E N Q U I R Y

IRQS

AN ISO 9001 UNIT

HOOGHLY DOCK & PORT ENGINEERS LTD.

(A Government of India Undertaking)
SHIP BUILDERS – SHIP REPAIRERS – ENGINEERS

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:Enq. no. 10/0179/09-10/ P-123 to 128/E-140

: Date: 13.05.2010

:Due Date: 31.05.2010

To
M/s

Sub: Supply of AC Distribution Box, AC Shore Connection Box, Lighting Transformer etc. for 6 nos. Work Boat of IWAI

Sealed tenders are invited from manufacturers for supply of AC Distribution Boxes for 6 nos. Work Boat of IWAI.as per enclosed Technical specification.

1] Sealed offers are to be submitted in Two Parts.

a) **Part –I** (Techno Commercial Bid) – To contain, all technical particulars, leaflets, Drawing, Specifications, Delivery Time & other Commercial terms.

b) **Part – II** (Price Bid) – To contain Price only.

Both Part I & II duly sealed & marked be submitted in main cover superscribed Tender no.

2] AC Distribution Boxes shall comply to rules & regulations of Indian Register of Shipping for construction and Classifications of Indian Waterways vessels.

3] INSPECTION: By Indian Register of Shipping & HDPEL representatives.

4] DELIVERY:

5] SECURITY DEPOSIT:
The successful tenderer shall have to be deposited 5% of the total value of the purchase order & Security Deposit in the form of Cash/Demand Draft or Bank Guarantee.

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6] L.D.CLAUSE :

In case of delay in delivery of the materials beyond contractual stipulation, Liquidated damage @ 1% per weeks delay or part thereof subject to a maximum of 10% of the value of the lot shall be imposed and recovered from you.

7] RISK PURCHASE:

In the event of failure in supplying the materials as per contractual terms, HDPEL reserves the right to cancel the order and procure the materials from any other source at your risk of cost.

8] PERFORMANCE GUARANTEE:

Successful bidder / bidders are to submit Bank Guarantee for 10% value of the Purchase Order towards Performance of the equipment, Valid up to 18 months from the date of supply or 12 months from the date of commissioning.

9] VALIDITY OF OFFER:

90 days from the date of opening.

for Hooghly Dock & Port Engineers Ltd.

Head (M.S.D) – NW

enq.distribution box(WB)

Annexure 'I'

Tender no. 10/0179/09-10/P-123 to 128/E-140 dt.13.05.2010, Due dt.31.05.2010

TECHNCAL SPECIFICATION FOR 6 NOS. WORK BOATS (YD P-123 – P-128) :

1) **220V 3 PH AC Distribution Box**
2) **220V 1 PH AC Distribution Box**
3) **415V AC Shore Connection Box**
4) **220V AC Shore Connection Box**
5) **415V AC Starters**

Inspection:

All the equipment are to be inspected at the manufacturer's premises by HDPEL representatives, however drawings are to be approved by HDPEL initially & by IRS subsequently before manufacture.

Drawing & Certificates:

In general the Distribution Box construction, design, electrical performances etc. are to be a per IRS rule requirements. Panels are to be designed according to approved SLD (pages 4,5,15-20), Service condition, Painting, General construction, Electrical Design & Make of Components etc. guide lines as supplied with this specification. Drawings in details shall be prepared. Bus Bars, Cables and all other components are to be properly rated and identified.

1. Manufacturers Test & Guarantee certificates in duplicate are to be supplied along with each individual Panel.
2. 4 sets of complete ckt drgs. and 6 sets Foundation details along with GA for each item are to be provided for yard approval and preliminary foundation work within two weeks of receipt of order.
3. Necessary sets of dimensional drgs. circuit diagrams & bill of materials comprising make and rating of components are to be submitted for IRS approval. IRS approvals are to be obtained by the manufacturer.
4. 2 set of IRS approved drawings for each panel are to be forwarded to us for our record.
5. 18 sets of "AS MADE" drawings of each item are to be supplied with the equipment.

Service condition:

Panels are to be of Marine type and shall withstand without hampering its normal operation marine atmosphere, tropical condition and marine adversaries.

Painting:

Light BS Grey Shade 697 of IS 5 outside and White Shed inside with all necessary pre treatments etc.

Make of the components:

For reference the following makes can be considered. However all the components are to be used of IRS approved Type and Make, having Rating as per Approved drawings.

Push Buttons	Siemens / BCH/L&T/Control & Switchgear
MCB	MDS/Siemens/L&T/Merlin Gerin/Telemecanique
SFU	Siemens / L&T/Standard/Havells
Overload relay with SPP	Siemens / L&T
Contactors	Siemens / L&T/Control & Switchgear / Andrew Yule
Control Transformer	Reputed
HRC fuse	Siemens/GE/EE/L&T
Lugs and pins	Dowells'
Indicating Lamps	Siemens/L&T/Telemecanique/BCH
Switches	Siemens/L&T/Kaycee/Control & Switchgear
Meters	AEG/IMP/MECO

1) 220V 3 PH AC DISTRIBUTION BOX &
2) 220V 1 PH AC DISTRIBUTION BOX

Quantity: 1 number each per Vessel (Total 3 Ph DB – 6 nos. & 1 Ph DB – 6 nos.)

General Construction:
The D.B. is to be dead front, drip proof, IP-22 protected, fully enclosed, Bulkhead mounting type and made of 14 SWG sheet steel on suitable, MS angle iron structure. Removable type bolted Gland plates fitted with sufficient numbers of Glands are to be provided with proper gasketting arrangements at the bottom.

For external cable connections ELMEX connectors are to be provided at the bottom side of D.B. keeping sufficient space for easy cable connection.

All bus-bars are to be made from annealed tinned copper bar in accordance with Classification Rules and are to be adequately supported to resist fault stress. HRPVC insulated copper conductor flexible cables of 1.1KV grade with proper identification ferrule marks at both ends of sufficient capacity are to be used for internal wiring (Control cables minimum 1.5 square mm & Power cables minimum 2.5 square mm). Air gap between bus-bars between bus-bar and frame is to be as per IRS rule.

All incoming & outgoing feeder & Top cover are to be properly identified with nameplates. All nameplates are to be of white sandwiched type having engraved black lettering on white surface (reverse is not acceptable). Sufficient numbers of "DANGER" plate are to be provided in Red lettering on white surface.
Two numbers of earthing bolts with nuts and Symbols are to be provided on two sides.

Electrical Design:

1) **220V 3 Ph AC Distribution Box**
The D.B. will be fed through 220V, 3 Phase AC supply.
The DB contaqins 3 nos. indicating lamps & fuses following Incomers/Feeders:-
1) TP MCB 20A 1 No.
2) DP MCB 10A 6 Nos.
3) DP MCB 6A 13 Nos.

2) **220V 1 Ph AC Distribution Box**
The D.B. will be fed through 220V, 1 Phase AC Supply.
The D.B contains 1 no. indicating lamp & fuse following Incomers / Feeders:-
1) DP MCB 6A 7 Nos.

3) 415V AC SHORE CONNECTION BOX

Quantity: 1 number per vessel (Total – 6 nos.)

General Construction:

The S.C.B. is to be of dead front, drip proof, IP-56 protected, fully enclosed, Bulkhead mounting type and made of 14 SWG sheet steel on suitable MS angle iron structure. For MSB to shore connection box cable (2 x 3 x 25 sq.mm cable) and Earth connection copper bar with rolled brass bolts, nuts & washers to be provided with a removable type gland plate, Gland & gasketing/bolting arrangement. 3 Phase Power available indication with fuse. For shore supply cable connections 60A watertight 4-pole plug socket to be provided (plug top to be supplied loose) at the bottom keeping sufficient space for easy cable connection. (Male part to be at Shore Connection Box). HRPVC insulated copper conductor flexible cables of 1.1 KV grade with proper identification ferrule marks at both ends of sufficient capacity are to be used for internal wiring (Control cables minimum 1.5 sq.mm). Air gaps are to be as per rule. All incoming & outgoing feeder & Top cover are to be properly identified with nameplates. All nameplates are to be of white-sandwiched type having engraved black lettering on white surface (reverse is not acceptable). Sufficient numbers of "DANGER" plate are to be provided in Red lettering on white surface.

Two numbers of panel earthing bolts with nuts and Symbols are to be provided on two sides.

Electrical Design:

The S.C.B. will be fed from 3 Phase + Neutral 415V A.C. supply.

The S.C.B. in general are to be provided with 1 No. TP 60A SFU/MCB, 1 No.3 Phase 60A Plug & Socket for incoming supply, Voltmeter with selector switch, Indicting lamps, 1 No. PSI with Push button, 1 No. Frequency meter & control fuses etc.

4) 220V AC SHORE CONNECTION BOX

Quantity : 1 number per Vessel (Total – 6 nos.)

General Construction:

The S.C.B. is to be of dead front, drip proof, IP-56 protected, fully enclosed, Bulkhead mounting type and made of 14 SWG sheet steel on suitable MS angle iron structure.

For BCH to shore connection box cable (2 x 2.5 sq.mm cable) and Earth connection Elmex terminals are to be provided.

For shore supply cable connection Latch & Key type metal clad WT male & female 1 Ph 220V 3 PIN 25A Switch Socket outlet & plug to be provided. Plug is to be of Female type. 1 Ph Power available indication with fuse.

HRPVC insulated copper conductor flexible cables of 1.1 KV grade with proper identification ferrule marks at both ends of sufficient capacity are to be used for internal wiring (Control cables minimum 1.5 sq.mm). Air gaps are to be as per IRS rule.

All incoming & outgoing feeder & Top cover are to be properly identified with nameplates. All nameplates are to be of white-sandwiched type having engraved black lettering on white surface (reverse is not acceptable). Sufficient numbers of "DANGER" plate are to be provided in Red lettering on white surface.

Two numbers of panel earthing bolts with nuts and Symbols are to be provided on two sides.

Electrical Design:

The S.C.B will be fed from 1 Phase + Neutral 230V A.C. supply.

The S.C.B. in general are to be provided with 1 No. Latch & Key type metal clad WT male & female 1 Ph 220V 3 PIN 25A Switch Socket, for incoming supply HRC fuse with base, Indicating lamp & control fuses etc.

5) 415V AC STARTERS

Quantity : 6 number per Vessel (Total – 36 nos.)

General Construction:
Starters are to be of dead front, drip proof, IP-22 protected, fully enclosed, Bulkhead mounting type and made of 14 SWG sheet steel on suitable MS angle iron structure. Removable type bolted Gland plates fitted with sufficient numbers of Glands are to be provided with proper gasketting arrangements at the bottom.

For external cable connections ELMEX connectors are to be provided at the bottom side of Starter keeping sufficient space for easy cable connection.

HRPVC insulated copper conductor flexible cables of 1.1KV grade with proper identification ferrule marks at both ends of sufficient capacity are to be used for internal wiring (Control cables minimum 1.5 sq.mm & Power cables minimum 2.5 sq.mm).

All incoming & outgoing feeder & Top cover are to be properly identified with nameplates. All nameplates are to be of white sandwiched type having engraved black lettering on white surface (reverse is not acceptable). Sufficient numbers of "DANGER" plate are to be provided in Red lettering on white surface.

Two numbers of earthing bolts with nuts and Symbols are to be provided on two sides.

Electrical Design:
All the Starters will be fed from 415V, 3 Phase, 50 Hz A C supply.
The Starter panels in general are to be provided with:- isolating MCB, push buttons (on/off etc.), indicating lamps (on/off/overload etc.), contactor, overload relay with spp, control transformer, control fuses, terminals etc.

STARTER RATINGS:

1)	S/D (STAR/DELTA)	7.5 KW	1 No.	Remote Off facility
2)	DOL (Direct On Line)	2.2 KW	1 No.	----------
3)	DOL (Direct On Line)	1.5 KW	1 No.	Remote Off facility
4)	DOL (Direct On Line)	0.5 KW	2 Nos.	Remote Off facility
5)	DOL (Direct On Line)	0.15KW	1 No.	Remote Off facility

for Hooghly Dock & Port Engineers Ltd.

Head (Materials)-NW