contract. The Seller confirms that he has not engaged any person, party, firm or institution as an Agent including his Agents already intimated to MoD; to, influence, manipulate or in any way to recommend to any functionaries of the Government of India, whether officially or unofficially, to the award of the contract to the Seller, or to indulge in corrupt and unethical practices. The Seller has neither paid, promised nor has the intention to pay to any person, party, firm or institution in respect of any such intervention or manipulation. The Seller agrees that if it is established at any time to the satisfaction of the buyer that the present declaration is in any way incorrect or if at a later stage it is discovered by the Buyer that Seller has engaged any such person, party, firm or institution and paid, promised or has intention to pay any amount, gift, reward, fees, commission or consideration to such person, party, firm or institution, whether before or after the signing of this contract, the Seller will be liable for any or all of the following actions:-

- (a) To pay to the Buyer any such amount paid as gift, reward, fees or consideration along with interest at the rate of 2% per annum above LIBOR rate.



(b) The Buyer will also have a right to put on hold or cancel the Contract either wholly or in part, without any entitlement or compensation to the Seller who shall in such event be liable to refund all payments made by the Buyer in terms of the Contract along with interest at the rate of 2% per annum above LIBOR rate

(c) The Buyer will also have the right to recover any such amount referred in (a) and (b) above from other contracts of the Seller with the Government of India.

(d) At the discretion of the Buyer, the Seller shall be liable for action as per extant policy on Putting on Hold, Suspension and Debarment of Entities

8. In case it is found to the satisfaction of the BUYER that the SELLER has engaged an Agent, or paid commission or influenced any person to obtain the contract as described in clauses relating to Agents and clauses relating to Penalty for Use of Undue Influence, the SELLER, on demand of the BUYER shall provide necessary information/inspection of the relevant financial documents/ information, including a copy of the contract(s) and details of payment terms between the vendors and Agents engaged by him.

Annexure I to Appendix H
(Refers to Para 20 (Part I) of RFP
and 6 (j) of Appendix H)

PRE-CONTRACT INTEGRITY PACT

General

1. Whereas the PRESIDENT OF INDIA, represented by Joint Secretary & Acquisition Manager (Army/Air Force/Maritime & Systems)/Major General & equivalent, Service Headquarters./Coast Guard, Ministry of Defence, Government of India, hereinafter referred to as the Buyer and the first party, proposes to procure (Name of the Equipment), hereinafter referred to as Defence Stores and M/s _____ represented by, _____ Chief Executive Officer (which term, unless expressly indicated by the contract, shall be deemed to include its successors and its assignees), hereinafter referred to as the Bidder/Seller and the second party, is willing to offer/has offered the Defence stores.

2. Whereas the Bidder is a private company/public company/partnership/registered export agency, constituted in accordance with the relevant law in the matter and the Buyer is a Ministry of the Government of India performing its functions on behalf of the President of India.

Objectives

3. Now, therefore, the Buyer and the Bidder agree to enter into this pre-contract agreement, hereinafter referred to as Integrity Pact, to avoid all forms of corruption by following a system that is fair, transparent and free from any influence/unprejudiced dealings prior to, during and subsequent to the currency of the contract to be entered into with a view to:

3.1 Enabling the Buyer to obtain the desired defence stores at a competitive price in conformity with the defined specifications of the Services by avoiding the high cost and the distortionary impact of corruption on public procurement

3.2 Enabling Bidders to abstain from bribing or any corrupt practice in order to secure the contract by providing assurance to them that their competitors will also refrain from bribing and other corrupt practices and the Buyer will commit to prevent corruption, in any form, by their officials by following transparent procedures.



Commitments of the Buyer

4. The Buyer commits itself to the following: -

4.1 The Buyer undertakes that, no official of the Buyer, connected directly or indirectly with the contract will demand, take a promise for or accept, directly or through intermediaries, any bribe, consideration, gift, reward, favour or any material or immaterial benefit or any other advantage from the Bidder, either for themselves or for any person, organisation or third party related to the contract in exchange for an advantage in the bidding process, bid evaluation, contracting or implementation process related to the Contract.

4.2 The Buyer will, during the pre-contract stage, treat all Bidders alike and will provide to all Bidders the same information and will not provide any such information to any particular Bidder which could afford an advantage to that particular Bidder in comparison to other Bidders.

4.3 All the officials of the Buyer will report to the appropriate Government office any attempted or completed breaches of the above commitments as well as any substantial suspicion of such a breach.

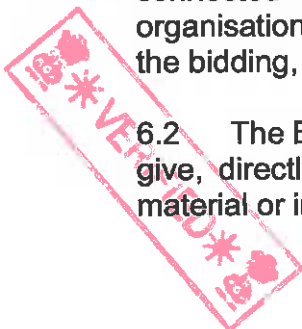
5. In case of any such preceding misconduct on the part of such official(s) is reported by the Bidder to the Buyer with full and verifiable facts and the same is prima facie found to be correct by the Buyer, necessary disciplinary proceedings, or any other action as deemed fit, including criminal proceedings may be initiated by the Buyer and such a person shall be debarred from further dealings related to the contract process. In such a case while an enquiry is being conducted by the Buyer the proceedings under the contract would not be stalled.

Commitments of Bidders

6. The Bidder commits himself to take all measures necessary to prevent corrupt practices, unfair means and illegal activities during any stage of his bid or during any pre-contract or post-contract stage in order to secure the contract or in furtherance to secure it and in particular commits himself to the following:

6.1 The Bidder will not to offer, directly or through intermediaries, any bribe, gift, consideration, reward, favour, any material or immaterial benefit or other advantage, commission, fees, brokerage or inducement to any official of the Buyer, connected directly or indirectly with the bidding process, or to any person, organisation or third party related to the contract in exchange for any advantage in the bidding, evaluation, contracting and implementation of the Contract.

6.2 The Bidder further undertakes that he has not given, offered or promised to give, directly or indirectly any bribe, gift, consideration, reward, favour, any material or immaterial benefit or other advantage, commission, fees, brokerage or



inducement to any official of the Buyer or otherwise in procuring the Contract or forbearing to do or having done any act in relation to the obtaining or execution of the Contract or any other Contract with the Government for showing or forbearing to show favour or disfavour to any person in relation to the Contract or any other Contract with the Government.

6.3 The Bidder will not collude with other parties interested in the contract to impair the transparency, fairness and progress of the bidding process, bid evaluation, contracting and implementation of the contract.

6.4 The Bidder will not accept any advantage in exchange for any corrupt practice, unfair means and illegal activities.

6.5 The Bidder further confirms and declares to the Buyer that the Bidder is the original manufacturer/integrator/authorised government sponsored export entity of the Defence stores and has not engaged any individual or firm or company whether Indian or foreign to intercede, facilitate or in any way to recommend to the Buyer or any of its functionaries, whether officially or unofficially to the award of the contract to the Bidder, nor has any amount been paid, promised or intended to be paid to any such individual, firm or company or Agent in respect of any such intercession, facilitation or recommendation.

6.6 The bidder would not enter into conditional contract with any Agents, brokers or any other intermediaries wherein payment is made or penalty is levied, directly or indirectly, on success or failure of the award of the contract. The bidder while presenting the bid, shall disclose any payments he has made during the 12 months prior to tender submission or is committed to or intends to make to officials of the buyer or their family members, Agents, brokers or any other intermediaries in connection with the contract and the details of such services agreed upon for such payments. Within the validity of PCIP, bidder shall disclose to MoD any payments made or has the intention to pay any amount, gift, reward, fees, commission or consideration to such person, party, firm or institution as an annual report during the procurement process.

6.7 The Bidder shall not use improperly, for purposes of competition or personal gain or pass on to others, any information provided by the Buyer as part of the business relationship regarding plans, technical proposals and business details, including information contained in any electronic data carrier. The Bidder also undertakes to exercise due and adequate care lest any such information is divulged.

6.8 The Bidder commits to refrain from giving any complaint directly or through any other manner without supporting it with full and verifiable facts. Complaint will be processed as per Guidelines for Handling of Complaints in vogue. In case the complaint is found to be vexatious, frivolous or malicious in nature, it would be construed as a violation of Integrity Pact.



6.9 The Bidder shall not instigate or cause to instigate any third person to commit any of the actions mentioned above.

7. **Previous Transgression**

7.1 The Bidder declares that no previous transgression occurred in the last three years immediately before signing of this Integrity Pact, with any other company in any country in respect of any corrupt practices envisaged hereunder or with any Public Sector Enterprise in India or any Government Department in India.

7.2 If the Bidder makes incorrect statement on this subject, Bidder can be disqualified from the tender process or the contract and if already awarded, can be terminated for such reason.

8. **Company Code of Conduct**

Bidders are also advised to have a company code of conduct (clearly rejecting the use of bribes and other unethical behaviour) and a compliance program for the implementation of the code of conduct throughout the company.

9. **Sanctions for Violation**

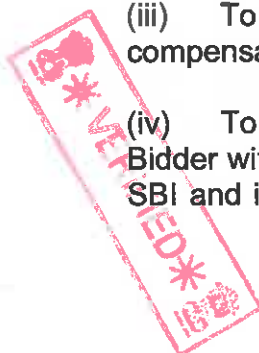
9.1 Any breach of the aforesaid provisions by the Bidder or any one employed by him or acting on his behalf (whether with or without the knowledge of the Bidder) or the commission of any offence by the Bidder or any one employed by him or acting on his behalf, as defined in Chapter IX of the Indian Penal Code, 1860 or the Prevention of Corruption Act 1988 or any other act enacted for the prevention of corruption shall entitle the Buyer to take all or any one of the following actions, wherever required:

(i) To immediately call off the pre-contract negotiations without assigning any reason or giving any compensation to the Bidder. However, the proceedings with the other Bidder(s) would continue.

(ii) The Performance-cum-Warranty Bond post signing of contract shall stand forfeited either fully or partially, as decided by the Buyer and the Buyer shall not be required to assign any reason therefore.

(iii) To immediately cancel the contract, if already signed, without any compensation to the Bidder.

(iv) To recover all sums already paid by the Buyer, in case of an Indian Bidder with interest thereon at 2% higher than the prevailing Base Rate of SBI and in case of a Bidder from a country other than India with interest



thereon at 2% higher than the LIBOR. If any outstanding payment is due to the Bidder from the Buyer in connection with any other contract for any other defence stores, such outstanding payment could also be utilised to recover the aforesaid sum and interest.

(v) To encash the advance bank guarantee and Performance-cum-Warranty Bond if furnished by the Bidder, in order to recover the payments, already made by the Buyer, along with interest.

(vi) To cancel all or any other Contracts with the Bidder.

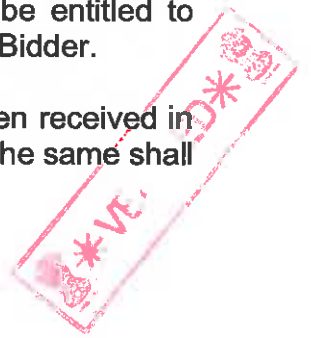
(vii) To Put on Hold or Suspend or Debar the bidder as per the extant policy.

(viii) To recover all sums paid in violation of this Pact by Bidder(s) to any Agent or broker with a view to securing the contract.

(ix) If the Bidder or any employee of the Bidder or any person acting on behalf of the Bidder, either directly or indirectly, is closely related to any of the officers of the Buyer, or alternatively, if any close relative of an officer of the Buyer has financial interest/stake in the Bidder's firm, the same shall be disclosed by the Bidder at the time of filing of tender. Any failure to disclose the interest involved shall entitle the Buyer to debar the Bidder from the bid process or rescind the contract without payment of any compensation to the Bidder. The term 'close relative' for this purpose would mean spouse whether residing with the Government servant or not, but not include a spouse separated from the Government servant by a decree or order of a competent court; son or daughter or step son or step daughter and wholly dependent upon Government servant, but does not include a child or step child who is no longer in any way dependent upon the Government servant or of whose custody the Government servant has been deprived of by or under any law; any other person related, whether by blood or marriage, to the Government servant or to the Government servant's wife or husband and wholly dependent upon Government servant.

(x) The Bidder shall not lend to or borrow any money from or enter into any monetary dealings or transactions, directly or indirectly, with any employee of the Buyer and if he does so, the Buyer shall be entitled forthwith to rescind the contract and all other contracts with the Bidder. The Bidder shall be liable to pay compensation for any loss or damage to the Buyer resulting from such rescission and the Buyer shall be entitled to deduct the amount so payable from the money(s) due to the Bidder.

(xi) In cases where irrevocable Letters of Credit have been received in respect of any contract signed by the Buyer with the Bidder, the same shall not be opened.



9.2 The decision of the Buyer to the effect that a breach of the provisions of this Integrity Pact has been committed by the Bidder shall be final and binding on the Bidder, however, the Bidder can approach the Independent Monitor(s) appointed for the purposes of this Pact.

10. **Fall Clause**

10.1 The Bidder undertakes that he has not supplied/is not supplying the similar products, systems or subsystems at a price lower than that offered in the present bid in respect of any other Ministry/Department of the Government of India and if it is found at any stage that the similar system or sub-system was supplied by the Bidder to any other Ministry/Department of the Government of India at a lower price, then that very price, with due allowance for elapsed time, will be applicable to the present case and the difference in the cost would be refunded by the Bidder to the Buyer, even if the contract has already been concluded.

10.2 The Bidder shall strive to accord the most favoured customer treatment to the Buyer in respect of all matters pertaining to the present case.

11. **Independent Monitors**

11.1 The Buyer has appointed Independent Monitors for this Pact in consultation with the Central Vigilance Commission. The names and addresses of nominated Independent Monitors (at the time of issue of RFP) are as follows (however the vendor must refer to the MoD website at www.mod.nic.in to check for changes to these details):-

- (a) Shri Ravikant, IAS (Retd)
Apartment No. 502
Tower 1, M3M Merlin, Sector 67,
Gurugram, Haryana - 122001
- (b) Shri Prabhat Kumar IAS (Retd)
C-120, Sector 39, Noida, Gautam Buddha Nagar
UP – 201301
- (c) Shri Cheri Ram IRS(Retd)
Flat No. A-203, Building Gemini, Galdys Alwares Marg
Hiranandani, Meadows Off Pokharan Road No.2
Thane (W), Mumbai - 400610

11.1A All communications to Independent Monitors will be copied to Director (Vigilance). The Designation and Contact details of Director (Vigilance) are as follows: -

Director (Vigilance)
Block - A
GPO Complex, INA
Rajaji Marg
New Delhi 110023



11.2 After the Integrity Pact is signed, the Buyer shall provide a copy thereof, along with a brief background of the case to the Independent Monitors, if required by them.

11.3 The Bidder(s), if they deem it necessary, may furnish any information as relevant to their bid to the Independent Monitors.

11.4 If any complaint with regard to violation of the IP is received by the buyer in a procurement case, the buyer shall refer the complaint to the Independent Monitors for their comments/enquiry.

11.5 If the Independent Monitors need to peruse the relevant records of the Buyer in connection with the complaint sent to them by the Buyer, the Buyer shall make arrangement for such perusal of records by the Independent Monitors.

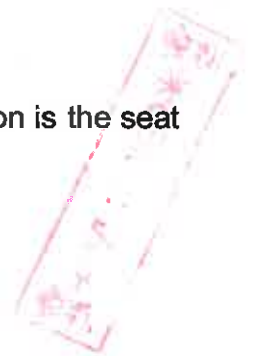
11.6 The report of enquiry, if any, made by the Independent Monitors shall be submitted to the head of the Acquisition Wing of the Ministry of Defence, Government of India for a final and appropriate decision in the matter keeping in view the provision of this Pact.

12. Examination of Books of Accounts

In case of any allegation of violation of any provisions of this Integrity Pact or payment of commission, the Buyer or its agencies shall be entitled to examine the Books of Accounts of the Bidder and the Bidder shall provide necessary information of the relevant financial documents in English and shall extend all possible help for the purpose of such examination.

13. Law and Place of Jurisdiction

This Pact is subject to Indian Law. The place of performance and jurisdiction is the seat of the Buyer i.e. New Delhi.



14. **Other Legal Actions**

The actions stipulated in this Integrity Pact are without prejudice to any other legal action that may follow in accordance with the provisions of the extant law in force relating to any civil or criminal proceedings.

15. **Validity**

15.1 The validity of this Integrity Pact shall be from date of its signing and extend up to 5 years or the complete execution of the contract to the satisfaction of both the Buyer and the Bidder/Seller, whichever is later.

15.2 Should one or several provisions of this Pact turn out to be invalid; the remainder of this Pact remains valid. In this case, the parties will strive to come to an agreement to their original intentions.

16. The Parties hereby sign this Integrity Pact at _____ on

BUYER

BIDDER

MINISTRY OF DEFENCE,
GOVERNMENT OF INDIA

CHIEF EXECUTIVE OFFICER

Witness

1.

Witness

1.

2.

2.



Appendix J

(Refers to Para 6 (Part I) of RFP)

**CRITERIA FOR BIDDER SELECTION / PRE-
QUALIFICATION FOR - RFP ISSUE / INCLUSION IN
RFP REQUIREMENTS**

Ser	Parameter	Qualifying Criteria
<p><i>The procurement case will be earmarked for MSMEs, provided there are at least two or more MSMEs, who qualify Technical Evaluation and accordingly the Commercial bids will be opened. Firms are required to submit their valid MSME certificate along with Technical Bid.</i></p>		
1	Financial	
(a)	Net Worth	Net worth should be positive.
(b)	Insolvency	The entity should not be under insolvency resolution as per IBC at any stage of procurement process from the issuing of RFP to the signing of contract.
2	Technical	
(a)	Nature of Business	Manufacturing entity or System Integrator of defence equipment and not a trading company, except in cases where OEM participates only through its authorised Bidders.
(b)	Experience in related field	Min 02 Yrs. experience in broad areas like manufacturing/ engineering/ electronics/ explosives etc. as applicable in the instant case. If not, then cumulative experience of at least 03 years in above areas, resulting in gaining of competence for manufacturing the proposed product.
(c)	Quality Control	As per RFP requirements.
3	Others	
(a)	Industrial License	Posses or be in the process of acquiring a license, if the product under project requires license as per DIPP licensing policy.
(b)	Registration	Registered for Min 02 Years, atleast 01 years for as MSMEs. Min no of years not applicable for JVs constituted specifically for a project.



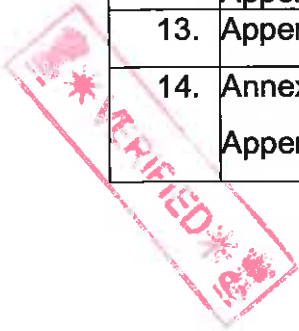
Appendix K

(Refers to Para 51 (Part IV) of RFP)

CHECK OF LIST - DOCUMENTS TO BE SUBMITTED BY THE BIDDER ALONG WITH THEIR TECHNO-COMMERCIAL PROPOSALS

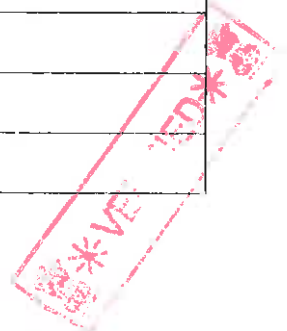
The list of documents which needs to be mandatorily submitted by the Bidders as part of Technical Proposal are placed below. Non-submission of the documents may result in disqualification of the Bidder from the bidding process.

Ser No.	Reference	Document Description
1.	Para 5 of RFP	Declaration by Bidder : Debarment of vendors
2.	Para 17 of RFP	Declaration by Bidder: Government Regulation
3.	Para 18 of RFP	Declaration by Bidder: Obligations Relevant to Transfer of Conventional Arms
4.	Para 19 of RFP	Declaration by Bidder : Patent Rights
5.	Para 21 of RFP	Declaration by Bidder : Fall Clause
6.	Para 30 of RFP	Technical document covering performance parameters.
7.	Appendix B	Compliance Table
8.	Appendix C	Warranty Clause
9.	Appendix D	CERTIFICATE: Malicious Code
10.	Annexure I to Appendix E	Technical Literature
11.	Annexure II to Appendix E	Training Aggregates
12.	Annexure III to Appendix E	Maintenance Routines / Services/ Calibration of Equipment
13.	Appendix G	Price Bid
14.	Annexure I to Appendix H	Pre-Contract Integrity Pact



Appendix LGLOSSARY

AMC	Annual Maintenance Contract
AoN	Acceptance of Necessity
ATP	Acceptance Test Procedure
CMC	Comprehensive Annual Maintenance Contract
CKD	Completely Knocked Down
CNC	Contract Negotiation Committee
DAC	Defence Acquisition Council
DGAQA	Director General of Aeronautical Quality Assurance
DGNAI	Director General Naval Armament Inspectorate
DGQA	Director General of Quality Assurance
DPB	Defence Procurement Board
DAP	Defence Acquisition Procedure
DRDO	Defence Research and Development Organisation
EMC	Electro Magnetic Compatibility
EMI	Electro Magnetic Interference
EPP	Enhanced Performance Parameters
ESP	Engineering Support Package
FET	Field Evaluation Trials
Gol	Government of India
IC	Indigenous Content
ICG	Indian Coast Guard
IDDM	Indigenously Designed & Developed Manufactured
IM	Indigenously Manufactured
IP	Integrity Pact
LRU	Line Replaceable Unit



MET	Maintainability Evaluation Trial
MoD	Ministry of Defence
MRLS	Manufacturer Recommended List of Spares
M-ToT	Maintenance Transfer of Technology
NCNC	No Cost No Commitment
OEM	Original Equipment Manufacturer
OTE	Open Tender Enquiry
PA	Production Agency
PCIP	Pre Contract Integrity Pact
QA	Quality Assurance
RFP	Request for Proposal
SPB	Services Procurement Board.
SHQ	Service Headquarters
SKD	Semi Knocked Down
SRU	Shop Replaceable Unit
TEC	Technical Evaluation Committee
ToT	Transfer of Technology

