**Pre-Bid Clarification on Bidding Document for Procurement of 4 no Cutter Suction Dredger** **Pre-bid held on 19.02.2025**

**Additional Queries**

ICB No: IN /IWAI/ 466874 /GO/ RFB_1 (January' 2024)

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|---|---|---|---|---|---|
| 1 | 77 | Section-VII, Part-A 1.2 Design Conditions & Basic Requirement. | …… *The Dredger is to be designed and constructed in such a manner that the pontoons and major structures are dismantlable for easy of transportation from one location to another. The dredgers so dismounted would be transported by Road wherever large distances to be transported or from one NW to another NW……* | Dredger should be dismountable – is ok | Yes for easy transportation dredgers shall be dismountable. |
| 2 | 77 | Section-VII, Part-A 1.2 Design Conditions & Basic Requirement | …… *The length and height of the pontoon to be restricted to 27.5 m x 3.5 m. The dismantlable components should be easy to lift by a crane from the water on a low floor 60 foot trailer and vice versa, and easily transportable on a low floor 60 foot trailer while adhering to Indian applicable traffic laws and regulations.* | **Length of centre pontoon not to exceed 17.5m and 3.5 m wide. Overall length of pontoons restricted to 27,5m.**<br>With length of pontoon we assume that you mean: "overall length of pontoons". Important is that the dismounted pontoons are not longer than max. 17,5m length in respect of transporting pontoon by road | No change.<br>Tender condition prevails.<br><br>The detachable pontoon are not of mono-bloc type so the approx *size of the pontoon to be restricted to 27.5 m x 3.5 m.* |
| 3 | 79 | Section-VII, Part-A 1.2.2 Basic Requirement sl(m) | Sl (m) - Zero waste discharge requirements | Refer Page No: 80, Serial No.:2.1; Zero Waste discharge requirements,<br>please indicate details of requirements of discharge plan, should it be holding tank with discharge pumps/ provision of Sewage treatment plan, either way please specify details. | Kindly refer **Section-VII, Part-A Sl.no 6. Zero Waste Discharge.**<br>The Dredgers should comply to the provisions of the Inland Vessel Act 2021 ( 24 of 2021) and rules framed there under.<br>No Sewage / Waste is to be discharged in the river and adequate holding / treatment system to be provided. |
| 4 | 79 | Part-A Technical Specification of the Dredger | Sl.(i) For passing bridges, the maximum height of the Dredger above waterline to be less than 6.0 m (Dredger in transport condition) ie air draft from the load line to the tip of mast or highest point on top of operation cabin if the mast is collapsible. Provision to be provided for Spuds to be secured horizontally to meet the air draft restrictions. Air draft restriction has to be maintained. | Spud to be installed on deck during transport. No tilting installation required.<br><br>make sure no tilting installation is required to reduce costs of dredger. | Tender Condition Prevails |
| 5 | 80 | Section-VII, Part-A 2.1 Main Installation. | a) Dolphin pingers<br>• *Installation of pingers in the vessel/dredgers to deflect dolphins.*<br>• *Installation of anti-vibration pads in the vessel/dredgers to reduce the noise generation.*<br>• ***Modified propeller guards for the vessels/dredgers.***<br>• *Bio toilets/ STP on the vessels/ Dredgers.*<br>• *Oil spill control kit along with Safety kits like Personal Protective Equipment (PPE's), life jackets etc are kept onboard dredgers.*<br>• *Prevention of pollution in line with the Inland Vessel Act 2021 through Zero discharge policy for the vessels/dredgers and Procedure of no waste discharge as well as waste collection.* | Refer Page No: 80, Serial No.:2.1; Bullet Point two,<br>• modified propeller guards for dredgers seem to be a redundant item given that at your specification states that dredger under consideration in the specification sheet are non-propelled. | May be read as "modified guards for the self propelled vessels". |
| 6 | 81 | Section-VII, Part-A 2.2 Principal Dimensions | Sl.no 11 -Harbour Diesel Engine coupled to alternator - 50 KVA 80 HP approx | Refer Page No: 80, Serial No.:2.2; You have stated Harbour Diesel Engine coupled to alternator 50 KVA, 80 HP Approx (50 KVA does not correspond to 80 HP Engine) Please specify your Power requirement of the Harbour Diesel Generator. | The engine power given in tender document is indicative (as 80 BHP approx.) only. However, range may vary from 75 to 80 BHP. |
| 7 | 81 | Section-VII, Part-A 2.2 Principal Dimensions | Sl.no 3. breadth moulded 9.5 m approx. | **Max. Breadth of CSD = 8m**<br>max. 8m width of pontoons more convenient for transport | No change<br>Tender condition prevails. |
| 8 | 81 | Section-VII, Part-A 2.2 Principal Dimensions | Sl no 16. Mixture Capacity of at least 2600 m3 /hr with 20% concentration of solids at 1.3 t/cum density. | . **Mixture capacity minimum 4000m3 with 20% concentration of solids at 1 2 ton/m3 suitable for 1000m discharge length.**<br><br>20% mixture concentration with 1300 kg/m3 mixture means dredging an insitu value of 2500 kg/m3. This is close to solids mass of quartz with 2650 kg/m3.<br>In-situ values should be expected way more lower. . It should be 1,2 ton/m3 of solids. Further it production of this size and type of dredger should be enlarged to 4000m3/hr to lower the price/.m3 output to normal international standards. | No change<br>Tender condition prevails. |

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| 9 | 81 | Section-VII, Part-A 2.2 Principal Dimensions | Sl no 14. fuel capacity at lease-t 80m3 ( 68T) | **Fuel enough for 100hrs dredging operations: approx. 20 m3.**<br>This will limit the size of your dredger. 100hrs dredging operations will in practice mean 2 weeks operation. Normally one day per 2 weeks a raepair day is scheduled for cutter, pump and discharge line. That time can be<br>used for bunkering as well. We propose approx. 20m3. | No change<br>Tender condition prevails<br><br>Considering remote location and lesser accessibility of refueling facility, Fuel capacity of 80 m3 (68T is regd.) |
| 10 | 81 | Section-VII, Part-A 2.2 Principal Dimensions | Sl.no 15. fresh water capacity 4000 ltrs ( 4T) | **Fresh water max 2m3**<br><br>This will limit the size of your dredger. Once in 2 weeks bunkering of fresh water can take place. | No change<br>Tender condition prevails. |
| 11 | 81 | Section-VII, Part-A 2.2 Principal Dimensions | Sl.no 11 -Harbour Diesel Engine coupled to alternator - 50 KVA 80 HP approx | **Harbour diesel only needed for all hydraulic and electric functions when laying idle. Max 30kw**<br>50KVA is not needed for all hydraulic and electric functions. Additionally, an extra Genset of approx. 20 kVA can be placed on deck in order to not use the auxiliary engine. | No change<br>Tender condition prevails |
| 12 | 81 | Section-VII, Part-A 2.2 Principal Dimensions | Sl no 10. Aux. Engine I abt 550 -650 HP Hyd.<br>power unit | **Aux engine max 340kW (440 BHP)**<br><br>We suggest max. installed power for aux engine which is enough for aux. functions to save energy and increase efficiency of dredger | No change<br>Tender condition prevails |
| 13 | 81 | Section-VII, Part-A 2.3 Pontoon | e) The accommodation and operator's control cabin will be built on deck with a width of about 4.3 m. The accommodation will have a day time crew arrangement and a double berth and Toilet. | **No Sleeping places on board**<br><br>Not allowed according Class | The arrangement provided in tent is for resting purpose of operator during day time.<br>May be read as :-<br><br>The operator's control cabin will be built on deck with a width of about 4.3 m. The same will have a day time rest arrangement for crew, and a double berth with Toilet. |
| 14 | 82 | Section-VII, Part-A 2.2 Dredging Equiment | sl.no (a) two hydraulically driven side winches, mounted on the main deck forward of the operator's control cabin. | **Side winchez 2x 120kN, 0-15m/min**<br><br>Side winch force is not specified in the tender. However, the side winch force is a main specificatiuon of a dredger. If not specidied, the rissk is that an inferior dredger is<br>offered to IWAI.<br>We suggest 120kN per winch to be able<br>to dredge medium packed sand. Also 15m/min whinh speed should be specified to guarantee high production in loose packed sand and silt. | May be read as:<br><br>“Two hydraulically driven side winches, mounted on the main deck forward of the operator's control cabin having capacity of minimum 13 Tonne each”. |
| 15 | 82 | Section-VII, Part-A 2.2 Dredging Equiment | Sl.no (‘c) The cutter shall be hydraulically driven (two slow running motors) through a watertight gearbox. The cutter ladder hoisting winch will be Identical to both side winches. | **Only 1 hydraulic motor to druve cutter**<br><br>Very old fashioned technology to drive the cutterhead with 2 slow running motors. Up to date technology should be specified: 1 hydraulic motor. | May be read as:<br>“The cutter shall be hydraulically driven through a water tight gearbox, The cutter ladder hoisting winch will be Identical to both side winches as approved by any Classification Society (IACS)”. |
| 16 | 82 | Section-VII, Part-A 3.0 Dredging Equipment | Sl.(d) …… …. , and present silt, sediment & mixture of both sand and fine materials from 6 m water depth and deliver the spoil via 500 m floating and 500m onshore pipeline | **Loose to medium packed sand, water depth max 14m.**<br>should be 14m water depth. This makes dredger more flexible for projects both in rivers and ports. 14m will also enlarge the swinging radius of the dredger at 6m water depth which will increase efficiency and production. | No change<br>Tender condition prevails. |

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| 17 | 82 | Section-VII, Part-A 4.0 Dredge Control & Measuring System. | **DREDGE CONTROL & MEASUREING SYSTEMS**<br>The main dredge controls for cutter and dredge pump, for side winches, spud control ladder hoisting/lowering along with indicators and profile control units in instrument panel to be installed in the control cabin. The dredge pump diesel engine to be remote controlled from the dredging desk with provision for emergency stop.<br>Instrument rack should be provided with vacuum/pressure indicators, ladder position indicator, Draught measuring device, spud carrier position indicator, Dredge profile computer, Gyro compass, and indicators to control the dredge efficiency such as flow rate (m3/hr) and density (Tonne/m3) indicators of the dredged materials. | Refer Page No: 82, Serial No.:4.0<br>You have stated provision of indicators to control the dredge efficiency such as flow rate and density of dredged materials.<br><br>Please indicate the type of flow meter envisaged unclear/ non-nuclear type. | Dredge Production meter of non-nuclear base to be provided. |
| 18 | 83 | Section-VII, Part-A 8.0 Place of Delivery | Place of delivery:<br>Varanasi; Patna & Sahibganj | Refer to place of delivery serial 8.0 of Section VII of Schedule of Requirements-Varanasi, Patna & Sahibganj<br>Adequate draft and fair navigable weather with no flood condition must be ensured for safe delivery of the Dredgers & the auxiliary crafts, alternatively the dredgers may be delivered at Kolkata or an extension of time be provided suitably. | No change<br>Tender condition prevails.<br><br>Place of delivery shall be Varanasi, Patna & Sahibganj. |
| 19 | | Section-VII, Part-A 2.2 Principal Dimensions | Not Specified | **Max installed power 1300kW (1750 BHP)**<br><br>We suggest a max. installed power to save energy and increase efficiency of dredger. Fuel Costs are aapprox 30% of toptal costs of ownership. Therefor power should be used as efficient as possible. | Main engine for dredger pump should have minimum installed power of approx. 1200 BHP. |
| 20 | 84 | Part-B Technical Specification of Work Boats<br>2.0 Design Conditions | The following ambient conditions are to be considered for the selection of equipment and machinery: -<br>- Maximum outside air temperature of 45$^{O}$C with 90% relative humidity.<br>- Air temperature of 50$^{O}$C with 90% relative humidity in the engine room.<br>- Maximum river water temperature of 32$^{O}$C.<br>- Atmospheric pressure of 760 mm Hg.<br>- Occasionally occurring sandstorms with wind. speeds up to 40 m/sec. | Operating conditions:<br>The design of the equipment and machinery shall be based on<br>the following ambient conditions:<br>Atmospheric pressure : 1,013 mBar<br>Air temperature : Max. 40 ºC Min. 3 ºC<br>Relative humidity : Max. 100 % at 30 ºC<br>Cooling sea temperature : Max. 32 ºC Min. 5 ºC<br>Altitude : Sea level<br><br>tender specs are over specified. | No change<br>Tender condition prevails |
| 21 | 85 | Part-A Technical Specification of the Work | The Vessels are intended for operation in all weather conditions in the National Waterway no. 1 (River Ganga) & National Waterway no. 2 (River Brahmaputra). and accordingly, it should be suitable for operation in Zone-1 (Maximum significant wave height of 2.0 m). | Maximum dredging condition Hs ≤ 0.50m or LWave ≤ 12m or current ≤ 2.5m/s<br>Maximum stand-by “on spud” condition<br>Hs ≤ 0.80m or LWave ≤ 18m or current ≤ 4.7m/s Maximum stand-by “on wire” condition<br>Hs ≤ 0.80m and LWave ≤ 18m or current ≤ 6m/s<br>Wave height of 2m is not possible for any csd. Please specifu wave height and wave length acoording our standards | The Vessels are intended for operation in all weather conditions in the National Waterway no. 1 (River Ganga) & National Waterway no. 2 (River Brahmaputra) and it should be suitable for operation in Zone-3 |
| 22 | | | | We along with our Dutch partners offer to supply world-class Dredgers, work boats and accommodation boats. | Kindly refer Section-II Bid date sheet ITB-4.1 JV is permitted. |
| 23 | | | | Remote Monitoring System: A state-of-the-art remote monitoring system that provides real-time operational data like location, dredging depth, areas dredged, production / flow meter and machinery status, accessible from the work boat, accommodation boat, project office. | Kindly refer Section-VII Part-A; Part-B & Part-C; The Equipment offered should also comply to the Technical Specification stated at Section-VII & subsequent Amendments. |
| 24 | | | | Minimum Output: Our Dredger will guarantee minimum output of 3000 m3/hr. | Kindly refer Section-VII Part-A; The Equipment offered should also comply to the Technical Specification stated at Section-VII & subsequent Amendments. |
| 25 | | | | Solar Roof Integration: A solar panel roof that not only provides shade but also generates approximately 30 kW of power, sufficient to run essential appliances like deck lights, communication devices and other low-power equipment. | Kindly refer Section-VII Part-A; Part-B & Part-C; The Equipment offered should also comply to the Technical Specification stated at Section-VII & subsequent Amendments. |

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| 26 | | | | Scooping Cutter Design: A specially designed scoop-shaped cutter that improves dredging efficiency for a wide range of materials, from loose sand to compact sediments. | Kindly refer Section-VII Part-A; Part-B & Part-C; The Equipment offered should also comply to the Technical Specification stated at Section-VII & subsequent Amendments. |
| 27 | | | | Production Optimizing System: A system that analyses dredging parameters including density, flow, discharge pressure, suction vacuum, cutter torque and RPM. A system will provide recommendation to achieving optimal production by adjusting torque & RPM to improve dredging production. | Kindly refer Section-VII Part-A; Part-B & Part-C; The Equipment offered should also comply to the Technical Specification stated at Section-VII & subsequent Amendments. Further, dredger production meter of non-nuclear base to be provided |
| 28 | | | | Remote trouble shooting: A system that allows remote access to the onboard PLC, enabling authorized personnel to diagnose issues and modify the program as needed to resolve technical problems. | Kindly refer Section-VII Part-A; Part-B & Part-C; The Equipment offered should also comply to the Technical Specification stated at Section-VII & subsequent Amendments. |
| 29 | | | | **Extension of Tender:**<br><br>The integration of these advanced technologies requires careful technical and commercial estimations. Therefore, we request you to kindly grant extension for Bid Submission of this tender for 15 days. | The Bid submission is already extended from 17.03.2025 to 02.04.2025.<br>For updated Bid submission details kindly visit Tender ID: 2025_JMVP_847143_1 at http://eprocure.gov.in/eprocure/app |