

ENQUIRY

HOOGHLY DOCK & PORT ENGINEERS LTD.

(A GOVT. OF INDIA UNDERTAKING)

UNIT : NAZIRGUNGE WORKS

P.O. - D.S. Lane, Howrah 711 109

PHONE : 2688-8000;

FAX NO.: (033)2688-5852

E-MAIL : hdpeInw@satyam.net.in

Website : www.hooghlydock.gov.in

Enquiry No. 10/E/0207/09-10/P-121

Dated : 15-03-2010

To,

You are invited to quote for the following work to be executed at our Works at Nazirgunge, Howrah - 711 109.

For Hooghly Dock & Port Engineers Ltd.

Head. [PPC]

Last date of submission : 25/03/2010

Annexure - I

Scope of work for fabrication, assembly, installation, testing / assistance in testing, inspection and commissioning of electrical cabling, equipment and associated systems / sub-systems for Self Loading Cargo Vessel. [Yard: P-121]

General requirements :-

1. The contractor shall interact with IRS surveyors in consultation with Engineer In-charge HDPE, wherever necessary for obtaining approval /clearance of fabrication, laying out, installation, testing and commissioning work.
2. The contractor should carryout the job taking every precaution not to interrupt or jeopardise the on-going jobs of HDPE in near proximity.
3. The contractor is liable to account for consumption of all free issue materials.
4. Any faulty workmanship, defects/damages detected by Engineer In-charge / IRS surveyor shall be reworked / rectified without any additional cost.
5. Contractor shall take delivery of all materials required for the job from Yard Stores including transportation of free issue materials up to work site/ on board etc. It is the responsibility of the contractor to carry out on board and at any elevation as per drawing/ship building practice for completion of work package.
6. If from inadvertence or oversight anything has been missed out in the scope of supply, but essential for guaranteed performance and/or proper operation of equipment the same shall be deemed to be included in the scope of supply without any cost implication.
7. HDPE shall have right to terminate the services of the contractor and engage another contractor, during the pendency of work, at the contractor's Risk & Cost.

Contd.... P/2

SCOPE OF WORK:

1. **LINING OUT WORK:**

Marking and fitting of various items e.g. Cable, Trays, Hangers, WT/NWT Deck / Bhd. Gland Box, flat bar type cable ways for electrical, electronic, navigation & communication equipment and all other electrical items in all compartments, various spaces as per relevant cable route layout drawings and as per instruction of Engineer In-charge. On completion of making of each compartments/spaces, the same is to be offered to HDPE for inspection. Subsequent rectification / modifications, if any, are to be carried out by the contractor free of charge, as advised by Engineer In-charge.

2. **CABLE ROUTE WORK:**

Preparation of cable route including all necessary hot work, fitment of lugs, chairs for cable hangers and trays, fitment of hangers & trays, piercing and fitment of cable glands (including running and final welding) as per Cable Route / Installation layout drng. The contractor shall also be required to do painting of lugs, chairs, trays, hangers etc. whatsoever is laid by them. The cable trays are to be, as far as practicable, straight and accessible and as high as possible above bilges in the engine room. The cable bends should be such so that these are not subjected to movements by expansions. Cable runs normally should not include joints. If at all a joint is necessary, it is to be carried out with prior approval and with due consideration to the methods of splicing that does not impair the properties of cable and which ensures that all conductors are adequately secured.

Cables exposed to risk of mechanical damage are to be protected by metallic channels/casings/conduits, so that the protective covering can withstand the possible damage. These casings are to be galvanised for corrosion prevention. Cables are to effectively supported and secured in a manner that prevents damage to their coverings. Penetration of WT Bhds. / Dk.hds is to be carried out with packed gland boxes ensuring watertight integrity and strength of Bhds / Dk.hds.

3. **OUTFITTING WORK INCLUDING INSTALLATION OF EQUIPMENT :**

This job involves hot work i.e. fitting/welding of seats of equipment, lugs, pads etc. of all equipment fittings with necessary vibration dampers wherever necessary as per drawings/specification requirement. The contractor will also be required to do painting of the hot work area i.e. lugs, brackets and other equipment mountings. Installation of electrical, electronics and navigation items are to be carried out as per required drawings. *A list of major equipment / items and the list of light and associated fittings which are to be installed is given in Annexure- II.* It may not be possible to provide drawings showing exact locations for all items, which will be mutually decided at Site with Engineer in charge of HDPEL.

4. **LAYING, DRESSING AND CLAMPING OF CABLES:**

The job involves taking measurements of cable lengths based on cable schedule, taking approval of HDPE on measured length, laying of cables, dressing of cables and finally clamping of suitable strips (to be provided by the contractor). The distance between supports for horizontal and vertical runs of cables is to be decided according to type/size of cables, meeting IRS rule requirement. The cables will be required to be laid on trays, hangers, and conduits or M.S strip as applicable throughout the Vessel, as per system drng. *Estimated lengths of cables to be laid and BOM for cable hangers, m.s strips, trays, glands etc. are mentioned in page -6 &7.* The job involves end preparation of cables and termination of cables to various equipment/fittings related to all the electrical and electronic equipment and machinery of the vessel. All items whatsoever are required to complete cable termination as per IRS rules, are to be treated as covered in the scope of work. Fitting of cable glands or replacement of cable glands by correct size wherever necessary will form a part of this job.

5. The entire electrical installation, cable laying / dressing, identification marking, termination, fitment of equipment etc. shall be as per relevant IRS rule requirement / contract specifications. Any rework necessary to satisfy the requirement of the IRS authority/Engineer In-charge, should be carried out free of charge. Any faulty installation or workmanship by the contractor have to be rectified within the agreed time frame. In case of time over run by the contractor beyond scheduled completion time, the outstanding job may be rectified by HDPE or HDPE appointed agencies and cost of all such work will be recovered from the contractor's bill.
6. Following activities are also to be carried out by the contractor :-
 - (a) Earthing of various equipment as per standard ship building practice.
 - (b) Providing of W.T. Glands to the satisfaction of IRS surveyor / Engineer In-charge.
 - (c) Fitment of cable identification tally and equipment tallies.
 - (d) Fitment of conduits for mechanical protection.
 - (e) Fitment of cable glands on equipment and bulkheads/decks etc. as applicable.
 - (f) Filling of WT and NWT gland boxes with compound.
 - (g) Insulation test of entire installation to the satisfaction of IRS surveyor/Engineer In Charge and submitting signed test records/inspection report Engineer In-charge.
7. All piercing of deck/bulkhead and fitting / welding of deck tube/bhd. Glands, WT multiple glands, NWT coamings are to be carried out by the contractor. Necessary marking on the bhd/deck, after clearance by Engineer In-charge, cutting of deck/bhd., tack welding and running welding are to be done by the contractor and for NWT glands and coamings filling of compound and proofing by approved method should also be done by the contractor. Fitment of individual deck tube/ bhd. Gland to suit the cable sizes at suitable locations is to be carried out by the contractor. **Filling compound for multiple glands will be provided by HDPE. Multiple cable gland WT and NWT to be manufactured by the Contractor without any extra cost while materials for the same will be supplied by HDPE.** Other filling and associated items are to be supplied by the contractor.
8. Seating/ mounting for all equipment/fittings shall be fabricated and erected at site by the contractor. Raw materials required for seating will be provided by HDPE. Drill holes and minor modifications of seats in the event of mismatching at the time of equipment installation on seats shall be carried out by contractor without any cost implications. All **fasteners** for fitment of equipment /fittings, nuts and bolts for cable tray, fasteners for cable hangers, cable clips, cable binding ties, fenders, cable identification brass clips, PVC sleeves/tapes, glass fibre tapes, grommets for panelled compartments will **have to be supplied by** the contractor. Normally all equipment will be supplied with loose / fitted cable glands. However, in the event of any short supply/mismatching of cable glands. **The contractor shall be to fit the same. HDPE will supply the cable glands. Loose cable glands supplied with the equipment are to be fitted by the contractor on equipment.**
9. It is the responsibility of the contractor to conduct and assist HDPE for successful **testing/trials** of all electrical equipment like main and auxiliary D.G. Sets, main switch board, control panels etc. Necessary tools and tackles manpower in connection with the testing/trials are to be provided by the contractor. Rest of electrical items like Motor starters, control panels etc. to be commissioned by contractor.

10. DRAWINGS:

(a) **HDPE shall issue two sets of working drawings to the contractor. The contractor should ensure proper care/custody of the drawings till the completion of the job.**

(b) **The Route diagram to be prepared by the Contractor in consultation with HDPEL site officer.**

11. MODIFICATION:

(a) Contractor shall carry out minor/standard modifications which are normally envisaged during installation work. Any major modifications/rework etc. during installation as required by Engineer In-charge due to system / design changes etc. will be paid extra and the rate for the same will be mutually settled after estimating the total quantity.

(b) Minor modifications as necessary, subsequent to installation, to avoid interference with other equipment/erection/trials work, which is to be rectified to the satisfaction of Engineer In-charge/IRS surveyor, at no extra charge. Any modification/rework required to be carried out due to the fault of the contractor shall be carried out free of charge.

12. FACILITY REQUIRED TO BE PROVIDED UNDER SCOPE OF WORK:

(a) All tools and tackles and test equipment required for installation, testing/trials on board are to be provided by the contractor. All test equipment should have proper calibration certificates acceptable to Engineer In-charge / IRS surveyor.

(b) Contractor shall have their own sets of all necessary electric/gas welding equipment and related accessories for their work. HDPE will provide power, compressor, air, water supply at one convenient point(s). Necessary terminal lead etc. shall be arranged by the contractor. Gas Cylinders and electrodes will be provided by HDPE. The contractor shall have to arrange staging for their erection/commissioning work. However, staging erected by HDPE may be issued by them with the consent of the Engineer-in-charge.

(c) Contractor should provide **IRS qualified welders** to meet welding quality requirement on board. They should also provide qualified electricians, fitters, qualified supervisors, experienced Engineers for carrying out/supervision work.

(d) Power supply necessary for work and testing of equipment will be fed from shore supply through switch board at the ship. Availability of power supply point(s) is to be decided mutually by the contractor and Engineer In-charge.

(e) Contractor shall supply all required installation hardware e.g. G.I. bolts, nuts, washers, other materials (plain and spring), fibre washer, insulated cable binding strip and ties, number ferrules, cable lugs, cable sockets, insulated tapes, cable marking strip, roofing bolts and nuts with washer, PVC tube, ampere tape and all necessary cable installation/connection materials for completion the electrical work, 6" width 20 swg G.I. sheet required for covering all tray at Cargo hold.

(f) Temporary light connection/arrangement required for the work is to be arranged by the contractor. During execution of electrical installation, testing and commissioning, good electrical engineering practices are to be followed to avoid any accident. All hand tools with metal cases are to be earthed properly before use.

(g) **All materials for installation on board to be taken from store (NW) by the contractor.**

13. SCHEDULES :

- (a) While executing the work, the contractor shall consider various interdependencies with the on going jobs of other departments/contractors are have to carry out the job in tandem following correct sequence. It is to be noted that the contractor shall not work in isolation and have to work keeping close liaison with other agency's working on the vessel.
- (b) If necessary, the contractor shall re-schedule their activities/time frame to meet HDPE fitting out programme on board after consultation with the Engineer In-charge.
- (c) Electrical installation work is to be carried out simultaneously with other groups viz. Machinery, plumbing, structural etc. who will also be engaged in the respective jobs. Manpower planning and deployment of personnel at site to complete the work in mutually agreed time period is to be planned by the contractor. Deployment of manpower shall be forwarded to Engineer In-charge in advance for his approval.
- (d) Contractor shall provide adequate number of skilled supervisors, workmen and labourer to meet the mutually agreed work schedule.
- (e) For completion of work to meet HDPE schedule, the site work force of the contractor may have to work *beyond the normal working hours for which no additional payment will be made to the contractor.*
- (f) HDPE shall supply cables of total length (as per manufacturers' standard drum length) as per the estimated cable schedules. **In case the total cable length fall short due to wrong cutting, wastage, misuse by the contractor, the same have to be replaced/necessary deductions will be made by HDPE from their running bills.**
- (g) The contractor shall submit the record of all materials, their quantity, weight etc. taken on board duly verified by Engineer-in-Charge.
- (h) For taking IN and OUT of tools and tackles etc. procedures as per HDPE norms will have to be followed by the firm. List of tools and tackles, instruments and accessories for erection and testing will have to be brought by the contractor in advance and list of such tools and tackles etc. are to be forwarded to Engineer In-charge.
- (i) If any additional job of similar nature or in line to any listed items to be done, the same will be considered at the price of ordered rate.

List of Electrical Equipment for Self Loading Cargo Vessel. [Yard: P-121] (ANNEXURE II)

Sl.No.	Description	Qty	Unit Rate (Rs.)	Total (Rs.)
1.	Main Switch Board	1 no		
2.	Shore Connection Box	1 no		
3.	Transformer Rectifier cum Battery Charger	1 no		
4.	Battery Charger E/R	1 no.		
5.	Lighting Transformer 12.0 KVA	1 no		
6.	Lighting D.B.	4 nos.		
7.	Navigational Light Panel	2 nos.		
8.	Starters (16 Nos. DOL & 2 Nos. S/D)	18 nos.		
9.	Anchor Windlass Control Panel & Controller	2 nos.		
10.	Ramp Winch Control Panel	1 no		
11.	Vent DB Control Panel	1 no		
12.	HRP Control Panel	2 nos.		
13.	W/H Console, Size- 2100 (L) x 850 (W) x 1000 (H) Details of work for console please see Annexure III	1 no.		
14.	Mounting & connection of Nav. Radar both Scanner & W/H unit with all materials (if required)	1 set.		
15.	CVS Control Panel in W/H Console	1 no.		
16.	VHF Set with Antenna	1 no.		
17.	MF/HF Radio, NBDP unit, charger, Antenna, Printer & Alarm Unit	1 set		
18.	Cooking Range 5 KW	1 no.		
19.	Window Wiper Control Panel in W/H Console	2 nos		
20.	H. Horn	2 nos		
21.	General Alarm bell	4 nos.		
22.	Echo-Sounder unit with power unit (only W/H) & J.B except Hull Unit	1 Set.		
23.	Oscillating Cabin Fan	20 nos.		
24.	Battery Box	7 nos.		
25.	Flame Proof Flood Light	6 nos.		
26.	Flame Proof ON OFF Switch, Socket & Plug	6 nos.		
27.	Flood Light (500 W)	4 nos.		
28.	Search Light (1000 W)	1 no.		
29.	Boat Compass	1 no.		
30.	Mounting & connection of GPS Receiver with computer interface & other items (Both Antenna & W/H unit if required)	1 set.		
31.	3 Ph Bench Grinder	1 no.		
32.	Hand Drill (Bench Mounted)	1 no.		
33.	Table Lamp	5 nos.		
34.	NWT Light Fittings	22 nos.		
35.	Water Tight E/R Light Fittings	18 nos.		
36.	Mirror Light	9 nos.		
37.	WT Incandescent Light fittings	30 nos.		
38.	Bunk Light	12 nos.		
39.	WT 10 A DP ON / OFF Switch	10 nos.		

Sl.No.	Description	Qty	Unit Rate (Rs.)	Total (Rs.)
40.	NWT 10 A DP ON / OFF Switch Socket & Plug	22 nos.		
41.	WT 24V. D.C. Inc. Light	22 nos.		
42.	10 A. WT. Plug & Socket	20 nos.		
43.	10 A. WT DP ON / OFF Switch, Socket & Plug	24 nos.		
44.	5 A. NWT Socket or Socket with switch	50 nos.		
45.	FLP ON / OFF Switch	2 nos.		
46.	FLP Light fitting, 24 V	3 nos.		
47.	ME Alarm Panel (2 nos. E/R & 2 nos. W/H) & AE Alarm panel (3nos E/R)	7 nos.		
48.	Junction Box (3 way & 4 way)	40 nos.		
49.	Navigation Light (2-tier)	10 nos.		
50.	Cable 3x50 mm ²	100 M		
51.	Cable 3x16 mm ²	200 M		
52.	Cable 3 x 6 mm ²	600 M		
53.	Cable 3x2.5 mm ²	500 M		
54.	Cable 2x2.5 mm ²	700 M		
55.	Cable 2x1.5 mm ²	2500 M		
56.	Cable 19x1.5 mm ²	200 M		
57.	Cable type TX01 for HRP system 19X1.5 mm ²	800 M		
58.	Cable type TX01 for HRP 3X1.5 mm ²	300 M		
59.	Cable type TX01 for HRP 3X1.0 mm ²	100 M		
60.	GI Perforated Cable Tray with M.S. Chair 75 mm	200 M		
61.	GI Perforated Cable Tray with M.S. Chair 100 mm	100 M		
62.	GI Perforated Cable Tray with M.S. Chair 150 mm	100 M		
63.	GI Perforated Cable Tray with M.S. Chair 200 mm	250 M		
64.	GI Perforated Cable Tray with M.S. Chair 300 mm	50 M		
65.	Installation of 4 Inch G.I Pipe with associated items used for cable protection	40 M		
66.	Installation of 2 Inch G.I Pipe with associated items used for cable protection	20 M		
67.	M.S. Strip Size 30 mm x 5 mm thick	100 M		
68.	Telephone System with power and control equipments and E/R Audio Visual Alarm system (1 set)	3 Nos.		
69.	Telephone cable (2 pair)	100 M		
70.	TP Main Switch Fuse Unit, 415 V, 32 A	2 Nos.		
71.	300 Ltr. Refrigerator	1 No.		
72.	Cover 200 mm cable tray in cargo hold area by G.I. sheet gauge 18 swg	50 meter (approx)		
73.	Cover 300 mm cable tray in cargo hold area by G.I. sheet gauge 18 swg	50 meter. (approx)		

NOTE :-

1. This tender may be downloaded from our website "www.hooghlydock.com".
2. Offer should strictly conform to specification, indicated above.
3. Quotation to be submitted in SEALED COVER with Enq. No. & Last Date of submission clearly marked on the cover. **Offer to be submitted in 2-part bid, part-I to consist the 'Techno-commercial bid' and part - II the 'Price Bid'.**
4. Any quotation delivered to us after the last date of submission may not be considered.
5. Please give Quotation. ONLY on the basis of Unit mentioned in the Enquiry.
6. Quotation may be rejected if there is any OVER WRITING in the Offer.
7. Statutory terms and conditions as per annexure – IV.
8. Price preference to Govt. undertakings, S.S.I. Units may be considered as per standard Regulations.
9. Management Reserves the right to reject any or all Quotations without assigning any reason thereof.

Hooghly Dock & Port Engineers Ltd.
Nazirgunge Works.

Scope of Work for W/H Console (P-121) :

Console frame structure already made by yard as per drawing no. HDPEL/P122/79 Rev. A2 (Enclosed). Top & front side of console are to be fixed with marine ply and properly fitting & pasting of Sunmica. Then all equipments cut-out size are to be out accordingly. All materials are to be fitted & connected. In the front side 4 nos. suitable door are to be provided. Back side are to be fitted with glasswool & ply. All sides to be covered with polished wooden beads. All above work to finished by a good carpenter.

HDPEL Scope of Supply :

Marine ply with loose Sunmica, Glass wool, ply for door side & back.

Contractor Scope of Supply :

Favicol, wooden bead with polish, Door hinged and Handle, Screw & nut & bolts etc. Front Handle with hinges (material Aluminium /steel).

Hooghly Dock & Port Engineers Ltd.
Nazirgunge Works.

MAJOR TERMS AND CONDITIONS

1. DELIVERY / EXECUTION is to be made/carried out at our Works.
 2. **Security Deposit** :- Contractor has to submit a Bank Guarantee [in the format of HDPEL, to be collected from our accts. Deptt.] from a nationalised bank; for an amount equivalent to 5% of the total P.O value towards Security Deposit within 7 days from the date of receipt of the order. This amount will be released to the contractor on successful completion of the job subject to submission of the Performance guarantee @ 10% of the P.O value.
 3. **Payment Terms**: Payment will be made on certified running bill by the 10th of every month after due verification by HDPEL.
 4. **Job completion Period**: As per HDPEL schedule subject to the availability of materials and site clearance for each of the categories of work.
 5. **Inspection**: IRS Surveyors and Head (SBR) or his authorized representative.
 6. **Bill Certification**: Running Bill on the 1st of every month will be certified by Head (SBR) of HDPEL..
 7. **PERFORMANCE GUARANTEE**: Contractor will have to provide a performance guarantee to the extent of 10% of the value of the order in the form of a bank guarantee [in the format of HDPEL, to be collected from our accts. Deptt.] from a nationalised bank; prior to submission of your final bills. We would retain the same as Performance Guarantee. On your written request this Performance Bank Guarantee would be returned to you after expiry of Performance Guarantee period, which is **6 months** from the date of completion of the job.
 8. **LIQUIDATED DAMAGE**: Liquidated damage @1% per week or part thereof, subject to a maximum of 10% of the value of the order would be charged in case of your failure to execute the job within the delivery period, to be mutually agreed upon.
 9. **RISK PURCHASE CLAUSE**: In case of non-delivery/non-execution of the order by you, we would be free to execute the job from other sources, at your risk & cost which will be recovered from your pending and/or future bills with a penalty of 10% of such cost.
 10. In case of any dispute the decision of our Chairman and Managing Director would be final and binding on both the parties.
In case of Legal Dispute, the same would be subject to the jurisdiction of Calcutta High Court.
 - NOTE**: Specific clauses for payment etc. would depend on the nature of job.
 11. Management reserves the right to reject any or all Quotations without assigning any Reasons thereof.
 12. Please mention your **PF and ESI registration nos.** in the offer. **This is mandatory.**
 13. All statutory deductions e.g., ESI, PF, Income Tax, work contract tax etc., will be made as per rules.
-