

No. IWAI/GHY/Mandovi/4(94)/2022-23/540

8th August 2023

To,

M/s Das Consultancy & Agency Services
81, Mridula Bhawan, Chatribari
Guwahati – 700001, Assam

Sub: - Award of work for "Repair of IWAI Vessel CSD Mandovi for the year 2023-24" – reg.

Ref:- 1. NIT No.: IWAI/GHY/Saffron/4(103)/2019-20, dt 17.7.2023

2. Your E-Bid no.: NIL, dt 21.7.2023

Sir,

With reference to the above, Inland Waterways Authority of India (IWAI), RO Guwahati is pleased to place the work order for "Repair of IWAI Vessel CSD Mandovi for the year 2023-24" at a total cost of **Rs. 24,08,413/- (Rupees Twenty-four lakh eight thousand four hundred and thirteen only) exclusive of GST as applicable** in accordance with the terms & conditions of the contract. Detailed Bill of Quantity is attached as Annex- I for your reference.

2. It is requested to deposit an amount of **Rs. 1,20,421/- (Rupees One lakh twenty thousand four hundred and twenty-one only)** as Performance Guarantee i.e., 5 % of the contract value of the work within 15 days from the issue of this letter as per Clause 3 of General Conditions of Contract (GCC). In addition to the above, a security deposit equivalent to 5% of the contract value i.e., **Rs. 1,20,421/- (Rupees One lakh twenty thousand four hundred and twenty-one only)** will be deducted from RA bills as per Clause 4 of the General Conditions of Contract.

3. The payment shall be made as per Clause 40 "Payment on Account" of the General Conditions of Contract (GCC).

4. The contractor shall commence the work at the respective site within 7 days of the issue of letter of award.

5. The whole work has to be completed within a period of 40 days from receipt date of this letter. The work has to be completed as per terms & conditions of contract.

6. In Case of delay in completion of work, the liquidity damage @1.5% per month subject to a maximum of 10% will be applicable as per Clause 35 of General Conditions of Contract (GCC).

7. Director, IWAI, Guwahati shall be the Engineer-In-Charge for the subject work.

8. It is requested to acknowledge the receipt of this work order and attend this office along with two non-judicial stamp papers of Rs. 200/- to enter into an agreement within 7 days.

Yours faithfully,

Encl.:- as stated above

(A. Selvakumar)

Director

E-mail: aselvakumar.iwai@nic.in

Phone:- 0361-2676925

Copy to:-

The Jr. Accounts Officer, IWAI, Guwahati.

BOQ for repair of CSD Mandovi for the year 2023-24

Sl. No.	Description of Work	Unit	Qty	Rate (in Rs.)	Labour (in Rs.)	Spares (in Rs.)
1.00	Major overhauling of genset engine make :Kirloskar, model no. 4R1040T, Capacity/Power: 83HP, Speed: 1500 RPM, Total Running Hours:22423 hrs(on 10.05.2023), is to be done with checking, servicing and renewal of spares e.g liner, piston,rings,valves,heads, self starter, dynamo, battery charger, safety system parameters likes LLOP switch, LLOP sensor, HCT switch, HCT sensor, LOT switch, LOT sensor and other accessories. Along with calibration of fuel pump , injectors, cooling water pumps, radiator cleaning etc as shall be done as required. Cooler to be cleaned, silencer, checking of exhaust line, crank shaft end clearance etc. with renewal of spares e.g. gauges,digital and analog meters installed on engine room as well as wheel house. Coupling and hose pipes etc. has to be replace; as required as per direction of EIC/ Surveyor.					
1.01	Labour, machining and consumable charges	No.	1	37795.50	37795.50	
1.02	Cost of spares (actual bill/invoice + 10%)	Job	1	41995.00		41995.00
2.00	Dredge pump (DDE/BP5045HD, Pump Dim:Suction Pipe Dia:500mm, Discharge Dia:450mm,impeller dia:1355mm, impeller width:463mm, spherical passage: 213mm and no of impeller blade:5, Rotaion :Clockwise) to be opened & fitted after renewal of its seals etc. Necessary repairs of casing/ impeller is to be done with remetalling, welding by plastic carbide or other means as required as per direction of EIC/ Surveyor.					
2.01	Labour, machining and consumable charges	Comp. Job	1	50394.00	50394.00	
2.02	Cost of spares (actual bill/invoice + 10%)	Job	1	83990.00		83990.00
3.00	Electrical power distribution board in E/R along with engine room, wheel house, accomodation (lights, fans etc) ,engine room (including emergency lights), general alarm bell, D.C. horn, switch boards, lighting, halogen light, bed light, table light, light cover, exhaust fan, are to be checked and rectified as per direction of EIC/ Surveyor.					
3.01	Labour charges	Comp. Job	1	37795.50	37795.50	
3.02	Cost of material (actual bill/invoice + 10%)	Job	1	58793.00		58793.00
4.00	The alternator coupled with Aux engine Make:Crompton Greaves Ltd, 65 KVA, Machine no.C2R65.0/43, Ref no. KEAG9681, 3 Phase, has to be serviced with AVR check, heat varnishing, megger testing etc is to be done as required as per direction of EIC/ Surveyor.					
4.01	Labour charges	Comp. Job	1	8399.00	8399.00	
4.02	Cost of spares (actual + 10%)	Job	1	25197.00		25197.00
5.00	The alternator Make:Crompton Greaves, 50 KVA, 3 Phase, Machine no. G1R50/43.33, Ref. KEAG9683, PF - 0.8 has to be serviced with AVR check, heat varnishing, megger testing etc is to be done as required as per direction of EIC/ Surveyor.					
5.01	Labour charges	Comp. Job	1	8399.00	8399.00	
5.02	Cost of spares (actual + 10%)	Job	1	20997.50		20997.50

37

Sl. No.	Description of Work	Unit	Qty	Rate (in Rs.)	Labour (in Rs.)	Spares (in Rs.)
6.00	Deck mounted hand movable davit to be serviced along with checking of all the bearing, gears, chain pulley and greasing of all movable parts as required as per direction of EIC/Surveyor.					
6.01	Labour charges	Comp. Job	1	12598.50	12598.50	
6.02	Cost of spares (actual + 10%)	Job	1	41995.00		41995.00
7.00	Checking, replacement and fitting of hard soil cutter teeth of existing composition of material and design (30 nos.) as required as per direction of EIC/surveyor.					
7.01	Labour charges	Comp. Job	1	9658.85	9658.85	
7.02	Cost of material (actual + 10%)	Job	1	125985.00		125985.00
8.00	Navigational Dredge profile gyroscopic system is out of order to be make operational with the repairing /servicing and renewal of spares of computer installed in wheel house along with all accessories like Antivirus(2 year), wire less mouse and wire less key board and UPS etc as required as per direction of EIC/Surveyor.					
8.01	Labour charges	Comp. Job	1	16798.00	16798.00	
8.02	Cost of spares (actual + 10%)	Job	1	100788.00		100788.00
9.00	Fabrication and installation of awning/shed using Polycarbonate sheet of 6mm. over the deck of engine room area (area 28 ft x 18 ft)including steel support and other required material to strengthening the structure including labor & material as required as per direction of Surveyor / EIC.	Sq-m	70	839.90	58793.00	
10.00	Repair and servicing of pulleys { total 08 in nos (02 nos. side anchor winch pulley (Dia: ø 350 mm), 04 nos. ladder gantry stay wire pulley (Dia: ø 500 mm) , 02 nos side sheave pulley(Dia: ø 500 mm)} with its side sheave blocks, Pulley Bushes(Mat: Phosphorous Bronze) and its pins including their winches hydraulic ram seal. Brake shoes required to be checked for wear and tear and its clearance (if not repaired then relaced) as required as per direction of EIC/Surveyor.					
10.01	Labour charges	Comp. Job	8	4199.50	33596.00	
10.02	Cost of spare (actual + 10% basis)	Job	1	83990.00		83990.00
11.00	The inter coolers of M/E, A/E & L/O Coolers to be taken out, tube checked, cleaned and pressure tested, same to be fitted back after servicing as required as per direction of EIC/Surveyor. [The inner coolers of main & Aux. engine to be pressure tested 1.5 times of working pressure.the working pressure apprx.10 bar]					
11.01	Labour charges	Comp. Job	3	8399.00	25197.00	
11.02	Cost of spares (actual + 10%)	Job	1	25197.00		25197.00
12.00	Cutter well mouth strainer to be repaired/renewed with grating of mesh; suitable to prevent stones etc entering in pump casing as required as per direction of EIC/ Surveyor.					
12.01	Labour charges	Comp. Job	1	16798.00	16798.00	
12.02	Cost of material (actual bill/invoice + 10%)	Job	1	12598.50		12598.50
13.00	Fire extinguisher to be hydraulic tested, refilled with same refilling materials and made operational after renewal of accessories, certificate is to be produced as required as per direction of Surveyor/ EIC.					
13.01	DCP 5 KG	No.	1	2687.68	2687.68	
13.02	Mechanical foam type 9 Liters	No.	6	2687.68	16126.08	
13.03	Water Co2 9 liters	No.	1	2687.68	2687.68	
13.04	DCP 10 KG	No.	2	2687.68	5375.36	

37

Sl. No.	Description of Work	Unit	Qty	Rate (in Rs.)	Labour (in Rs.)	Spares (in Rs.)
14.00	01 in nos. FRP Crew Boat / Life Boat (Dia: 4.50 x1.86x0.75 mtr, 06 person) Make: SHIM, Entire rubber fender(Running meter=20) is wasted and perished, the same to be renewed and fitted by good/reputed existing material with strengthning the structure. Fibreglass, hand rest, hull/base, bollard and chair was damaged the same has to repaired by providing necessary material gluing with adhesive to make leak proof and strengthning the structure. Painting of FRP boat with double coat & naming of vessel as required as per direction of EIC..					
14.01	Labour charges	Comp. Job	1	20997.50	20997.50	
14.02	Cost of spares (actual bill/invoice + 10%)	Job	1	41995.00		41995.00
15.00	Supply of fire bucket(5 nos) with scoop as required as per direction of EIC/Surveyor.	Comp. Job	5	839.90	4199.50	
16.00	Main engine, auxilary engine and harbor generator's exhaust trucking pipes to be repaired with lagging by glass wool & ducting with aluminimum sheet. Putting doubler of pipes bottom at the deck for strengthning and water proofing of and changing of damaged nuts and bolts with SS one as required as per direction of EIC/Surveyor.					
16.01	Labour charges	Comp. Job	1	16798.00	16798.00	
16.02	Cost of spare (actual + 10% basis)	Job	1	41995.00		41995.00
17.00	The power pack unit of the hydraulic system is to be thoroughly cleaned, all filters, coolers and other accessories of the unit are to be cleaned/ renewed as per requirement and hyraulic pump, solenoid valves, manual valves etc are to cleaned/serviced as required as per direction of EIC/Surveyor.					
17.01	Labour charges	Comp. Job	1	62992.50	62992.50	
17.02	Cost of spare (actual + 10% basis)	Job	1	41995.00		41995.00
18.00	Except above S.No. all hydraulic lines to be checked and leakage to be arrested with renewal of its gaskets, seals, o-rings, high pressure hoses, solenoid, emergency hydraulic system, sensors etc as required and ensure air free operation as per direction of EIC/ Surveyor. Also fill up the hydraulic oil(supplied by deptt.) in the tank and make operational of all hydraulic lines with ensure smooth flow as per direction of EIC/ Surveyor.					
18.01	Labour charges	Comp. Job	1	20997.50	20997.50	
18.02	Cost of spares (actual bill/invoice + 10%)	Job	1	41995.00		41995.00
19.00	supply and installation of spud carraige sensor.	Comp. Job	1	50394.00	50394.00	
20.00	All pumps of the vessel such as Sea water pumps(1 No.), Fresh Water pumps(1 No.), and GS Pumps(1 No.), emergency hydraulic pump(1 No.) etc. along with its motors and all gauges are to be seved as per direction of Survevor / EIC.					
20.01	Labour charges	Comp. Job	4	6299.25	25197.00	
20.02	Cost of spares (actual bill/invoice + 10%)	Job	1	25197.00		25197.00
21.00	Servicing of hand operated grease pump (Capcity- 5 kg) as required as per direction of EIC/Surveyor.					
21.01	Labour charges	Comp. Job	1	1679.80	1679.80	
21.02	Cost of spares (actual bill/invoice + 10%)	Job	1	1679.80		1679.80
22.00	Engine room service tank (Approx capacity- 3600 liters) has to be cleaned and quantity level indicator has to be made in service tank to detect HSD level as required as per direction of EIC / Surveyor.	Comp. Job	1	33596.00	33596.00	

37

Sl. No.	Description of Work	Unit	Qty	Rate (in Rs.)	Labour (in Rs.)	Spares (in Rs.)
23.00	Box keel coolers of main engine ((a. heat dissipated capacity: 564 kw) b.(hydraulic/Gear oil Plate heat exchanger heat dissipated capacity :344.2 KW)) & Auxilary Engine (heat dissipated capacity: 295 kw) to be taken out, tube Checking. If found damage then blocking/ replacement of tubes subsequently pressure tested and serviced as required as per direction of EIC/Surveyor. [The inner coolers of main & Aux eng to be pressure tested 1.5 times of working pressure approx. 10 Bars]					
23.01	Labour charges	No.	2	8399.00	16798.00	
23.02	Cost of spares (actual bill/invoice + 10%)	Job	1	12598.50		12598.50
24.00	OBM engine (Yamaha make; 25 HP) with all accessories like fuel tank, fuel pipes, fuel pipe connector nipples etc to be repaired/serviced as required as per direction of EIC/Surveyor.					
24.01	Labour charges	Comp. Job	1	16798.00	16798.00	
24.02	Cost of spares (actual + 10%)	Job	1	16798.00		16798.00
25.00	Running routine maintenance has to be carried out as per total running 3000 hrs(on 10.05.2023), of main Engine Gearbox REINTJES-Germany, Modal :- LAF542, Input speed KW 1800/1min, Output speed 455/1min, through renewal of all filters, gear oil, coolants and arresting all leakage ,along with servicing/repairing and renewal of damaged spares e.g water and oil hose pipes. All the digital and analog gauges, meters, safety switch and sensors etc has to be checked then repaired/replaced as required as per direction of surveyor/EIC.					
25.01	Labour charges	Comp. Job	1	29396.50	29396.50	
25.02	Cost of spares (actual bill/invoice + 10%)	Job	1	41995.00		41995.00
26.00	Running routine maintenance has to be carried out as per total Running 3000 hrs(on 10.05.2023), of Main Engine; Cummins, Model :KTA-38-M2, capacity/Power: 1200 BHP, Speed:1800RPM, through renewal of all filters, lub oil, coolants and arresting oil and water leakage. Along with servicing/repairing and renewal of damaged spares e.g water and oil hose pipes, V belts. Engine safety panel parameters e.g. all the digital and analog gauges,meters, LLOP, HCT, over speed etc switch and sensors mounting in engine and wheel house has to be checked then repaired/replaced as required as per the direction of surveyor/EIC.					
26.01	Labour charges	Comp. Job	1	29396.50	29396.50	
26.02	Cost of spares (actual bill/invoice + 10%)	Job	1	104987.50		104987.50
27.00	Running routine maintenance has to be carried out as per total Running 4090hrs(on 10.05.2023), of Aux.Engine, Make:Cummins, Modal; KTA-19-D M1, Capacity/Power: 550BHP, Speed: 1500RPM, through renewal of all filters, lub oil, coolents and arresting the all oil and water leakage ,along with servicing/repairing and renewal of damaged spares e.g water and oil hose pipes, V belts, engine safety panel parameters e.g. all the digital and analogue gauges,meters, LLOP, HCT, Over speed etc switch and sensors installed in engine and wheel house as required as per the direction of surveyor/EIC.					
27.01	Labour charges	Comp. Job	1	20997.50	20997.50	
27.02	Cost of spares (actual bill/invoice + 10%)	Job	1	125985.00		125985.00

39

Sl. No.	Description of Work	Unit	Qty	Rate (in Rs.)	Labour (in Rs.)	Spares (in Rs.)
28.00	All PLC system, parameters/gauges, meters fitted in control cabin control panel including dredge pump clutch control switch, carriage joystick and engine (main & auxillary) speed control regulator to be checked, calibrated and replace (if required). Spud and winches speed control regulators to be checked and repaired as required as per direction of Surveyor / EIC.					
28.01	Labour charges	Comp. Job	1	41995.00	41995.00	
28.02	Cost of spares (actual bill/invoice + 10%)	Job	1	167980.00		167980.00
29.00	Both spud's lock pin 2 nos, spud holes, hydraulic pipes carriage framing, spud lifting wire 2 nos etc. to be repaired/serviced as required as per direction of EIC/Surveyor.					
29.01	Labour charges	Comp. Job	1	29396.50	29396.50	
29.02	Cost of material (actual + 10%)	Job	1	83990.00		83990.00
30.00	Cutter ladder greasing line and valves has to be checked and serviced to make fully operational as required as per direction of EIC/Surveyor.					
30.01	Labour charges	Comp. Job	1	20997.50	20997.50	
30.02	Cost of material (actual + 10%)	Job	1	25197.00		25197.00
31.00	The following tanks to be cleaned :- 2 nos water ballast tank(18.12 cu.m.), 1no fresh water tank (10 cu.m.) , 1no fresh water tank (5 cu. m.). The new gasket/packing and SS nut bolts has to be provided at manhole cover as required as per direction of EIC.					
31.01	Labour charges	Comp. Job	4	5879.30	23517.20	
31.02	Cost of material (actual bill/invoice + 10%)	Job	1	41995.00		41995.00
32.00	Discharge bend pipe (450 mm dia) from dredge pump and both side discharge nozzle was wasted and perished. The same has to be repair & fitted as per existing pattern as required as per direction of EIC/Surveyor.					
32.01	Labour charges	nos	3	16798.00	50394.00	
33.00	Tank cleaning & leakage repair of following tanks to be carried as per good ship repair standards 2 nos water ballast tank(18.12 cu.m.), 1no fresh water tank (10 cu.m.) , 1no fresh water tank (5 cu. m.) as required as per direction of EIC/Surveyor.	Comp. Job	4	20997.50	83990.00	
34.00	Rubber packing/gasket of engine room, sky light glass, void tank's manhole, engine room hatch covers and store hatch etc was painted and hardened, the same has to be replaced with existing type of materials as required as per direction of EIC/Surveyor.					
34.01	Labour charges	Comp. Job	1	10078.80	10078.80	
34.02	Cost of material (actual bill/invoice + 10%)	Job	1	16798.00		16798.00
Total(in Rs.)					953706.45	1454706.80
Work Order value (in Rs.)					2408413.25	
Say, Rs.					2408413.00	

(Rupees Twenty four lakh eight thousand four hundred and thirteen only)

GST Extra as applicable

37
DD(M)