

# **TENDER DOCUMENT**

## **FOR DESIGN, CONSTRUCTION AND SUPPLY OF TWO SELF PROPELLED CUTTER SUCTION DREDGERS**

**TENDER NO. IWAI/MD/261/2017-18**

October 2017



## **Inland Waterways Authority of India**

**(Ministry of Shipping, Govt. of India)**

**A-13, Sector-1, Noida – 201 301 (UP)**

Tel (0120) 2522798, Fax (0120) 2544041

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**NIT FOR PUBLICATION IN NEWSPAPER**



**INLAND WATERWAYS AUTHORITY OF INDIA,  
A-13, SECTOR-1, NOIDA – 201301**

**TENDER NO. IWAI/MD/261/2017-18**

**E-Tender for Design, Construction and  
Supply of two Self Propelled Cutter  
Suction Dredgers for NW-2**

Online bids/tenders are invited from reputed and experienced National/International Shipbuilders for design, construction and supply of two Self Propelled Cutter Suction Dredgers for NW-2 (ie River Brahmaputra) to be delivered at Kolkata, India Tender cost: 5000/-. Date of download of Tenders is from 13.10.2017 to 25.11.2017. A pre- bid meeting is scheduled at IWAI, A-13, Sector-1, Noida - 201301 on 25.10.2017 at 15.00 hours. Last date of submission of online bids/tender: 27.11.2017 up to 15:00 hrs. Date of online opening: 28.11.2017 at 15.30 hrs. For other details, terms & conditions please refer to IWAI website [www.iwai.nic.in](http://www.iwai.nic.in) and CPP Portal

website

<https://eprocure.gov.in/eprocure/app>

**CHIEF ENGINEER-III**

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## **(SECTION-I)**

### **NOTICE INVITING E-TENDER**



## INLAND WATERWAYS AUTHORITY OF INDIA

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### **NOTICE INVITING E-TENDER**

The Inland Waterways Authority of India (IWAI) hereby invites online tenders/bids (Technical and Financial Bid) from reputed and experienced Indigenous & International(foreign) Shipbuilders for Design, Construction and Supply of two Self Propelled Cutter Suction Dredgers for NW-2 (i.e. River Brahmaputra) to be delivered at Kolkata, India as per details given below. The Bids will be placed online at <https://eprocure.gov.in/eprocure/app>

Sl. No.	Description of work	Estimated cost (Rs.)	Bid Security (EMD) (Rs.)	Time for Delivery
1.	Design, Construction & supply Testing & commissioning of two Self Propelled Cutter Suction Dredgers including transportation and including GST with following Principal dimension: i) Length – abt 27.00 m ii) Breadth – abt 12.00m iii) Depth – 2.50m iv) Draft max loaded – 1.2m v) Capacity – Mix. abt. 250 m3 of solid/hours	77.68 Cr.	87.68 lakh	1 <sup>st</sup> .SPCSD-12 Months  2 <sup>nd</sup> . SPCSD-14 months

## **TERMS & CONDITIONS**

1. Interested bidders may download the bid document from IWAI's website <http://www.iwai.nic.in> and CPP Portal Website <https://eprocure.gov.in/eprocure/app> as per the schedule as given in Critical Date Sheet as under-

NIT no :- <b><u>IN/ IWAI /</u></b>	
Document download Commencement date & Time	13.10. 2017 ( 16.00 hrs)
Source of EOI / NIT	Head Office
Contract Classification	Open Tender
Pre-Bid Conference Date	25.10. 2017 (11.00 hrs)
Last date & Time for Bid Submission	27.11. 2017 (15.00 hrs)
Bid Opening Date	28.11. 2017 (15.30 hrs)
Cost of Tender Document in INR ( US Dollars)	INR 5000.00 or USD 100.00
Bid Security in INR (US Dollars)	Rs,87,68,000.00 or USD 1,35,000.00

Applicant submitting the downloaded version would need to pay the cost of tender document/bid for Rs.5000/-or equivalent USD 100 in IWAI Fund internal receipt account by RTGS at **Syndicate Bank A/c no.90622150000086, IFSC code- SYNB0009062** Tender document will be available on the above websites from 13.10.2017.

A signed declaration stating that no alteration has been made in any form in the downloaded tender document/bid is to be enclosed with the tender by bidder for downloaded tenders. The amendment/clarification, if any, related to the tender notice/ document will be made available on the above website. Bidders are advised to keep themselves updated.

2. Tenderer shall agree to the terms & conditions including amendment/clarification/corrigendum of the tender and submit the tender online.

### **3. Eligibility Criteria:**

3.0	<b>Qualification Requirements cum Eligibility of Bidders</b>  This invitation of bids is open to all reputed and experienced Indigenous and International (foreign) firms having at least seven years' experience and satisfactory performance record for the Design, Construction and Supply of Inland / Sea-going Self Propelled - Cutter Suction Dredgers or non- propelled Cutter Suction Dredgers of various capacity & type, or any other dredgers may participate directly or through their authorized agencies/suppliers in India.
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	<p>Those Bidders interested in participating in the said tender should provide</p> <ol style="list-style-type: none"> <li>Their credentials information, to demonstrating that they have the required qualifications and relevant experience to execute the contract.</li> <li>Bidder shall adequately demonstrate that they have the training facilities</li> <li>The bids of the Bidders who have delayed the deliveries of the SP-CSD for two SPCSD more than one year shall not be considered for evaluation.</li> </ol> <p>The international (foreign) firm / company on design, construction and supply of non- propelled / Self-Propelled Cutter Suction Dredger or any other dredgers may participate directly or through their authorized agencies / suppliers in India.</p> <p>Bidders may associate with other firms so as to form of a Joint Venture to enhance their qualifications. The short-listing criteria are:</p>
3.1	<p><b>Technical Criteria:-</b></p> <p>The Bidder shall furnish documentary evidence to demonstrate that it meets the following experience requirement(s):</p> <p>The bidder must have experience of having successfully completed similar works during last (7) seven years prior to the date of Submission of Bid.</p> <p>At least one or more works similar to the proposed works defined in detailed technical Specification / tender documents, as per following:</p> <ul style="list-style-type: none"> <li>▪ 1 (one) contract with minimum value of USD 9,700,000 or <b>INR 63.00 Crs</b></li> <li>Or</li> <li>▪ 2 (Two) contract each with minimum value of USD 7,300,000 or <b>INR 47.00 Crs</b></li> <li>Or</li> <li>• 3( three ) contract each with minimum value of USD 5,000,000 or <b>INR 32.00 Crs</b></li> </ul>
3.1.1	<p>Technical Weightage -criteria for the Evaluation of the Technical Proposal is placed at Annexure-I in the end.</p> <p>The minimum technical score (St) required to pass is: 75</p>
3.2	<p><b>Financial Criteria :-</b></p> <p>The Bidder shall furnish documentary evidence that it meets the following financial requirement(s):</p> <ol style="list-style-type: none"> <li>The Bidder should have Minimum Average Annual Financial turnover of INR 39 Crs / USD 6,000,000.00 or an equivalent amount in a freely convertible currency, calculated as total certified payments received for contracts in progress or completed, within the last</li> </ol>

	<p>three (3) Financial years as on 31st March 2017.</p> <p>b. The bidder should have financial solvency of not less than Rs 32,00,00,000.00 or USD 5,000,000 or 4,300,000 Euro and submit the scan copy of Solvency certificate from a Nationalized/scheduled/foreign National Bank as the documentary evidence countersigned by Indian Scheduled Bank.( 1USD= 65 INR &amp; 1 EURO = 76 INR)</p> <p>c. Financial year shall, for the purposes of a Bid hereunder, means the Accounting Year followed by the Bidder in the course of its normal business.</p>
3.3	<p><b>Experience</b></p> <p>a) The bidder should furnish the information on all past supplies and satisfactory performance form the user with full contact details including phone, fax and e-mail. Both in India &amp; aboard for CSD's &amp; SP-CSD's</p> <p>b) Should have capability to Design, Construction, Manufacture similar / comparable items as per requirement of the client – proof of having executed supplies during the past (7) Seven years (i.e. from 2017 to 2009 ) along with the user's satisfaction certificate on the letterhead of the user / user department / ministry / government.</p> <p>c) The supplied items should be in satisfactory operation for the last 12 months as on the date of bid opening.( certificate from Client to be furnished )</p> <p>d) The bidder must have the Ship Building Yard along with requisite facilities of his own or same on Lease / Rent basis existing on the day of submission of bid. ( Proof for the same must be submitted.)</p> <p>e) The Satisfactory performance certificate for the Dredgers supplied during the last (7) Seven years from the Clients</p> <p>f) The bidder must confirm that all the facilities exist in his factory for inspection and testing and these will be made available to the Purchaser or his representative for inspection.</p> <p>g) The Bidder shall provide the Details of Service Centers in India and information on service support facilities that would be provided for after the warranty period for the Major Equipments; like Main Propulsions etc.</p>
3.4	<p><b>In Case of Joint Venture</b></p>



	<p>Bids of bidders quoting as Joint Venture meeting with the above requirement in full, can also be considered provided:</p> <ul style="list-style-type: none"> <li>(i) The JV Consortium shall furnish a legally enforceable JV Agreement in the prescribed format assuring full guarantee and warranty obligations as per GCC and SCC for the goods offered; and</li> <li>(ii) The bidders may also submit a bid having a joint venture with the firm of adequate experience in the design construction &amp; supply of the dredgers.</li> <li>(iii) The indigenous bidder may have tie up with experienced International Design Consultant / Firm for Design, Preparation of the Drawing, obtaining approval from classification and statutory bodies as well as model testing and construction, commissioning, test &amp; trial of the dredgers.</li> </ul>
3.5	<p><b>In Case of Authorized Agent</b></p> <p>Bids of bidders quoting as authorized representative of original manufacturer, meeting with the above requirement in full, can also be considered provided:</p> <ul style="list-style-type: none"> <li>a) The manufacturer furnishes a legally enforceable authorization in the prescribed format assuring full guarantee and warranty obligations as per GCC and SCC for the goods offered; and</li> <li>b) The bidder, as authorized representative, has supplied, installed, commissioned and provided after sales satisfactorily at least 100% of the quantity supplied in any one of the last (7) Seven years which must be in satisfactory operation for at least 6 months on the date of bid opening.</li> <li>c) And must be providing annual maintenance services for the above equipment.</li> </ul>
3.6	<p><b>Documentation in support of Qualifying Criteria</b></p> <p>The Bidder shall enclose with its Bid Proposal the self-attested scanned copy of all necessary documentary evidence of credentials in support of meeting the Bid Qualification Criteria, viz</p> <ul style="list-style-type: none"> <li>a. Certificate(s) confirming that the Organisational details;</li> <li>b. Purchase Orders;</li> <li>c. Certificate(s) from its statutory auditors specifying Financial Turn Over;</li> <li>d. Certificate(s) confirming that the Bidder has completed similar works from User / Owner.</li> </ul>

	<ul style="list-style-type: none"> <li>e. Details of all past supplies and satisfactory performance form the user with full contact details including phone, fax and e-mail.</li> <li>f. For Authorized agents - legally enforceable authorization in the prescribed format;</li> <li>g. The JV Consortium shall furnishes a legally enforceable JV Agreement</li> <li>h. The bidder should furnish the certificate for having delivered the dredgers on time from the Owner.</li> <li>i. Details of having the Infrastructure facilities w.r.t <ul style="list-style-type: none"> <li>1. Ship Building Yard along with requisite facilities</li> <li>2. Existing facilities for inspection and testing in the factories.</li> <li>3. Details of Service Centers and information on service support facilities in India / Aboard</li> <li>4. Training facilities in India</li> </ul> </li> </ul>
4.0	<p>Any entity which has been barred by the Central/ State Government, or any entity controlled by it, from participating in any project, and the bar subsists as on the Bid submission Date, would not be eligible to submit a Bid , either individually or as member of a Consortium.</p> <p>Further, if any entity, which has been barred or sanctioned or can be barred or sanctioned by the World Bank, under its Guidelines for Procurement of Goods, Works and Non-Consulting Services, or the World Bank Group Anti-Corruption policies and sanctions procedures, then, such entity would not be eligible to submit a Bid, either individually or as member of a Consortium.</p>
5.0	<p>A Bidder including any Consortium Member or Associate should, in the last 3 (three) years, have neither failed to perform on any contract, as evidenced by imposition of a penalty by an arbitral or judicial authority or a judicial pronouncement or arbitration award against the Bidder, Consortium Member or Associate or the said penalty has been accepted by the Bidder, Consortium Member or Associate, as the case may be, nor has been expelled from any project or contract by any public entity nor have had any contract terminated by any public entity for breach by such Bidder, Consortium Member or Associate.</p>

6.0	No change in the composition of the Consortium is allowed subsequent to the submission of the Bid during the Process.
7.0	<p>The following conditions shall be adhered to while submitting Bid :</p> <ul style="list-style-type: none"> <li>(a) Bidder should attach clearly marked and referenced continuation sheets in the event that the space provided in the prescribed forms in the Annexes is insufficient.</li> <li>(b) Information supplied by a Bidder (or other constituent Member if the Bidder is a Consortium) must apply to the Bidder, Member or Associate named in the Bid and not, unless specifically requested, to other associated companies or firms;</li> <li>(c) The Bidders should demonstrate their capabilities in accordance Qualifying Requirements.</li> <li>(d) In case the Bidder is a Consortium, each Member should substantially satisfy requirements to the extent specified in the bidding document.</li> </ul>
8.0	<p>A complete set of Bidding Documents may be DOWN LOADED by any interested Bidder from our e-Tender Site.</p> <p>For logging on to the e-Tender Site, the Bidder would require User ID and Password which can be obtained by submitting a request form available at our e-Tender Site <a href="https://eprocure.gov.in">https://eprocure.gov.in</a> as well as at (www. IWAI.NIC.IN )</p> <p>Note: No hard copy of Bidding Documents shall be issued.</p>
9.0	<p>Issuance or downloading of Bidding Documents to any Bidder shall not construe that such Bidder is considered to be qualified.</p> <p>Bids shall be submitted online and will be opened at the address given below in the presence of Bidder's representatives who choose to attend the Opening.</p>
10.0	Transfer of Documents downloaded by one intending Bidder to another is not permissible
11.0	IWAI reserves the right to reject any or all Bids / withdraw the NIT for the subject

	package without assigning any reason whatsoever and in such case no bidder / intending bidder shall have any claim arising out of such action.
12.0	<p>Address for communication:</p> <p>Chief Engineer -III</p> <p>Inland Waterways Authority of India,</p> <p>A-13, Sector-I,</p> <p>Noida – 201 301</p> <p>Tel (0120) 2522798, Fax (0120) 2544041/ 2522969</p> <p>Website : <a href="http://www.iwai.nic.in">www.iwai.nic.in</a>. Mobile 9910530099</p> <p>Email ID:-<a href="mailto:vcddialani.iwai@nic.in">vcddialani.iwai@nic.in</a>, <a href="mailto:vijaykumardialani@gmail.com">vijaykumardialani@gmail.com</a></p>

## **Weightage -criteria for the Evaluation of the Technical Proposal**

Weightage -criteria for the Evaluation of the Technical Proposal		Point System	
		activity	total
1	Technical Features of the Self Propelled - Cutter Suction Dredger offered with respect to the Specification	10	10
2	Bidders having experience & facilities in manufacturing of following		25
	• CSD + SPCSD	25	
	• SPCSD	20	
	• CSD	15	
3	Bidders must have completed & executed similar projects: ( 5 for each project)		30
	• 6 Similar Projects Completed	30	
	• 5 Similar Projects Completed	25	
	• 4 Similar Projects Completed	20	
	• 3 Similar Projects Completed	15	
	• 2 Similar Projects Completed	10	
	• 1 Similar Projects Completed	05	
4	Bidders must have the following facilities.		20
	• Own - Ship Building Yard along with requisite facilities	05	
	• Leased - Ship Building Yard along with requisite facilities	03	
	• Existing facilities for inspection and testing in the factories.	02	
	• Details of Service support Center facilities in Aboard / India.	1.5 / 03	
	• Training facilities in India	05	
	• Timely Supplies with no defaults	05	
5	Bidder may be Manufacturer / JV Consortium / Agent of a Manufacturer		15
	• Bidder as Manufacturer	15	
	• Bidder as JV consortium	12	
	• Bidder as Agent of Manufacturer	08	
Total Points			100
The minimum technical score (St) required to pass is: 75			
Similar projects means : Design, Construction and Supply of Inland / Sea-going Self Propelled - Cutter Suction Dredgers of various capacity & type.			

**(SECTION-II)**

**INSTRUCTION TO BIDDERS (ITB) including  
Instruction to the Contractors/Bidders for the e-  
submission of the bids online through the  
Central Public Procurement Portal for E-  
procurement & APPENDIX TO BID**

## **Section II: Instructions to Bidders**

### **Table of Clauses**

**Instructions to the Contractors/Bidders for the e-submission of the bids online through the Central Public Procurement Portal for E-Procurement <https://eprocure.gov.in/eprocure/app>**

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## **Section II**

### **Instructions to Bidders (ITB)**

#### **Instructions to the Contractors/Bidders for the e-submission of the bids online through the Central Public Procurement Portal for eProcurement**<https://eprocure.gov.in/eprocure/app>

- 1) Possession of valid Digital Signature Certificate (DSC) and enrolment/registration of the contractors/bidders on the e-procurement/e-tender portal is a prerequisite for e-tendering.
- 2) Bidder should do the enrolment in the e-Procurement site using the <https://eprocure.gov.in/eprocure/app> option available on the home page. Portal enrolment is generally free of charge. During enrolment/registration, the bidders should provide the correct/true information including valid email\_id. All the correspondence shall be made directly with the contractors/bidders through email\_id provided.
- 3) Bidder need to login to the site through their user ID/ password chosen during enrolment/registration.
- 4) Then the Digital Signature Certificate (Class II or Class III Certificates with signing key usage) issued by SIFY/TCS/nCode/e-Mudra or any Certifying Authority recognized by CCA India on eToken/SmartCard, should be registered.
- 5) The DSC that is registered only should be used by the bidder and should ensure safety of the same.
- 6) Contractor/Bidder may go through the tenders published on the site and download the required tender documents/schedules for the tenders he/she is interested.
- 7) After downloading/getting the tender document/schedules, the Bidder should go through them carefully and then submit the documents as asked.
- 8) If there are any clarifications, this may be obtained online thro' the tender site, or thro' the contact details. Bidder should take into account of the corrigendum published before submitting the bids online.
- 9) Bidder then logs in to the site through the secured log in by giving the user id/ password chosen during enrolment/registration and then by giving the password of the eToken/SmartCard to access DSC.
- 10) Bidder selects the tender which he/she is interested in by using the search option & then moves it to the 'my favourites' folder.
- 11) From the favourites folder, he selects the tender to view all the details indicated.
- 12) It is construed that the bidder has read all the terms and conditions before submitting their offer. Bidder should go through the tender schedules carefully and upload the documents as asked, otherwise, the bid will be rejected.
- 13) Bidder, in advance, should get ready the bid documents to be submitted as indicated in the tender document/schedule and generally, they can be in PDF/xls/rar/jpg/ formats. If there is more than one document, they can be clubbed together and can be provided in the requested format. Each document to be uploaded through online for the



tenders should be less than 2 MB. If any document is more than 2MB, it can be reduced through zip/rar and the same can be uploaded, if permitted.

- 14) If there are any clarifications, this may be obtained through the site, or during the pre-bid meeting if any. Bidder should take into account the corrigendum published from time to time before submitting the online bids.
- 15) The Bidders can update well in advance, the documents such as certificates, annual report details etc., under My Space option and these can be selected as per tender requirements and then send along with bid documents during bid submission. This will facilitate the bid submission process faster by reducing upload time of bids.
- 16) Bidder should submit the Tender Fee/ EMD as specified in the tender. Earnest money shall be accepted in the form of RTGS of a Scheduled Bank. A part of earnest money is acceptable in the form of Bank Guarantee also. In such cases 50% of Earnest Money or Rs. 20 lakh whichever is less, will have to be deposited in the shape of RTGS and balanced can be accepted in the form of Bank Guarantee issued by a Scheduled Bank. The original payment instruments should be posted/couriered/given in person to the Tender Inviting Authority within the due date as mentioned in this tender document. Scanned copy of the instrument should be uploaded as part of the offer, if asked for.
- 17) While submitting the bids online, the bidder reads the terms & conditions and accepts the same to proceed further to submit the bid packets.
- 18) The bidder has to select the payment option as offline to pay the Tender FEE/ EMD as applicable and enter details of the instruments.
- 19) The details of the BG/any other accepted instrument, physically sent, should tally with the details available in the scanned copy and the data entered during bid submission time. Otherwise submitted bid will not be acceptable.
- 20) The bidder has to digitally sign and upload the required bid documents one by one as indicated. Bidders to note that the very act of using DSC for downloading the bids and uploading their offers shall be deemed to be a confirmation that they have read all sections and pages of the bid document including General conditions of contract without any exception and have understood the entire document and are clear about the requirements of the tender requirements.
- 21) The bidder has to upload the relevant files required as indicated in the cover content. In case of any irrelevant files, the bid will be rejected.
- 22) If the price bid format is provided in a spread sheet file like BoQ\_xxxx.xls, the rates offered should be entered in the allotted space only and uploaded after filling the relevant columns. The Price Bid/BOQ template must not be modified/replaced by the bidder; else the bid submitted is liable to be rejected for this tender.
- 23) The bidders are requested to submit the bids through online e-tendering system to the Tender Inviting Authority (TIA) well before the bid submission end date & time (as per Server System Clock). The TIA will not be held responsible for any sort of delay or the difficulties faced during the submission of bids online by the bidders at the eleventh hour.
- 24) After the bid submission, the acknowledgement number, given by the e-tendering system should be printed by the bidder and kept as a record of evidence for online submission of bid for the particular tender and will also act as an entry pass to participate in the bid opening date.

- 25) The bidder should ensure/see that the bid documents submitted should be free from virus and if the documents could not be opened, due to virus, during tender opening, the bid is likely/liable to be rejected.
- 26) The time settings fixed in the server side & displayed at the top of the tender site, will be valid for all actions of requesting, bid submission, bid opening etc., in the e-tender system. The bidders should follow this time during bid submission.
- 27) All the data being entered by the bidders would be encrypted using PKI encryption techniques to ensure the secrecy of the data. The data entered will not be viewable by unauthorized persons during bid submission & not be viewable by any one until the time of bid opening.
- 28) Any bid document that is uploaded to the server is subjected to symmetric encryption using a system generated symmetric key. Further this key is subjected to asymmetric encryption using buyers/bid openers public keys. Overall, the uploaded tender documents become readable only after the tender opening by the authorized bid openers.
- 29) The confidentiality of the bids is maintained since the secured Socket Layer 128 bit encryption technology is used. Data storage encryption of sensitive fields is done.
- 30) The bidder should logout of the tendering system using the normal logout option available at the top right hand corner and not by selecting the (X) exit option in the browser.
- 31) For any queries regarding e-tendering process, the bidders are requested to contact through the modes given below:

**Chief Engineer -III**

Inland Waterways Authority of India,

A-13, Sector-1,

Noida – 201 301

Tel (0120) 2543931, Fax (0120) 2544041/ 2522969

Website : [www.iwai.nic.in](http://www.iwai.nic.in)

Email ID:-[vcdialani.iwai@nic.in](mailto:vcdialani.iwai@nic.in), [vijaykumardialani@gmail.com](mailto:vijaykumardialani@gmail.com)

## **A. General**

### **1. Scope of Bid**

**1.1** The Owner (as defined in the Appendix to ITB) invites online bids for **“Design, Construction and supply of two nos. Self-Propelled Cutter Suction Dredgers for NW-2”** to be delivered at Kolkata as described in these documents and referred to as “the works”. The name of the work is provided in the Appendix to ITB.

**1.2** The successful bidder will be expected to complete the works by the delivery schedule as follows:

**Delivery of both the Self-Propelled CSDs** - 1<sup>st</sup> SPCSD within 12 months and 2<sup>nd</sup> SPCSD within 14 (Fourteen) months from the date of issuance of work order.

**1.3** Throughout these bidding documents, the terms “bid” and “tender” and their derivatives (bidder/tenderer, bid/tender, bidding/tendering, etc.) are synonymous.

### **2. Source of Funds**

**2.1** The expenditure on this project will be met by Inland Waterways Authority of India (IWAI).

### **3. Eligible Bidders**

**3.1** This Invitation for online Bids is open to all bidders engaged in Shipbuilding and have constructed vessels of similar type or vessels with similar or higher size/ capacity as already described in NIT clause-3.

**3.2** Bidders shall not be under a declaration of ineligibility for corrupt and fraudulent practices by the Central Government, the State Government, multi-lateral funding agency or any Public undertaking, Autonomous Body, Authority by whatever name called under the Central or the State Government or any international shipbuilding regulatory agency. If any information found to be wrong or false in this regard is brought to the knowledge of owner either before award after submission of bid or during execution of contract after award, shall be liable to be terminated.

### **14. Qualification of the Bidder**

**4.1** This invitation of bids is open to all reputed and experienced Indigenous and International (foreign) firms having at least seven years’ experience and satisfactory performance record for the Design, Construction and Supply of Inland / Sea-going Self Propelled - Cutter Suction Dredgers or

non- propelled Cutter Suction Dredgers of various capacity & type, or any other dredgers may participate directly or through their authorized agencies/suppliers in India.

**4.2** All bidders shall submit or upload the scanned copy of following information and documents with their bids online.

- (a) Copies of original documents defining the constitution or legal status (supported by certificate of incorporation and incorporation documents), place of registration, and principal place of business; written power of attorney of the signatory of the Bid (Authorized by competent company representative) to commit the Bidder.
- (b) Total monetary value of all similar works performed for each of the last seven years (work contract wise).
- (c) Experience certificate in works of a similar nature and size for each of the last seven years with satisfactory performance certificates from clients. (Copies of order and completion certificate of client issued on their letter head certifying contracted date & amount, cost of completion and work completion date only would be accepted as proof).
- (d) Evidence of availability of shipyard where the vessels are proposed to be built (either owned or leased or rented) has to be submitted with details of available process and facilities. The bidders who own their own yard and facilities would be preferred. In case the yard is on lease or rented basis, a copy of the lease or rent agreement with facilities available thereon to be enclosed as evidence. No change of yard or change in place of construction will be allowed.
- (e) Qualification and experience of all key personals including site management and technical personnel proposed for the contract (Whether on regular employment or engagement on assignment basis) need to furnished.
- (f) Reports on the financial standing of the Bidder (Financial statement for FY 2014-15, FY 2015-16 and FY 2016-17), and a certificate from Chartered Accountant as a proof of turnover for the past three years to be furnished. For international bidders, documents as per their financial year would be acceptable.
- (g) Evidence of adequacy of working capital for this contract [access to line(s) of credit and availability of other financial resources].
- (h) Bidders entity should have financial solvency of not less than Rs. 21.30 Cr. supported with documentary evidence, issued by any Nationalized Bank of India for domestic bidder and from any nationalized Bank of bidder, documents as per their financial year would be acceptable.

- (i) Proposals for subcontracting components of the works amounting to more than 10% of the contract price.
- (j) Information regarding any litigation or arbitration during the last five years in which the Bidder is involved, the parties concerned the disputed amount, and the relevant details of matter with details of award, if any.
- (k) Details of the contracts if any having delay in completing the work more than one year over and above contractual delivery period. In the event of no case, similar statement is to be submitted.
- (l) Valid income tax clearance certificate from Income Tax department for past three years for domestic bidders. In case of foreign supplier equivalent certificate issued by concerned authority is to be furnished
- (J) All foreign bidders have to submit scan copy of original documents, as stated above, with certified version in English language, if original documents are in any other language.

#### **1.1- 4.3     Bids by Joint venture or consortium:**

- 1.1.1** The Joint Venture/ consortium can be entered between two or more firms and limited to maximum three firms.
- 1.1.2** The lead partner has to be an Indian company. The lead member should have highest share of participation in a JV/consortium.
- 1.1.3** In case of international bidder participation in foreign currency. No JV/Consortium would be allowed.
- 1.1.4** In case the bidder is a JV of two members then the minimum share of the 2nd member shall be 25%. In case the bidder is JV/consortium of three members then the minimum share of 2<sup>nd</sup> and 3<sup>rd</sup> member shall be 15% each, with total share of all the JV/ consortium members being 100%.
- 1.1.5** There shall be a Joint Venture agreement/ Memorandum of Understanding specific for the contract between the constituent firms, indicating clearly, amongst other things, the proposed distribution of responsibilities both financial as well as technical for execution of the work amongst them. A copy of the Joint Venture Agreement/ MOU in accordance with requirements mentioned shall be submitted along with the bid.

The Letter of Intent to enter into a JV/ consortium agreement should contain at least the following:

- Name of the Lead Partner
- Clearly mentioned Percentage share of JV/consortium members adhering to the clause 6.9.3 mentioned above.
- “all the partners shall jointly and severally liable for the execution of the contract in accordance with the contract terms”

- 1.1.6 Lead partner's authorization shall be evidenced by submitting a power of attorney, duly notarized, signed by the legally authorized signatories of all the partners/members of JV/consortium.
- 1.1.7 The Lead Partner shall be authorized to incur liabilities and to receive instructions for and on behalf of the partners of the Joint venture, whether jointly or severally, and entire execution of the contract (Including payment) shall be carried out exclusively through the partner-in-charge. A copy of the said authorization shall be furnished in this Bid.
- 1.1.8 However, the successful bidder is required to submit proof of registration of JV under statute of companies act 2013 and completion of relevant formalities before signing of agreement and entire paper work of formalities to be completed within 30 days from letter of award.
- 1.1.9 In the event of default by any partner, in the execution of his part of the contract, the employer shall be so notified within 30 days by the Lead Partner, or in the case of the Lead Partner being the defaulter, by the partner nominated as partner-in-charge of the remaining Joint venture/consortium. The partner-in-charge shall, within 60 days of the said notice, assign the work of the defaulting partner to any other equally competent party acceptable to the employer to ensure the execution of that part of the contract, as envisaged at the time of bid. Failure to comply with the above provisions will make the contractor liable for action by the employer under the conditions of contract. If the Most Experienced i.e. Lead Partner defined as such in the communication approving the qualification defaults, it shall be construed as default of the Contractor and employer will take action under the conditions of contract.
- 1.1.10 Notwithstanding the permission to assigning the responsibilities of the defaulting partner to any other equally competent party acceptable to the employer as mentioned in sub clause 6.9.7 above, all the partners of the Joint venture/consortium will retain the full and undivided responsibility for the performance of their obligations under the contract and/ or for satisfactory completion of the Works.
- 1.1.11 The bid submitted shall contain all relevant information for each member of JV/consortiums per the requirement stipulated under clause 10.1 of ITB.
- 1.1.12 Lead member must meet at least 60% and other member must meet at least 30% of the requirements stipulated in clause 16.1.1 and 16.1.3 of ITB. However the JV/consortium members together shall meet the overall qualification criteria stipulated in clause 16.1 of ITB.

#### 4.4 **Conflict of Interest**

- 4.4.1 Employer requires that selected bidder(Contractor) provides professional, objective, and impartial advice and at all times holds the employer's

interests paramount, strictly avoids conflicts with other assignment(s) or his own corporate and act without any consideration for future work.

4.4.2 without limitation on the generality of the forgoing, Bidders, and any of their affiliates, shall be considered to have conflict of interest and shall not be recruited, under any of the circumstances set forth below:-

- (a) **Conflicting activities :-** A firm or any of its affiliates who have been engaged by the employer to provide goods, works or assignment/job other than design and build assignment/job for a project shall be disqualified from providing design and build assignment/job related to those goods, works or assignments/job. Conversely, a firm or any of its affiliates who have been hired to provide design and build assignment/job for the preparation or implementation or implementation. For the purpose of this paragraph, assignment/job other than design and build assignment/job are defined as those leading to a measurable physical output for example surveys exploratory drilling aerial photography, satellite imagery etc.
- (b) **conflicting assignment/job:-** A contractor {including its Personnel and sub-contractor(s)} or any of its affiliates shall not be hired for any assignment/job that by its nature may be in conflict with another assignment/job of the contractor to be executed for the same or for another employer, for example a Contractor hired to prepare engineering design for an infrastructure project shall not be engaged to prepare an independent environmental assessment for the same project and a contractor assisting an Employer in the privatization of public assets shall not purchase nor advise purchasers of such assets.
- (c) **conflicting relationships:-** A Contractor ( including its Personnel and Sub-Contractors) that has a business or family relationship with a member of the employer's staff who is directly or indirectly involved in any part of (i) the preparation of the Terms of Reference of the assignment/job (ii) the selection process for such assignment/job or (iii) supervision of contract, may not be awarded a contract unless the conflict stemming from this relationship has been resolved in a manner acceptable to the employer throughout the selection process and the execution of the contract.

4.4.3 Contractors have an obligation to disclose any situation of actual or potential conflict that impacts their capacity to serve the best interest of their Employer, or that may reasonably be perceived as having this effect. Any such disclosure shall be made as per the standard forms of technical proposal provided herewith. If the Contractor fails to disclose said situations and if the employer comes to know about any such situation at any time, it may lead to the disqualification of the contractor during bidding process or termination of its contract during execution of assignment.

4.4.4 No agency or current employees of the employer shall work as contractors under their own ministries, departments or agencies. The contract is liable for cancellation if either the contractor himself or any of his employees or representatives are found to be persons/ person who have held class I post under IWAI immediately before retirement and has within two years of such retirement accepted without obtaining the previous permission of IWAI, or the chairman as the case may be, and employment as contractor, or in connection with the execution of the public works, or as an employees of such contractor. If the contract is terminated on account of the failure of the contractor to comply with this clause, IWAI shall be entitled to recover from him such damages as may be determined by the engineer in charge with due regard to the inconvenience caused to IWAI on account of such termination without prejudice to IWAI's right to proceed against such officer.

#### 4.4.5 Sustainability of JV/consortium

**4.4 A** To qualify for award of the Contract, each bidder should have

- a) The Bidder should have Minimum Average Annual Financial turnover of INR 39.00 Crs / USD 6,000,000.00 or an equivalent amount in a freely convertible currency, calculated as total certified payments received for contracts in progress or completed, within the last three (3) Financial years as on 31st March 2017
- b) The bidder must have experience of having successfully completed similar works during last (7) seven years prior to the date of Submission of Bid.

At least one or more works similar to the proposed works defined in detailed technical Specification / tender documents, as per following:

- 1 (one) contract with minimum value of USD 9,700,000 or **INR 63.00 Crs**  
Or
- 2 (Two) contract each with minimum value of USD 7,300,000 or **INR 47.00 Crs**  
Or
- 3( three ) contract each with minimum value of USD 5,000,000 or **INR 32.00 Crs**

The similar work constitutes design, construction supply testing and commissioning of Inland/Sea-going Self-Propelled Cutter Suction Dredgers/non-Propelled Cutter Suction Dredgers of Various capacity and size.



C) The bidder should have financial solvency of not less than Rs 32,00,00,000.00 or USD 5,000,000 or 4,300,000 Euro and submit the scan copy of Solvency certificate from a Nationalized/scheduled/foreign National Bank as the documentary evidence countersigned by Indian Scheduled Bank.( 1USD= 65 INR & 1 EURO = 76 INR)

**4.4 B (a)** Each bidder must produce:

(i) An affidavit on a Stamp Paper, duly attested from the Notary, that the information furnished with the bid documents is correct in all respects; and failure to submit the document as specified shall make the bid non-responsive. Scanned copy to be submitted online.

**(b)** Each bidder must demonstrate:

(i) Evidence of availability (either owned or leased or rented) of shipyard where the dredgers are proposed to be built. The bidder to submit the details of the yard owned by them, in case the yard is on lease or rented a copy of the lease or rent agreement to be enclosed as evidence.

(ii) Availability of technical, managerial and skilled personnel for this work.

**4.5** Even though the bidders meet the above qualifying criteria, they are subject to be disqualified if they have:

(i) made misleading or false representations in the forms, statements, affidavits and attachments submitted in proof of the qualification requirements; and/or

(ii) Record of poor performance such as abandoning the works, not properly completing the contract, inordinate delays in completion, litigation history, or financial failures etc. or debarring.

(iii) Tampered the bid document in any manner.

**5. One Bid per Bidder**

**5.1** Each Bidder shall submit only one online Bid for the work. A Bidder who submits more than one Bid will cause the proposals with the Bidder's participation to be disqualified. The bid shall be submitted either by original manufacturer or their authorized agent otherwise it would be cancelled.

**6. Cost of Bidding**

**6.1** The Bidder shall bear all costs associated with the preparation and submission of his Bid, and the Owner will, in no case, be responsible or

liable for those costs regardless of the conduct or out come of the bidding process.

## **B. Bidding Documents**

### **7. Content of Bidding Documents**

**7.1** The set of bidding documents comprises the documents listed below and addenda issued in accordance with Clause 9:

1. Notice Inviting Tender
2. Instructions to Bidders
3. Forms of bid and Bank Guarantee
4. Conditions of Contract

(Part I General Conditions of Contract, and Contract Data; Part II Special Conditions of Contract)

5. Technical Specifications

**7.2** The bidder is expected to examine carefully all instructions, conditions of contract, contract data, forms, terms, specifications, forms and drawings in the Bid Document. Failure to comply with the requirements of Bid Documents shall be at the bidder's own risk. Pursuant to clause 25 hereof, bids, which are not substantially responsive to the requirements of the Bid Documents, shall be rejected.

### **8. Clarification of Bidding Documents**

**8.1** A prospective Bidder requiring any clarification of the bidding documents may submit queries to the owner in writing by post or email at the owner's address indicated in the Notice Inviting Tenders. The Owner will respond to any request for clarification received earlier than 10 days prior to the deadline for submission of bids, as stipulated in date sheet. Copies of the Owner's response to all queries consolidated till date of pre-bid meeting shall be forwarded to all bidders who have purchasers bidding documents, and copy of same would be made available prospective buyers of bid document However, source of queries would not be disclosed.

**8.2.1** Not more than two representatives per bidder shall be allowed in scheduled pre-bid meeting.

**8.2.2** The purpose of the meeting will be to clarify issues and to answer questions on any matter that may be raised at that stage.

**8.2.3** The bidder is requested to submit any questions in writing or by fax so as to reach the Owner not later than one week before the meeting.

**8.2.4** Non-attendance at the pre-bid meeting will not be a cause for disqualification of a bidder.

## **9. Amendment of Bidding Documents**

**9.1** Before the deadline for online submission of bids, the Owner may modify/amend/make addition in the bidding documents for any reason, whether at its own initiative or in response to clarification requested by a prospective bidder by issuing addenda/corrigendum.

**9.2** Any addendum/corrigendum uploaded on website shall be part of the bidding documents. Corrigendum/Addendum will be available on website. The modification /amendment/additions in the bidding document shall be binding on the prospective bidders.

**9.3** To give prospective bidders reasonable time in which to take a corrigendum/addendum into account in preparing their bids, the Owner shall extend, as necessary, the deadline for submission of bids, in accordance with Clause 19.2.

## **C. Preparation of Bids**

### **10. Language of Bid**

**10.1** All documents relating to the Bid shall be in the language specified in the Appendix to ITB.

### **11. Documents Comprising the Bid**

**11.1** The Bid submitted by the Bidder shall be in two separate parts:

**Part I** - This shall be named Technical Bid and shall comprise scanned copies of:

- I. For bidding documents downloaded from the website <https://eprocure.gov.in/eprocure/app>, the scanned copy of the Demand Draft for the cost of the bidding documents must be uploaded. The original Demand Draft is to be deposited in the office before the bid submission closing date.
- II. A scanned copy of the Earnest Money must be uploaded. The original of the Earnest money deposit to be deposited in the office before the bid submission closing date.

- III. Qualification information, supporting documents, affidavit and undertaking as specified in Clause 4;
- IV. Undertaking that the bid shall remain valid for the period specified in clause 14.1;
- V. Any other information/documents required to be completed and submitted by bidders, as specified in the Appendix to ITB, and
- VI. A scanned affidavit affirming that information he has furnished in the bidding document is correct to the best of his knowledge and belief must be uploaded. The original affidavit is to be deposited in the office before the bid submission closing date.
- VII. Form of bid.
- VIII. The scanned copy of the Program and Method Statement/Work Plan and the Activity Schedule for the entire work including design, model testing, construction, procurement of major machineries, installation, testing and commissioning works for both Self-Propelled Cutter Suction Dredgers.

**Part II.** It shall be named Financial Bid and shall comprise of:

- (i) Cost schedule (BOQ)

## **12. Bid Prices**

- 12.1** The Contract shall be for the whole Works, as described in Clause 1.1, based on the cost schedule submitted by the Bidder.
- 12.2** The bidder shall quote rates and prices for all items of the Works described in the cost schedule. Domestic bidders to quote in INR and foreign currency bids shall be converted in INR based on currency conversion rate published by RBI, on date of technical bid opening.
- 12.3** All duties, taxes, royalties and other levies payable by the Contractor under the Contract, or for any other cause, shall be included in the rates, prices, and total Bid price submitted by the Bidder. GST shall be quoted separately and shall be treated as per prevailing taxation rules.
- 12.4** The rates and prices quoted by the Bidder shall be fixed for the duration of the Contract and shall not be subject to any price adjustment.
- 12.5** The bidder is required to submit complete cost break-up to justify his quoted price for entire scope of work.

## **13. Currencies of Bid and Payment**

- 13.1** The prices shall be quoted by the Indian bidder entirely in Indian Rupees. All payments shall be made in Indian Rupees. In case these are

imported, the rate shall be quoted in foreign currency and payment shall be made in foreign currency.

#### **14. Bid Validity**

**14.1** Bids shall remain valid for a period of 120 days after the deadline date for bid submission specified in Clause 19. The Owner as non-responsive shall reject a bid valid for a shorter period.

**14.2** In exceptional circumstances, prior to expiry of the original time limit, the Owner may request that the bidders may extend the period of validity for a specified additional period. The request and the bidders' responses shall be made in writing or by cable. A bidder may refuse the request without forfeiting his bid security. A bidder agreeing to the request will not be required or permitted to modify his bid, but will be required to extend the validity of his bid security for a period of the extension, and in compliance with Clause 15 in all respects.

#### **15. Earnest Money/Bid Security**

**15.1** The Bidder shall furnish, as part of the Bid, Earnest Money/Bid security, for the amount as specified in the Appendix to ITB. **However Micro, small and medium Enterprises (MSME) or are registered with the Central Purchase Organization Ministry or Department or Startups as recognized by Department of Industrial Policy & Promotion (DIPP) are exempted from depositing EMD.**

**15.2** The Earnest Money shall, be in the form of Bank Guarantee and RTGS as specified in the Appendix to ITB. It shall be valid for 90 days beyond the validity of the bid. Earnest Money Deposit for the tendered work in the Notice Inviting Tender should be submitted in the following manner:

- a) Either 100% by RTGS
- or
- b) 50% by RTGS and remaining 50% as Bank Guarantee. In such cases 50% of Earnest Money or Rs. 20 lakh whichever is less, will have to be deposited in the shape of RTGS and balanced can be accepted in the form of Bank Guarantee issued by a Scheduled Bank.

The RTGS only payable in favour of "IWAI Fund" in the A/c No. 513202050000007, IFSC Code: UBIN0551325, Union Bank of India, Branch- sector-15, Noida. The Bank Guarantee submitted as EMD to be valid for 90 days beyond the validity of the bid.

The scanned copies of the RTGS receipt for tender cost and EMD with transaction ID certified by the same bank must be enclosed along with

the e-bid. In case the EMD and tender fee receipt are not enclosed along with the e-bid, the bid is liable for rejection.

The Earnest Money of the successful Bidder submitted in the form of RTGS will be retained as Security Deposit and that given in the form of Bank Guarantee will be discharged when the Bidder has signed the Agreement and furnished the required Performance Security. It shall be valid for 90 days beyond the validity of the bid.

- 15.3** Any bid not accompanied by an acceptable Earnest Money shall be rejected by the Owner as non-responsive. The proof of RTGS and B.G. for tender fee and EMD must be deposited before closing date and time of submission of bid at IWAI, A-13, Sector-1, NOIDA-201301.
- 15.4** The Earnest Money of unsuccessful bidders will be returned within 28 days after awarded to successful bidder or cancellation of tender process.
- 15.5** The Earnest Money of the successful Bidder will be discharged when the Bidder has signed the Agreement and furnished the required Performance Security.
- 15.6** The Bid Security/Earnest Money will be forfeited:
- a) if the Bidder withdraws the Bid after its submission during the period of Bid validity;
  - b) in the case of a successful Bidder, if the Bidder fails within the specified time limit to
    - i. sign the Agreement; and/or
    - ii. furnish the required Performance Security.
- 15.7** Foreign bidders has to submit the same on appropriate conversion rate taken for the date 14 days prior to submission due date. This conversion rate would be valid for bid price conversion also. In case of Bank Guaraantee by foreign bidder, same shall be issued by nationalized bank of bidder,s country and countersigned by nationalized Indian Bank.

## **16. Alternative Proposals by Bidders**

- 16.1** Bidder shall submit offers that fully comply with the requirement of the bidding document including conditions of contract. Conditional offer or alternate offer will not be considered further in the process of tender evaluation.

## **17. Format and Signing of Bid**

- 17.1** The Bidder shall submit online bid comprising of the documents as described in Clause 11 and other documents as specified in the tender.
- 17.2** The Bid shall be signed by a person or persons duly authorized to sign on behalf of the Bidder. All pages of the Bid shall be signed by the person or persons signing the Bid.
- 17.3** The Bid shall contain no overwriting, alterations or additions, except those to comply with instructions issued by the Owner, or as necessary to correct errors made by the Bidder, in which case such corrections shall be made by scoring out the cancelled portion, writing the correction and signing and dating it along with the stamp by the person or persons signing the Bid.

## **D. Submission of Bids**

### **18. Online submission of Bids**

- 18.1** The Bidder shall submit online bids.

### **19. Deadline for Submission of Bids**

- 19.1** Complete online Bids (including Technical and Financial) must be received by the bid submission closing date and time, as prescribed in notice or published on website, if extended.

### **20. Modification and Withdrawal of Bids**

- 20.1** Bidders may modify or withdraw their bids online before the deadline prescribed in Clause 19, and the latest submitted bid before deadline shall be deemed to be final bid and same shall be opened, discarding the previous bids, if any. However, no modification or withdrawal shall be allowed after opening of bid.

## **E. Bid Opening and Evaluation**

### **21. Bid Opening**

Online Bid opening shall be carried out in two stages. Firstly, 'Technical Bid' of all the online bids received shall be opened on the date and time mentioned in 19.1 of ITB. 'Financial Bid' of technically qualified bidders as laid down in Clause 25.2 shall be opened on a subsequent date, which will be notified to such bidders.

- 21.1** The Owner will open the online "Technical Bid" in the presence of the bidders/bidders' representatives who choose to attend at the time, date and place specified. In the event of the specified date for the submission

of bids being declared to be a holiday for the Owner, the Bids will be opened on the same time and venue on the next working day.

- 21.1.1** Bidder's names, the presence of bid security and such other details, as the Owner may consider appropriate will be announced by the Owner after the opening.
- 21.2** In all other case, the amount of Earnest Money, forms and validity shall be announced. Thereafter, the Owner at the opening as the Owner may consider appropriate, will announce the bidder's names and such other details.
- 21.3** After the opening of the technical bids their evaluation will be taken up with respect to bid security, qualification information and other information furnished in Part I of the bid in pursuant to clause 11.1, thereafter on fulfilling the criteria laid down in Clause 3, a list will be drawn up of technically qualified bidders, the responsive bids whose financial bids are eligible for consideration and opening.
- 21.4** The Owner shall inform the technically qualified bidders, of the date, time and place of opening of the financial bids. The bidders so informed, or their representative, may attend the meeting of online opening of financial bids.
- 21.5** At the time of the online opening of the 'Financial Bid', the names of the bidders and the Bid prices, the total amount of each bid, and such other details as the Owner may consider appropriate will be announced by the Owner at the time of bid opening.

## **22. Process to be Confidential**

- 22.1** Information relating to the examination, clarification, evaluation, and comparison of bids and recommendations for the award of a contract shall not be disclosed to bidders or any other persons not officially concerned with such process until the award to the successful Bidder has been announced. Any attempt by a Bidder to influence the Owner's processing of bids or award decisions may result in the rejection of his Bid

## **23. Clarification of Bids and Contacting the Owner**

- 23.1** During the evaluation of the bids, the owner may, at its discretion, ask the bidder to provide any additional information/clarification in relation to its bids as may be deemed fit by the owner. The bidder shall in all cases where such request has been made by the owner, submit within such period and in such manner as may be specified by the owner in the request so made. Failure of the bidder to furnish such additional



information as may be requested by the owner may non-evolution of bid. The bidder shall not have any right to challenge the same or any claims arising from such bid being not evaluated by the owner.

- 23.2** No bidder shall contract the owner on any matter relating to its bid from the time of the bid opening to the time the of award of contract. Any attempt by the bidder to influence the Owner's bid evaluation, bid comparison or contract award decision may result in the rejection of his bid.

## **24. Examination of Bids and Determination of Responsiveness**

- 24.1 During the detailed evaluation of "Technical Bids", the Owner will first determine whether each Bid (a) meets the eligibility criteria defined in Clauses 3 and 4; (b) has been properly signed; (c) is accompanied by the required securities; and (d) is responsive to the requirements of the bidding documents.

After the above process is completed the technical specification/offer of the responsive bidders will be examined with respect to technical specifications provided in the tender document, clarifications, if any, at this stage in respect of the technical parameters offered by the bidder will be sought from the bidders. Thereafter, the bids, which conform, to the terms, conditions, and specifications of the bidding documents, without material deviation or reservation will be considered as responsive for evaluation.

## **25. Evaluation of Bids**

- 25.1 Selection of the bidder for design, construction, supply, testing and commissioning of dredgers will be based on technical and financial evaluation.

**25.2** Technical evaluation shall be based on **Weightage -criteria for the Evaluation of the Technical Proposal.**

Weightage -criteria for the Evaluation of the Technical Proposal		Point System	
		activity	total
1	Technical Features of the Self Propelled - Cutter Suction Dredger offered with respect to the Specification	10	10
2	Bidders having experience & facilities in manufacturing of following		25
	• CSD + SPCSD	25	
	• SPCSD	20	
	• CSD	15	
3	Bidders must have completed & executed similar projects: ( 5 for each project)		30
	• 6 Similar Projects Completed	30	
	• 5 Similar Projects Completed	25	
	• 4 Similar Projects Completed	20	
	• 3 Similar Projects Completed	15	
	• 2 Similar Projects Completed	10	
	• 1 Similar Projects Completed	05	
4	Bidders must have the following facilities.		20
	• Own - Ship Building Yard along with requisite facilities	05	
	• Leased - Ship Building Yard along with requisite facilities	03	
	• Existing facilities for inspection and testing in the factories.	02	
	• Details of Service support Center facilities in Aboard / India.	1.5 / 03	
	• Training facilities in India	05	
	• Timely Supplies with no defaults	05	
5	Bidder may be Manufacturer / JV Consortium / Agent of a Manufacturer		15
	• Bidder as Manufacturer	15	
	• Bidder as JV consortium	12	
	• Bidder as Agent of Manufacturer	08	
Total Points			100
The minimum technical score (St) required to pass is: 75			
Similar projects means : Design, Construction and Supply of Inland / Sea-going Self Propelled - Cutter Suction Dredgers of various capacity & type.			

**25.4** If the bidder does not fulfill the above criteria his bid shall be technically disqualified and his financial bid shall not be opened.

**25.5** The evaluation of the financial bid will be based on the lowest financial offer received for the work i.e design, construction; supply testing & commissioning of two self-propelled Dredgers. For evaluation of the price quoted for supply if made in foreign currency this shall be converted into Indian Rupees at the rate of exchange prevailing on the date of opening of technical bid.

## **F. Award of Contract**

### **26. Award Criteria**

**26.1** Subject to Clause 28, the Owner will award the Contract to the Bidder after evaluation as per Clause 25.

**27. Owner's Right is reserved to accept any Bid or to Reject any or all Bids and also reserve the right to modify by splitting the scope of work or Increase and Decrease scope work.**

**27.1** Notwithstanding Clause 26, the Owner reserves the right to accept or reject any

Bid, and to cancel the bidding process and reject all bids, at any time prior to the award of Contract, without thereby incurring any liability to the affected Bidder or bidders or any obligation to inform the affected Bidder or bidders of the grounds for the Owner's action. Owner also the reserve the right to split the work to one or more parties depending on capability of the yard and increase/decrease the work requirement.

### **28. Notification of Award and Signing of Agreement.**

**28.1** The bidder whose Bid has been accepted will be notified of the award by the Owner prior to expiration of the Bid validity period by registered letter and through email. This letter (hereinafter and in the Part I *General Conditions of Contract* called the "Letter of Acceptance") will state the sum that the Owner will pay to the Contractor in consideration of the execution and completion of the Works by the Contractor as prescribed by the Contract (hereinafter and in the Contract called the "Contract Price").

**28.2.** The notification of award will constitute the formation of the Contract, subject only to the furnishing of a performance security in accordance with the provisions of Clause 30.

**28.3.** The Agreement document will comprise of all bid document submitted along with all correspondences between the Owner and the successful Bidder. It will be signed by the Owner/owners representative and the authorised representative of successful Bidder, at the owners premises on mutually agreed date and time. after furnished the performance security, within 15 days of issuance of Letter of Acceptance.

**28.4** After signing of the agreement with successful bidder, EMD of unsuccessful bidder would be released.

**29. Factors Affecting the Award of the contract.**

**29.1** The bidder should have its own contract support facilities. The support facilities should be fully owned and managed by the bidder.

**29.2** Conformity with the request for bid/tender required and conditions.

**29.3** The assessment of the capability of the bidder to meet the terms and conditions.

**29.4** The bidder must have executed similar orders, for which the bidder is quoting as indicated in clause 1 of ITB for Government/ semi Government/Autonomous Organisations/reputed Private organisations.

**30. Performance Security**

**30.1** Within 15(Fifteen) days after receipt of the Letter of Acceptance, the successful Bidder shall deliver to the Owner a Performance Security of Ten percent of the Contract Price, for the period of 28 days after the expiry of defect liability period of 12 months.

**30.2** The performance security shall be Bank Guarantee, proforma of which is enclosed at **Annexure-II**.

**30.3** Failure of the successful bidder to comply with the requirement of sub-clause 30.1 shall constitute sufficient ground for cancellation of the award and forfeiture of the bid security.

**31. Advances**

On award of work and execution of agreement and if requested a mobilization advance, which would be limited to maximum of 10% of contract

price. Advance will be released at the simple rate of interest as specified in Appendix to ITB against furnishing of irrevocable bank guarantee for amount 110% of amount of advance . The mobilisation advance will be recovered in four equal installments from the first running bill i.e., when the keel is laid.

### **32. Corrupt or Fraudulent Practices**

The Owner will reject a proposal for award if it determines that the Bidder recommended for award has engaged in corrupt or fraudulent practices in competing for the contract in question and will declare the firm ineligible, either indefinitely or for a stated period of time, to be awarded a contract with Inland Waterways Authority of India and any other agencies, if it at any time determines that the firm has engaged in corrupt or fraudulent practices in competing for the contractor, or in execution.

The Owner requires the bidders/Contractors to strictly observe the laws against fraud and corruption enforced in India, namely, Prevention of Corruption Act, 1988.

## **Appendix to ITB**

The Owner should fill out this Appendix to ITB before issuing the bidding documents. The insertions should correspond to the information provided in the Invitation for Bids.

### Instructions Bidders Clause Reference

- (1.1) The Owner is Chairman, Inland Waterways Authority of India
- (1.1) The Works is “Design, Construction, Supply, testing and Commissioning of two Self-Propelled Cutter Suction Dredgers for NW-2”.
- (4.4.A)(b) The value shall be as mentioned in Bid Notice. Escalation factor (for the cost of works completed during the last 7 years ) may be taken as follows: [CI. 4.4A(b)]

Year Before	Multiplying Factor
One .....	1.07
Two .....	1.15
Three .....	1.23
Four .....	1.31
Five .....	1.40
Six .....	1.50
Seven .....	1.60

.

- (8.2.1) Place, Time and Date for pre-bid meeting are:

Place: **NOIDA (will be intimated later, in case of change if any)**

Time : **15:00 hrs**

Date : **-----2017**

- (10.1) Language of the bid is English

- (11.1.v) Nil

- (15.1) The amount of Earnest Money shall be as mentioned in NIT.

- (15.2) The EMD/bid security which shall either be in the form of

a Bank Guarantee, in the name of the Owner, from a National or Scheduled Bank of India or from a Foreign Bank in respect of International Bidders.

Any Scheduled Commercial Bank approved by RBI having a net worth of not less than Rs. 500 crore as per the latest Annual Report of the Bank. In the case of a Foreign Bank (issued by a branch in India), the net worth in respect of the Indian operations shall only be taken into account.

and

RTGS only payable in favour of "IWA Fund" in the A/c No. 513202050000007, IFSC Code: UBIN0551325, Union Bank of India, Branch- sector-15, Noida.

(19.1) The Owner's address for the purpose of Bid submission is Inland Waterways Authority of India, A-13, Sector-I, Noida – 201 301.

(19.1) The deadline for submission of bids shall be:  
Time & Date : As prescribed in Notice inviting E-tender

(21.1) The date, time and place for opening of the Bids are:

**(A) Technical Bid**

Date, Time & Place : As prescribed in Bid Notice

**(B) Financial Bid (For qualified bidder)**

Date, Time & Place : (Will be intimated later)

(30.1) The amount and validity period of the performance guarantee is:

Amount: 10 % of the contract price.

Validity Period: (i) Performance security shall be valid until a date 28 days after the expiry of Defect Liability Period.

(31.) Rate of simple interest for mobilization advance will be 15%.

## **Appendix – 1**

### **Availability of vessel building facility including infrastructural facilities, machineries, etc. which will be utilised for the work under tender**

<b>Name &amp; Address of the Ship Builder</b>	<b>Detailed Particulars</b>
(i) Building Dock/Slipway including fabrication/ construction bays (details including number, dimension, location and layout of shipyard to be given). Whether covered or open.	
(ii) Skids/Mould loft for modular construction (details including number, dimension and location to be given). Whether covered or open.	
(iii) Design and drawing office of own or tie up with experienced Design Consultant/ Naval Architect with brief resume	
(iv) List of Manpower, machinery, equipment etc.	
(v) Facilities for carry out outfitting job in a float condition indicating location and area as applicable for said work.	

Name & signature of  
the

authorized

signatory



**APPENDIX – 2**  
**OUTPUT OF THE SHIPYARD DURING PRECEDING 7 YEARS**

Sl.No.	Name of the contract	Name and Address of employer	Cost of Work	Date of Award	Date completion of		Type of Vessel and specification
					Schedule	Actual	

the Name & signature of authorized signatory

### **APPENDIX-3**

#### **CONTRACT OF NON-PERFORMANCE OF WORKS (DURING PRECEDING 7 YEARS)**

Sl. No.	Name of Contract	Name and Address of employer	Date of award	Date of completion as per contract	Physical status	Reason for non-completion	Any revised date fixed for completion	Whether under Litigation

the Name & signature of authorized signatory

## **APPENDIX – 4**

### **FINANCIAL PERFORMANCE (DURING PRECEDING 7 YEARS)**

Sl. No.	Name of Contract	Name and Address of firms	Date of award	Cost of contract	Date of completion as per contract	Actual date of completion	Any cost overrun allowed indicating reasons	Revised cost if any

the Name & signature of authorized signatory

## **APPENDIX – 5**

### **ANNUAL CONSTRUCTION TURNOVER (DURING PRECEDING 7 YEARS)**

Year	Annual Turnover

Name & signature of  
the authorized signatory

N.B.-The annual turnover duly certified by the bidders Chartered Accountant on their letter head for last seven years to be submitted as a scanned document in the technical bid and original to be submitted along with EMD and other specified document before the closing date and time i.e. submission of bid.

**(SECTION-III)**  
**INTEGRITY AGREEMENT**

### **SECTION - III**

**To be signed by the bidders' and same signatory competent/  
Authorized to sign the relevant contract on behalf of IWAI.**

### **INTEGRITY AGREEMENT**

This Integrity Agreement is made at ..... on this ..... day of .....  
20.....

BETWEEN

Chairperson, Inland Waterways Authority of India represented through Chief Engineer, Inland Waterways Authority of India, A - 13, Sec. – 1, Noida.

IWAI, (Hereinafter referred as the 'Principal/ Owner', which expression shall unless repugnant to the meaning or context hereof include its successors and permitted assigns)

AND

.....  
(Name and Address of the Individual/firm/Company)  
through .....(Hereinafter referred to as  
the

(Details of duly authorized signatory)  
“Bidder/Contractor” and which expression shall unless repugnant to the  
meaning or context hereof include its successors and permitted assigns)

Preamble

WHEREAS the Principal / Owner has floated the Tender (No. IWAI/MD/221/2015-16) (hereinafter referred to as “Tender/Bid”) and intends to award, under laid down organizational procedure, contract for “ Design, construction, supply of two Self-Propelled Cutter Suction Dredgers”.

AND WHEREAS the Principal/Owner values full compliance with all relevant laws of the land, rules, regulations, economic use of resources and of fairness/transparency in its relation with its Bidder(s) and Contractor(s).

AND WHEREAS to meet the purpose aforesaid both the parties have agreed to enter into this Integrity Agreement (hereinafter referred to as “Integrity Pact” or “Pact”), the terms and conditions of which shall also be read as integral part and parcel of the Tender/Bid documents and Contract between the parties.

NOW, THEREFORE, in consideration of mutual covenants contained in this Pact, the parties hereby agree as follows and this Pact witnesses as under:

**Article 1: Commitment of the Principal/Owner**

- 1) The Principal/Owner commits itself to take all measures necessary to prevent corruption and to observe the following principles:
  - (a) No employee of the Principal/Owner, personally or through any of his/her family members, will in connection with the Tender, or the execution of the Contract, demand, take a promise for or accept, for self or third person, any material or immaterial benefit which the person is not legally entitled to.
  - (b) The Principal/Owner will, during the Tender process, treat all Bidder(s) with equity and reason. The Principal/Owner will, in particular, before and during the Tender process, provide to all Bidder(s) the same information and will not provide to any Bidder(s) confidential / additional information through which the Bidder(s) could obtain an advantage in relation to the Tender process or the Contract execution.
  - (c) The Principal/Owner shall endeavor to exclude from the Tender process any person, whose conduct in the past has been of biased nature.
- 2) If the Principal/Owner obtains information on the conduct of any of its employees which is a criminal offence under the Indian Penal code (IPC)/Prevention of Corruption Act, 1988 (PC Act) or is in violation of the principles herein mentioned or if there be a substantive suspicion in this regard, the Principal/Owner will inform the Chief Vigilance Officer and in addition can also initiate disciplinary actions as per its internal laid down policies and procedures.

**Article 2: Commitment of the Bidder(s)/Contractor(s)**

1. It is required that each Bidder/Contractor (including their respective officers, employees and agents) adhere to the highest ethical standards, and report to the IWAI all suspected acts of fraud or corruption or Coercion or Collusion of which it has knowledge or becomes aware, during the tendering process and throughout the negotiation or award of a contract.
2. The Bidder(s)/Contractor(s) commit himself to take all measures necessary to prevent corruption. He commits himself to observe the following principles during his participation in the Tender process and during the Contract execution:

- a) The Bidder(s)/Contractor(s) will not, directly or through any other person or firm, offer, promise or give to any of the Principal/Owner's employees involved in the tender process or execution of the contract or to any third person any material or other benefit which he/she is not legally entitled to, in order to obtain in exchange any advantage of any kind whatsoever during the Tender process or during the execution of the contract.
  - b) The Bidder(s)/Contractor(s) will not enter with other Bidder(s) into any undisclosed agreement or understanding, whether formal or informal. This applies in particular to prices, specifications, certifications, subsidiary contracts, submission or non-submission of bids or any other actions to restrict competitiveness or to cartelize in the bidding process.
  - c) The Bidder(s)/Contractor(s) will not commit any offence under the relevant IPC/PC Act. Further the Bidder(s)/Contract(s) will not use improperly, (for the purpose of competition or personal gain), or pass on to others, any information or documents provided by the Principal/Owner as part of the business relationship, regarding plans, technical proposals and business details, including information contained or transmitted electronically.
  - d) The Bidder(s)/Contractor(s) of foreign origin shall disclose the names and addresses of agents/representatives in India, if any. Similarly Bidder(s)/Contractor(s) of Indian Nationality shall disclose names and addresses of foreign agents/representatives, if any. Either the Indian agent on behalf of the foreign principal or the foreign principal directly could bid in a tender but not both. Further, in cases where an agent participate in a tender on behalf of one manufacturer, he shall not be allowed to quote on behalf of another manufacturer along with the first manufacturer in a subsequent/parallel tender for the same item.
  - e) The Bidder(s)/Contractor(s) will, when presenting his bid, disclose any and all payments he has made, is committed to or intends to make to agents, brokers or any other intermediaries in connection with the award of the Contract.
3. The Bidder(s)/Contractor(s) will not instigate third persons to commit offences outlined above or be an accessory to such offences.
4. The Bidder(s)/Contractor(s) will not, directly or through any other person or firm indulge in fraudulent practice means a willful misrepresentation or omission of facts or submission of fake/forged documents in order to induce public official to act in reliance thereof, with the purpose of



obtaining unjust advantage by or causing damage to justified interest of others and/or to influence the procurement process to the detriment of the Government interests.

5. The Bidder(s)/Contractor(s) will not, directly or through any other person or firm use Coercive Practices (means the act of obtaining something, compelling an action or influencing a decision through intimidation, threat or the use of force directly or indirectly, where potential or actual injury may befall upon a person, his/ her reputation or property to influence their participation in the tendering process).

### **Article 3: Consequences of Breach**

Without prejudice to any rights that may be available to the Principal/Owner under law or the Contract or its established policies and laid down procedures, the Principal/Owner shall have the following rights in case of breach of this Integrity Pact by the Bidder(s)/Contractor(s) and the bidder/contractor accepts and undertakes to respect and uphold the Principal/Owner's absolute right:

1. If the Bidder(s)/Contractor(s), either before award or during execution of Contract has committed a transgression through a violation of Article 2 above or in any other form, such as to put his reliability or credibility in question, the Principal/Owner after giving 14 days' notice to the contractor shall have powers to disqualify the Bidder(s)/Contractor(s) from the tender process or terminate/determine the Contract, if already executed or exclude the Bidder/Contractor from future contract award processes. The imposition and duration of the exclusion will be determined by the severity of transgression and determined by the Principal/Owner. Such exclusion may be forever or for a limited period as decided by the Principal/Owner.
2. Forfeiture of EMD/Performance Guarantee/Security Deposit: If the Principal/Owner has disqualified the Bidder(s) from the tender process prior to the award of the contract or terminated/determined the contract or has accrued the right to terminate/determine the contract according to Article 3(1), the Principal/Owner apart from exercising any legal rights that may have accrued to the Principal/Owner, may in its considered opinion forfeit the entire amount of Earnest Money Deposit, Performance Guarantee and Security Deposit of the Bidder/Contractor.
3. Criminal Liability: If the Principal/Owner obtains knowledge of conduct of a bidder or Contractor, or of an employee or a representative or an associate of a bidder or Contractor which constitutes corruption within the meaning of IPC Act, or if the Principal/Owner has substantive

suspicion in this regard, the Principal/Owner will inform the same to law enforcing agencies for further investigation.

#### **Article 4: Previous Transgression**

- 1) The Bidder declares that no previous transgressions occurred in the last 5 years with any other Company in any country confirming to the anticorruption approach or with Central Government or State Government or any other Central/State Public Sector Enterprises in India that could justify his exclusion from the Tender process.
- 2) If the Bidder makes incorrect statement on this subject, he can be disqualified from the Tender process or action can be taken for banning of business dealings/ holiday listing of the Bidder/Contractor as deemed fit by the Principal/ Owner.
- 3) If the Bidder/Contractor can prove that he has resorted / recouped the damage caused by him and has installed a suitable corruption prevention system, the Principal/Owner may, at its own discretion, revoke the exclusion prematurely.

#### **Article 5: Equal Treatment of all Bidders/Contractors/Subcontractors**

- 1) The Bidder(s)/Contractor(s) undertake(s) to demand from all subcontractors a commitment in conformity with this Integrity Pact. The Bidder/Contractor shall be responsible for any violation(s) of the principles laid down in this agreement/Pact by any of its Subcontractors/ sub-vendors.
- 2) The Principal/Owner will enter into Pacts on identical terms as this one with all Bidders and Contractors.
- 3) The Principal/Owner will disqualify Bidders, who do not submit, the duly signed Pact between the Principal/Owner and the bidder, along with the Tender or violate its provisions at any stage of the Tender process, from the Tender process.

#### **Article 6: Duration of the Pact**

This Pact begins when both the parties have legally signed it. It expires for the Contractor/Vendor 12 months after the completion of work under the contract or till the continuation of defect liability period, whichever is more and for all other bidders, till the Contract has been awarded.

If any claim is made/lodged during the time, the same shall be binding and continue to be valid despite the lapse of this Pacts as specified above, unless it is discharged/determined by the Competent Authority, IWAI.

#### **Article 7: Other Provisions**

- 1) This Pact is subject to Indian Law, place of performance and jurisdiction is the Headquarters of the Division of the Principal/Owner, who has floated the Tender.
- 2) Changes and supplements need to be made in writing. Side agreements have not been made.
- 3) If the Contractor is a partnership or a consortium, this Pact must be signed by all the partners or by one or more partner holding power of attorney signed by all partners and consortium members. In case of a Company, the Pact must be signed by a representative duly authorized by board resolution.
- 4) 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 intensions.
- 5) It is agreed term and condition that any dispute or difference arising between the parties with regard to the terms of this Integrity Agreement / Pact, any action taken by the Owner/Principal in accordance with this Integrity Agreement/ Pact or interpretation thereof shall not be subject to arbitration.

#### **Article 8: LEGAL AND PRIOR RIGHTS**

All rights and remedies of the parties hereto shall be in addition to all the other legal rights and remedies belonging to such parties under the Contract and/or law and the same shall be deemed to be cumulative and not alternative to such legal rights and remedies aforesaid. For the sake of brevity, both the Parties agree that this Integrity Pact will have precedence over the Tender/Contact documents with regard any of the provisions covered under this Integrity Pact.

IN WITNESS WHEREOF the parties have signed and executed this Integrity Pact at the place and date first above mentioned in the presence of following witnesses:

.....  
(For and on behalf of Principal/Owner)

.....  
(For and on behalf of Bidder/Contractor)

WITNESSES:

1. ....  
(signature, name and address)

2. ....  
(signature, name and address)

Place:

Date :

## **(SECTION-IV)**

### **SCHEDULES**

## SECTION-IV

### SCHEDULES

#### **SCHEDULE 'A' : Salient Features of the work.**

**Name of Work : Design, construction, Supply & Commissioning of two Self-Propelled Cutter Suction Dredgers for NW-2.**

**Estimated cost of work:** The work is estimated to cost Rs. 77.68 Crore

- |                                  |   |                        |
|----------------------------------|---|------------------------|
| <b>(a) Earnest Money</b>         | : | Rs. 87.68 lakh         |
| <b>(b) Performance Guarantee</b> | : | 10% of contract value. |
| <b>(C) Security Deposit</b>      | : | 5% of contract value.  |

**(SECTION-V)**

**GENERAL CONDITIONS OF THE  
CONTRACT**

## **Section – V**

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# GENERAL CONDITIONS OF CONTRACT

## CLAUSE - 1: DEFINITIONS

In the contract, the following words & expressions shall, unless context otherwise requires, have the meaning thereby respectively assigned to them:

- i) **Contract:** means the documents forming the tender and acceptance thereof and the formal agreement executed between the competent authority on behalf of the Chairman, Inland Waterways Authority of India and the contractor, together within the documents referred to therein including these conditions, the specifications, designs, drawings and instructions issued from time to time by the Engineer-in-charge and all these documents taken together shall be deemed to form one contract and shall be complementary to one another
- ii) **Contract sum;** means the amount arrived at by multiplying the quantities shown in the schedule of quantities and price by the respective item rates as allowed.
- iii) **Contractor:** means the successful tenderer who is awarded the contract to perform the work covered under this tender documents and shall be deemed to include the contractor's successors, executors, representatives or assign approved by the Engineer-in-charge.
- (iv) **Employer** means the Chairman, Inland Waterways Authority of India and his successors.
- (v) **IWAI/ Authority/ Department/ Owner** shall mean the Inland Waterways Authority of India, which invites tenders on behalf of the Chairman, IWAI and includes therein-legal representatives, successors and assigns.
- (vi) **Engineer-In-Charge (EIC)** means the Engineer officer authorised to direct, supervise and be In-charge of the works for the purpose of this contract who shall supervise and be in charge of the work.
- (vii) **Engineer-in-charge representative** shall mean any officer of the Authority nominated by the Engineer-in-charge for day to day supervision, checking, taking measurement, checking bills, ensuring quality control, inspecting works and other related works for completion of the project.
- (viii) **Chairman:** means Chairman of Inland Waterways Authority of India.
- (ix) **Chief Engineer:** means the Chief Engineer of the Authority.

- (x) **Director** means the Director of the Authority, as the case may be.
- (xi) **Deputy Director** means the Deputy Director of the Authority, as the case may be.
- (xii) **Assistant Director** means the Asstt. Director of the Authority, as the case may be.
- (xiii) **Work Order** means a letter from the Authority conveying the acceptance of the tender/offer subject to such reservations as may have been stated therein.
- (xiv) **Day** : means a calendar day beginning and ending at mid-night.
- (xv) **Week** : means seven consecutive calendar days
- (xvi) **Month** : means the one Calendar month.
- (xvii) **Site** means the waterway and / or other places through which the works are to be executed.
- (xviii) **Vessel** : **Vessel** is the ***Self propelled Dredger*** to be designed, constructed, equipped and delivered afloat in accordance with the contract and with modification, if any, as mutually agreed upon.
- (xix) **Drawings** : means the drawings referred to in the specifications and / or appended with the tender document, any modifications of such drawing approved in writing by the Engineer-in-Charge and shall also include drawings/ charts issued for actual execution of the work time to time by the Engineer-in-Charge.
- (xx) **Urgent Works**: means any urgent nature which in the opinion of the Engineer-In-Charge become necessary at the time of execution and / or during the progress of work to obviate any risk or accident or failure or to obviate any risk of damage to the vessel structure, or required to accelerate the progress of work or which becomes necessary for security or for any other reason the Engineer-in-Charge may deem expedient.
- (xxi) **Work/ works**: means work / works to be executed in accordance with the contract.
- (xxii) Schedules referred to in these conditions shall mean the relevant schedules annexed to the tender papers.
- (xxiii) Tendered value means the value of the entire work as stipulated in the letter of award.

(xxiv) A **Defect** is any part of the Works not completed in accordance with the Contract.

(xxv) **The Defects Liability Certificate** is the certificate issued by Owner, after the Defect Liability Period has ended and upon correction of Defects by the Contractor.

(xxvi) **The Defects Liability Period** is 12 months calculated from the Date of delivery of the *two self-propelled dredgers*.

## **CLAUSE – 2: INTERPRETATIONS**

2.1 Where the contract so requires, words imparting the singular only shall also include the plural and vice versa. Any reference to masculine gender shall whenever required include feminine gender and vice versa.

2.2 Heading and marginal notes in these General Conditions shall not be deemed to form part thereof or be taken into consideration in the interpretation of construction thereof of the contract.

## **CLAUSE-3. (a) PARTIES**

The parties to the contract are the contractor and the owner.

### **(b) AUTHORITY OF PERSONS SIGNING THE CONTRACT ON BEHALF OF THE CONTRACTOR:**

A person signing the tender or any other document in respect of the contract on behalf of the contractor without disclosing his authority to do so shall be deemed to warrant that he has authority to bind the contractor. If it is discovered at any time that the person so signing had no authority to do so, the Chairman on behalf of Authority may, without prejudice to any other right or remedy of the owner, cancel the contract and make or authorize the making of a purchase of the vessels at the risk and cost of such person and hold such person liable to the owner for all costs and damages arising from the cancellation of the contract including any loss which the owner may sustain on account of such purchase. The provisions of clause 11 apply to every such purchase as far as applicable.

### **(c) ADDRESS OF THE CONTRACTOR AND NOTICES AND COMMUNICATIONS ON BEHALF OF THE OWNER**

(i) For all purposes of the contract including arbitration there under, the address of the contractor mentioned in tender shall be the address to which all communication addressed to the contractor shall be sent, unless the contractor has notified a change by a separate letter

containing no other communication and sent by registered post due to Chairman, Inland Waterways Authority of India, A-13, Sector-1, NOIDA, Gautam Budh Nagar Distt (U.P.) 201301. The Contractor shall be solely responsible for the consequence of an omission to notify a change of address in the matter aforesaid.

(ii) Any communication or notice on behalf of the owner, in relation to the contract may be issued to the contractor by the owner, and such communications and notices may be served on the contractor either by fax or courier or registered post or under certificate of posting or by ordinary post or by hand delivery at the option of the owner.

#### **CLAUSE-4. AUTHORITY OF THE CHAIRMAN:**

For all purposes of the contract including arbitration proceeding there under the Chairman on behalf Authority shall be entitled to exercise all the rights and powers of the owner

#### **CLAUSE – 5: PERFORMANCE SECUTIRY**

- 5.1 The contractor shall be required to deposit an amount equal to 10% of the contract value of the work as performance guarantee in the form of either demand draft payable at any nationalized/schedule bank **OR** an irrevocable bank guarantee of any scheduled bank or State Bank of India in accordance with the form prescribed within 15 days of the issue of the work order.
- 5.2 The total security deposit to be deducted shall be 5% of the contract value. Ernest money deposit in the form of RTGS shall be adjusted against the Security Deposit shall be deducted @ 5% from each payment until the total Security Deposit amounts to 5% of the contract value.
- 5.3 The security deposit/retention money and the performance security aggregating to 15 percent of the contract price will be released to the contractor price will be released to the contractor when the defect liability period is over, and the engineer-in-charge has certified that the defects, if any, notified by the Engineer-in-Charge to the contractor before the end of this period have been corrected.
- 5.4 Performance of contract including warrantee period of 12 months on the guarantee with the respect to workmanship and material etc. shall be initially valid up to the stipulated date of completion plus 28 days beyond that. In case the time for completion gets enlarged, the contractor shall get the validity of the performance guarantee extended to cover such enlarged time of the work. After recording of the completion certificate for the work by the competent authority, the performance guarantee shall be returned to the contractor without any interest.

- 5.5 In the event of contract being determined under the provision of any of the clauses/conditions of agreement, the performance guarantee shall be forfeited in full or in part and shall be absolutely at the discretion of the authority.

#### **CLAUSE – 6: RELEASE OF PERFORMANCE SECURITY/GUARANTTEE**

- (1) The performance security will be released to the contractor when the defect liability period of 12 Months after the delivery of the dredger is over and the Engineer-in-charge has certified that the defects, if any, notified by the Engineer-in-charge to the contractor before the end of this period have been corrected.
- (2) No claim shall lie against the owner either in respect of interest or any depreciation in value of any security.
- (3) If the contractor fails or neglects to observe or perform any of his obligations under the contract, it shall be lawful for the Chairman or his duly authorized representative to forfeit either in whole or in part, the performance security furnished by the contractor. Save as aforesaid, if the contractor duly performs and completes the contract in all respects and presents in absolute “NO DEMAND CERTIFICATE” in the prescribed form, the Chairman on behalf of the Authority shall refund the performance security to the contractor after deducting all costs and other expenses that the owner may have incurred and all dues and other money including all losses and damages which the owner is entitled to recover from the contractor.

#### **CLAUSE – 7: RESPONSIBILITY OF THE CONTRACTOR FOR EXECUTION OF THE CONTRACT**

##### **i) RISK IN THE CONSTRUCTIONS:**

The contractor shall perform the contract in all respects in accordance with the terms and conditions thereof. The dredger and every constituent part thereof, whether in the possession or control of the contractor, his agents or employees or in the joint possession of the contractor, his agents or employees or purchaser, his agents or employees shall remain in every respect of at the risk of the contractor until its actual delivery to the representatives at the stipulated place or destination or, where so provided in the acceptance of tender, until its delivery to a person specified in the schedule as interim consignee for the purpose of dispatch to the consignee. The contractor shall be responsible for all loss, destruction, damage or deterioration of or to the dredger from

any cause whatever while the dredger after approval by the inspector is awaiting delivery or is in the course of transit from the contractor to the consignee or, interim consignee as the case may be.

**(ii) RESPONSIBILITY FOR COMPLETENESS:**

In respect of any inspection and tests made by the inspector, the contractor shall be entirely responsible for the proper execution of the contract notwithstanding any approval, which may have been given by the inspector or the contractor.

Any fittings, accessories which may not be specially mentioned in the specification but which are usual or necessary are to be provided by the contractor without extra charge.

**(iii) SUBLETTING THE CONTRACT:**

The contractor shall not assign, lease or sublet or cede this contract or the benefit hereof or any part thereof or any money payable hereunder or sublet the services to be rendered as aforesaid or any part thereof to any other person or company without the previous permission of the Owner certified in writing under the hands of the Owner and no assignment, lease, cession or subletting although so permitted shall exonerate the contractor from his liability under this contract and the Owner shall not be bound or required to take notice or give effect to any such assignment, lease, cession or subletting unless the same shall have been made with such permission as aforesaid PROVIDED ALWAYS the contractor may procure any necessary materials to be manufactured for the purposes of, this contract by any person, firm or company whose names shall have been submitted to and approved by Chairman on behalf of the Authority before the said materials are ordered but no such approval shall relieve the Contractor from any responsibility or obligations with reference to any such materials.

**(iv) (a) CHANGES IN A FIRM**

(i) Where the contractor is a partnership firm, a new partner shall not be introduced in the firm except with the previous consent in writing of the Chairman on behalf of Authority which may be granted only upon acceptance of a written undertaking by the new partner to perform the contract of accept all liabilities incurred by the Firm under the contract prior to the date of such undertaking.

(ii) On the death or retirement of any partner of the contractor firm before complete performance of the contract the Chairman on behalf of Authority may, at his opinion cancel the contract and in such case the contractor shall have no claim whatsoever to compensation against the owner.

(iii) If the contract is not determined as provided in sub-clause (ii) above notwithstanding the retirement of a partner from the firm he shall continue to be liable under the contract for acts of the firm until a copy of the public notice given by him under section 32 of the partnership Act has been sent by him to the owner by registered post acknowledgement due.

**(b) CONSEQUENCE OF BREACH:**

Should the contractor or a partner in the contractor firm commit breach of either of the conditions (iii) or (ii) (a) (I) of this sub clause it shall be lawful for the owner to cancel the contract and purchase or authorize the purchase of the vessels at the risk and cost of the contractor and in that event the provisions of clause 48 & 56 of **GENERAL CONDITIONS** shall as far as applicable apply. The decision of the Chairman on behalf of Authority as to any matter or thing concerning or arising out of this sub-clause or any question whether the contractor or any partner of the contract firm has committed a breach of any of the conditions in this sub-clause contained shall be final and binding on the contract.

**(V) ASSISTANCE TO THE CONTRACTOR:**

a) The contractor shall be solely responsible to procure any material or obtain any import or other license or permit required for fulfilment of the contract and the grant by "the owner or any other authority of a quota certificate or permit required under any law for distribution or acquisition of iron and steel or any other commodity or any other form of iron and steel, or any other commodity or any other form of assistance in the procurement of the material aforesaid, shall not be construed as a representation in the part of the purchase that the material covered by such license or permit quota certificate is available or constitute any premise, undertaking or assurance on the part of the owner regarding the procurement of the same or effect any variation in the rights and liabilities of the parties under the contract. But, if by reason of any such assistance as aforesaid, the contractor obtains any materials at less than their market price or the cost of production of the vessel is lowered, the price of the vessels payable under the contract shall be reduced proportionately and the extent of such reduction shall be determined by the owner whose decision shall be final and binding on the contractor.

(b) Every agreement made by Chairman on behalf of the Authority to supply or give assistance in the procurement of materials, whether from the Govt. Stock or by purchase under permit or release order issued by or by any officer empowered in that behalf of Govt. shall be deemed to be subject to the condition that it will be performed with due regard to other



demands and only if it is found practicable to do so within the stipulated time and the decision of the Chairman on behalf of Authority whether it was practicable to supply or give assistance as aforesaid or not shall be final and binding on the contractor.

#### **CLAUSE-8. INABILITY TO PERFORM CONTRACT:**

Should the Contractor's preparation for the commencement of the work, or any portion of it or his subsequent rate of progress may be, from any cause whatever, so slow that in the opinion of the inspector, which shall be conclusive, the contractor will be unable to complete the work or any portion thereof as agreed upon, or should he not have the work ready for delivery in conformity with the contract should he neglect to comply with any directions given to him by the inspector or in any respect fail to perform the contract, the owner shall have power to declare the contract at an end, in which case the contractor shall be liable for any expense, loss or damage which the owner may incur or sustain by reason, of or in connection with contractor's default.

#### **CLAUSE – 9: QUOTATION OF RATES BY CONTRACTOR**

The price quoted by contractor shall be firm with no provision for any deviation as per the cost schedule. The price shall include the cost of the material, equipment, machineries, the import/custom duty, all tax and duties including cost of dry docking, test & trial, transportation/Shipping and delivery at Kolkata, India.

If the dredger is delivered as dry cargo, the dry docking is not necessary. In case, the same is delivered after sailing in the river/sea, dry docking shall be done at the sole cost of the builder. Accordingly, provision is to be made and rate to be quoted.

#### **CLAUSE – 10: DELEGATION OF POWERS**

The Chairman on behalf of Authority may from time to time delegate to any person operations to be named by him such of the powers, authorities and discretion's vested in him by the contract as he may think fit and the contractor shall recognize such person or persons on written notice from the Chairman of him or their appointment and of the powers, authorities and discretion's respectively delegated to him or them as lawfully exercising for the purpose of this contract the powers, authorities and discretion's so delegated provided that the Chairman on behalf of Authority shall not delegate the powers, authorities and discretion's conferred on him by the clause 66 hereof.

**CLAUSE-11. RISK OF LOSS OR DAMAGE TO AUTHORITY OR OWNER'S PROPERTY**

(1) All the property of the Authority or Owner loaned whether with or without deposit to the contractor in connection with the contract shall remain the property of the authority or the Owner as the case may be. The contractor shall use such property for the purpose of the execution of the contract and for no other purpose whatsoever.

(2) All such property shall be deemed to be in good condition when received by the contractor unless he shall have within seven days of the receipt thereof notified the Chairman to the contrary. If the contractor fails to notify any defect in the condition or equality of such properties he shall be deemed to have lost the right to do so at any subsequent stage.

(3) The contractor shall return all such property in good condition. The contractor shall be able for loss or damage to such property in the possession of or under the control of the contractor, his employees or agents and responsible for the full value thereof to be assessed by the Chairman on behalf of authority whose decision shall be final and binding on the contractor.

(4) Where such property is insured by the contractor against loss or fire at the request of the authority or the Owner such insurance shall be deemed to be affected by way of additional precaution and shall not prejudice the liability of the contractor as aforesaid.

**CLAUSE-12: CHARGES FOR WORK NECESSARY FOR COMPLETION OF THE CONTRACT:**

The contractor shall pay all charges for handling, stamping, printing, painting, marking and for protecting and preserving patent rights and for all such measures which the inspector or the representative of owner may require the contractor to take for the proper completion of the contract though no special provision in respect thereof may have been made in particular.

**CLAUSE-13: TIME AND DATE OF COMPLETION OF WORK**

The time and the date stipulated in the tender for the completion of the work shall be deemed to be the essence of the contract. In case of delay the contractor shall in addition to other liabilities mentioned in to special conditions of contract be liable for all cost of inspection, which may be incurred after the date on which the work ought to have been completed. But if the delay shall have arisen from any cause such as strikes, locations, fire, accident, riot, etc. which the owner may admit as

reasonable ground for further time, the owner will allow such additional time as he may consider to have been required by the circumstances of the case.

#### **CLAUSE-14: PROGRESS REPORT**

(1) The contractor shall from time to time tender reports concerning the progress of the contract in such form as may be required by the EIC on behalf of Authority.

(2) The submission, receipts and acceptance of such reports shall not prejudice the rights of the owner under the contract, nor shall operate as a stopple against the owner merely by the reason of the fact that he has not taken notice of or objected to any information contained in such report.

#### **CLAUSE –15: CERTIFICATE AND FEES**

All test certificates and other certificates are to be handed over to the owner or his representative on completion of the dredger by the contractor with the report that the dredger is ready for delivery. The contractor shall pay all the fees in connection with the certificates and all royalties or incur other fees during the construction of the dredger.

#### **CLAUSE – 16: CONTRACT PRICE**

##### **(a) CONTRACT PRICE:**

Subject to any deduction and addition authorized by and to the other provisions of this contract, Owner shall pay to the contractor for the building, equipment, testing and delivery at specified destination, for the dredger including Dry Docking (import and customs Duty if applicable) and for all other works, matters, things and obligations to be executed, done, supplied and performed by the contractor under this contract including the provision of the hull inventory as specified (which said amount is herein called the contract price) by the time and in the manner following viz.

##### **Details of Shipping and other Documents to be furnished by the Supplier:**

The meaning of any trade term and the rights and obligations of parties thereunder shall be as prescribed by Incoterms 2010. The products shall be delivered Cost insurance paid to Kolkata (CIP Kolkata)

***(a) For Dredger supplied from abroad:***

Upon delivery of the dredger to the consignee the supplier shall notify the purchaser and submit the following documents to the purchaser:

**Payment against Keel Laying:**

- (i) One original and two copies of Supplier's invoice showing contract number, goods description, quantity, unit price and total amount.
- (ii) Bank Guarantee of 20% of the contract value having validity till the acceptance of delivery by the purchaser.
- (iii) Certificate of Keel Laying issued by the Purchaser's representative nominated by the Chief Engineer.
- (iv) Builder's Insurance policy as specified in GCC 38 .

**Payment against 100% Hull Fabrication & Erection:**

- (i) One original and two copies of Supplier's invoice showing contract number, goods description, quantity, unit price and total amount.
- (ii) Certificate of 100% Hull Fabrication & Erection issued by the Purchaser's representative nominated by the Chief Engineer.
- (iii) Manufacturer's / Supplier's warranty certificate, if applicable
- (iv) Manufacturer's Test report, if applicable

**Payment against Successful Launching & Procurement of Major machineries:**

- (i) One original and two copies of Supplier's invoice showing contract number, goods description, quantity, unit price and total amount
- (ii) Certificate of Successful Launching & Procurement of Major machineries issued by the Purchaser's representative nominated by the Chief Engineer.
- (iii) Manufacturer's / Supplier's warranty certificate
- (iv) Manufacturer's Test report, if applicable

**Payment against Successful test, trial and Delivery:**

- (i) One original and two copies of Supplier's invoice showing contract number, goods description, quantity, unit price and total amount
- (ii) Certificate of Successful test, trial and Delivery issued by the Purchaser's representative nominated by the Chief Engineer.
- (iii) Copy of Airway / Seaway Bill marked freight prepaid
- (iv) Three Copies of packing list identifying contents of each package
- (v) Insurance certificate
- (vi) Manufacturer's / Supplier's warranty certificate
- (vii) Manufacturer's Test report
- (viii) Certificate of origin
- (ix) Copy of insurance policy for 110% CIF value which should cover all risks and damages etc.

Partial shipment and transshipment is allowed.

***(b) For Dredger from within India:***

Upon delivery of the dredger to the consignee the supplier shall notify the purchaser and submit the following documents to the purchaser:

**Payment against Keel Laying:**

- (i) One original and two copies of Supplier's invoice showing contract number, goods description, quantity, unit price and total amount
- (ii) Bank Guarantee of 20% of the contract value having validity till the acceptance of delivery by the purchaser
- (iii) Certificate of Keel Laying issued by the Purchaser's representative nominated by the Chief Engineer.
- (iii) Manufacturer's / Supplier's warranty certificate, if applicable
- (iv) Manufacturer's Test report, if applicable
- (iv) Builder's Insurance policy as specified in GCC 38.

**Payment against 100% Hull Fabrication & Erection:**

- (i) One original and two copies of Supplier's invoice showing contract number, goods description, quantity, unit price and total amount
- (ii) Certificate of 100% Hull Fabrication & Erection issued by the Purchaser's representative nominated by the Chief Engineer
- (iii) Manufacturer's / Supplier's warranty certificate, if applicable
- (iv) Manufacturer's Test report

**Payment against Successful Launching & Procurement of Major machineries:**

- (i) One original and two copies of Supplier's invoice showing contract number, goods description, quantity, unit price and total amount
- (ii) Certificate of Successful Launching & Procurement of Major machineries issued by the Purchaser's representative nominated by the Chief Engineer
- (iii) Manufacturer's / Supplier's warranty certificate
- (iv) Manufacturer's Test report

**Payment against Successful test, trial and Delivery:**

- (i) One original and two copies of Supplier's invoice showing contract number, goods description, quantity, unit price and total amount
  - (ii) Certificate of Successful test, trial and Delivery issued by the Purchaser's representative nominated by the Chief Engineer
  - (iii) Delivery note and acknowledgement of receipt of goods duly sealed and signed by the Consignee
  - (iv) Three copies of packing list identifying contents of each package
  - (v) Insurance Certificate
  - (vi) Manufacturer's / Supplier's warranty certificate
-

(vii) Manufacturer's Test report

The above documents shall be received by the Purchaser before arrival of the Goods and, if not received, the Supplier will be responsible for any consequent expenses.

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The prices charged for the Goods supplied and the related Services performed "*shall not*" be adjustable.

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The method and conditions of payment to be made to the Supplier under this Contract shall be as follows:

**Payment for Goods supplied from abroad:**

Payment of foreign currency portion shall be made in the following manner :

(i) **Keel Laying Payment:** Twenty (20) percent of the Contract Price shall be paid within thirty (30) days of Keel Laying, through Bank Transfer and upon submission of claim and a bank guarantee for equivalent amount valid until the Goods are delivered and in the form provided in the bidding documents.

(ii) **On Hull Fabrication & Erection:** Forty (40) percent of the Contract Price of the Goods shall be paid through irrevocable confirmed letter of credit opened in favour of the Supplier in a bank in its country, upon submission of documents specified in GCC Clause 13.1.

(iii) **On Launching & Procurement of major machineries:** Twenty (20) percent of the Contract Price of the Goods shall be paid through irrevocable confirmed letter of credit opened in favour of the Supplier in a bank in its country, after the successful launching & procurement of major machineries i.e. propulsion engines, auxiliary engines, genset, and upon submission of the documents .

(iv) **On Delivery:** The remaining twenty (20%) percent of the Contract Price of the Goods shall be paid through irrevocable confirmed letter of credit opened in favour of the Supplier in a bank in its country, after the successful test, trial & acceptance of delivery of the dredger by the Purchaser and upon submission of the documents .

Payment of local currency portion, including Agency Commission if any, shall be made in INR within thirty (30) days of presentation of claim supported by a certificate from the Purchaser declaring that the Goods have been delivered and that all other contracted Services have been performed.

**Payment for Goods and Services supplied from within the Purchaser's country:**

Payment for Goods and Services supplied from within the Purchaser's country shall be made in INR, as follows:

- (i) **Keel Laying Payment:** Twenty (20) percent of the Contract Price shall be paid within thirty (30) days of signing of the Contract against an invoice and a bank guarantee for the equivalent amount and in the form provided in the bidding documents.
  - (ii) **On Hull Fabrication & Erection:** Forty (40) percent of the Contract Price shall be paid on 100% Hull Fabrication and Erection and upon submission of the documents specified in GCC Clause 13.1.
  - (iii) **On Launching & Procurement of major machineries:** Twenty (20) percent of the Contract Price shall be paid to the Supplier within thirty (30) days after the successful launching & procurement of major machineries i.e. propulsion engines, auxiliary engines, genset, and upon submission of the documents specified in GCC Clause 13.1.
  - (v) **On Delivery:** The remaining twenty (20%) percent of the Contract Price shall be paid to the Supplier within thirty (30) days after the successful test, trial & acceptance of delivery of the dredger by the Purchaser certified by an acceptance certificate.
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### **16.1 Warranty**

The equipment supplied will remain under warranty for a period of 12 months from the date of acceptance at site as per contract conditions.

### **16.2 Training:**

The contractor will provide one week of training (6 days) (free of cost) to IWAI personal for operation and maintenance of the dredger.

### **(b) MOBILISATION ADVANCE**

On award of work and execution of agreement a mobilisation advance of 10% of contract price will be given at a simple rate of interest of 15% per annum against furnishing of Non revocable Bank Guarantee 110% of advance. The Mobilisation advance will be recovered in four equal installments from the first running bill i.e when the keel is laid

For the mobilisation advance the firm shall have to furnish non-revocable Bank Guarantee and for the first installment of 15% when the keel is laid the firm shall have to furnish bank Guarantee for the sums being claimed in the forms enclosed, from a nationalized bank or a scheduled bank located in India.

These documents shall be dept valid till full recovery of mobilization advance. There shall not be any additional payment to the contractor for obtaining bank guarantee.

### **(c) SYSTEM OF PAYMENT:**

Unless otherwise agreed in writing between Chairman on behalf of Authority and the Contractor payment for the works shall be made by Chairman on behalf of Authority as in clause 16 (a) upon production of the certificate of the representative of owner after the inspection of the construction of the dredger against the installment due. The contractor must submit the bills and necessary documents allowing 30 days from the date of submission for the payment of installment subject to the condition that the amount of an installment payment shall in no case exceed the value of the work done.

### **CLAUSE – 17: WITHHOLDING AND LIEN IN RESPECT OF SUM CLAIMED**

Whenever any claim or claims for payment of a sum of money arises out of or under the contract against the contractor, the owner shall be entitled to withhold and also have a lien to retain such sum or sums in whole or in part from the security, deposited by the contractor and for the purpose aforesaid the owner shall be entitled to withhold the said

security deposit furnished and also have a lien over the same pending finalization or adjudication of any such claim. In the event of the security being insufficient to cover the claimed amount or amounts or if no security has been taken from the contractor, the owner shall be entitled of the such claimed amount or amounts referred to supra, from any sum or sums found payable or which at any time thereafter may become payable to the contractor under the same contract or any other contract with the owner or the government or any person contracting through the owner pending finalization or adjudication of any such money so withheld or retained under the lien referred to above, by the owner will claim arising out of or under the contract is determined by the arbitrator.

#### **CLAUSE – 18: INDEMNITY**

(1) The contractor shall at all-time indemnify the owner against all claims which may be made in respect of the dredger for infringement of any right protected by patent, registration of designs or trade mark. Provided always that in the event of any claim in respect of alleged breach of patent, registered designs or trade mark being made against the owner, the owner shall notify the contractor of the same and the contractor shall at his own expense either settle any such dispute or conduct and litigation's that may arise there from.

(2) The contractor shall not be liable for payment of any royalty, license fee or other expenses in respect of for making use of patents or designs with respect to which he is according to the terms of the contract, to be treated as an agent of the Government for the purpose of making use of the patent of trade mark for fulfillment of the contract.

#### **CLAUSE – 19:TESTS**

19.1 The contractor shall be solely responsible for :

- i) Carrying out the mandatory tests prescribed as per ship building practice and
- ii) For the correctness of the test results, whether preformed in his laboratory or elsewhere.

19.2 If the Owner instructs the Contractor to carry out a test not specified in the Specification to check whether any work has a Defect and the test shows that it does, the Contractor shall pay for the test and any samples.

#### **CLAUSE – 20: CURRENCIES**

All payments will be made in Indian Rupees and equivalent.

## **CLAUSE – 21: SUFFICIENCY OF TENDER**

The contractor shall be deemed to have satisfied himself before tendering as to the correctness and sufficiency of his tender for the works and of the rates quoted in the schedule of Quantities and Prices which shall (except as otherwise provided in the contract) cover all his obligations under the contract and all matters and things necessary for the proper execution and completion of the works in accordance with the provisions of the contract and its operation during execution of work.

## **CLAUSE – 22: CONTRACT DOCUMENTS**

- 22.1 The language in which the contract documents shall be drawn up shall be English and if the said documents are written in more than one languages, the language according to which the contract is to be constructed and interpreted shall be English.
- 22.2 The Contractor shall be furnished free of charge certified true copy of the contract document.
- 22.3 A copy of the Contract Documents furnished to the Contractor as aforesaid shall be kept by the Contractor on the Site in good condition and the same shall at all reasonable time be available for inspection and use by the Engineer-in-Charge, his representatives or by other Inspecting officers of the Authority.
- 22.4 None of these Documents shall be used by the Contractor for any purpose other than that of this contract.

## **CLAUSE – 23: DISCREPANCIES AND ADJUSTMENT OF ERRORS**

- 23.1 Detailed drawings shall be followed in preference to small-scale drawings and figured dimensions in preference to scaled dimensions. The case of discrepancy between the Schedule of Quantities and prices, the Specifications and/ or the drawings, the following order of precedence shall be observed : -
  - (a) Description in the Schedule of Quantities and Prices.
  - (b) Relevant Specifications and Special Conditions, if any.
  - (c) Drawings.
  - (d) Indian Standards Specifications of BIS.
- 23.2 The contractor shall study and compare the drawings, specifications and other relevant information given to him by the Engineer-in-Charge and shall

report in writing to the Engineer-in-Charge any discrepancy and inconsistency which he notes. The decision of the Engineer-in-Charge regarding the correct intent and meaning of the drawings and specifications shall be final and binding.

- 23.3 Any error in description, quantity or price in Schedule of Quantities and Prices or any omission there from shall not vitiate the Contract or release the Contractor from the execution of the whole or any part of the work(s) comprised therein according to drawings and specifications or from any of his obligations under the contract.
- 23.4 If on check there is difference in the amount worked out by contractor in the schedule of quantities and prices and General summary the same shall be adjusted in accordance with the following rules:
- (a) In the event of error/discrepancy occurring in the rates written in figures and words, then the rate which corresponds with the amount worked out by the contractor shall, unless otherwise proved, be taken as correct. If the amount of an item is not worked out by the contractor or it does not correspond with the rate written either in figures or in words, then the rate quoted by the contractor in words shall be taken as correct. When the rate quoted by the contractor in figures and words tally, but the amount is not worked out correctly, the rate quoted by the contractor will, unless or otherwise proved, be taken as correct.
  - (b) All errors in totaling in the amount column and in carrying forward totals shall be corrected.
  - (c) The totals of various sections of schedule of quantities and price amended shall be carried over to the General Summary and the tendered sum amended accordingly. The tendered sum so altered shall, for the purpose of tender, be substituted for the sum originally tendered and considered for acceptance instead of the original sum quoted by the tenderer. Any rounding off of quantities or in sections of schedule of quantities and prices or in General summary by the tenderer shall be ignored.

#### **CLAUSE-24: DUTIES AND POWERS OF THE ENGINEER-IN-CHARGE REPRESENTATIVE**

- 24.1 The duties of the representative of the Engineer-in-Charge are to watch and supervise the works and to test and examine any materials/ parts to be used or workmanship achieved in connection with the works.

- 24.2 The Engineer-in-Charge may, from time to time in writing, delegate to his representative any of the powers and authorities, vested in the Engineer-in-Charge and shall furnish to the contractor a copy of all such written delegation of powers and authorities. Any written instruction or written approval given by the representative of the Engineer-in-Charge to the contractor within the terms of such delegation shall bind the contractor and the Authority as though it has been given by the Engineer-in-Charge.
- 24.3 Failure of the representative of the Engineer-in-Charge to disapprove any work or materials shall be without prejudice to the power of the Engineer-in-Charge thereafter to disapprove such work or materials and to order the pulling down, removal or breaking up thereof. The contractor shall, at his own expense, again carry out such works as directed by the Engineer-in-Charge.
- 24.4 If the Contractor is dissatisfied with any decision of the representative of the Engineer-in-Charge, he will be entitled to refer the matter to the Engineer-in-Charge who shall thereupon confirm, reverse or vary such decision and the decision of the Engineer-in-Charge in this regard shall be final and binding on the contractor.

#### **CLAUSE – 25: ASSIGNMENT AND SUB-LETTING**

The Contractor shall not sub-let, transfer or assign the whole or any part of the work under the contract. Provided that the Engineer-in-Charge may at his discretion, approve and authorize the Contractor to sub-let any part of the work, which in his opinion, is not substantial, after the contractor submits to him in writing the details of the part of the work(s) or trade proposed to be sublet, the name of the sub-contractor thereof together with his past experience in the said work/trade and the form of the proposed sub-contract. Nevertheless any such approval or authorization by the Engineer-in-Charge shall not relieve the contractor from his any or all liabilities, obligations, duties and responsibilities under the contract. The contractor shall also be fully responsible to the Authority for all the acts and omissions of the sub-contractor, his employees and agents or persons directly employed by the contractor. However, the employment of piece rate works shall not be construed as sub-letting.

#### **CLAUSE – 26: CHANGE IN THE CONSTITUTION OF THE FIRM TO BE INTIMATED**

Where the contractor is a partnership firm, prior approval in writing of the Engineer-in-Charge shall be obtained before any change is made in the constitution of the firm. Where the contractor is an individual or a Hindu

Undivided Family business concern, such approval, as aforesaid, shall likewise be obtained before the contractor enters into any partnership agreement where under the partnership firm would have the right to carry out the works hereby undertaken by the contractor. If prior approval as aforesaid is not obtained the contractor shall be deemed to have been assigned in contravention to Clause 57 hereof and the same action will be taken and the same consequences shall ensure as provided for in the said clause-57.

#### **CLAUSE – 27: COMMENCEMENT OF WORK**

The contractor shall commence the work at the respective sites within 15 days of the issue of Letter of Award. If the contractor commits default in mobilization of resources, and equipment as aforesaid, the Engineer-in-Charge shall without prejudice to any other right or remedy be at liberty to cancel the contract and forfeit the earnest money/security deposit.

#### **CLAUSE – 28: WORKS TO BE CARRIED OUT IN ACCORDANCE WITH SPECIFICATION DRAWINGS AND ORDERS ETC.**

- 28.1 The contractor shall execute the whole and every part of the work in the most substantial and workman like manner in strict conformity with the specifications laid down in the contract document or as may be laid down by the Engineer-in-Charge under the terms of the contract. The contractor shall also conform exactly, fully and faithfully to the designs, drawings specifications and instructions in writing in respect of the work, duly signed by the Engineer-in-Charge as may be issued from time to time.
- 28.2 The contractor shall be entitled to receive, on demand, in addition to the contract documents, in accordance with the provisions of contract, the documents set forth herein in respect of the work on commencement or during the performance of the contract:
  - (a) Specifications or revisions thereof other than standard printed specifications and charts/drawings issued to the contractor from time to time
  - (b) Explanations, instructions etc.

Such further drawings, explanation, modifications and instruction, as the Engineer-in-Charge may issue to the contractor from time to time in respect of the work shall be deemed to form integral part of the contract and the contractor shall be bound to carry out the work accordingly.

- 28.3 All instructions and orders in respect of the work shall be given by the Engineer-in-Charge in writing. However, any verbal instructions or order shall be confirmed by the Engineer-in-Charge as soon as practicable without loss of time and only such written instruction shall be deemed to be valid.

## **CLAUSE – 29: SETTING OUT THE WORKS**

The contractor shall provide all assistance and adhere to the instruction of E.I.C during the course of surveying, inspection, etc.

## **CLAUSE - 30: CONTRACTOR'S SUPERVISION**

- 30.1 The contractor shall either himself supervise the execution of the works or shall appoint at his own expense, a qualified and experienced Engineer as his accredited agent approved by the Engineer-in-Charge, if contractor has himself not sufficient knowledge or experience to be capable of receiving instruction or cannot give his full attention to the works. The contractor or his agent shall be present at the site(s) and shall supervise the execution of the works with such additional assistance in each trade, as the work involved shall require and considered essential by the Engineer-in-Charge. Further the directions/instructions given by the Engineer-in-Charge to the contractor's agent shall be considered to have the same force as if these had been given to the contractor himself.
- 30.2 If the contractor fails to appoint a suitable agent as directed by the Engineer-in-Charge, the Engineer-in-Charge shall have full powers to suspend the execution of the works until such date as a suitable agent is appointed by the contractor and takes over the charge of supervision of the work. For any such suspension, the contractor shall be held responsible for delay so caused to the work.

## **CLAUSE - 31: INSTRUCTIONS AND NOTICE**

- 31.1 Except as otherwise provided in this contract, all notices to be given on behalf of the Authority and all other actions to be taken on its behalf may be given or taken by the Engineer-in-Charge or any officer for the time being entrusted with the functions, duties and powers of the Engineer-in-Charge.
- 31.2 All instructions, notices and communications etc. under the contract shall be given in writing and any such oral orders / instructions given shall be confirmed in writing and no such communication which is not given or confirmed in writing shall be valid.
- 31.3 All instructions, notices and communications shall be deemed to have been duly given or sent to the contractor, if delivered to the contractor, his authorized agent, or left at, or posted to the address given by the contractor or his authorized agent or to the last known place of abode or business of the contractor or his agent of services by post shall be deemed to have been served on the date when in the ordinary course of post these would have

been delivered to him and in other cases on the day on which the same were so delivered or left.

- 31.4 The Engineer-in-Charge shall communicate or confirm the instructions to the contractor in respect of the execution of work through a "Site Order Book" maintained in the office of the Engineer-in-Charge and the contractor or his authorized representative shall confirm receipt of such instructions by signing the relevant entries in this book. If required by the Contractor, he shall be furnished a certified true copy of such instruction(s).
- 31.5 The "Hindrance Register" shall be maintained at the site of work, where any hindrance which comes to the notice of the representative of the Engineer-in-Charge shall be recorded and immediately a report will be made to the Engineer-in-Charge within a week. The Engineer-in-Charge shall review the Hindrance Register at least once in a month.

#### **CLAUSE – 32: PATENT RIGHTS**

The contractor shall indemnify the Authority, its representatives or its employees against any action, claim or proceeding relating to infringement or use of any patent or design or any alleged patent or design rights and shall pay any royalties or other charges which may be payable in respect of any article or material or part thereof included in the contract. In the event of any claim being made or action being brought against the Authority or any agent, servant or employee of the Authority in respect of any such materials as aforesaid the contractor shall immediately be notified thereof. Provided that such indemnification shall not apply when such infringement has taken place in complying with the specific directions issued by the Authority but the contractor shall pay any royalties or other charges payable in respect of any such use, the amount so paid being reimbursement to the contractor only if the use was the result of any drawings and or specifications issued after submission of the tender.

#### **CLAUSE – 33: MATERIALS**

- 33.1 The contractor shall at his own expenses provide / arrange all materials required for the bona-fide use on work under the contract.
- 33.2 All materials/parts to be provided by the contractor shall be in conformity with the specifications laid down in the contract and the contractor shall furnish from time to time proof and samples, at his own cost, the materials/parts as may be specified by the Engineer-in-Charge. Further the Engineer-in-Charge shall also have powers to have such tests, in addition to those specified in the contract, as may be required and the contractor shall provide all facilities to carry out the same. The cost of materials/parts consumed in such tests and also the expenses incurred thereon including



the cost of the testing charges, shall be borne by the contractor in all cases and also where such tests which are in addition to those provided in the contract disclose that the materials are in conformity with the provisions of the contract.

- 33.3 The Engineer-in-Charge or his representative shall be entitled at any time to inspect and examine any materials/parts intended to be used in the works, either on the site or at factory or workshop or other place(s) where such materials are assembled, fabricated, manufactured or any place where these are lying or from where these are being obtained. For this, purpose, the contractor shall afford such facilities as may be required for such inspection and examination.

#### **CLAUSE - 34: LAWS GOVERNING THE CONTRACT**

The rules of procedure for arbitration proceedings shall be as follows:

***(a) Contract with foreign Supplier:***

Any dispute arising out of or in connection with this Contract, including any question regarding its existence, validity or termination shall be referred to and finally resolved by arbitration under the Rules of the London Court of International Arbitration, which rules are deemed to be incorporated by reference to this clause.

***(b) Contracts with Supplier national of the Purchaser's country:***

In case of Dispute or difference arising between the Purchaser and a domestic supplier relating to any matter arising out of or connected with this agreement, such disputes or difference shall be settled in accordance with the Arbitration and Conciliation Act, 1996. The arbitral tribunal shall consist of 3 arbitrators one each to be appointed by the Purchaser and the Supplier. The third Arbitrator shall be chosen by the two Arbitrators so appointed by the Parties and shall act as Presiding arbitrator. In case of failure of the two arbitrators appointed by the parties to reach upon a consensus within a period of 30 days from the appointment of the arbitrator appointed subsequently, the Presiding Arbitrator shall be appointed by the Indian Council of Arbitration.

- (c) If one of the parties fails to appoint its arbitrator in pursuance of sub-clause (a) and (b) above, within 30 days after receipt of the notice of the appointment of its arbitrator by the other party, then the "The International Centre for Alternative Dispute Resolution (India), both in cases of the Foreign supplier as well as Indian supplier, shall appoint the arbitrator. A certified copy of the order of the "The International

Centre for Alternative Disputes Resolution (India), making such an appointment shall be furnished to each of the parties.

- (d) Arbitration proceedings shall be held at Delhi, India, and the language of the arbitration proceedings and that of all documents and communications between the parties shall be English.
- (e) The decision of the majority of arbitrators shall be final and binding upon both parties. The cost and expenses of Arbitration proceedings will be paid as determined by the arbitral tribunal. However, the expenses incurred by each party in connection with the preparation, presentation etc. of its proceedings as also the fees and expenses paid to the arbitrator appointed by such party or on its behalf shall be borne by each party itself.

#### **CLAUSE - 35: LABOUR**

- 35.1 (a) The contractor shall employ labour in sufficient numbers to maintain the required rate of progress and of quality to ensure workmanship of the degree specified in the contract and to the satisfaction of the Engineer-in-Charge. The Contractor shall not employ in connection with the works any person who has not completed eighteen years of age the minimum age specified in Indian Labour Law.
- (b) If any foreigner is employed by the contractor on the work within the site the later shall ensure that such foreigner possesses the necessary special permit issued by the Civil Authorities in writing and also comply with the instructions issued there-from from time to time. In the event of any lapse in this regard on the part of such foreigner the contractor shall be personally held responsible for the lapse & Authority shall not be liable in any event.
- (c) The Contract is liable for cancellation if either the contractor himself or any of his employee is found to be a person who has held Class-I post under the Authority immediately before retirement and has within two years of such retirement accepted without obtaining the previous permission of the Authority or of the Chairman as the case may be and employment as contractor for, or in connection with the execution of the public works, or as an employee of such contractor. If the contract is terminated on account of the failure of the contractor to comply with the above clause, the Authority shall be entitled to recover from him such damages as may be determined by the Engineer-in-Charge with due regard to the inconvenience caused to the Authority on account of such termination without prejudice to the Authority's right to proceed against such officer.

- 35.2 The contractor shall furnish and deliver fortnightly to the Engineer-in-Charge, a distribution return of the number and description by trades of the works of people employed on the works. The contractor shall also submit on the 4th and 19th of every month for the period of second half of the preceding month and first half of the current month respectively to the Engineer-in-Charge, a true statement in respect of the following.
- i) Any accident if occurred during the said fortnight showing the circumstances under which it happened and the extent of damage and injury caused by it and.
  - ii) The number of female workers who have been allowed maternity benefit as provided in the Maternity Benefit Act 1961 or Rules made there under and the amount paid to them.
- 35.3 The Contractor shall pay to labourer employed by him either directly or through sub-contractors wages not less than wages as defined in Minimum Wages Act 1948 and Contract Labour (Regulation and Abolition) Act 1970 amended from time to time and rules framed there-under and other labour laws affecting contract labour that may be brought in force from time to time.
- 35.4 The Contractor shall also comply with the provisions of all Acts, Laws, any Regulation or Bye Laws of any Local or other Statutory Authority applicable in relation to the execution of works such as:
- i) Payment of Wages Act, 1936 (Amended)
  - ii) Minimum Wages Act, 1948 (Amended).
  - iii) The Contract Labour (Regulation & Abolition) Act, 1970 with Rules framed there under as amended.
  - iv) Workmen Compensation Act, 1923 as amended by Amendment Act no.65 of 1976.
  - v) Employer's Liability Act 1938 (Amended)
  - vi) Maternity Benefit Act. 1961 (Amended)
  - vii) The Industrial Employment (Standing orders) Act 1946 (Amended).
  - viii) The Industrial Disputes Act. 1947 (Amended)
  - ix) Payment of Bonus Act.1965 and Amended Act No. 43 of 1977 and No. 48 of 1978 and any amended thereof:

- ix) The Personal Injuries (Compensation Insurance) Act 1963 and any modifications thereof and rules made thereunder from time to time. The Contractor shall take into account all the above and financial liabilities in his quoted rates and nothing extra, whatsoever, shall be payable to him on this account.

The list is indicative only, otherwise the contractor should be aware of all the Acts/Labour Laws and should follow diligently on the work. The contractor shall be fully and personally responsible for the violation of any Act/Labour Law

- 35.5 The Contractor shall be liable to pay his contribution and the employees contribution to the State Insurance Scheme in respect of all labour employed by him for the execution of the contract, in accordance with the provision of "the Employees State insurance Act 1948" as amended from time to time. In case the Contractor fails to submit full details of his account of labour employed and the contribution payable, the Engineer-in-Charge shall recover from the running bills the contribution amount as assessed by him. The amount so recovered shall be adjusted against the actual contribution payable for Employees State Insurance.
- 35.6 The Engineer-in-Charge shall on a report having been made by an inspecting officer as defined in the Contract Labour (Regulation and Abolition) Act and Rules or on his own in his capacity as Principal Employer, have the power to deduct from the amount due to the contractor any sum required for making good the loss suffered by worker(s) by reason of non-fulfillment of the conditions of the Contract for the benefit of Workers, nonpayment of wages or on account of deduction made from the wages of the workers which are not justified by the terms of the contract or non- observance of the said Act and Rules framed there under with amendments made from time to time.
- 35.7 The Contractor shall indemnify the Authority against any payments to be made under and for observance of the Regulation Laws, Rules as stipulated in Clause-35.4 above without prejudice to his right to claim indemnity from his sub-contractors. In the event of the contractor's failure to comply with the provisions of all the Acts/Laws stipulated in Clause-35.4 or in the event of decree or award or order against the contractor having been received from the competent authority on account of any default or breach or in connection with any of the provisions of the Acts/Laws/Rules mentioned in Sub-Clause 35.4 above, the Engineer-in-Charge without prejudice to any other right or remedy under the contract shall be empowered to deduct such sum or sums from the Bill of the contractor or from his security deposit or from other payment due under this contract or any other contract to satisfy within a reasonable time the provisions of the various Acts/Laws/Rules/Codes as mentioned under Sub-Clause 35.4 above, on the part of the contractor under the contract on behalf of and at the

expenses of the contractor and make payment and /or provide amenities/ facilities/services accordingly. In this regard, the decision of the Engineer-in-Charge shall be conclusive and binding on the contractor.

- 35.8 In the event or the Contractor committing a default or breach of any of the provisions of the aforesaid Contract's Labour (Regulation and Abolition) Act and Rules as amended from time to time or furnishing any information or submitting or filling any form/Register/Slip under the provisions of these Regulations which is materially incorrect then on the report of the Inspecting officer as defined in the relevant Acts and Rules as referred in Clause 35.4 above, the Contractor shall without prejudice to any other liability pay to the Authority a sum not exceeding Rs.50/- (Rs. Fifty only) as liquidated damages for every default, breach or furnishing, making, submitting, filling materially incorrect statement as may be fixed by the Engineer-in-Charge. The decision of the Engineer-in-Charge in this respect shall be final & binding.
- 35.9 The Contractor shall at his own expenses comply with or cause to be complied with the Provisions/ Rules provided for welfare and health of Contract Labour in the Contract Labour (Regulation and Abolition) Act and other relevant Acts and Rules framed there under or any other instructions issued by the Authority in this regard for the protection of health and for making sanitary arrangements for workers employed directly or indirectly on the works. In case the contractor fails to make arrangements as aforesaid, the Engineer-in-Charge shall be entitled to do so and recover the cost thereof from the contractor.
- 35.10 The Contractor shall at his own expense arrange for the safety or as required by the Engineer-in-Charge, in respect of all labour directly or indirectly employed for performance of the Works and shall provide all facilities in connection therewith. In case the contractor fails to make arrangements and provide necessary facilities as aforesaid, the Engineer-in-Charge shall be entitled to do so and recover the cost thereof from the Contractor. But this will not absolve the contractor of his responsibility or otherwise thereof.
- 35.11 Failure to comply with "Provisions/Rules made for Welfare and Health of Contract Labour" Safety Manual, or the provisions relating to report on accidents and grant of maternity benefits to female workers and the relevant Acts/Rules referred in clause 35.4 above shall make the contractor liable to pay to the Authority as liquidated damages an amount not exceeding Rs. 50/- for each default or materially incorrect statement. The decision of the Engineer-in-Charge in such matters based on reports from the inspecting Officers as defined in the relevant Acts and Rules as referred in clause 35.4 above shall be final and binding and deductions for recovery of such liquidated damages may be made from any amount payable to the contractor. In the event of any injury, disability or death of any workmen in or about the work employed by the contractor either directly or through his

sub-contractor, contractor shall at all time indemnify and save harmless the Authority against all claims, damages and compensation under the Workmen Compensation Act. 1923 as amended from time to time or in other Law for the time being in force and Rules there-under from time to time and also against all costs, charges and expenses of any smooth action by proceedings arising out of such accidents or injury, disability or death of a workmen and against all sum or sums which may with the consent of the contractor be paid to compromise or compound any claim in this regard. If any award, decree or order is passed against the contractor for recovery of any compensation under the Workmen Compensation Act, 1923, for any injury, disability or death of a workman by any competent court, the said sum or sums shall be deducted by the Engineer-in-Charge from any sum then due or that may become due to the contractor or from his security deposit or sale thereof in full or part under the contract or any other contract with the Authority towards fulfillment of the said decree, award or orders.

35.12 Provided always that the contractor shall have no right to claim payments/claims whatsoever on account of his compliance with his obligations under this clause and Labour Regulations.

35.13 The contractor shall not otherwise than in accordance with the statutes ordinance and Government Regulations or orders for the time being in force import, sell, give, barter or otherwise dispose of any alcoholic liquor or drugs to permit or suffer any such import, sale, gift, barter or disposal by his sub-contractor, agent or employees.

35.14 The contractor shall not give, barter or otherwise dispose of to any person or persons any arms or ammunition of any kind or permit to suffer the same as aforesaid.

35.15 The Contractor shall employ for the execution of the works only such persons as are skilled and experienced in their respective trades and Engineer-in-Charge shall be at liberty to object to and require the contractor to remove from the works any persons employed by the Contractor for the execution of the works who, in the opinion of the Engineer-in-Charge, misconduct himself or is incompetent or negligent in the proper performance of his duties. The contractor shall forthwith comply with such requisition and such person shall not be again employed upon the works without permission of the Engineer-in-Charge.

#### **CLAUSE – 36: FORCE MAJEURE**

36.1 The term Force Majeure shall herein mean Riots (other than among the contractor's employees), Civil Commotion (to the extent no insurable), war (whether declared or not), invasion, act of foreign enemies, hostilation, civil

war, rebellion, revolution, insurrection, military or usurped power, damage from aircraft, nuclear fission, acts of God, such as earthquake (above 7 magnitude on Richter Scale), lightning, unprecedented floods, fires not caused by contractor's negligence and other such causes over which the contractor has no control and are accepted as such by the Engineer-in-Charge, whose decision shall be final and binding. In the event of either party being rendered unable by Force Majeure to perform any obligation required to be performed by them under this contract, the relative obligation of the party affected by such Force Majeure shall be treated as suspended for the period during which such Force Majeure cause lasts, provided the party allowing that it has been rendered unable as aforesaid, thereby shall notify within 15 days of the alleged beginning and ending thereof giving full particulars and satisfactory evidence in support of such cause.

- 36.2 For delays arising out of Force Majeure, the bidder shall not claim extension in completion date for a period exceeding the period of delay attributable to the causes of Force Majeure and neither the Authority nor the bidder shall be liable to pay extra costs provided it is mutually established that Force Majeure conditions did actually exist.
- 36.3 If any of the Force Majeure conditions exists in the places of operation of the bidder even at the time of submission bid, he shall categorically specify in his bid and state whether they have been taken into consideration in their quotations.

**CLAUSE - 37: LIABILITY FOR DAMAGE, DEFECTS OR IMPERFECTIONS AND RECTIFICATION THEREOF**

- 37.1 If the contractor or his labour or his sub-contractor, injure, destroy or damage, battery, solar panel, lighting system, road, fence, enclosures, water pipe, cables, buildings, drains, electricity or telephone posts, wires, trees, grass line, cultivated land in the area in which they may be working or in the area contiguous to the premises on which the work or any part of it is being executed or if any damage is caused to any item belonging to IWAI or to any person during the progress of work, the Contractor shall upon receipt of a notice in writing in that behalf from the Engineer-in-Charge, make good the same at his cost.
- 37.2 If it appears to the Engineer-in-Charge or his representative at any time during the progress of work or prior to the expiration of the Defects Liability period that any work has been executed with unsound, imperfect or unskilled workmanship or that any materials or articles provided by the Contractor for execution of the work are unsound or of a quality inferior to that contracted for, or otherwise not in accordance with the Contract, or that any defect,

shrinkage or other faults found in the work arising out of defective design or defective/ improper materials or workmanship, the Contractor shall, upon receipt of a notice in writing in that behalf from the Engineer-in-Charge forthwith rectify or remove and reconstruct the work so specified in whole or in part, as the case may be, and/or remove the materials/articles so specified and provide other proper and suitable materials at his expense.

- 37.3 All damages caused by accidents or carelessness of the contractor or any of his employees or any property belonging to the Authority is wasted or is misused by the contractor or any of his employees shall be to the account of the contractor, who shall make good the loss.

#### **CLAUSE – 38: CONTRACTOR'S LIABILITY AND INSURANCE**

38.1 From commencement to completion of the work(s) as a whole, the Contractor shall take full responsibility for the care thereof and for taking precautions to prevent loss or damage. He shall be liable for any damage or loss that may happen to the works or any part thereof and to the Authority's Plant, Equipment and Material (hired or issued to the Contractor) shall be in good order and condition and in conformity in every respect with the requirements of the Contract and instructions of the Engineer-in-Charge.

- 38.2 i) Neither party to the contract shall be liable to the other in respect of any loss or damage which may occur or arise out of "Force Majeure" to the works or any part thereof on to any material or article at site but not incorporated in the works or to any person or anything or material whatsoever or either party provided such a loss or damage could not have been foreseen or avoided by a prudent person and the either party shall bear losses and damages in respect of their respective men and materials. As such liability of either party shall include claims/ compensations of the third party also.
- ii) Provided, however, in an eventuality as mentioned in sub-clause – 38.2 (i) above, the following provisions shall also have effect:
- (a) The Contractor shall, as may be directed in writing by the Engineer-in-Charge proceed with the completion of the works under and in accordance with the provisions and conditions of the contract, and
  - (b) The Contractor shall, as may be directed in writing by the Engineer-in-charge, re-execute the works lost or damaged, remove from the site any debris and so much of the works as shall have been damaged and carry the Authority's T & P, Plant and Equipment, Material etc. to the Authority's store. The cost



of such re-execution of the works, removal of damaged works and carrying of Authority's store shall be ascertained in the same manner as for deviations and this shall be added to the contract sum. Provided always that the Contractor shall, at his own cost, repair and make good so much of the loss or damage as has been occasioned by any failure on his part to perform his obligations under the contract or not taking precautions to prevent loss or damage or minimize the amount of such loss or damage, Final assessment of loss or damage shall be decided by the Engineer-in-Charge and his decision shall be final and binding.

- 38.3 The contractor shall take special precautions to see that public places and roads adjacent to contractor's yard are not blocked at any time either by his material or by his workmen. The roads are to be kept always clear and no equipment/materials shall be stacked.
- 38.4 The navigable waterways shall not be blocked by Contractor's vessels. The anchors dropped in the waterways shall be properly marked and removed after done with.
- 38.5 The contractor shall indemnify and keep indemnified the Authority against all losses and claims for death, injuries or damage to any person or any property whatsoever which may arise out of or in consequence of the construction and maintenance, of works during the contract period and also against all claims, demands, proceedings, damages, costs, charges and expenses whatsoever in respect of or in relation thereto, and such liabilities shall include claims/compensations of the third party.
- 38.6 (a) Before commencing execution of the work, the Contractor shall without in any way limiting his obligations and responsibilities under this condition, insure against any damage, loss or injury which may occur to any property (excluding that of the Authority but including the Authority building rented to the contractor wholly or in part and any part of which is used in part and any part of which is used by him for storing combustible materials) public liability by arising out of the carrying out of the contract. For this purpose the contractor shall take out, pay all costs and maintain throughout the period of his contract public liability with the following coverage.
- i) Public liability limits for bodily injury or death not less than Rs. 1,00,000 for one person and Rs. 2,00,000 for each accident.
  - ii) Property liability limits for each accident not less than Rs. 1,00,000 ;

- iii) The Contractor shall prove to the Engineer-in Charge from time to time that he has taken out all the insurance policies referred to above and has paid the necessary premiums for keeping the policies alive till expiry of the Defects Liability Period.
- (b) The Contractor shall ensure that similar insurance policies are taken out by his sub-contractor (if any) and shall be responsible for any claims or losses to the Authority resulting from their failure to obtain adequate insurance protection in connection thereof. The Contractor shall produce or cause to be produced by his sub-contractors (if any) as the case may be, relevant, policy or policies and premium receipt as and when required by the Engineer-in-Charge.
- (c) If the contractor and/or his sub- contractor (if any) shall fail to effect and keep in force the insurance referred to above or any other insurance which he/they may be required to effect under the term of the Contract then and in any such case the Authority may, without being bound to effect and keep in force any such insurance and pay such premium or premiums as may be necessary for that purpose and from time to time deduct the amount so paid by the Authority from any moneys due or which may become due to the contractor or recover the same as a debt due from the contractor.
- (d) The contractor shall at his own expense arrange for the safety provisions as required in respect of the works covered under this contract as per the instruction of Engineer-in-charge. In case, the contractor fails to comply with the provisions of the safety the Engineer- in-Charge shall be entitled to and make the necessary arrangements at the risk and cost of the contractor. This will, however, not absolve the Contractor of his overall responsibility to execute the works under the contract.

## **CLAUSE – 39: SUSPENSION OF WORKS**

- 39.1 The contractor shall on the receipt of order of the Engineer-in-Charge (whose decision shall be final and binding on the contractor) suspend the progress of the works or any part thereof for such time or times and in such manner as the Engineer-in-Charge may consider necessary.
- 39.2 The suspension of the work can be done by Engineer-in-Charge for any of the following reasons:
- (a) On account of any default on the part of the contractor or
  - (b) for proper execution of the works or part thereof for the reasons other than the default of the contractor or
  - (c) For the safety of the works or part thereof.

- 39.3 The contractor shall during the suspension period, properly protect and secure the works to the extent necessary and carry out the instructions given in that behalf by the Engineer-in-Charge.
- 39.4 If the suspension is ordered for the reasons under the Clause 39.2(b) and (c) above, the contractor shall be entitled to the extension of time equal to the period of every such suspension Plus 25% for the completion of the item or group of items of work for which a separate period of completion is specified in the contract and of which suspended work forms a part

**CLAUSE – 40: FORECLOSURE OF CONTRACT IN FULL OR IN PART DUE TO ABANDONMENT OR REDUCTION IN SCOPE OF WORK**

If at any time after acceptance of the tender the Authority decides to abandon or reduce the scope of the works for reason whatsoever and hence does not require the whole or any part of the works to be carried out, the Engineer-in-Charge (with the prior approval of competent authority shall give notice in writing to that effect to the contractor and the Contractor shall have no claim to any payment of compensation or otherwise whatsoever, on account of any profit or advantage which he might have derived from the execution of the works in full but which he could not derive in consequence of the fore closure of the whole or part of the works.

**CLAUSE – 41: TERMINATION OF CONTRACT ON DEATH**

If the Contractor is an individual or a proprietary concern and the individual or the proprietor dies, or if the Contractor is a partnership concern and one of the partners dies, then, unless the Engineer-in-Charge is satisfied that the legal representatives of the individual contractor or of the proprietor of the proprietary concern and in the case of partnership, the surviving partners are capable of carrying out and completing the contract, the Engineer-in-Charge shall be entitled to terminate the Contract as to its incomplete part without the Authority being in anyway liable to payment of any compensation whatsoever on any account to the estate of the deceased Contractor and/or to the surviving partners of the Contractor's firm on account of termination of the Contract. The decision of the Engineer-in-Charge that the legal representatives of the deceased contractor or the surviving partners of the Contractor's firm cannot carry out and complete the works under the contract shall be final and binding on the parties. In the event of such termination, the Authority shall not hold the estate of the deceased Contractor and/or the surviving partners of the Contractor's firm liable for damages for not completing the contract. Provided that the power of the Engineer-in-Charge of such termination of contract shall be without

prejudice to any other right or remedy which shall have accrued or shall accrue to him under the contract.

**CLAUSE -42: INSOLVENCY AND BREACH OF CONTRACT:**

The Chairman on behalf of Authority may at any time, by notice in writing, summarily determine the contract without compensation to the contractor in any of the following events, that is to say:

- (i) If the contractor being an individual or if a firm, any partner thereof, shall at any time, be adjudged insolvent or shall have a receiving order or other for administration of his estate made against him or shall take any proceeding for composition under any insolvency act for the time being in force or make any conveyance or assignment of his effects or enter into any arrangement or composition with his creditors or suspend payment or if the firm be dissolved under the partnership act, or
- (ii) If the contractor being a company is wound up voluntarily or by the order of a court or a Receiver, Liquidator or Manager on behalf of the debenture holders is appointed or circumstances shall have arisen which entitled the court or debenture- holders to appoint a Receiver, Liquidator or Manager, or
- (iii) If the contractor commits any breach of the contract not herein specifically provided for: provided always that such determination shall not prejudice any right of action or remedy which shall have accrued or shall accrue thereafter to the owner and provided also the contractor shall be liable to pay to the owner for any extra expenditure is thereby put to and the contractor shall under no circumstances be entitled to any gain on re-purchase.

**CLAUSE- 43: CARRYING OUT PART OF WORK AT THE RISK AND COST OF THE CONTRACTOR**

43.1 If the contractor

- (i) At any time makes default during the currency of work or does not execute any part of the work with due diligence and continues to do so even after a notice in writing of 7 days in this respect from the Engineer-in-Charge; **or**
- (ii) Commits default in complying with any of the terms and conditions of the contract and does not remedy it or takes effective steps to remedy it within 7 days even after a notice in writing is given in that behalf by the Engineer-in-Charge; **or**
- (iii) Fails to complete the work (s) or items of work with individual dates of completion, on or before the date (s) so determined, and does not complete them within the period specified in the notice given in writing in that behalf by the Engineer-in-Charge.

The Engineer-in-Charge without invoking action under clause 36 may, without prejudice to any other right or remedy against the contractor which have either accrued or accrue thereafter to IWAI, by a notice in writing to take the part work/ part incomplete work of any item (s) out of his hands and shall have powers to:

- (a) Take possession of the site and any materials, constructional plant, implements, stores, etc., thereon; and/ or
- (b) Carry out the part work/ part incomplete work of any items (s) by any means at the risk and cost of the contractor.

- 43.2 The Engineer-in-Charge shall determine the amount, if any, is recoverable from the contractor for completion of the part work/ part incomplete work of any item (s) taken out of his hands and execute at the risk and cost of the contractor, the liability of contractor on account of loss or damage suffered by IWAI because of action under this clause shall not exceed 10% of the tendered value of the work.
- 43.3 In determining the amount, credit shall be given to the contractor with the value of work done in all respect in the same number and at the same rate as if it had been carried out by the original contractor under the terms of his contract, the value of contractor's materials taken over and incorporated in the work and use of plant and machinery belonging to the contractor. The certificate of the Engineer-in-Charge as to the value of work done shall be final and conclusive against the contractor provided always that action under this clause shall only be taken after giving notice in writing to the contractor. Provided also that if the expenses incurred by the IWAI are less than the amount payable to the contractor at his agreement rates, the difference shall not be payable to the contractor.
- 43.4 Any excess expenditure incurred or to be incurred by IWAI in completing the part work/ part incomplete work of any item (s) or the excess loss of damages suffered or may be suffered by IWAI as aforesaid after allowing such credit shall without prejudice to any other right or remedy available to IWAI in law or as per agreement be recovered from any money due to the contractor on any account, and if such money is insufficient, the contractor shall be called upon in writing and shall be liable to pay the same within 30 days.
- 43.5 If the contractor fails to pay the required sum within the aforesaid period of 30 days, the Engineer-in-Charge shall have the right to sell any or all of the contractors' unused materials, constructional plant, implements, temporary building at site etc. and adjust the proceeds of sale thereof towards the dues recoverable from the contractor under the contract and if thereafter there remains any balance outstanding, it shall be recovered in accordance with the provisions of the contract.

- 43.6 In the event of the above course being adopted by the Engineer-in-Charge, the contractor shall have no claim to compensation for any loss sustained by him by reason of his having purchased or procured any materials or entered into any engagements or made any advance on any account or with a view to the execution of the work or the performance of the contract.

**CLAUSE-44: POWERS OF THE OWNER TO TAKE POSSESSION OF N**

**DREDGERS AND MATERIALS IN CERTAIN CASES AND COMPLETE WORKS:**

Subject to the terms of the contract, in the event of the contractor making default in the prosecution of construction of the vessel(s) and machineries or in the event of contractor becoming insolvent or from any cause going or taking steps to go into liquidation (except a voluntary liquidation undertaken with the object of amalgamation or reorganization by separation of departments of the contract into separate companies or taking any steps for compounding with his creditors it shall be component for (but not incumbent upon) the Owner after due notice to the contractor in writing, to take possession of the vessel(s) in her then state and all other materials and machineries and all intended for here, as before mentioned and to complete the vessel(s) and machineries and for this purpose with power to enter into any contract with other contractors or manufacturers, and to use the yard or yards, workshops, machineries and tools of the Contractor or such other contractors or manufacturers with whom the contractor may have entered into sub-contracts and the reasonable cost incurred by the exercise of any of the power of this clause shall be deducted from the purchase money then unpaid, if sufficient, and if not sufficient, shall be made good by the Contractor.

**CLAUSE-45: APPEAL**

If the contractor desires to appeal against the decision of the Inspector against the rejection of any work as not being in accordance with the contract, he shall appeal to the Chairman within fourteen days after the Inspector's decision and if an appeal is so preferred, the decision of the Chairman on behalf of Authority shall be final and conclusive.

**CLAUSE-46: CHAIRMAN'S CERTIFICATE TO BE FINAL:**

Wherever in this contract provision is made for any question, arrangement, amount matter or things being settled, decided, certified or determined by the Chairman or by the Inspecting authority or officer or by the representative or resting upon or being governed or controlled by or submitted to the judgment or opinion of them/him or any of them/their/his assessment, decision, certificate, determination judgment

or opinion shall unless otherwise stated therein be final and conclusive for all purposes and shall be binding on the Authority and the contractor notwithstanding anything contained in this contract.

**CLAUSE-47: AUTHORITY AND THEIR STAFF NOT TO BE PERSONALLY LIABLE**

Nothing in these presents shall be deemed to or shall impose any personal liability of the Authority or their staff.

**CLAUSE-48: STANDARD BREAK CLAUSE**

The owner shall in addition to his power under other clauses to determine this contract have power to terminate his liability there under at any time by giving three months (or such shorter period as may be mutually agreed) notice in writing to the contractor of the owner's desire to do so and upon the expiration of the notice the contract shall be determined without prejudice to the rights of the parties accrued to the date of determination but subject to the operation of the following provisions of this clause.

**2.** In the event of this, notice being given the Owner shall be entitled to exercise as soon as may be reasonably practicable within that period the following powers or any of them: -

**a)** To direct the Contractor to complete in accordance with the contract all or any articles, parts of such articles or components in course of manufacture at the expiration of the notice and to deliver the same at such rate of delivery which may be mutually agreed or in detail of agreement at the contract rate. All articles delivered by the contractor in accordance with such directions and accepted shall be paid at a fair and reasonable price assessed on the basis of the contract price when it exists.

**b)** To require the contractor on receipt of the notice of termination.

i) Immediately to take such steps as will ensure that the production rate of the articles specified in the schedule and parts thereof is reduced as rapidly as possible.

ii) as far as possible consistent with (i) above to concentrate work on the completion of parts already in partly manufactured state; and

iii) to terminate on the best possible terms such orders for materials and parts bought out in a partly manufactured or wholly manufactured state as have not been completed, observing in this connection any directions given under this paragraphs (a) and (b) (i) and (ii) above as far as this may be possible.

**3.** In the event on such notice being given provided the contractor has reasonably performed all the provisions of the contract binding upon him down to the date of this notice.

**a)** The Owner shall take over from the contractor at a fair and reasonable price (assessed on the basis of the contract price of the completed articles), all unused, undamaged and acceptable materials, bought out components and articles in the course of manufacture in possession of the Contractor at the expiration of the notice and properly provided by or supplied to the contractor for the performance of this contract except such materials, bought out components are supplied to the contractor through the intervention of the owner or on his behalf:-

(i) the said fair and reasonable price shall be assessed on the basis of the cost price of such materials and/or components, and

(ii) If the contractor elects to retain any materials, bought-out components and articles as in this clause provided, he shall settle all claims of supplier in respect of the materials and/or components supplied to him as aforesaid including any claims to any extra charge (if the original stipulated terms and been concessional) and shall keep the owner indemnified against the same:

(b) The Contractor shall deliver in accordance with the direction of the Owner all such unused, undamaged and acceptable materials, bought out components and articles in course of the manufacture (except as aforesaid) taken over by or previously belonging to the Owner and the Owner shall pay to the Contractor fair and reasonable handling and delivery charges therefore,

(c) The Owner shall indemnify the contractor against the commitments, liabilities or expenditure which in the opinion of the Owner are reasonable and properly chargeable by the contractor in connection with the contract to the extent to which the Owner is satisfied that such commitments, liabilities or expenditure would otherwise represent an unavoidable loss by the contractor by reason of the termination of the contract. Provided that in the event of the contractor not having observed any direction given to him under the sub clause (2) hereof the Owner shall not be liable under the sub clause to pay any sums in excess of those for which the Owner would have been able had the contractor observed that direction.

**4.** If in any particular case exceptional hardship to the contractor should arise from the operation of this clause it shall be open to the Contractor to refer the circumstances to the Chairman who on being satisfied that such hardship exists shall make such allowance if any as in his opinion is reasonable.



5. The Owner shall not in any case be liable to pay under the provisions of this clause any such sum which when taken together with any sums paid or due to becoming due to the contractor under this contract shall exceed the total price of the article specified in the schedule payable under this Contract.

6. The Contractor shall in any substantial order or sub-contract planned or made by him in connection with or for the purpose of this contract take power wherever possible by securing the acceptance of the sub-contractor to terminate such order or sub-contract in the event of the termination of this contract by the Owner of this clause and save only that: -

(a) The name of the contractor shall be substituted for the owner throughout except in sub-clause 3 (c) where it occurs for the second and third times;

(b) The period of the notice of termination shall be two months or such shorter period as may be mutually agreed upon). Substantial order or sublet contracts of or over Rs. 1,00,000 (Rupees One lakh) in value.

#### **CLAUSE-49: Program and Method Statement/Work Plan**

49.1 The Contractor shall submit to the Owner for approval a programme showing the general methods, arrangements, order, and timing for all the activities in the Works, along with cash flow forecasts. The program and method statement/work plan are to be submitted in the Technical Bid. The Method Statement/Work Plan to indicate the activities in detail vessel wise proposed to be carried out for the execution of the works. This is also to include the selection of equipment, approval of the Owners for the selected equipment and thereafter ordering and receipt of the same. All activities to be listed in the Method Statement/Work Plan including the completion of the stages as per the stage payments.

49.2 An update of the Programme shall be a programmed showing the actual progress achieved on each activity and the effect of the progress achieved on the timing of the remaining Works, including any changes to the sequence of the activities. This update is to be sent at monthly intervals.

49.3 The Owner's approval of the Programme shall not alter the Contractor's obligations. The Contractor may revise the Programme and submit it to the Owner again at any time. A revised Programme shall show the effect of Variations.

#### **CLAUSE-50: MANAGEMENT MEETINGS**

50.1 The Owner may require the Contractor to attend a management meeting. The business of a management meeting shall be to review the plans for the Works.

50.2 The Owner shall record the business of management meetings and provide copies of the record to those attending the meeting. The responsibility of the parties for actions to be taken shall be decided by the Owner either at the management meeting or after the management meeting and stated in writing to all those who attended the meeting.

#### **CLAUSE-51: IDENTIFYING DEFECTS**

The Owner or the inspector shall check the Contractor's work and notify the Contractor of any Defects that are found. Such checking shall not affect the Contractor's responsibilities. The Owner or the inspector may instruct the Contractor to search for a Defect and to uncover and test any work that the Owner considers may have a Defect.

#### **CLAUSE-52: CORRECTION OF DEFECTS NOTICED DURING THE DEFECT LIABILITY PERIOD.**

52.1 If any defects including workmanship of hull, structure, performance of engines, machineries, stern gear or any other part appear within twelve months of "Taking over" certificate, the Owner shall give notice to the Contractor of any defects before the end of the Defects Liability Period, which begins at Completion, and is for twelve months thereafter. The Defects Liability shall be extended for as long as defects remain to be corrected.

52.2 Every time notice of a defect is given, the Contractor shall correct the notified defect at his own cost within the length of time specified by the Owner's notice. If the contractor is in default the Owner shall cause the same to be made good by other workmen and deduct the expense from any sums that may be due to the contractor.

#### **CLAUSE-53. UNCORRECTED DEFECTS**

If the Contractor has not corrected a Defect, to the satisfaction of the Owner, within the time specified in the Owner's notice, the Owner will assess the cost of having the Defect corrected, and the Contractor will pay this amount, on correction of the Defect.

#### **CLAUSE-54: ACTIVITY SCHEDULE**

The Activity Schedule shall contain items for the construction, installation, testing, and commissioning works to be done by the Contractor. All variations shall be included in updated programmes and Activity Schedules produced by the contractor. When the Programme or Activity Schedule is updated, the Contractor shall provide the Owner with an updated cash flow forecast. The Activity schedule shall be submitted in the Technical Bid.

#### **CLAUSE - 55: COMPLETION TIME AND EXTENSIONS**

- 55.1 If after the award of the work the contractor commits defaults in commencing the execution of work as aforesaid, the authority shall without prejudice to any other right or remedy available in law, be at liberty to forfeit the earnest money & performance guarantee absolutely.
- 55.2 As soon as possible after the Contract is concluded, the Contractor shall submit a Time and Progress Chart get it approved by the Department. The Chart shall be prepared in direct relation to the time stated in the Contract documents for completion of items of the works. It shall indicate the forecast of the dates of commencement and completion of various trades of sections of the work.
- 55.3 However, if the work (s) be delayed by:-
- (i) Force majeure as per clause 36, or
  - (ii) Abnormally bad weather, or
  - (iii) Serious loss or damage by fire, or
  - (iv) Civil commotion, local commotion of workmen, strike or lockout, affecting any of the trades employed on the work, or
  - (v) Delay on the part of other contractors or tradesman engaged by Engineer-in-Charge in executing work not forming part of the contract, or
  - (vi) Non-availability of stores, which are the responsibility of Government to supply or
  - (vii) Non-availability of breakdown of Tools and Plant to be supplied or supplied by Government or
  - (viii) Any other cause which, in the absolute discretion of the Engineer-in-Charge is beyond the Contractor's control.

then immediately upon the happening of any such events as aforesaid, the contractor shall inform the Engineer-in-Charge accordingly, but the contractor shall nevertheless use constantly his best endeavors to prevent and/or make good the delay and shall do all that may be

required in this regard. The Contractor shall also request, in writing, for extension of time, to which he may consider himself eligible under the contract, within fourteen days of the date of happening of any such events as indicated above.

- 55.4 In case the cost of the work is more than 10 crores then the total scope of work will be divided into milestones. The contractor shall submit a Time & Progress chart for each milestone and get it approved by the competent authority.
- 55.5 Request for rescheduling of Mile stones and extension of time, to be eligible for consideration, shall be made by the Contractor in writing within fourteen days of the happening of the event causing delay. The Contractor may also, if practicable, indicate in such a request the period for which extension is desired.
- 55.6 In any such case as may have arisen due to any of the events, as aforesaid, and which may have been brought out by the contractor in writing, the Competent Authority may give a fair and reasonable extension of time, after taking into consideration the nature of the work delayed and practicability of its execution during the period of extension.
- 55.7 Such extensions shall be communicated to the contractor by the Engineer-in-Charge in writing. The contractor shall not be entitled to claim any compensation or over run charges whatsoever for any extension granted.

#### **CLAUSE – 56: LIQUIDATED DAMAGES FOR DELAY**

- 56.1 If the contractor fails to maintain the required progress in terms of clause 55 or to complete the work on or before the date of completion as per the contract or extended date of completion, he shall, without prejudice to any other right or remedy available under the law to the authority on account of such breach, pay as agreed liquidated damages the amount calculated at the rates stipulated below.

- (i) Liquidated Damages - @ 1.5 % per month of delay  
for delay of work - to be computed on per day basis

Provided always that the total amount of compensation for delay to be paid under this condition shall not exceed 10% of the contract value of work.

The competent authority (whose decision in writing shall be final & binding) may decide on the amount of tendered value of the work for

every completed day/month (as applicable) that the progress remains below that specified in Clause 55 or that the work remains incomplete.

The amount of liquidated damages may be adjusted or set-off against any sum payable to the Contractor under this or any other contract with the authority.

- 56.2 In case of contracts having tendered amount more than 10 crores, if the contractor does not achieve a particular milestone, or the re-scheduled milestone(s) in terms of Clause 55.5, the amount shown against that milestone shall be withheld, to be adjusted against the liquidated damages levied at the final decision on Extension of Time. With-holding of this amount on failure to achieve a milestone, shall be automatic without any notice to the contractor. However, if the contractor catches up with the progress of work on the subsequent milestone(s), the withheld amount shall be released. In case the contractor fails to make up for the delay in subsequent milestone(s), amount mentioned against each milestone missed subsequently also shall be withheld. However, no interest, whatsoever, shall be payable on such withheld amount.
- 56.3 In case of contracts having tendered amount less than 10 crores, if the work remains incomplete after the stipulated date of completion, the Engineer-in-charge may withhold 10% of the tendered value of the work from the running payments of the contractor pending final decision of the competent authority on the extension of time case. If the competent authority decides to grant extension of time without levy of liquidated damages or levy part of the total liquidated damages specified above then the balance withheld amount after adjusting the amount of the liquidated damages levied by the competent authority will be refunded to the contractor.

#### **CLAUSE – 57: WHEN THE CONTRACT CAN BE DETERMINED**

- 57.1 Subject to other provisions contained in this clause, the Engineer-in-Charge may, without prejudice to his any other rights or remedy against the contractor in respect of any delay, inferior workmanship, any claims for damages and/or any other provisions of this contract or otherwise, and whether the date of completion has or has not elapsed, by notice in writing absolutely determine the contract in any of the following cases:
- (i) If the contractor having been given by the Engineer-in-Charge a notice in writing to rectify, reconstruct or replace any defective work or that the work is being performed in an inefficient or otherwise improper or un-workman like manner shall comply with the requirement of such notice for a period of seven days thereafter.

- (ii) If the contractor has, without reasonable cause, suspended the progress of the work or has failed to proceed with the work with due diligence so that in the opinion of the Engineer-in-Charge he will be unable to secure completion of the work by the date for completion and continues to do so after a notice in writing of seven days from the Engineer-in-Charge.
- (iii) If the contractor fails to complete the work within the stipulated date or items of work with individual date of completion, if any stipulated, on or before such date(s) of completion and does not complete them within the period specified in a notice given in writing in that behalf by the Engineer-in-Charge.
- (iv) If the contractor persistently neglects to carry out his obligations under the contract and/ or commits default in complying with any of the terms and conditions of the contract and does not remedy it or take effective steps to remedy it within 7 days after a notice in writing is given to him in that behalf by the Engineer-in-Charge.
- (v) If the contractor shall offer or give or agree to give to any person in IWAI service or to any other person on his behalf any gift or consideration of any kind as an inducement or reward for doing or forbearing to do or for having done or forborne to do any act in relation to the obtaining or execution of contract.
- (vi) If the contractor shall enter into a contract with IWAI in connection with which commission has been paid or agreed to be paid by him or to his knowledge, unless the particulars of any such commission and the terms of payment thereof have been previously disclosed in writing to the Engineer-in-Charge.
- (vii) If the contractor shall obtain a contract with IWAI as a result of wrong tendering or other non-bonafide methods of competitive tendering or commits breach of integrity pact.
- (viii) If the contractor being an individual, or if a firm, any partner thereof shall at any time be adjudged insolvent or have a receiving order or order for administration of his estate made against him or shall take any proceedings for liquidation or composition (other than a voluntary liquidation for the purpose of amalgamation or reconstruction) under any Insolvency Act for the time being in force or make any conveyance or assignment of his effects or composition or arrangement for the benefit of his creditors or purport so to do, or if any application be made under any Insolvency Act for the time being in force for the sequestration of his estate or if a trust deed be executed by him for benefit of his creditors.

- (ix) If the contractor being a company shall pass a resolution or the court shall make an order that the company shall be wound up or if a receiver or a manager on behalf of a creditor shall be appointed or if circumstances shall arise which entitle the court or the creditor to appoint a receiver or a manager or which entitle the court to make a winding up order.
- (x) If the contractor shall suffer an execution being levied on his goods and allow it to be continued for a period of 21 days.
- (xi) If the contractor assigns, transfers, sublets (engagement of labour on a piece-work basis or of labour with materials not to be incorporated in the work, shall not be deemed to be subletting) or otherwise parts with or attempts to assign, transfer, sublet or otherwise parts with the entire works or any portion thereof without the prior written approval of the Engineer -in-Charge.

When the contractor has made himself liable for action under any of the cases aforesaid, the Engineer-in-Charge on behalf of the IWAI with the approval of the competent authority shall have powers:

- (a) To determine the contract as aforesaid (of which termination notice in writing to the contractor under the hand of the Engineer-in-Charge shall be conclusive evidence). Upon such determination, the Earnest Money Deposit, Security Deposit already recovered and Performance Guarantee under the contract shall be liable to be forfeited and shall be absolutely at the disposal of the IWAI.
- (b) After giving notice to the contractor to measure up the work of the contractor and to take such whole, or the balance or part thereof, as shall be un-executed out of his hands and to give it to another contractor to complete the work. The contractor, whose contract is determined as above, shall not be allowed to participate in the tendering process for the balance work.

In the event of above courses being adopted by the Engineer-in-Charge, the contractor shall have no claim to compensation for any loss sustained by him by reasons of his having purchased or procured any materials or entered into any engagements or made any advances on account or with a view to the execution of the work or the performance of the contract. And in case action is taken under any of the provision aforesaid, the contractor shall not be entitled to recover or be paid any sum for any work thereof or actually performed under this contract unless and until the Engineer-in-Charge has certified in writing the performance of such work and the value payable in respect thereof and he shall only be entitled to be paid the value so certified.

## **CLAUSE – 58: INSPECTION AND APPROVAL**

- 58.1 All works involving more than one process shall be subject to examination and approval at each stage thereof and the contractor shall give due notice to the Engineer-in-Charge on his authorized representative, when each stage is ready. In default of such notice, the Engineer-in-Charge shall be entitled to appraise the quality and extent thereof and the decision of the Engineer-in-Charge in this regard shall be final and binding.
- 58.2 No work shall be put out of view without the approval of the Engineer-in-Charge or his authorized representative and the Contractor shall afford full opportunity for examination. The contractor shall give due notice to the Engineer-in-Charge or his authorized representative whenever any such work is ready for examination and the Engineer-in-Charge or his representative shall, without unreasonable delay, unless he considers it necessary and advise the contractor accordingly, examine and measure such work. In the event of the failure or the contractor to give such notice, he shall if required by the Engineer-in-Charge, uncover such work at the contractor's expenses.
- 58.3 Periodic inspection will be carried out by the EIC or his representative. The contractor can have the inspection schedules finalized with the Engineer-in-charge. Generally all attempts should be made to have joint inspection

## **CLAUSE – 59: COMPLETION CERTIFICATE AND COMPLETION PLANS**

- 59.1 The work shall be completed to the entire satisfaction of the Engineer-in-Charge and within the specified time limit and under the terms and conditions of the contract. As soon as the work under the contract is completed as a whole the contractor shall give notice of such completion to the Engineer-in-Charge. The Engineer-in-Charge shall inspect the work and shall satisfy himself that the work(s) has been completed in accordance with the provisions of the contract and then issue to the Contractor a certificate of completion indicating the date of completion. Should the Engineer-in-Charge notice that there are defects in the works or the works are not considered to be complete, he shall issue a notice in writing to the Contractor to rectify / replace the defective work or any part thereof or complete the work, as the case may be within such time as may be notified and after the contractor has complied with as aforesaid and gives notice of completion the Engineer-in-Charge shall inspect the work and issue the completion certificate in the same manner as aforesaid.



59.2 No certificate of completion shall be issued as stipulated above and no work be considered to be completed unless the contractor shall have removed from the work site and / or premises all his belongings / temporary arrangements brought / made by him for the site and / or premises in all respects and made the whole of the site and / or premises fit for immediate occupation / use to the satisfaction of the Engineer- in-Charge. If the contractor fails to comply with the above mentioned requirements on or before the date of completion of the work, the Engineer-in-Charge, may as he thinks fit and at the risk at cost of the contractor, fulfill such requirements and remove / dispose of the contractor's belongings / temporary arrangements, as aforesaid, and the contractor shall have no claim in this respect except for any sum realised by the sale of Contractor's belongings / temporary arrangements less the cost of fulfilling the said requirements and any other amount that may be due from the contractor. Should the expenditure on the aforesaid account exceed the amount realized by sale of such contractor's belongings / temporary arrangements then the contractor shall on demand pay the amount of such excess expenditure.

59.3 The contractor shall submit the completion plans of the work wherever required within 30 days of the completion of work. In case the contractor fails to submit completion plans as aforesaid, he shall be liable to pay a sum equivalent to 2.5% of the value of the work subject to a ceiling of Rs. 15000/- (Rupees fifteen thousand only) as may be fixed by Engineer-in-Charge concerned and in this respect the decision of the Engineer-in-Charge shall be final and binding on the contractor.

#### **CLAUSE – 60: TAXES, DUTIES AND LEVIES ETC.**

The prices shall include all the taxes, levies, cess, octroi, royalty, terminal tax, excise, or any other local, State or Central taxes as applicable/ charged by Centre or State Government or Local authorities on all materials that the contractor has to purchase for the performance of the contract and services, shall be payable by the contractor and the Authority will not entertain any claim for compensation whatsoever in this regard. The rates quoted by the contractor shall be deemed to be inclusive of all such taxes, duties, levies, etc.

**GST/Import duty** as applicable, will be paid by the contractor to the concerned Authority, shall be paid.

#### **CLAUSE-61: TAX DEDUCTION AT SOURCE**

TDS at the applicable rate as per Income Tax Act/Rules shall be deducted from all the payment/advances made against the contract.

## **CLAUSE – 62: PAYMENT OF FINAL BILL**

The final bill shall be submitted by the contractor within one month from the date of completion of the work or of the date the certificate of completion furnished by the Engineer-in-Charge. No further claim in this regard unless as specified herein under shall be entertained. Payment of final bill shall be made within three months if the amount of the contract is up to Rs. 15 lakhs and six months if the value of the work exceeds Rs. 15 lakhs. If there shall be any dispute about any item or items of the work then the undisputed item or items only shall be paid within the said period of three months or six months, as the case may be. The contractor shall submit a list of the disputed items within thirty days from the disallowance thereof and if he fails to do so, his claim shall be deemed to have been fully waived and absolutely extinguished.

## **CLAUSE - 63: OVER PAYMENTS AND UNDER PAYMENTS**

- 63.1 Whenever any claim whatsoever for the payments of a sum of money to the Authority arises out of or under this contract against the contractor, the same may be deducted by the Authority from any sum then due or which at anytime thereafter may become due to the contractor under this contract and failing that under any other contract with the Authority or from any other sum whatsoever due to the contractor from the Authority or from his security deposit, or he shall pay the claim on demand.
- 63.2 The Authority reserves the right to carry out post- payment audit and technical examination of the final bill including all supporting vouchers, abstracts, etc. The authority further reserves the right to enforce recovery of any over payment when detected notwithstanding the fact that the amount of the final bill may be included by one of the parties as an item of dispute before an arbitrator appointed under clause 48 of this contract and notwithstanding the fact that the amount of the final bill figures in the arbitration award.
- 63.3 If as a result of such audit and technical examination any over payment is discovered in respect of any work done by the contractor or alleged to have been done by him under contract, it shall be recovered by the Authority from the contractor by any of all of the methods prescribed above, and if any under payment is discovered, the amount shall be duly paid to the contractor by the Authority.
- 63.4 Provided that the aforesaid right of the Authority to adjust over-payment against amount due to the contractor under any other contract with the Authority shall not extend beyond the period of two years from the date of payment of the final bill or in case the final bill is a MINUS bill, from the date the amount payable by the Contractor under the MINUS final bill is communicated to the contractor.

63.5 Any sum of money due and payable to the Contractor (including the security deposit returnable to him) under the contract may be withheld or retained by way of lien by the Engineer-in-Charge or Authority against any claim of the Authority or such other person or persons in respect of payment of a sum of money arising out of or under any other contract made by the contractor with the Engineer-in-Charge or Authority or with such other person or persons. The sum of money so withheld or retained under this clause by the Engineer-in-Charge or Authority will be kept withheld or retained as such by the Engineer-in-Charge or Authority or till his claim arising out of in the same contract or any other contract is either mutually settled or determined by the arbitrator, if the contract is governed by the arbitration clause under the clause 48 or by the competent court hereinafter provided, as the case may be, and the contractor shall have no claim for interest or damages whatsoever on this account or any other ground in respect of any sum of money withheld or retained under this clause.

#### **CLAUSE – 64: FINALITY CLAUSE**

It shall be accepted as an inseparable part of the contract that in matters regarding design, materials, workmanship, removal of improper work, interpretation of the contract drawings and contract specifications, mode of procedure and the carry out of the work the decision of the Engineer-in-Charge which shall be given in writing shall be final and binding on the contractor.

#### **CLAUSE – 65: SUM PAYABLE BY WAY OF COMPENSATION TO BE CONSIDERED IS REASONABLE WITHOUT PREFERENCE TO ACTUAL LOSS**

All sum payable by way of compensation to the Authority under any of these conditions shall be considered as reasonable compensation without reference to the actual loss or damage sustained and whether or not damage shall have been sustained.

#### **CLAUSE - 66 SETTLEMENT OF DISPUTES & ARBITRATION.**

66.1 Except where otherwise provided in the contract, all questions and disputes relating to the meaning of the specifications, design, drawings and instructions here-in-before mentioned and as to the quality of workmanship or materials used on the work or as to any other question, claim, right, matter or thing whatsoever in any way arising out of or relating to the contract, design, drawings, specifications, estimates, instructions, orders or these conditions or otherwise concerning the works or the execution or failure to execute the same whether arising during the progress of the work or after the cancellation, termination, completion or abandonment thereof shall be dealt with as mentioned hereinafter:

- (i) If the contractor considers any work demanded of him to be outside the requirements of the contract, or disputes any drawings, record or decision given in writing by the Engineer-in-Charge on any matter in connection with or arising out of the contract or carrying out of the work, to be unacceptable, he shall promptly within 15 days of the receipt of decision from the Engineer-in-Charge request the Chief Engineer in writing through the Engineer-in-Charge for written instruction or decision. Thereupon, the Chief Engineer shall give his written instructions of the decision within a period of one month from the receipt of the contractor's letter. However, this will not be reason for the stoppage of work.
  - (ii) If the Chief Engineer fails to give his instructions or decision in writing within the aforesaid period or if the contractor is dissatisfied with the instruction or decision of the Chief Engineer, the contractor may, within 15 days of the receipt of Chief Engineer's decision, appeal to the Chairman, IWAI who shall afford an opportunity to the contractor to be heard, if the latter so desires, and to offer evidence in support of his appeal. The Chairman, IWAI shall give his decision within 30 days of receipt of contractor's appeal. If the contractor is still dissatisfied with his decision, the contractor shall within a period of 30 days from receipt of the decision, give notice to the Chairman, IWAI for appointment of arbitrator failing which the said decision shall be final binding and conclusive and not referable to adjudication by the arbitrator.
- 66.2 Except where the decision has become final, binding and conclusive in terms of Sub Para 47.1 above, disputes or differences shall be referred for adjudication through arbitration by a sole arbitrator appointed by Chairman, IWAI.
- 66.3 Further, within thirty (30) days of receipt of such notice from either party, the Engineer-in-Charge of work at the time of such dispute shall send to the Contractor a panel of three persons preferably but not necessarily from the approved panel of arbitrators being maintained by Indian Council of Arbitration (ICA) and thereafter the Contractor within fifteen (15) days of receipt of such panel communicate to the Engineer-in-charge the name of one of the persons from such panel and such a person shall then be appointed as sole arbitrator by the Chairman, IWAI. However, the arbitrator so appointed shall not be an officer or the employee of Inland Waterways Authority of India.

Provided that if the Contractor fails to communicate the selection of a name out of the panel so forwarded to him by the Engineer-in-charge then after the expiry of the aforesaid stipulated period the Chairman, shall without delay select one person from the aforesaid panel and appoint him as the sole arbitrator.

- 66.4 The arbitrator to whom the matter is originally referred being transferred or vacating his office or being unable to act for any reason, then the Chairman IWAI shall appoint another person to act as sole arbitrator, such person shall be entitled to proceed with the reference from the stage at which it was left by the predecessor.
- 66.5 The award of the Arbitrator shall be final and binding. The Arbitrator shall decide in what proportion the Arbitrator's fees, as well as the cost of Arbitration proceeding shall be borne by either party.
- 66.6 The arbitrator with the consent of the parties can enlarge the time, from time to time to make and publish his award.
- 66.7 A notice of the existence in question, dispute or difference in connection with the contract unless served by either party within 30 days of the expiry of the defects liability period, failing which all rights and claim under this contract shall be deemed to have been waived and thus forfeited and absolutely barred.
- 66.8 The Arbitrator shall give reasons for the award if the amount of claim in dispute is Rs. 1,00,000/- and above.
- 66.9 The work under this Contract shall continue during Arbitration proceedings and no payments due from or payment by the Authority shall be withheld on account of such proceedings except to the extent which may be in dispute.
- 66.10 The Arbitration and Conciliation Act 1996 with any statutory modifications or re-enactment thereof and the rules made there under and being in force shall apply to the Arbitration proceedings under this clause.
- 66.11 The parties to the agreement hereby undertake to have recourse only to arbitration proceedings under for Arbitration Act 1996 and the venue of the arbitration proceeding shall be Noida/ New Delhi and the parties will not have recourse to Civil Court to settle any of their disputes arising out of this agreement except through arbitration.

**NOTE:** In case of contract with another Public Sector Undertaking, following Arbitration Clause shall apply: "Except as otherwise provided, in case of a contract with a public Sector Undertaking if at any time any question dispute or difference whatsoever arises between the parties upon or in relation to, or in connection with this agreement, the same shall be settled in terms of the Ministry of Industry, Department of Public Enterprises O.M No. 3/5/93-PMA dt.30.06.93 or any modifications / amendments thereof. "The arbitrator shall have the power to enlarge the

term to publish the award with the consent of the parties provided always that the commencement or continuation of the arbitration proceeding shall not result in cessation or suspension of any of other rights and obligations of the parties of any payments due to them hereunder.

#### **CLAUSE 67: INTEREST**

No interest shall be payable on account due to the contractor against final bills or any other payment due under the contract.

#### **CLAUSE 68: BANNED OR DELISTED FIRMS:**

The firm shall give a declaration that they have not been banned or delisted by any govt. or quasi Govt. agency or public Sector Undertaking.

If a firm has been banned by any Govt. or quasi Govt. Agency or PSU, this fact must be clearly stated and it may not be a cause of disqualifying the firm. If the declaration is not given, the bids shall be rejected as non-responsive.

#### **CLAUSE 69 :SUSTAINABILITY OF JV**

In case JV/ consortium is not sustained due any reasons or discrepancies arising amongst the JV/consortium members, Unsustainability of JV/consortium shall be determined by the Engineer in Charge/ Employer during the monitoring in the contract period based on the failure of the deliveries/ missing of the milestones and other deliverables. The same shall be dealt in the following manner.

- (a) If JV/consortium becomes unsustainable after being selected as L1 EMD of the defaulting JV/consortium shall be forfeited.
- (b) If JV/consortium becomes unsustainable after the award of contract the employer has complete authority to nominate another contractor to complete the balance work on risk and cost of the defaulting contractor. The contractor will be notified of the decision to stop the work and get the measurements done to ascertain the value of work completed till date. No payment shall be released immediately, however, after completion of entire work on risk and cost, the differential cost would be recovered from all held up amount (BG, EMD, Security deposit and unpaid amount for the work done) of the defaulting contractor and if any balance amount is still available, that shall be released to defaulting contractor.

## **Contract Data to General Conditions of Contract**

### **Clause Reference**

1. The Owner is IWAI represented by [Cl.1(i)]  
Chairman, IWAI  
Address: A-13, Sector-1, Noida.
2. The Engineer-in-charge is:  
Designation: Chief Engineer (P & M)  
Address: IWAI, A-13, Sector 1, Noida 201301 [Cl.1(i)]
3. The place of delivery is Kolkata.
4. The Start Date shall be from the issuance of Work Order/ Letter of  
Acceptance [Cl.1(i)]
5. (a) The name and identification number of the Contract is :  
**“Design, Construction and supply of two Self-Propelled Cutter  
Suction Dredgers for NW-2”.**
6. The standard form of Performance Security acceptable to the Owner  
Shall be an unconditional Bank Guarantee of the type as presented in  
the Bidding Documents. [Cl. 38]

**(SECTION-VI)**

**SPECIAL CONDITIONS OF CONTRACT**



## **SECTION – VI**

### **SPECIAL CONDITIONS OF CONTRACT**

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## **SECTION – Vi**

### **SPECIAL CONDITIONS OF CONTRACT**

#### **(Two Self-Propelled Cutter Suction Dredgers for NW-2)**

##### **1. PERFORMANCE OF THE WORK:**

The work shall be performed at the place or places named in the tender or at such other place or places as may be approved by the Owner.

##### **2. SPECIFICATION:**

In particular and without prejudice to the foregoing condition, when tenders are called for in accordance with the particulars, the contractor's tender to supply the vessel in accordance with such particulars shall be deemed to be an admission on his part that he has acquainted himself with the details thereof and no claim shall lie against the owner on the ground that the contractor did not examine or acquaint himself with such particulars.

##### **3. GUARANTEE FOR THE MAIN ENGINES AND EQUIPMENTS SUPPLIED**

The contractor will be required to obtain and furnish a guarantee for the main engines and auxiliaries, machineries fitted on the vessel to the effect that General spares suppliers will be in a position to supply the spare parts of the engines and other machineries and the spares will continue to be available from the stock for a period of at least seven years from the date of the receipt of the machineries and equipments.

##### **4. MISTAKE IN DRAWINGS:**

The contractor will be responsible for and shall pay for any alterations of the work due to any discrepancies, errors or omissions in the drawings or other particulars supplied by him whether such drawings or particulars have been approved by the Owner or not, provided that such discrepancies, error or omission be not due to inaccurate information or particulars furnished to the Contractor on behalf of the Owner. If any dimensions figured upon a drawing or plan differ from those obtained by scaling the drawing or plan, the dimensions as figured upon the drawing or plan shall be taken as correct.

##### **5. VARIATIONS (i.e. MODIFICATIONS) IN DESIGN AND DIMENSION:**

Should any alterations in or additions to the works as specified in the said specifications not involving extra cost to the Contractor be considered necessary or expedient by the Contract or by the owner or the Inspecting

Owner or Officer and be mutually agreed on in the writing the Contractor shall execute the same without any charge beyond the Contract Price. But if the owner shall desire any alteration or additions involving extra cost to the contractor before executing the same shall tender to the owner a written offer stating the nature and cost of such alterations or additions and the extension of time if any required for making them and if the owner shall accept the said offer and allow such extension of time in writing the Contractor shall be bound to execute the work. No extra work shall be executed by the Contractor or if executed shall be paid for to the Contractor except such as may be embraced in such offer and acceptance. The Contractor shall allow the owner the value as shall be mutually agreed in writing or any materials and value as shall be mutually agreed in writing or any material and workmanship dispensed with by any such alterations or additions.

Provided that no such variations shall except with the instructions from the Inspector as to carry out the work which either then or later will in the opinion of the contractor, involve a claim for additional payment, the Contractor shall, as soon as reasonably possible after receipt of instructions aforesaid advise the Inspector to that effect.

#### **6. APPROVAL OF DRAWINGS AND EQUIPMENT WITH CONSENT OF OWNER**

The detailed drawings so prepared from the general arrangement drawing should be got approved from owner or his authorised officer/agency. Approved statutory body/Classification Society will give approval of all construction drawings. However, other drawings such as General Arrangement, Machinery layout, system control drawings and particular of all equipments to be installed shall be forwarded to owner or his authorized Officer for his approval. Copies of all drawings to be sent to the owner, IWAI will be the Owner of such design and drawings of the dredgers.

Before ordering any equipment, materials and outfit of any description for the works, the contractor shall submit for the approval of the Owner or his authorised representative/consultant, the names of the makers and suppliers proposed and any other detail required by the Owner or his authorised representative/consultant and seek their approval prior to ordering.

#### **7. CONTRACTOR TO CONSTRUCT, EQUIP, TEST AND DELIVER THE DREDGERS.**

Subject to and in accordance with the provisions of the Contract, the Contractor shall in the best and most workman like manner and with material, thing and workmanship respectively of the best kinds build, equip and test to the satisfaction of the Owner and deliver to the representative in the condition provided by this Contract, the dredgers of the description dimensions

containing the accommodation and supplied with all apparatus, permanent and temporary fittings, outfit and gear and the spare gear mentioned and described in or to be informed from the modifications hereto attached and from the specifications furnished by the Contractor and accepted by him (Owner) for the purposes of this Contract, both of which hereinafter called the said specifications hereto attached and from the plan or plans which have for purposes of identification been signed on behalf of the Owner and by the Contractor and shall supply and deliver as hereinafter mentioned the spare parts as specified in all respects with this contract, the said specifications and the said plans, supplementary drawing, instructions and explanations as shall from time to time hereinafter be furnished and given by the contractor to and be approved by the Owner the contractor shall also in manner aforesaid when requested by the Owner supply further drawings and execute supply and complete to the satisfaction of the Owner all other works, materials and thing mentioned and described in or to be inferred from the said specifications and the said drawings furnished and given to and approved by the Owner shall provide to the satisfaction of the Owner, labour, superintendence, power, materials and things which shall be requisite for the due performance, execution and completion of all and every work, matters and thing hereby contracted to be executed and done.

**8. Contractor to include execution and supply of all work matters and things required by Owner for due performance of Contract:**

This contract shall be deemed to comprise the design of **Self-Propelled Cutter Suction Dredgers**, construction, testing, installation of the equipment/machineries and delivery complete in working order in all respects of the dredgers together with the equipment and all other things to be supplied in connection therewith and the due performance, execution and completion of all works, matters and thing necessary or proper for such construction, installation of equipment/machineries and delivery at the price hereinafter mentioned and accordingly the Contractor shall execute all works and find and supply all things which the Owner or the inspecting Owner or officer shall consider necessary proper according to the direction of the Owner or inspecting authority or officer and to their satisfaction according to the true intent and meaning of this Contract and notwithstanding that any such work or things respectively may not be expressly mentioned for referred to in the said specification and the said plans and the Contractor shall not be entitled to any payment or allowance whatsoever in respect thereof unless such payment or allowance is, in the opinion of the Owner, occasioned on account of such modifications of the said Contract, as have been agreed to in writing by the Owner.

## **9. INSPECTION**

### **(a) Obligation to carryout Inspector's instructions**

The Contractor shall satisfy the Inspector that adequate provision has been made, (i) to carry out his instructions fully and with promptitude (ii) to ensure that parts required to be inspected before use are not used before inspection; and (iii) to prevent rejected parts being used in errors. Where parts rejected by the inspector have been rectified or altered, such parts shall be segregated for separate inspection and approved before being used in the work.

### **(b) Inspection and testing during progress of work:**

The Contractor shall offer the Owner or the Inspecting authority or Officer all proper and reasonable facilities for examining inspecting and testing the materials, machinery and workmanship used or intended to be used or employed during the progress of the construction and installation of equipment of the vessel and on completion thereof shall also supply free of charge such apparatus, materials, tools or labour as may be required from time to time for the purpose of such examinations, inspections and testing. The Owner, the Inspecting authority or officer shall have access to the place or places where any part of the machinery or equipment is being constructed or is stored at all reasonable times during the execution of this Contract and in case any part of the work shall have been covered or closed without previous inspection the Contractor shall if required open such part or parts wherever necessary to enable the Owner or Inspecting authority or Officer to inspect the part so opened up at the expense of the Contractor.

### **(c) Intimation for Inspection & Cost involved**

The Contractor shall inform the Inspector in writing when any portion of the work is ready for inspection, giving him sufficient notice to enable him to inspect the same without retarding the further progress of the work. No portion of the work shall be considered completed in accordance with the terms of the contract until the Inspector shall have certified in writing that it has been inspected, and approved by him. The expense incurred in the inspection and / or tests at the place agreed upon the contract will be defrayed by the owner, provides that the results are the event of inspection and or tests providing unsatisfactory and resulting in the non-acceptance of the plan/structure or any portion thereof, the cost of such re-inspection and / or tests shall be borne by the contractor.

## **10. Replacement of defective work, material and fittings**

All materials, machinery and workmanship used and employed in carrying out this Contract shall be to the entire satisfaction of the Owner or the Inspecting Owner or Officer. Any portion or portions of the material, machinery or any of

the works done under this Contract which may be considered by the Owner or the Inspecting Owner or officers to be defective or unsatisfactory or not in accordance with the said specifications and plans and the requirements of the vessel shall be replaced in a manner satisfactory to the Owner or the Inspecting Owner or Officer at the sole expense of the Contractors

If the Inspector shall find any work to be not in accordance with the contract, he shall be entitled to give the Contractor notice thereof and the Contractor shall forthwith make the defective work good or alter the same to make it comply with the requirements of the contract. Should he fail to do so within a reasonable time (as to which the Inspector shall be the judge), the owner may reject and replace at the cost of the contractor the whole or any portion of the work as the case may be, which is defective or fails to fulfil the requirement or the contract. Such replacement shall be carried out by the Owner within a reasonable time to the same specifications and under competitive conditions. The Contractor's full and extreme liability under this clause shall be satisfied by the payment to the owner, of the extra cost, if any, of such replacement delivered and / or constructed as provided for in the original contract, such extra cost being the ascertained difference between the price paid by the Owner, under the provisions above mentioned, for such replacement and the contract price for the work so replaced, and the repayment of any sum paid by the owner to the Contractor in respect of such defective work. Should the Owner not so replace the rejected work within reasonable time, the Contractor's full and extra liability under this clause shall be satisfied by the repaying of all money paid by the Owner to him in respect of such work.

## **11. TRIALS**

Forthwith after the completion of the vessel in strict conformity with the Technical specifications under this contract the vessel shall undergo, in the presence of the Owner and the Inspecting Owner or Officer or their representative trials near the yards of construction or any other places as mutually agreed upon in accordance with the provisions of the specifications and as directed by the Owner or the Inspecting Owner or Officer.

The said trials shall be at the sole expenses and risk of the Contractor who shall pay and discharge all costs and bear all liabilities whatever arising out of the same. The contractor shall supply all crew and officers, fuel, gear and equipment required for the trials, all at his own expenses and shall also be responsible for all risks to the vessel(s) and other craft or to any person or property during the continuance of such trials and make good any damage which may arise in consequence thereof and indemnify the owner and his Officers / and servants therefrom and from all claims, action, suits and proceedings and all costs, charges and expenses in respect thereof or in any way arising there out or incidental thereto. Provided that all claims in respect of the owner shall meet the employee's representatives of the Owner.

## **12. DELIVERY**

### **(a) Preparing for voyage and delivery**

Immediately after completion of satisfactory trials the Contractor shall proceed to make the Dredgers ready for the delivery at specified destination and shall thereupon deliver the dredgers or cause the same to be delivered in a proper and seaman like manner at their own risk at the said specified destination and deliver the same in the charge of the representative in such suitable place and position as may be indicated by him complete with all necessary certificates and licences and in a good, complete and satisfactory condition of repair, fair wear and tear, consequent on the voyage accepted and with all stores and equipments in the specification mentioned or herein provided for on board, any damages incurred (other than fair wear and tear) or defects discovered during such navigation being made good by the Contractor at his own expenses prior to such last mentioned delivery. A sufficient crew and all engines and other necessary and usual stores and equipment are to be provided for the delivery by the Contractor and all costs and charges of every description in connection with the delivery are to be borne by the Contractor and all dock, canal and harbour dues and charges are to be paid by him.

The contractor shall comply with all Ministry of Shipping Rules, if any, and must also satisfy the requirements of the insurance broker, underwriters and surveyors and not do anything or leave anything undone where by the cost of insurance premium is increased. Should the cost of insurance be in any way increased by the failure of the contractor to meet such requirements, any such increased cost shall be borne by the contractor.

### **(b) Spare Parts**

**The spare parts as per manufacturer's recommendation for 2000 hrs. of operation are to be supplied for major machineries and equipment without extra cost along with the dredgers and accordingly the cost is to be including in the bid.**

**A list of the spare parts of major machineries and equipment to include Main Engines, Auxiliary Engines, dredge pumps, Crane, Anchor Handling Winch etc. as in the technical specification clause no. 18 shall be submitted with price, terms & conditions if any for placement of supply order separately. However, the spare parts are to be supplied along with the dredger. The above cost shall not be considered for the evaluation of the financial bids.**

Should it be necessary for the Contractor to send any of the spare parts by the separate means, the contractor shall be responsible for the cost of delivery and also for the proper packing, storage and protection whilst on the board and for their subsequent reception and delivery to the representative.



**(c) Provision as to Trials**

As soon as the dredgers shall have been re-equipped and made ready for work to the satisfaction of the representative it shall then undergo such trial as their representative may require to demonstrate that neither the hull, machinery nor any other parts of the dredgers have been damaged during the delivery and that all are in good working order and that the dredgers is upto the standard required when working under local conditions. Any defect noticed during such trials shall be rectified by the Contractor to the satisfactory of the Owner / Inspector or the representative at the cost of the contractor.

**(d) Dredgers to be at Contractor's risk until the issue of certificate of delivery**

The said delivery and re-equipment of the dredgers at the specified destination shall be at the expense and risk of the contractor who shall pay and discharge all costs and liabilities thereof and connected therewith and shall continue to be responsible for the safety of the dredgers until the Owner or his representative shall have accepted delivery thereof as hereinafter mentioned. If any loss (whether total or otherwise) shall be sustained or incurred by the dredgers by any means or from any cause either during the delivery or before acceptance by the Owner then and in any such case the Contractor shall at his own expenses forthwith make good such loss subject in the case of total of constructive total loss to the provision of this contract.

**(e) As to acceptance of delivery**

When and as soon as the dredgers shall have been duly re-equipped and made ready for work in accordance with the specifications and shall be in a complete and satisfactory condition with their certificates, licences and outfits and spare gears enumerated in the specifications on board then the dredgers shall be delivered to the representative of Owner who shall thereupon give to the Contractor or to such other persons who may be appointed by the contractor to receive the certificates of such delivery and of the date thereof and the granting of such delivery and of the date thereof and the granting of such certificates shall along be evidence of the acceptance by the owner of the delivery and of the date thereof.

**(f) Power for representative to dismantle and re-equip the dredgers in default of Contractor**

If after the arrival of the dredgers at the specified destination the contractor shall fail to dismantle any equipment/machineries of the dredgers and re-equip and make them ready in all respects for work to the satisfaction of the representative or shall in the opinion of the representative be carrying on such dismantling, re-equipment and making ready for work negligently, improperly or so slowly as to cause or be delayed then in any such case the representative

on behalf of the Owner may without vitiating this Contract take the dredgers out of the possession of the Contractor and employ any persons or workmen upon such terms as he may think fit to dismantle and re-equip the dredgers and make them ready for work in accordance with the specifications and this Contract and to perform any of the other obligations of the contractor under this contract which shall remain to be performed and the contractor shall pay to owner such a sum as shall be certified in writing by the representative to represents to costs and expenses incurred by the owner or the representative by reason or in course of the exercise of any of the powers conferred on the representative under this clause or the owner may at his option deduct such sum from the contract price.

**(g) Penalty for deficiency in speed of the dredgers**

The contractor shall give full guarantee in every respect in accordance with the provisions of the specifications for the construction of the fully river worthy dredger constructed out of the best material of international shipbuilding quality and workmanship with good stability as also for faultless execution of work in all its details. The total contract price of the dredger shall have to be affected or changed, by reason of the actual speed, as determined by trial runs, in accordance with the specifications, being less than the guaranteed speed under the terms of the attached specifications, if the actual speed is less than three-tenth (3/10) of knot below the aforementioned guaranteed speed.

However, commencing with and including a decrease of three-tenth(3/10) of a knot in actual speed below the guaranteed speed of the dredger, the total contract price of the dredger shall be reduced for deficiency in speed as follows (but dis-regarding fractions of less than one-tenth(1/10), of knot ):

For three-tenths (0.3) of a knot	1% of the basic cost of the dredger
For four-tenths (0.4) of a knot	3% of the basic cost of the dredger
For five-tenths (0.5) of a knot	10%of the basic cost of the dredger

If the deficiency in actual speed of the dredger upon said trial runs, is more than 0.5 knot below the guaranteed speed as provided herein above, and the builder is not able to rectify even by an extension of the delivery period, then the owner at his option may reject the dredger and rescind this contract or may accept the dredgers at a reduction in the price as may be agreed between the parties.

**(h) Penalty for deficiency in draft of the dredger**

The total contract price of the dredger has to be affected or changed by reason of the actual max. draft with full bunker, water, personnel and stores as determined by actual measurement in accordance with specification being more than that specified in the attached specifications if the actual draft is more than 25mm.

However, commencing with and including an increase of 25mm in actual draft the total contract price of the dredger shall be reduced for deficiency in draft as follows:

Up to 25 mm of draft (1525 m draft): **5% of the basic cost of the dredger.**

Up to 50mm of draft (1550 m draft): **10% of the basic cost of the dredger.**

If the actual draft of the dredger is more than 1250 m and builder is not able to rectify even by an extension of delivery period, then the owner at his option may reject the dredger and rescind the contract or may accept the dredger at a reduction of the price as may be agreed between the parties.

**(I) Penalty for dredging output.**

225 cu.m Solids per hour (1187.5 cu.m mixture capacity) – 5% of the basic cost of the dredger.

200 cu.m Solids per hour (1125 cu.m mixture capacity – 10% of the basic cost of the dredger.

**13. Number of workmen and rate of progress to be increased on requisition of the Owner.**

The contractor shall at all times during the progress of the construction and installation of equipment and machineries of the dredgers and subject to the limits of his control in the matter of labour employment and sufficient number of skilled workmen and labourers with necessary overlooks and proceed with the works hereby agreed to be executed (hereinafter referred to as the “workers with such despatch as in the opinion of the Owner or Inspecting Owner or Officer shall be necessary in order to secure the due completion of the dredgers within the time limit for that purpose by the contract and shall also at times during the progress of the works upon being required to do so by the Owner or the Inspecting Owner or officers hasten the rate of progress of the dredgers and of the work in accordance with any such requisition and to the satisfaction of the Owner or the Inspecting Owner or Officer PROVIDED ALWAYS that nothing herein contained nor anything done or omitted to be done by the Owner or the inspecting Owner or officer on behalf of owner in pursuance hereof shall be deemed to release the Contractor from or diminish or affect obligation to

complete the dredgers within the limit by this Contract or their liability in respect thereof.

#### **14. Defect Liability**

In the event of any defect being discovered in any part of the dredgers, the machineries or equipments or fittings (which is not attributable to fair wear and tear of the dredgers nor to improper management on the part of the official staff of the dredgers during a period of 12 calendar months from the date of the delivery certificate, the Contractor shall supply to Owner or their representative at the specified destination new parts to replace any that may be proved to have been so defective or shall pay to Authority such sum as it would cost the Contractor to supply such parts for replacement from the Contractors works.' The cost of receiving any such defective parts and or fitting such parts in replacement thereof shall be borne by the Contractor or be adjusted as liquidated damages from the security deposits/payment of last instalment of the contract price to such amount as it would in the opinion of the Owner have cost the contractor if the removing and replacing had been done at their works. The contractor shall also be entitled to have any workmanship or material claimed to be defective inspected by a representative to be appointed by them for that purpose or should the Contractor so require, Owner shall be bound to consign to the Contractor at his works in and at the Contractors expenses the parts claimed by the Owner to be defective so that the contractor may have an opportunity of satisfying himself as to the defect complained of and also be in position to operate his relief if any against any sub-contractor in respect of such defective parts.

#### **15. Registration of Vessels**

The Contractor shall give all such builders and other certificates and documents and do such other acts and things as may be necessary or proper on his part for the registration of the dredgers in the name of the Owner to the representative or other agent of the Owner whom the Owner may appoint for that purpose. Failing this the Contractor must arrange for the dredgers to proceed to the specified destination under a "Pass" from the appropriate authorities at any port and all fines payment or penalties which may become payable by the Owner, the representative of the said agent by reason of any defect in such registration or during the delivery of the dredgers to the specified destination shall be paid by the Contractor or may be deducted from the money payable to him under this contract and he shall indemnify the Owner, the representative and the said agent respectively there from and from all claims, actions, suits and proceeding and all costs, charges and expenses in respect thereof.

#### **16. Insurance**

The Contractor shall at his own cost fully insure and keep insured in the joint names of the Owner and the Contractor the dredgers and the machineries, materials and thing used or intended for use in the construction and outfit thereof. Hull insurance and machinery insurance may be done by the Builder but the

insurance cover should cover the effected payment as well as the extent of work completed. The contractor is also to keep insured the value of any modifications, additions and spare parts as may be agreed upon from time to time during the construction of the dredgers.

The Policy/Policies shall be effected with reputable Insurance Company approved by the Govt. and shall comprise insurance against fire, launching and all other risks, accidents and damages excluding War Risk which for the time being can be covered by insurance during and after the construction of the dredgers and while she remains in the harbour or the yard of construction or when engaged on or in connection with any trials made under this Contract as well as the perils of the river and all other risk of every kind including War Risk so far as they are insurable, or whilst lying therein or on a slipway or in a dry dock or being tried near thereto previous to being accepted by Owner and the Contractor shall from time to time (if from any cause the dredgers shall not be delivered to and accepted by the Owner during the term of such policies) renew and said insurance and pay and continue to pay all premium which shall become payable in respect of such insurance and within seven days from the date when such renewed insurance is effected or premium paid shall deliver to the Owner the policy or policies thereof and the receipts for such premium PROVIDED ALWAYS that in case of default by the Contractor to keep up the said insurance or to effect any such renewal insurance as aforesaid then the Owner if they shall think fit shall be at liberty to do so and thereupon the Contractor shall repay the owner the amount of the premium paid by them or the Owner shall be at liberty at his option to deduct the amount thereof from any sums payable to the Contractor under this contract PROVIDED ALSO that nothing wherein contained nor anything done or omitted to be done by the Owner in pursuance hereof shall be deemed to release the Contractor from diminish or affect his obligation to keep the dredgers machineries, materials and thing insured to the full amount of the value therefore from time to time in accordance herewith until her acceptance at the place of delivery mentioned in the Contract nor shall diminish or affect the liability of the Contractor in respect thereof. If any event shall happen giving rise to a claim under the insurance policy to be effected under this clause or if the dredgers shall become a total or constructive total loss on the delivery to specified destination or after the arrival there and before the acceptance by the representative owing to perils of the river or other risks insurance so far as they are insurable to be effected for the delivery at the specified destination the Owner without prejudice to the rights to have this contract performed within such extended time and at such price as may be mutually agreed and failing agreement determined by the Owner shall give the money which shall become payable under whichever of the said policies the claim shall arise and retain the same paying the contractor the difference between the aggregate of such sums as they may have previously paid the contractor under this contract and such total amount as the Owner may certify would have been payable to the contractor if this contract had been terminated.

**(SECTION-VII)**  
**ANNEXURES**

## **Annexure-I**

### **AGREEMENT FORM**

THIS AGREEMENT made this... .. day of ..... 2017 BETWEEN Inland Waterways Authority of India, hereinafter called the Owner of the ONE PART AND M/s. .... an existing Company within the meaning of companies Act, 1956 having its registered office at..... as CONTRACTOR, which expression shall unless excluded by or repugnant to the context be deemed to include its successor in interest of the OTHER PART.

WHEREAS THE OWNER proposes to purchase of **TWO SELF-PROPELLED CUTTER SUCTION DREDGERS FOR NW-2** for its own purpose and the CONTRACTOR has agreed to supply the same on the terms and conditions mentioned below: -

1. The Contractor will design, construct and deliver at Kolkata to the order of the IWAI, **TWO SELF-PROPELLED CUTTER SUCTION DREDGERS FOR NW-2** in accordance with the subject to the conditions of contract, hereto annexed and marked and the specifications and schedule attached hereto all of which form part of this agreement.
2. The consideration payable therefore shall be the sum of Rs..... Payable as stated and on the condition expressed in Clause 14 of conditions of contract.
3. The following documents shall be deemed to form and be read and construed as part of the agreement viz:
  - a. Agreement
  - b. Bid Notice
  - c. Instructions to bidders
  - d. General conditions of the contract
  - e. Special conditions of the contract
  - f. Technical specifications and drawings
  - g. Form of bid
  - h. Cost schedule
  - i. Letter of acceptance

IN WITNESS whereof the IWAI has caused .....on their behalf to hereunto set his hand and the contractor has hereunto set his hand/the Company has caused its common seal to be affixed hereunto the day and year classification society above written.

(a) Signed by ..... the contractor above named in the presence of;

1. ....

2. ....

(b) \* The common seal of ..... was hereunto affixed pursuant to a resolution of the Board of Directorate passed at a meeting of the Board used on the ..... Day of ..... In the presence of ..... ..

Witness

Signed by .....  
(Director of the Company)

Witness

Signed by .....  
For and on behalf of Inland  
Waterways Authority of India

A-13, Sector-1, NOIDA (U.P) 201301

(\*To be used in the case of a Company)



## **Annexure –II**

### **BANK GUARANTEE PROFORMA FOR FURNISHING PERFORMANCE GUARANTEE**

**To**

**The Chairman**

**Inland Waterways Authority of India**

**A-13, Sector-1**

**Noida - 201301**

In consideration for the Chairman, Inland Waterways Authority of India hereinafter called ‘the Authority’ having agreed, under the terms and conditions of the Agreement dated ..... made between..... and ...for the due fulfillment of the said Agreement by the Contractor of the terms and conditions contained in the said Agreement, on production of Bank Guarantee for Rs..... (Rupees.....) at the request of..... Contractor(s), We (Bank) do hereby undertake to pay to the Authority an amount not exceeding Rs..... against any loss or damage caused to or suffered, or would be caused to or suffered by the Authority by reason of any breach of the said Contractor(s) of any of the terms or conditions contained in the said Agreement.

2. We..... do hereby undertake to pay the amount due and payable under this Guarantee without any demur, merely on a demand from the Authority stating that the amount claimed is due by way of loss or damage caused to or would be caused to or suffered by the authority by reason of breach by the said contractor(s) of any of the terms or conditions contained in the said Agreement or by reason of the contractor(s)’s failure to perform the said Agreement,. 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 liability under this guarantee shall be restricted to an amount not exceeding Rs.....

3. We undertake to pay the authority any money so demanded notwithstanding any dispute or disputes raised by the contractor(s) / suppliers(s) in any suit or proceeding pending before any court or Tribunal relating thereto 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 contractor(s) / supplier(s) 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 Agreement and that it shall continue to be enforceable till all the dues of the Authority under or by virtue of the said Agreement have been fully and its claim satisfied or discharge or till..... Certify that the terms and conditions of the said Agreement have been fully and properly carried out

by the said Contactor(s) and accordingly discharges this Guarantee after..... years from the date of completion of the said contract unless a demand or claim under this Guarantee is served in writing on the bank but before the expiry of the said period of ..... years in which case it shall be enforceable against the bank notwithstanding the fact that the same is enforced after the expiry of the said period of ..... years.

5. We,.....further agree with the Authority that the Authority 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 Agreement or to extend time of performance by the said Contractor(s) from time to time or to postpone for any time or from time to time any of the powers exercisable by the Authority against the said Contactor(s) and to forbear or enforce any of the terms and conditions relating to the said Agreement and we shall not be relieved from our liability by reason of any such variation, or extension being granted to the said Contractor(s) or for any forbearance, act or omission on the part of the Authority or any indulgence by the Authority to the said Contractor(s) or by any such matter or thing whatsoever which under the law relating to sureties would, but for the provision, have effect of so relieving us.

6. It shall not be necessary for the Authority to proceed against the Contractor before proceeding against the Bank and the Guarantee herein contained shall be enforceable against the Bank notwithstanding any security which the Authority may have obtained or obtain from the Contactor shall at the time when proceedings are taken against the Bank hereunder be outstanding or unrealized.

7. Notwithstanding anything contained herein above our liability under the guarantee is restricted to Rs..... and shall remain in force until..... Unless a claim or suit under this guarantee is filed with us on or before..... ALL OUR RIGHTS UNDER THE GUARANTEE SHALL BE FORFEITED and the bank shall be relieved and discharged from all liabilities therein.

8. This Guarantee will not be discharged due to the change in the constitution of the Bank or the Contractor(s) / supplier(s).

9. We,..... lastly undertake not to revoke this Guarantee during its currency except with the previous consent of the Authority in writing.

Dated the .....date of.....201...

for.....

(indicate the name of Bank)

Signature.....

Name of the Officer.....

(in Block Capitals)

Designation of

Code No.....

Name of the Bank and Branch.

## **Form of Bank Guarantee – Secure a Lump-Sum Advance**

To

The Chairman,  
Inland Waterways Authority of India,  
A -13, Sector-1,  
NOIDA-201301 (UP).

In consideration of the Chairman, Inland Waterways Authority of India ..... Hereinafter called “the Authority” which expression shall unless repugnant to the subject or context include his successor an assigns) having agreed under the terms and conditions of Contract No. .... dated..... Made between..... and the authority in connection with .....(Hereinafter called “the said Contract”) to make at the request of the Contractor a lump-sum advance of Rs. .... For utilising it for it for the purpose of the contract on his furnishing a guarantee acceptable to the Authority, we the ..... Bank Ltd. (hereinafter referred to as the “the said Bank”) a company under the Companies Act. 1956 and having our registered office at ..... Do hereby guarantee the due recovery by the Authority of the said advance with interest thereon as provided according to the terms and conditions of the contract. We do hereby undertake to pay the amount due and payable under this Guarantee without any demur, merely on a demand from the Authority stating that the amount claimed is due to the Authority under the said Agreement. Any such demand made on the ..... Shall be conclusive as regards the amount due and payable by the ..... under this guarantee and the amount so demanded shall be absolute and unconditional notwithstanding any dispute or disputes raised by the contractor and notwithstanding any legal proceeding pending in any court or tribunal relating thereto. However, our liability under this Guarantee shall be restricted to an amount not exceeding Rs. ....

2. We, ..... Bank Ltd., further agree that the Authority shall be the sole judge of and as to whether the said contractor has not utilised the said advance or any part therefore for the purpose of the contract and the extent of loss or damage caused to or suffered by the Authority on account of the said advance together suffered by the Authority on account of the said advance together with interest now being recovered in full and the decision of the Authority that the said contractor has not utilised the said advance or any part thereof for the purpose of the contract and as to the amount or amounts of loss or damages caused to or suffered by the Authority shall be final and binding on us.

3. We, the said Bank 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 would be taken for the performance of the said contract and till the said advance with interest has been fully recovered and its claim satisfied or discharged and till..... Certify that the said advance with interest has been fully recovered from the said contractor, and accordingly discharges this Guarantee subject, however, that the owner shall have no claims under this Guarantee after ..... Years from the date of completion of the said contract, as the case may be, unless a notice of their claim under this guarantee has been served on the Bank but expiry of the said period of ..... Years in which cash the shall be enforceable against the bank notwithstanding the fact that the same is enforced after the expiry of the said period of ..... years.

4. The Authority shall have the fullest liberty without affecting in any way the liability of the Bank under this Guarantee or indemnity, from time to time to vary any of the terms and conditions of the said contract or the advance or to the extend time of performance by said contractor or to postpone for any time and from time to time any of the powers exercisable by it against the said contractor and either to enforce or forbear from enforcing any of terms and conditions governing the said contract or the advance of securities available to the Authority and the said Bank shall not be released from its liability under these presents by any exercise by the Authority of the liberty with reference to the matters aforesaid or by reasons of time being given to the said contractor or any other forbearance, act or omission on the part of the Authority or any indulgence by the Authority to the said contractor or of any other matter or thing whatsoever which under the laws relating to sureties would but for this provision have the effect of so releasing the bank from its such liability.

5. It shall not be necessary for the Authority to proceed against the Contractor before proceeding against the Bank and the Guarantee herein contained shall be enforceable against the Bank notwithstanding any security which the Authority may have obtained or obtain from the contractor shall at the time when proceedings are taken against the Bank hereunder be outstanding or unrealised.

6. We, the said Bank lastly undertake not to revoke this Guarantee during its currency except with the previous consent of the Authority in writing and agree that any change in the constitution of the said contractor or the said bank shall not discharge our liability hereunder.

7. The executor to this bank guarantee has resolved that it will not have recourse to any civil court for enforcement/cancellation of this bank guarantee to which, we also agree.

Dated this ..... day of ..... 20 .....

For and on behalf of the Bank  
(Name and Designation)

The above guarantee is accepted by the Chairman, Inland Waterways Authority of India.

For and on behalf of the Chairman, Inland Waterways Authority of India

Dated.....

Note:

For proprietary concerns:

Shri ..... Son of ..... Resident of .....  
..... Carrying on business under the name and style of .....  
..... at .....(Hereinafter called the said contractor, which on possession shall unless the context requires or otherwise include his heirs, executors, administrators and legal representatives).

For partnership concerns:

(1) Shri ..... Son of ..... Resident of .....  
.....

(2) Shri ..... Son of ..... Resident of .....  
.....

And carrying on business in co-partnership under the name and style of .....  
..... At ..... (Here in after collectively called “the said contractor” which expression shall unless the context requires otherwise includes each on them and their respective heirs, executors, administrators, and legal representatives.

For Companies:

Shri ..... A company under the companies Act, 1956 and having its registered office at ..... In the State of .....  
..... (Hereinafter called “the said Contractor” which expression shall unless the context requires otherwise include its successors and assigns).

**Form of Bank Guarantee (for payment of 1<sup>st</sup> installment)**

**(TWO SELF-PROPELLED CUTTER SUCTION DREDGERS FOR NW-2)**

In consideration of Inland Waterways Authority of India, under Ministry of Shipping, Government of India (hereinafter called the owner) having made advance payment to ..... (Hereinafter called the contractor) under the terms and conditions of the contract dated ..... made between the contractor and the owner for the design, construction supply and delivery of **TWO SELF-PROPELLED CUTTER SUCTION DREDGERS FOR NW-2** (hereinafter called the contract) on production of a bank guarantee for Rs. .... (Rupees ..... only). We ..... further agree that if demand is made to the owner for honouring the bank guarantee, we ..... have no right to decline to cash the same for any reason whatsoever and shall cash the same within a maximum period of 2 days from the date of serving notice to the bank from the date of such demand. The fact that there is dispute of any matter whatsoever between the contractor and the owner is no ground for us ..... to decline to honour the bank guarantee in the manner aforesaid is a sufficient reason for the owner to enforce the bank guarantee unconditionally without any reference to the contractor. We ..... further agree that a mere demand by the owner is sufficient for us ..... to pay the amount covered by the bank guarantee in the manner and within the time aforesaid without reference to the contractor and any protest by the contractor shall not be valid ground for us, ..... to decline or fail or neglect the payment to the buyer in the manner and within the time aforesaid. Any such demand on the Bank shall be conclusive as regards the amount due and payable to the owner by the Bank under this guarantee.

We, ..... Further agree that the bank guarantee herein contained shall remain in full force and effect, till the delivery and acceptance of the vessel to the complete satisfaction of the owner in terms of clause 12 of special condition of the contract dated ..... and that it shall continue to be enforceable till all the dues of the owner under or by virtue of the said contract have been fully paid and its claims satisfied or discharged in full or till the owner certifies that the terms and conditions of the contract have been fully and properly carried out by the contractor and accordingly discharge the guarantee. Unless a demand or claim under this guarantee is made on us in writing on or before the ....., we shall be discharged from all liability under this guarantee thereafter.

We, ..... further agree that the owner shall have the fullest liberty, without our consent and without effecting in any manner our obligations hereunder, to vary any of the terms and conditions of the contract or to extend the time during which the contract is to remain valid and or the time for performance by the contractor of its / their obligations under the contract from time to time or to postpone for any time or from time to time any of the powers exercise by the owner against the contractor and to forbear or enforce any of the terms and conditions relating to the contract and we shall not be relieved from our liability by reason of any such variation, or extension being granted to the contractor or any indulgence by the owner to the contractor or by any such mater or thing whatsoever which under the law relating to sureties would but for this provision have effect of so relieving us, .....

The executor to this bank guarantee has resolved that it will not have recourse to any civil court for enforcement / cancellation of this bank guarantee to which, we also agree.

This Guarantee shall be valid upto ..... Including from the date of issue.

We ..... lastly undertake not to revoke this guarantee during its currency except with previous consent of the owner in writing.

Dated ..... day of ..... Two thousand .....

Signature .....

SEAL

## **Cost Schedule**

### **(Design, construction & Supply of two Self-Propelled Cutter Suction Dredgers)**

The below mentioned Commercial bid format is provided as BOQ\_ two Self-Propelled Cutter Suction Dredgers along with this tender document at <https://eprocure.gov.in/eprocure/app>. Bidders are advised to download this BOQ\_ two Self-Propelled Cutter Suction Dredgers as it is and quote their offer/rates in the permitted column and upload the same in the commercial bid.

<b>Tender Inviting Authority : Inland Waterways Authority of India , Noida</b>						
<b>Name of Work: Design, construction &amp; Supply of Two Self-Propelled Cutter Suction Dredgers for NW-2.</b>						
<b>Tender No: IWAI/MD/261/2017-18</b>						
<b>Bidder Name :</b>						
<b>COST SCHEDULE FOR-TWO SELF PROPELLED CUTTER SUCTION DREDGERS</b>						
<b>(This BOQ template must not be modified/replaced by the bidder and the same should be uploaded after filling the relevant columns, else the bid is liable to be rejected for this tender. Bidders are allowed to enter the Bidders Name and Values only)</b>						
Sl. No.	Description of work	Qty.	Unit	Rate per Self-Propelled Cutter Suction Dredgers in <b>Figures</b> to be entered by the <b>Bidder</b>		AMOUNT in <b>INR</b> <b>Rs. P</b> <b>(@ INR/ Unit Foreign currency)</b>
				<b>Foreign Currency</b>		
				<b>Figures</b>	<b>Words</b>	<b>INR</b>
1.00	Cost of Self-Propelled Cutter Suction Dredger complete in every respect in accordance with the attached technical specification (including Hull inventory, various attachments, tools, 2000 hrs spare parts and cost of shipment & transportation, taxes other than GST and duties etc if any.) or on CIF basis to Kolkata Port for international bidder	2.00	No.		Rupees/Foreign currency	
	GST for domestic or import duty for Intl. bidders.	2	no			
<b>Total in Figures</b>						
<b>Total in Words</b>		<b>Rupees/Foreign Currency</b>				



**(SECTION-V)**

**TECHNICAL SPECIFICATIONS**

# Technical Specifications

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## **1. GENERAL**

### **1.1 Intent**

This specification is intended to describe the construction of a **self-propelled cutter suction dredger** completely outfitted and equipped as detailed in this specification. The vessel shall be built in accordance with good shipbuilding practice and comply with the requirements of classification society and other statutory authorities as stipulated under section 1.4 & section 1.5.

**The responsibility for developing the design and performance of the vessel is with the Builder. All technical data for the vessel and power rating, size etc. of machinery, outfit and equipment given in this document are indicative. Therefore the requirements are to be computed by the Builder in due course of detailed design, but Owner's requirements on capacity, loads, speed and minimum deck area would remain applicable.**

**The builder shall ensure to design, construct and supply the vessel (Self-Propelled Cutter Suction Dredger) with the dredge machineries and equipment of modern, latest with proven design and good performance from the reputed manufacturers and suppliers. The general information on the installation of machineries and equipment is to be submitted along with the proposal.**

Any items not specifically mentioned in this specification but functionally or statutorily necessary for the type and size of the vessel shall be furnished by the Builder.

Any modification or alteration to this specification shall be executed under mutual agreement of the Owner and the Builder. IWAI shall have the right to suggest modifications and alterations in the specifications and drawings during construction. Cost and time implications, if any, shall be mutually agreed. All modifications shall be proposed and agreed to in writing.

#### **Plans to be submitted together with the technical bids:**

- a) General Arrangement with principal dimension and main particular
- b) Mid ship section
- c) Layout of the engine room with details of the main engines & machineries etc.
- d) Proposed Dredge Pump characteristics & capacity
- e) Dredge machinery & equipment.
- f) Propulsion system & powering calculations
- g) Preliminary Trim and stability calculation
- h) Electrical load analysis

Note 1: The capacities indicated in the specification are indicative and it is the responsibility of the bidder to justify the values proposed by him to meet the performance and endurance capabilities of the vessel.

Any material/fitting/equipment or procedure not described or left out of these specifications, but considered as normal and necessary for intended services of this vessel shall be supplied and fitted by the builder without extra charge.

The builder shall be responsible for all the extra work, which arises out of the recommendation, and remarks made by the Classification Society as well as IWT surveyors.

## **1.2 Objectives for an optimum design & construction**

- 1.2.1 The vessel shall be a mono hull steel cutter suction dredger (hereinafter called "the vessel") suitable for dredging operations in protected (inland) waters, such as the river Ganga from Haldia to Allahabad stretch of National Waterway-1 and Brahmaputra from Bangladesh Border to Sadiya stretch of National Waterway -2 for navigation with least available depth of 1.5 to 3 m, in India. The dredger is to be quickly deployed from one shoal to another for which adequate propulsion capacity to be provided.
- 1.2.2 In order to construct and supply a dredger suitable for operation with good performance, the builder must carry out a basic design with powering calculation and submit the same along with the technical documents as in clause 1.1 in the technical bids and same shall be one of the criteria for evaluation.
- 1.2.3 The bidder should mention in the bid whether their offer is for a proven design vessel or a newly design one. In case the offer is of a proven design than only CFD analysis will be required. In case the offer is for a new design dredger, model testing in a reputed towing test tank/laboratory for ascertaining the speed and propulsion power of the SPCSD will be necessary.
- 1.2.4 The vessel shall be built and classed under the supervision of a classification society that is a member of the International Association of Classification Society (IACS) for protected or sheltered/inland waterway operation. The vessel should also meet the requirement of Inland Vessel Act 1917 under the statutory authority IWT Directorate of West Bengal.

## **1.3 Approximate Principal dimension and other particulars**

The principal dimensions & other particulars as mentioned below are purely indicative

- Length overall : 27 m
- Breadth : 12 m
- Depth : 2.5 m
- Maximum draught : 1.5 m loaded draft with full Bunkers
- Air draught with respect to lightship draught : 6 m
- Trial speed (deep water) : 8.5 knots (calm water)

- Dredge Pump capacity : Mixture capacity of 1250 cub. mt/hr at 20% concentration of solid by volume and mixture density of 1.3 t/cub mt and capable of discharging at 500 m distance using floating pipelines and throw of about 80m with side cast facility on either side (5% variation allowed). Discharge coupling at the aft for pumping to be provided.
- Fuel Oil Bunker Capacity : 15 days of operation of the dredger of which 10 days of dredging for 12 hours and 5 days of steaming for 10 hours
- Endurance : 15days
- Accommodation : For eight persons in 3 cabins, galley, mess cum recreation room, two bio bathrooms cum toilet to be provided

Deviation allowed from specified dimensions (length, breadth and depth) in principal particulars shall be as detailed under only. No deviations allowed for maximum draught and minimum trial speed.

sl	heads	Variation permissible
1	Length	+ / - 5 %
2	Breadth	+ / - 5 %
3	Depth	+ / - 5 %
4	Draught	Nil
5	Air draught ( max)	Nil
6	Trial speed	- 5 %
7	Dredge Pump Capacity	- 5 %

The dredger is to be deployed with the following conditions and accordingly the dredge equipment & machineries be designed for providing the desired performance.

- Channel Dimensions : 45 m width and 2.0 to 3.0 m depth
- River : The Ganges & Brahmaputra (NW-1 & NW- 2)
- River current in lean season : 1.5 to 0.8 m/s (2.92 knots to 1.55 knots)
- Minimum dredging depth : 1.5 mt.
- Maximum dredging depth : 6.0 mt.
- Type of soil to be dredged : Mostly sand, silt, coarse & fine sand and admixture of compact soil at few locations.

#### **1.4 Classification**

The vessel with her equipment and machinery shall be constructed and classed in accordance with the rules of any classification society being a member of IACS (International Association of Classification Society) for inland waterway operation as applicable for inland vessels and classed as + IWL Zone 2, “Cutter Suction Dredger” + IY for Inland Waterways Operation.

The Vessel is to be built under the class survey of the classification society and specification survey of owner's inspectors.

Statutory requirements like lifesaving appliances, firefighting appliances, navigational lights and sound signals shall conform to the rules and regulations under the Inland vessel act 1917 as framed by the state government where the vessel is to be registered. i.e. IWT Directorate of Government of West Bengal.

#### **1.5 Registration**

The vessel shall be registered at Kolkata with Inland Water Transport Directorate, Govt. of West Bengal as per relevant rules and regulations of I.V. Act of 1917.

#### **1.6 Trim and Stability**

The vessel shall comply with IMO's stability requirements. The vessel shall not have any trim by forward in any of the operating loading conditions. Permanent ballasting will not be allowed.

An inclining experiment is to be conducted by the builder in the presence of the class surveyor(s), IWT surveyors and the Owner. A detailed trim and stability booklet duly approved by Classification Society and IWT surveyor shall be submitted to the Owner.

#### **1.7 Drawings**

The Builder will supply the Class approved drawings and other design information as listed below within 8 weeks of placing the order. The list given below is a preliminary list.

Classification charges for approval of drawings shall be borne by the builder.

Class approved drawings / Information

1. Midship section
2. Deck and profile and bottom construction plans
3. Transverse Bulkheads & Typical Transverse Section
4. Rudder and Rudder Stock
5. Main propulsion system
6. Schematic piping arrangements of all the system
7. Single line Electrical Diagram
8. Trim and Stability booklet (Preliminary and Final)
9. Lines Plan
10. General Arrangement
11. Hydrostatic tables & cross curves
12. Electrical load chart

13. General Machinery Layout
14. Weight Estimate
15. Major Equipment list
16. Inclining Experiment Plan
17. Cutter and its operation arrangement Plan
18. Spuds and their operation arrangement Plan (if provided)
19. Spoil Pumping Arrangement
20. Anchor booms and their operating arrangement

Any additional drawings required for construction shall also be prepared by the builder and submitted for the approval of the owner and classification society.

### **1.8 Materials and Workmanship**

The hull shall be constructed of good quality mild steel plates and sections tested and approved by the Classification Society. Test certificates shall be supplied.

**Superstructure shall be constructed of good quality Aluminium.**

All steel plates and sections shall be shot blasted to SA 2.5 and primed with an approved primer before fabrication.

All wood used in the vessel shall be well seasoned and treated to prevent pest attacks, free from sap, shakes, warps and other defects.

All smith work or fabricated fittings shall be of neat design, strong, smooth and free from defects and to be galvanized as required. All castings shall be of good quality, close grained and free from cracks, blowholes and other defects. The castings shall be manufactured to Classification requirements and approval as applicable.

All cables, fastenings, shackles, rigging, ropes, etc. shall be of materials that have been tested, approved and certificates supplied prior to commencing the work.

Workmanship shall be of good quality and shall be to the satisfaction of the Owner and the Classification Society surveyor.

### **1.9 Inspection and Supervision**

The Owners or the Owner's representative will carry out the inspection of the construction of the dredger. Owner's representatives, the class surveyor and IWT surveyors shall have free access to the yard and the subcontractors' premises where the vessel or parts of it are being constructed during working hours.

The Owner's representative shall inspect and carryout specification surveys during the construction of the vessel. The vessel shall be built under the classification survey of classification society as engaged and specification survey by owner and statutory survey of IWT Directorate.

No major construction alteration or modification shall be permitted without specific written approval from the Owner's or their authorized representative.



Owners' representative/ surveyor for certification of the stage completion shall inspect all stages of work against which stage payments are to be made.

Sufficient notice shall be given before conducting trials for the Owner to inspect or witness trials at Manufacturers' Works. Any defective work pointed out during inspection by the Surveyors or the Owner shall be rectified.

All tests shall be pre-arranged and shall be conducted in the presence of the concerned authorities and a report approved by the authorities shall be submitted to the owner. Any defect found by the surveyors during the tests and trials shall be rectified by the builder at no extra cost.

Two copies of all statutory and test certificates of materials and the equipments, shall be supplied.

#### **1.10 Tests and Trials**

All tests and trials shall be performed in accordance with the requirements of the Classification Society and other regulatory bodies concerned and as stipulated in the specifications. The trials shall be conducted in the presence of the Owner's representatives as per the agreed tests and trials plan.

Programme for trials shall be submitted to the Owner at least one month before the trials. Yard shall provide fuel oil, lube oil, fresh water, etc. for the trials. Grades of fuel and lube oil used shall be equivalent to manufacturer's recommendations. Left over stocks of fuel and lube oil shall be taken over by Owner as per contract.

Machinery and equipment shall be tested at the manufacturers' premises as per their normal procedure. These tests shall be witnessed by Class Surveyors as required.

During the trial, the dredger shall be under the command of a Master/Dredge Master nominated by the Builder, who shall also provide the necessary crew.

Dredging trials protocol to be submitted one month in advance to the owner and the final dredging trials are to be carried out in NW-1 or NW-2 as the case may be at specified location by IWAI. The SPCSD for NW-1 to be delivered at Kolkata and SPCSD for NW-2 to be delivered at Pandu- Guwahati after the final dredging trials, speed trials and acceptance trials are done.

#### **1.11 Welding**

Welding shall be of high quality, and shall be performed by Classification Society approved personnel. Welding procedures shall be in accordance with the rules and regulations of the Classification Society. Necessary precautions shall be taken to eliminate deformations. Approved manual, semi-automatic or automatic welding techniques should be adopted for the construction.

#### **1.12 Tank Testing**

A suitable tank-testing scheme to check for water-tightness is to be prepared and submitted to the Owners and Classification Society for approval. All tanks and watertight or oil tight compartments are to be tested in accordance with the class requirements. The tests must be carried out after the completion of construction and before painting.

### **1.13 Dock Trials**

The Dock Trials shall be conducted in accordance with a programme to be agreed to, by the Owner or their representative to check the operation of the machinery. Main engine and other auxiliary machinery are to be in operation during dock trials. A report on the performance of various machinery and equipment during the dock trials is to be submitted to owner.

### **1.14 River Trials**

River trials shall be carried out as per the recommendations of classification society and Owner. A detailed programme is to be submitted to Owner/classification society for approval, prior to the trials. Trial is to be carried out for the design condition as specified under clause no: 1.10 & 1.13.

### **1.15. Instruction Manual and Books**

Three sets of instruction books, operation and maintenance manuals, spares catalogues given by the original machinery suppliers for all the equipment / machinery and instrumentation installed on board, shall be supplied to the Owners / handed over to the Owner's representative.

Three copies of the list of suppliers of all the fittings and equipments used on board with their addresses and phone / fax numbers shall be supplied to Owners' representative.

### **1.16 Hull Preservation / Painting**

The hull is to be cleaned of mill-scale by blast cleaning and coated with an approved good quality primer prior to fabrication. After installation of engines, auxiliary's etc. damaged paintwork is to be repainted in original colours and quality.

Painting work shall be executed in accordance with paint manufacturers' recommendations. Copper alloy, aluminium, aluminium alloy, stainless steel, non-ferrous materials and galvanized surfaces shall not be painted unless otherwise specifically required.

Painting scheme shall be based on epoxy coating system and is to be guaranteed by the paint manufacturer for a period of 5 years.

Paint specification and scheme are to be approved by the Owners.

Colour scheme is to be approved by Owners. All small parts, which are exposed to climate, such as railings, sheaves, grating, and parts of rigging are to be galvanized.

Galvanized surfaces are to be degreased and coated with a self-etching primer before painting. The paint specifications for galvanized surface are to be the same as for steel.

Prior to launching, Anti-fouling paints are to be applied to the hull outside, up to boot toping area. Nonslip paint is to be applied on the main deck open areas and passages.

Fixed sacrificial Aluminum anodes of sufficient number in accordance with class requirement /IS 8062 shall be provided as cathodic protection. Standard colour coding is to be used for pipes.

## **4. Hull Structure**

### **2.1 General**

The hull shall have the following layout:

- Aft peak / steering gear room
- Engine-room
- Store space / Cofferdam
- Fore peak
- Main Deck arrangement

The steel should be of shipbuilding quality and shall be IRS/LRS Grade A or equivalent. Scantlings of all structural members shall be as per class requirements. Approved shipbuilding quality material is to be used throughout the construction. Sharp corners are to be avoided. Good continuity of structural members in basic hull structure should be maintained.

Before the steel plates and rolled sections are used for construction, rust and mill-scale must be removed by means of sand/grit-blasting. Immediately after the steel sand/grit-blasting, one coat of epoxy shop primer with a thickness of approximately 25-40 microns is to be applied as a temporary protection.

### **2.2 Hull Construction**

The bottom plating shall have a thickness as per Class requirement. The bottom structure shall be strengthened in way of the propeller units. In way of hawse pipes, deck machinery, mooring fittings, spuds, dredge pump, winch and elsewhere as required insert plates of increased thickness shall be inserted and the structure in way shall be strengthened.

The keel is to be of a flat plate type with thickness as per Class requirements or as considered necessary. Plate floors are to be constructed in accordance with the Rules.

Longitudinal girders shall be fitted in the engine-room in such a way that they form part of the foundations for the main and auxiliary engines, else longitudinal girders to be provided as required by the Class. A sufficient number of drain and air holes to be provided in floors and girders.

### **2.3 Bulkheads**

All watertight bulkheads shall be plated horizontally. Vertical stiffening shall be provided by the stiffeners spaced evenly.

### **2.4 Decks**

The Main deck will have no camber or sheer. The main deck will form the base of the superstructure (about 2.5m above base). Thickness of the deck plating shall be as per classification society requirement.

## **2.5 Hull Opening and Hatches**

All hull openings wherever provided shall be in accordance with classification society rules. Sills on the main deck for all doors are to satisfy rule requirements of Classification Society. Hatches are to be provided wherever necessary and shall comply with the rule requirements. Escape hatches should be operable from either side.

A removable hatch is to be provided above the dredge pump to facilitate handling of dredge pump parts which can be done with the help of the deck crane.

## **2.6 Mast**

A collapsible type of mast on the wheelhouse deck shall be provided.

## **2.7 Super Structure (Wheel House & Accommodation)**

The Super structure shall house the wheelhouse & Accommodation. It shall be of Aluminium construction. The materials, stiffening and deck connections are to be approved by classification society.

## **2.8 Ladders and Railings on superstructure**

In general, all ladders shall- comply with the rule requirements. Ladders shall be placed under each manhole and escape hatch. Chequered Aluminium plate ladders are to be provided in accommodation. Railing of 1.0m height shall be provided wherever required after galvanising.

## **2.9 Name and Draught Marks**

The name of the vessel, the place of registry and the draft marks should be executed in welded characters and the letters and figures should be cut out of 5mm thick steel plate.

The name of the vessel should be executed on bow and stern. In addition, the place of registry should be indicated on the stern.

A 3mm thick brass plate with the name of the vessel and the owner's mark shall be fixed through screws on both sides of the wheelhouse.

## **2.10 Life Saving Appliances**

LSA as per the relevant rules under the Inland Vessel Act shall be supplied and installed on board the vessel.

## **2.11 Fire Fighting Appliances**

FFA as per the relevant rules under the Inland Vessel. Act, shall be supplied and installed on board the vessel.

## **2.12 Mooring & Towing Arrangement**

The required bollards and cleats of appropriate size shall be provided for the mooring and towing arrangement with mooring & towing ropes of appropriate length & strength.

## **5. Accommodation**

### **3.1 General**

The accommodation shall be provided for 8 persons in three cabins. Galley, Mess rooms, two bathrooms cum toilets are also to be provided. Provision for hot water in the toilets is to be provided.

#### **Above Main deck:**

- 2 cabins with two double berths
- 1 cabin with four berths (two double berths)
- 1 Bio-Toilet cum shower for Master & Driver
- 1 Bio-Toilet cum shower for crew
- 1 Galley & Stores
- 1 Mess cum recreation room to seat 8 persons

### **3.2 Furniture:**

The accommodation space shall be equipped as per standard shipbuilder's practices and in compliance with statutory requirements. The same are also to be approved by the Owner.

All wooden furniture shall be made of good marine quality teakwood. All furniture supplied must be of good standard.

Crockery, utensils, compatible to induction heater are to be supplied by the yard.

Provision for hot and cold water is to be provided in galleys and toilets. Pillows and mattresses of fire resistant quality to be supplied.

**First Aid Box:** One First Aid Box shall be provided in wheel house.

#### **Each Double Berth Cabins shall include:**

- a) Two double Bunks of 2000x900 (mm)
- b) One Table with 2 chairs
- c) Two lockers.
- d) One toilet cabinet with mirror.
- e) Two book shelves
- f) Curtains for berths and windows
- g) Metal dustbin with cover
- h) Split Air Conditioner of appropriate capacity

**One four bunk cabin shall include:**

1. 2 tier bunks in two rows size 2000x900 (mm)
2. One table with 4 chairs
3. Toilet cabinets with mirrors
4. Four Lockers
5. Metal dustbin with cover
6. Curtains for berths and windows

**One Mess cum recreation room:**

1. Dining tables with hard plastic top, for 8 persons
2. FRP chairs,- 8 nos
3. book shelf,
4. one wash basin,
5. one metal dustbin with cover two ashtrays,
6. One 32" LED TV.

**Galley:**

- a) One double cook top induction heater and one cooking range ( preferably flame less type )
- b) One dresser with stainless steel top and sink with plug and siphon, Lockers and drawers shall be provided underneath.
- c) Sufficient number of plates and crockery, utensils compatible with induction Heater
- d) Two 300 litre refrigerator Built in Amirah's.
- e) Two Big size metal dustbin with cover.
- f) Two RO Water purifier of sufficient capacity
- g) Two nos. pressure cookers of large capacity compatible with induction cooking heater.
- h) Kitchen waste incinerator (one no.)
- i) Micro wave with one no. 28 Lt.

**Wheel House:**

The furniture, as a minimum, shall consist of: Manoeuvring desk with propulsion control, steering wheel, navigational equipment. Dredging desk with controls and monitoring systems display panel for performing dredging operations.

Note: Both controls may be combined in the same console. One helmsman chair

One split type Air Conditioner of suitable capacity one settee Wind screen to be fitted in ford part. The dredging operation is to be centrally controlled from the wheel house and shall be capable of operation by one person.

### **3.3 Flooring**

All floors and deck covering shall be of excellent, approved marine quality and fire resistant and anti-skid nature.

#### **Wheel house:**

Steel deck in the wheelhouse shall be covered with 8mm latex cement (or epoxy) and further covered with vinyl tiles.

#### **Toilets/ Showers:**

W.C. are to be water efficient type preferably with bio treatment technology. Steel deck in toilets / showers to be covered with 8mm thick latex cement on which unglazed antiskid ceramic tiles to be glued. Glazed ceramic tiles are to be provided on all four walls up to height of 600mm in toilets and 1.5 m in showers.

#### **Engine room:**

In Engine room, 4mm steel chequered plate removable flooring shall be fitted with counter shank SS screws, covering piping and other fittings.

#### **Accommodation:**

Under deck accommodation except the toilets shall have 4 mm thick Aluminium chequered plate removable false flooring at a height of approx. 400-mm from the base line.

### **3.4 Partition bulkheads, linings and ceilings**

The partition lining and ceiling, and insulation work for the crew accommodation space shall be carried out in such a way that the minimum clear height between the floors and ceiling of 1.8 m is maintained.

Partition bulkheads are to be fitted between sleeping rooms, mess rooms, galleys and toilets.

In the crew accommodation and the wheel house, linings and ceilings are to be fitted in easily removable panels. All fixing materials such as screws and bolt are to be of stainless steel.

The materials of the linings, partition bulkheads and ceiling are to be:

Lining: 10mm marine plywood of waterproof and fire retarding quality, both sides covered with plastic laminate (Formica or-similar approved).

Partition bulkhead: 20mm marine plywood of waterproof and fire retarding quality both sides covered with plastic laminate (Formica or similar approved).

Bulkheads separating galley from toilet are to be of steel and to meet statutory requirements.

### **Ceilings**

6mm marine plywood, a waterproof fire retardant, both sides covered with plastic laminate (Formica or similar approved).

Thickness of plastic laminate in general should not be less than 1.5 mm. Borders of linings, around windows, doorframes etc. are to be of Classification Society class tropical hardwood.

### **3.5 Insulation**

Thermal insulation in accommodation spaces is to be provided.

#### **Acoustic insulation in accommodation spaces:**

The bulkheads of the accommodation spaces adjacent to the engine room to be provided with acoustic compound insulation and then with perforated Aluminium sheet. A dust proof foil is to be provided between the glass wool and the perforated plate.

#### **Acoustic insulation in engine room:**

In the engine room, the forward bulkhead shall be covered with sound absorbing acoustic compound insulation and then with perforated Aluminium sheet. A dust proof foil is to be provided between the glass wool and the perforated plate. Further engine room is to be insulated by A-60 insulation from adjacent spaces.

### **3.6 Doors, Windows & Scuttles**

Doors are to be provided in accordance with the Rules. Wooden doors, if provided, are to be of good quality teak. Other doors in accommodation are to be made of good quality teak board. Wheelhouse doors shall be sliding / hinged type to provide un-obstructed passage on either side of the wheelhouse.

A suitable dead light / window made of marine toughened glass may be provided on wheelhouse doors.

The hull side bulkheads of the following rooms shall be fitted with suitable opening type windows.

Wheelhouse shall have windows all around and shall provide visibility of cutter ladder, spuds and its winches. Window in front of the helmsman chair shall be fitted with window wipers. All windows shall be of approved marine quality type with steel framing. Curtains shall be provided for all dead lights and windows.

A joiner's plan shall be submitted to owner for approval before construction.

## **4. Electrical**

### **4.1 General**

The complete electrical installation and workmanship on board shall be in accordance with the rules and regulations of the Classification Society and statutory authorities applicable to this class of vessel.



The electrical rotating machinery, transformers and other electrical equipment shall work satisfactory at an ambient temperature of 45°C or to suit the tropical environment.

Electrical motors to be standardized as much as possible to size and type and with isolating class F with the temperature rise for class B.

All the electrical equipment shall be arranged for easy accessibility for repair and replacement. The equipment installed shall work satisfactorily at voltage and frequency variations as specified by classification society.

Each control panel shall be provided with relevant drawing, wherein the fuse ratings of feeders shall be clearly mentioned.

Ingress protection of the Electrical equipment shall be as per the area of installation.

In general all the electrical motors, control panels and generators, unless specified by the supplier, shall be earthed as per the rules.

## **4.2 Power Supply**

A 415 V, 3 Ph, AC 50 Hz electrical systems shall be used for normal power supplies. 24 V DC system shall be used for feeding the following loads.

- Engines and Genset engines starting
- Emergency lighting, Navigational and communicational equipment.

Provision for shore supply connection shall be made for powering the main switchboard through a shore supply box. In general squirrel cage marine type induction motors of direct on line starting type shall be used. The motors shall be drip proof or weather proof as required by the location and shall be of approved type.

### **4.2.1 Generator**

The system shall have as a minimum 50 KVA, 3 pH 415 V.A.C. marine type, and drip proof diesel engine (water-cooled) driven alternator with electrical starting. The capacities are to be finalized subsequent to approval of the electrical load analysis. The generator shall be capable of taking the entire load with 20% reserve. The generator shall be continuously rated and shall have class F insulation, suitable for tropical environment and shall be designed for a temperature rise after continuous full load working not exceeding the temperature limits as specified by classification society. The diesel driven generator is to provide electrical power for the dredger. The Generator set is to be placed in the engine room. One harbour genset of 25 KVA capacity to be provided.

### **4.2.2 Battery**

Lead acid batteries of adequate capacity with suitable charging arrangements, shall be provided for main engine and generator engine starting as per the rules. 2 numbers additional batteries should be provided above the main deck level for emergency lighting purpose and navigational and communicational equipment.

Battery charging arrangement with a trickle charging system is to be provided.

All batteries should be enclosed in well ventilated battery box so as to protect the batteries from the weather.

### **4.3 Power Distribution**

#### **4.3.1 Main Switch Board**

One main switchboard of metal clad, drip proof, dead front type, mounted on resilient mountings shall be fitted in engine room. The switchboard shall be completely closed at the rear and is to be serviceable from the front. All the sides of the MSB should be accessible. Two nos. cooling fans to be provided.

The alternator panels shall have meters for the measurement of voltage, current, power factor separately for Auxiliary generator and Harbour generator. The alternator shall be protected through, circuit breakers of adequate capacity and shall have under voltage, over current and short circuit protection. All the out-going feeders and the shore supply shall be protected through suitable circuit breakers. Switchboard Earth leakage indicator shall be provided.

The switchboard shall be installed and designed with ample space for repairs and maintenance.

Remote stop arrangement for vent fans and oil pumps to be as per Rules. All the motors shall be protected through fuse and breaker of adequate capacity. Unless specified by the maker, motors with low starting current shall be of direct online starting type.

#### **4.3.2 Distribution Board**

Suitable number of lighting distribution boards and power distribution boards shall be provided. All the panels shall be of drip proof type; galvanized sheet metal enclosed and is to be provided with suitable schematic drawings.

Both the switchboards should be integrated with the PLC system or its equivalent.

Rubber floor matting to be provided.

### **4.4 Cables**

All the cables shall be flame retardant and comply with rules of Classification Society. The voltage rating of the cables is to be as per the specific requirement of the installation and in accordance with the rules of classification society.

Cables passing through decks and bulkheads shall be led through individual watertight glands. The piercing shall be filled with approved filling material for water tightness. The piercing shall be filled with approved filling material for water tightness. Cables passing close to Radio and Navigation equipment shall be properly screened.

The control cables, power cables and communication cables are to be separated from each other.

### **4.5 Control System**

The PLC System or its equivalent shall be designed, manufactured, programmed, and tested prior to installation on board the dredger. The control system shall be a PLC capable of monitoring digital and analog inputs, controlling digital and analog outputs, performing automatic loop control, displaying pertinent information, and recording historical data. The

dredge control system shall protect against pump engagement and disengagement at high speed and locks out all hydraulic functions during start-up and control activation. The system shall also alarms on electrical faults, hydraulic problems, etc. All of the alarmed conditions, along with the time and date, are logged; the last sixty-four alarms are retained for review. The dredge control system shall provide electronic operation of the pump engagement, and all hydraulic speeds and directions. The dredge control system shall record and display the operating hours of all major dredge systems including major equipment hours, dredge pump, cutter and winches, Swing and Cutter Speed, Slurry Velocity Control, Predictive Pump Wear, etc.

#### **4.6 Electrical System**

- 24 VDC for starting, convenience lighting, navigation and controls

#### **4.7 Lighting**

##### **4.7.1 General**

The lighting installation consists of two networks - one of 220 V.A.C. and another of 24 V DC.

Light fittings are to be of LED Type. Light fittings inside the accommodation and wheel house are to be of decorative LED.

Illumination levels in various areas shall comply with relevant statutory authorities as applicable to this class of vessel.

Four numbers 40W, 220V portable hand lamps shall be provided with watertight sockets and 8 meters flexible cable.

Sufficient numbers of rechargeable battery lights operating on 220 VAC shall be fitted at the following places.

- Mess rooms
- Wheel house
- Engine room
- Three cabins

Sufficient number of Marine Type switch sockets shall be provided in Engine room, Mess room and wheelhouse as per the Owners requirement.

##### **4.7.2 Navigational and Signal Lights**

Signal lights, NUC lights, anchor lights and other equipments shall be fitted as per regulations.

##### **4.7.3 Floodlights and Searchlights**

A 1000 W search light of rotating and adjustable type is to be fitted on top of the wheelhouse. The open decks are to be illuminated by sufficient number of LED floodlights for operation at night.

#### **4.8 Navigational Equipment**

The following equipments shall be provided

- Magnetic Compass
- Search light -1000 W
- LED Flood lights
- Electric horn-as per class requirement
- Fog Horn-as per class requirement
- Navigational lights
- Thermometer
- Barometer
- Nos. battery operated Clocks
- Remote location tracking device (GPS)
- GPS based navigation device

#### **4.9 Navigational Console**

One navigational console shall be erected in the wheelhouse and all the navigational equipment shall be fitted on it.

#### **4.10 Communication Equipment**

Following communication equipment shall be provided onboard:

- Internal

Engine room telegraph system. A voice pipe from wheel house to Engine room

- External

VHF radiotelephone Loud Speaker Signals and Alarm as per statutory rules.

### **5 Machinery & Piping Systems**

#### **5.1 General**

All the engine room units shall be of marine grade and the installation should be in accordance with the rule and regulations of the Classification Societies and suitable for working in the following condition: Maximum ambient temperature in engine room

: 50°

Maximum river water temperature : 32°

Relative humidity (average) : 95%

In general shop and installation tests shall be conducted as per the rules of the Classification Society and on an agreed program with Owners or their authorized representatives.

#### **5.2 Main Engines**

The broad specifications of the engine shall be as follows:

One no 4 stroke Marine quality diesel engine of suitable capacity (minimum 600 kw) shall be provided which shall be coupled to drive the dredge pump through marine reduction gear through suitable coupling made of appropriate material on one end and the other end is connected to drive hydraulic pump to cater to dredging functions while in dredge mode: -

- a) Cutter Motors
- b) Anchor booms
- c) Flush pump
- d) Winch
- e) Any other dredging equipment / components.

Powering calculations are to be submitted along with the technical bid. Rating of the engine should be such as to ensure continuous dredging operation. The selection of engine is to be based on its smallness in size and lightweight.

Exhaust manifold and scavenging manifold should be provided with drain cock and Pipe.

### **5.3 Diesel Generator Set**

One auxiliary engine of reputed make coupled with alternator set of appropriate capacity shall be provided.

### **5.4 Hydraulic System**

#### **Hydraulic pumps**

A hydraulic power pack shall be provided such as to drive two hydraulic double gear pumps with fixed output, by means of a flexible coupling and gearbox, suitable for its functional requirements.

#### **Hydraulic motors**

All hydraulic motors used for the winches, as far as practicable, should remain identical.

#### **Hydraulic piping**

The hydraulic piping is to be of seamless steel pipe and provided with the necessary fittings, such as valves, non-return valves etc. The hoses and pipes are to be tested for 1.5 times the design pressure. All pipe and hose is supported by rubber bushed isolation mounts. All hydraulic components which are below the water line are to be designed for continued submergence. Pipes used for main hydraulic systems shall be of seamless steel ASTM as per Class requirement or manufacturer's recommendations, whichever is higher. Hydraulic control piping system shall be generally of pipes as per Class requirement or equivalent.

#### **Cooler for hydraulic system**

A hydraulic oil cooler is to be incorporated in the return pipeline of the hydraulic system.

### **5.5 Service Water Pump**

The service water pump's primary use is for the dredge pump packing gland. The service water pump will also be used as the source for the raw water wash down system and the dredge pump transmission cooling system. The service water pump is to be of the centrifugal design with a single open end suction protected by a strainer. The service water pump will be supplied with an apt suction and discharge relevant for the operation.

### **5.6 Propulsion System**

Two nos. 4 stroke marine quality diesel engines of adequate horse power and reputed make

each driving a fixed pitch nozzle propeller for propulsion system to achieve the desired speed of 8.5 knots should be installed. The shop test of the propulsion diesel engines shall be done as per the Class requirement. The specific fuel consumption is to be recorded during the trials.

The dredger should be able to tow at least 200 mtrs of floating pipeline and suitable towing arrangement to be provided.

### **5.7 Steering Gear**

Two Electro Hydraulic operated semi balanced rudders of appropriate size to be provided.

### **5.8 Exhaust System**

Every diesel engine shall have a separate exhaust pipe; the exhaust pipe lay out shall be approved by the engine maker's recommendation. The exhaust pipes shall be of steel. Exhaust pipe layout shall be designed such that, it is detachable at main deck level. A protection against rainwater entry is to be provided at the end. Necessary drains shall be fitted in the pipes to drain any water in the pipes.

Each engine shall be provided with suitable exhaust gas silencer.

### **5.9 Insulation**

In general the surface machinery, equipment, pipes and tanks whose surface temperature is more than 50°C shall be insulated.

Pipe shall be tested and painted (when necessary), before insulation is applied. The exhaust gas piping and silencers are to be insulated with rock wool blankets on wire gauze finished with a glued layer of glass fibre cloth and the whole to be covered with aluminium sheets. The flanges and expansion joints have to be covered, with insulating mattresses filled with glass wool. The application of asbestos as insulating material is not permitted.

In general the insulating materials shall be fire resistant and shall be arranged in such a way that operation and maintenance are not hindered.

### **5.10 Fuel oil system**

The fuel oil shall be stored in two storage tanks provided in the engine room. The capacity is not to be less than 35 m<sup>3</sup>. In addition, two F.O. day tanks of suitable capacity shall be provided for the engine, such that sufficient head is available for engines. A fuel measuring indicator is to be provided. A display indicating the amount of fuel is to be fitted on one of the consoles in the wheelhouse

Each diesel engine will draw the fuel oil directly from fuel oil day tank. A fuel oil transfer / supply pump 5m<sup>3</sup>/h is to be installed in the engine room for transferring the fuel oil from storage tanks to day tanks. Piping must be fitted below floor level as far as possible.

Necessary quick closing valves operable from main deck to be provided for fuel oil storage tank/day tanks as per class requirements.

### **5.11 Lube Oil System**

The following installations shall have their own independent lube oil system

- Each diesel engine
- Each reverse reduction gearbox.

As far as possible all systems should use the same lubricant. The yard will be required to furnish a list of lubricants to be used on machinery and equipment installed in the vessel, in accordance with the manufacturers recommendation for Owners reference.

One service tank shall be provided with a tap cock and drip tray for filling oilcan and having a capacity of at least 300 liters.

All piping is to be executed with steel tubes.

### **5.12 Cooling Water System**

The main parts of the cooling water system of the diesel engines are to be built on the respective engines. The oil coolers of the reverse / reduction gearbox shall be connected to the cooling water system of the concerned diesel engine.

### **5.13 Bilge / Deck wash and Fire-Fighting system**

Two Bilge cum General Service pumps driven by main engines shall be installed in the engine room. The pumps shall be of the self-priming centrifugal type and to have a capacity of 25 m<sup>3</sup> /h at 2 bars. Further, two hand operated portable bilge pumps shall be installed, one in the steering gear compartment and one in the fore peak. One double acting head operated pump is to be provided in the suitable place, for emergency fire fighting purpose.

All piping shall be galvanized after fabrication. Pipe sizes shall be as per the requirements of the Classification rules. Over board discharge valves shall be screwed down non-return type (SDNRV) Valves.

Sufficient number of the fire hydrants shall be arranged on deck and in engine room satisfying Classification/statutory regulations.

### **5.14 Ventilation system**

#### **Engine room:**

Supply of fresh air and exhaust for the engine room shall be provided through two axial flow fans of suitable capacity, out of which one is of reversible type.

Sufficient ducting has to be provided to ensure the air supply at required locations.

#### **Accommodation:**

Supply of air to accommodation spaces shall be provided through one no. Axial flow fan of suitable capacity is to be provided. Exhaust shall be natural. Sufficient ducting has to be provided to ensure the air supply at required locations.

#### **Galley & Toilets:**

Galley and two-toilet space shall be provided with one exhaust fan each. Supply is natural. All axial fans shall be mounted on the deck. The capacity of the system is to be calculated on the basis of International Standards and in general to maintain ISO's specified conditions inside the engine room. All fans should have emergency stop facility from the wheelhouse.

### **Cabin Fans:**

Cabin Fans shall be provided as per the following:

- Two persons cabin-one fan per person
- Wheelhouse – 2 fans
- Four persons cabin-1 fan per person
- One split type Air Conditioner to be provided in all cabins.

### **5.15 Fire Fighting System**

In general, fire-fighting system shall be in accordance with class / statutory requirements. Portable foam fire extinguishers in engine room and other places in the vessel, fireman's outfit, dry powder extinguisher in engine room and wheel house and fire main and hydrants complete with hoses and nozzles satisfying various class / statutory requirements shall be provided. A general service /fire fighting pump of capacity 25 cum/hr at 3 bar, as a minimum is to be provided.

### **5.16 Sanitary Water System**

A gravity water tank of 500 lt. shall be installed on the wheelhouse deck. The tank shall be filled by a separate pump. Toilet space shall have a river water flushing system.

### **5.17 Potable Water System**

A gravity water tank (approximate capacity 500 ltrs.) is to be installed on the wheelhouse top. The tank shall be filled by a centrifugal pump of suitable capacity. Necessary connection is to be given to washbasins, galley and toilets.

### **5.18 Sewage discharge system**

Sewage from the toilets and galley shall be collected in two holding tanks located below the toilets. There shall be a pumping arrangement to discharge this sewage to shore reception facilities. One power driven pump of sufficient capacity exclusively for this purpose in addition to hand pump along with necessary piping systems is to be provided. A sewage treatment plant of approved make and capacity shall be installed.

### **5.19 Vent, Sounding and Filling Pipes**

All air sounding and filling pipes for water tanks and void spaces are to be of galvanized steel. For pipes on oil tanks only the parts above open decks to be of galvanized steel.

All structural and loose tanks to be provided with a vent pipe connected to the highest point of the tank. Vent pipes of fuel tanks shall be fitted with flameproof wire gauge. Upper ends of vent pipes to be provided with air pipe hoods. Save tray with drain plug shall be provided at the fuel oil bunkering pipe and vent pipe.

Air vents for fresh water tank shall be provided with insect proof net. Flush and thief proof sounding caps shall be provided on the upper deck. Sleeve joints shall be used for pipes passing through decks.



Tanks in the engine room shall be provided with a short sounding pipe with a self-closing sounding cock. Filling connections to various tanks shall be arranged at least 300 mm above deck. They shall be suitable for coupling to standard supply hoses. Shut off by brass caps with chains should be provided.

Air and sounding pipes shall be arranged near bulkheads and behind stiffeners wherever possible.

## **5.20 Bow Anchor**

Bow Anchor of adequate weight of standard design and approved make along with chain cable of appropriate length & and size as per classification society requirement to be provided.

## **5.21 Anchor Winch**

Bow anchor winch should be electrically operated and installed.

## **6. Deck Crane**

One manually operated deck crane of 2 tonne lifting power with about 3 mt out reach for handling parts of machineries from the engine room to be provided.

## **7. Dredge Machineries & equipment**

### **7.1 Dredge Pump**

The dredge pump should be an in-hull mounted pump and shall be rated to ensure pumping of the dredged material through a 500 m long floating pipeline. The dredge pump must be capable of a flow rate of 1250 cum/hr with 20% concentration and mixture density of 1.3 t/m<sup>3</sup> with side casting facility on either side with a throw of about 80 m. The suction and discharge pipeline diameters are not to be less than 300 mm. The pressure pipe line on board to be installed with expansion pipe pieces provided shortly after the sand pump discharge opening. At the aft end, a swivel bend with stuffing box to be mounted for connecting to a floating pipeline is to be provided. The required gland pump, flushing pump and any other accessories as required for the functioning of dredge pump, impeller shall be provided. The separate size of impeller if considered necessary for discharging the spoil directly through side casting or through pipelines shall be provided. Accordingly, one set of spare impeller and two set of spare wearing plates shall be supplied along with the dredger.

### **7.2 Dredge Pump Drive and Cutter**

The dredge pump is to be driven by one engine and should be efficient in performing the envisaged duties as per the specification.

The cutter will be driven by a hydraulic pump. The cutter head will be basket style cutter or serrated or plain or equivalent with welded heavy duty replaceable teeth.

### **7.3 Cutter**

The cutter size and type shall be installed for type of soil to be dredged. However, the cutter of serrated and plane with removable type of teeth or any equivalent or efficient cutter shall be suggested and installed considering the ease in the repair & maintenance.

#### **7.4 Spoil Discharging Arrangement through nozzle and pipelines**

The dredge shall be equipped with a side casting discharge nozzle for jettisoning the dredge slurry and capable of having a throw of about 80 m on either side. The floating dredge pipeline for 200 mt in length and of suitable diameter of HDPE shall be provided along with suitable floaters having opening & closing system, flexible hoses and anchors.

### **8. Floating Discharge Pipelines**

Floating discharge pipeline of 200mtr length to be supplied alongwith the dredger. The pipes to be made of HDPE and duly provided with flanges at both end and enable to easy fitment by use of gaskets and galvanized nuts and bolts. The pipe shall be of 6mtr in length interconnected by 2mtr long rubber hoses. Each length of pipeline to be supported by two nos. high impact polyethylene floating elements made in two halves having length of about 1mtr each. The floating element to be designed for keeping the dredge pipeline afloat when pumping a mixture with a density of 1.6 tonne per cub.mtr with a margin of 15% displacement.

All flange connection to be designed with a rubber sealing ring, a minimum number of bolts and taking into consideration an axial load due to current of atleast 8 KN. Further for anchoring this pipe line all elements to be provided with suitable connections and required number of anchors with each anchor connected with a 30 mtr long wire.

### **9. Dredge automation & Dredge Controls**

Controls for hydraulic motors and engine controls are to be located in the wheelhouse as well as locally, where applicable.

#### **9.1 Suction Depth Indicator**

A scale is to be fitted on the ladder for indication of dredging depth

#### **9.2 Swing Angle Measurement**

Provision is to be made to calculate and display the swing angle, heading and the same is to be integrated with the PLC.

#### **9.3 Density meter and production calculator**

The density meter of non-radioactive material shall be installed with production calculator for measuring for production of the dredger. The density meter should be able to operate in the most hostile and demanding of process conditions and capable of carrying out measurements on all kinds of liquids and bulk materials. They should be able to provide a maintenance free operation as far as possible.

### **10. Hull inventory and tools**

#### **10.1 General**

Standard Hull inventories and tools including tools recommended by the manufacturers shall be provided and they will be in accordance with normal shipbuilding practice.

## **10.2 Tools and Inventory**

- Tools and inventory must be of good standard and approved type, where applicable.
- The tools and inventory shall consist of:

Maker's standard tools and special tools necessary for overhauls during the life of the vessel are to be delivered by all the manufacturers with their supply.

## **10.3 Spare Parts**

One set of spare impeller and two set of wearing plates are to be provided along with the dredger.

Spares required for 2000 hrs of operation as recommended by Original Equipment Manufacturers are to be supplied for the following:

- Main engines for propulsion
- Dredge pump engine
- All gearboxes
- All generators
- Dredge pump
- Cutter head and
- All winches & any other major machineries.

These spare parts, suitably packed, will have to be delivered along with the dredger within the delivery period

## **10.4 Additional items**

1. Bilge alarm shall be provided as per requirement of classification society.
2. Oily Bilge Separator (OBS) system shall be provided.
3. Smoke sensors shall be provided in accommodation and in engine room as per requirement of classification society.
4. Battery box shall be kept in separate space on the deck.
5. Vessel vibration and noise level shall be as per requirement of classification society.

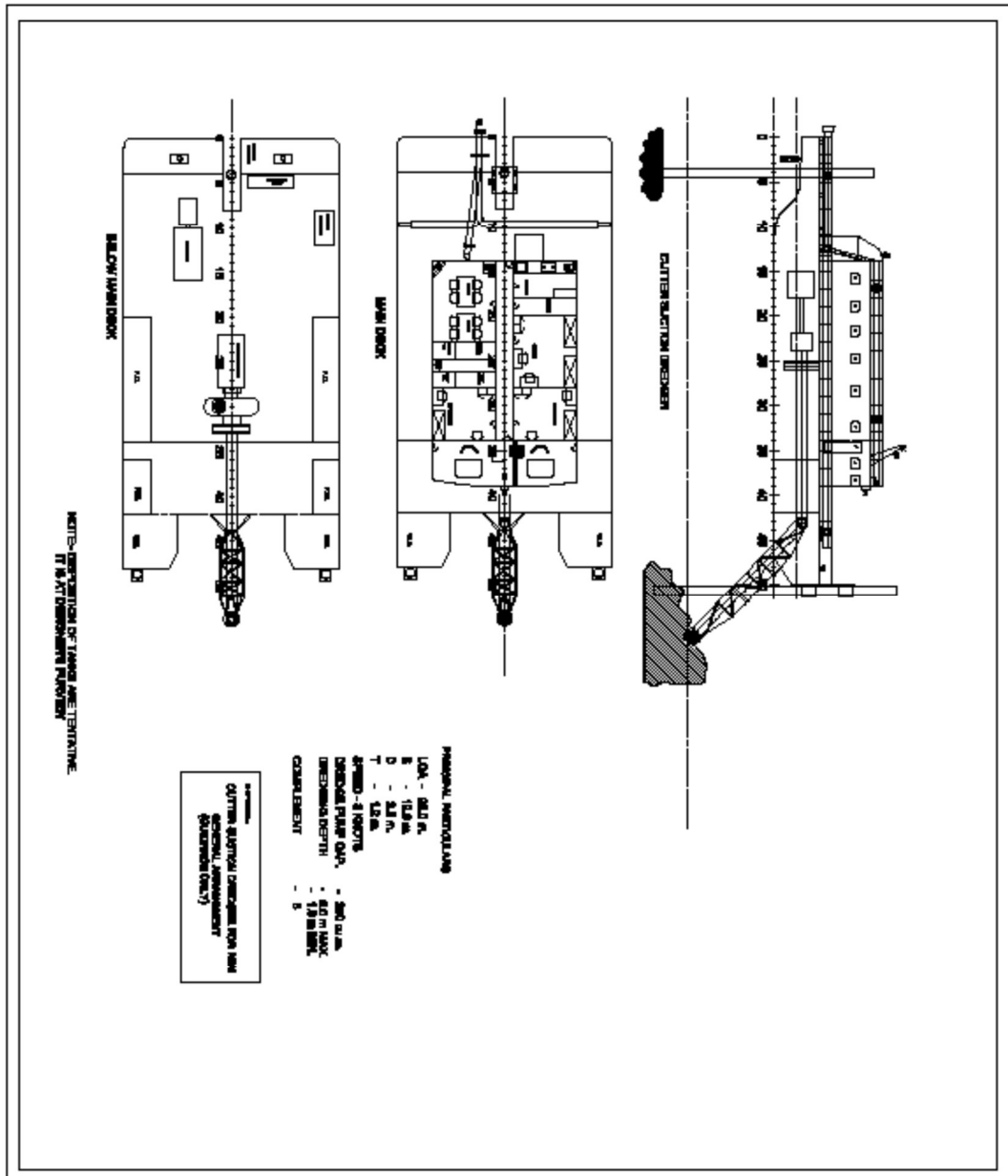
## **10.5 Sales Support Certificate**

The bidders to provide certificate from the prospective OEM's of the proposed major equipment's, confirmation after sales service /maintenance support facilities in India.

## **10.6 Solar Power Backup**

Solar panels for charging of batteries to cater to the requirements of accommodation load to be fitted and integrated with power supply (at clause 4.2)

## Drawings



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