



**MAZAGON DOCK SHIPBUILDERS LIMITED**

(Formerly known as Mazagon Dock Ltd.)

CIN : U35100MH1934GOI002079

(A Government of India Undertaking)

Shipbuilders to the Nation

Dockyard Road, Mazagon,

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INDIA

**Electrical Work for 2000T Hydraulic Press in  
ALY & Making of Earth Pits at various locations  
of East Yard & Alcock Yard, MDL  
VOLUME-III**

**Scope of Work, Tender Drawings  
& Price Bid (Part-II)**

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**1 कार्य का ब्योरा / BRIEF SCOPE OF WORK:**

**A. ELECTRICAL WORK:**

- SITC of 150W LED flood light fixtures inside industrial shed on roof/ columns at height of approx. 15 m from floor level.
- Supply, installation, testing and commissioning of PVC armoured Copper/Aluminium cable for power distribution by providing cable trays of appropriate sizes and necessary iron works..
- SITC of MCCB panel board for welding power supply of work shop.
- SITC of MCB Distribution Board for power distribution of Lighting DB, Grinder DB & Raw power DBs with proper rating MCB.
- SITC of 90-100W LED Flood light fittings with necessary cabling and termination on columns complete with all accessories.
- SITC of Metra plug/ tetra plug socket arrangements with required cables in Industrial shed.
- SITC of Air Circulators on columns of the industrial shed structure with required cabling.
- SITC of copper earth pits complete with all accessories and excavation.

**The detailed scope of work has been indicated in the Bill of Quantities (BOQ) Price Bid Part-II at Enclosure-1.**

**2 निविदा हेतु चित्रकारी की सूची / TENDER DRAWINGS:**

Sr. NO	TITLE	TENDER DRAWING NO
1	RAW POWER FOR 2000T HYDRAULIC PRESS 1-7	IP/ALCOCK YARD/HYDRAULIC PRESS/1-7
2	PLAN OF LIGHTING FOR 2000T HYDRAULIC PRESS 2-7	IP/ALCOCK YARD/HYDRAULIC PRESS/2-7
3	LIGHTING DISTRIBUTION PRESS MACHINE ,ALY YARD 3-7	IP/ALY YARD/PRESS MACHINE/3-7
4	WELDING DB PRESS MACHINE ,ALY YARD 4-7	IP/ALY YARD/PRESS MACHINE/4-7
5	ELECT. GRINDER MC PRESS MACHINE ,ALY YARD 5-7	IP/ALY YARD/PRESS MACHINE/5-7
6	3Ø,32A,TP SWSKT PRESS MACHINE ,ALY YARD 6-7	IP/ALY YARD/PRESS MACHINE/6-7
7	1Ø,16/6A SW/SKT PRESS MACHINE ,ALY YARD 7-7	IP/ALY YARD/PRESS MACHINE/7-7

The above Tender Drawings in PDF form are attached separately along with Tender Document.

**Enclosure-1**

**PRICE BID (PART-II)**  
**BILL OF QUANTITIES**  
**(To be submitted online)**

**Sub: Electrical Work for 2000T Hydraulic Press in ALY & Making of Earth Pits at various locations of East Yard & Alcock Yard, MDL**

**Ref: MDL Tender No. 180000047**

**INSTRUCTION TO THE BIDDER:**

1. The Goods & Service Tax **IS NOT INCLUDED** in the rates indicated below for this section. Bidder is required to quote Goods & Service Tax **SEPERATELY** in Percentage which will be added to the rate quoted for this section during placement of Order.
2. Bidder to note clause No 3 (Security Deposit), Clause No 4 (Performance bank Guarantee), Clause No 9 (Prices and Taxes) & Clause No 16 (Insurance) of Volume II before quoting.
3. MDL reserves the right to increase the quantity of any item in the BOQ to any extent provided the increase in the total Estimated Amount due to this change in the quantity over BOQ quantity multiplied by specified rate for all the items put together do not exceed 25% of the Accepted Contract Value. Bidder to note Clause No 13 of Volume II before quoting.
4. Please note that the rate indicated below are inclusive of VAT on Input material, Excise, Octroi wherever applicable before implementation of GST Act. However, bidder to quote considering GST Act.

Sr No.	Item Description	Unit	Qty	Rate	Amount
A	ELECTRICAL WORK FOR 2000 MT HYDRAULIC PRESS				
	LDB (LIGHTING DB)				
	INCOMING CABLE				
1	Supplying, erecting & terminating PVC armoured cable 4 core 10 sq mm copper conductor continuous 5.48 sq mm (12 SWG) G.I. earth wire complete erected with glands & lugs, on wall/ trusses/pole or laid in provided trench/ pipe as per specification no. CB-LT/CU	M	50.00	624.64	31232.00
2	Supplying & erecting triple pole and neutral distribution board (TPNDB) with door surface/ flush mounted SP / TP MCBs 24 Poles on iron frame/wooden board. (Vertical Busbar type) as per specification No. SW-SWR/MCBDB	AU	1.00	6660.10	6660.10
	INCOMER				
3	Supplying, fixing and commissioning RCCB+MCB, electro magnetic type with 30/100/300 mA sensitivity and having capacity of 32A/40A 4 Pole 3 phase as per specification No. SW-RCCB/RCCB	AU	1.00	3611.65	3611.65
	OUTGOING				

4	Supplying, erecting & marking SPMCB 6A to 32A, B- series (for lighting) in provided distribution board as per specification No. SW-SWR/MCB	AU	15.00	165.89	2488.35
5	Supplying, erecting & terminating PVC armoured cable 2 core 2.5 sq mm copper conductor continuous 5.48 sq mm (12 SWG) G.I. earth wire complete erected with glands & lugs, on wall/ trusses/pole or laid in provided trench/ pipe as per specification no. CB-LT/CU	M	1000.00	148.48	148480.00
6	Supplying and erecting LED Flood light fitting of 90-100W, including lamp, with PF > 0.95, class IP 65 and above class IP 65 and above Housing of pressure die cast alluminium alloy and heat sink extruded alluminium complete per specification No FG-ODF	AU	20.00	9207.68	184153.60
7	Supplying and erecting LED Flood light fitting of 150W, including lamp, with PF > 0.95, class IP 65 and above class IP 65 and above Housing of pressure die cast alluminium alloy and heat sink extruded alluminium complete per specification No FG-ODF/FL	AU	20.00	28715.91	574318.20
	FANS				
8	Supplying, erecting and marking enclosure Single pole and neutral distribution board (SPNDB) one way for SPMCB 1 No on iron frame/wooden board as per specification No. SWSWR/MCBDB	AU	9.00	262.14	2359.26
9	Supplying, erecting & marking SPMCB 6A to 32A, C-series (for motor/power) in provided distribution board as per specification No. SW-SWR/MCB	AU	18.00	177.15	3188.70
10	Providing and erecting air circulator 600 mm. sweep oscillating type, wall mounting 1440 RPM without speed regulator, overheat protection unit, totally enclosed, flame proof motor suitable for 230/250 Volts single phase, 50 cycles A.C. supply, with one metre of 3 core lead wire and with moisture proof treatment to winding and with 'E' class insulation and marking Sr. No. and date of erection.	AU	9.00	6115.33	55037.97
	EOT CRANE + WELDING DB				

INCOMING CABLE					
11	Supplying, erecting & terminating PVC armoured cable 3½ core 150 sq mm aluminium conductor with continuous 12.97 sq mm (8 SWG) G.I. earth wire complete erected with glands & lugs, on wall/ trusses/pole or laid in provided trench/ pipe as per specification no. CB-LT/AL	M	50.00	902.14	45107.00
12	Supplying & erecting triple pole and neutral distribution board (TPNDB) with door surface/ flush mounted suitable for 3 Pole MCCB as Incommer & outgoing SP MCB (36 Poles) or TP MCB of 12 ways (36 Poles) on iron frame. (Vertical Busbar type) as per specification No. SW-SWR/MCDB1	AU	1.00	7392.26	7392.26
INCOMER					
13	Providing & erecting 3 Pole MCCB of 200A,415V capacity with S.C. rating 25 kA (Ics=100% of Icu) thermal and magnetic setting with provided leads on iron frame/wooden board as per specification no. SW-SWR/MCCB	AU	1.00	14531.58	14531.58
OUTGOING					
14	Supplying, erecting & marking TPMCB 6 A to 32A in provided distribution board as per specification No. SW-SWR/MCB	AU	2.00	793.60	1587.20
15	Supplying, erecting & marking TPMCB 40A to 63A in provided distribution board as per specification No. SW-SWR/MCB	AU	4.00	1055.74	4222.96
16	Supplying, erecting & terminating PVC armoured cable 4 core 4 sq mm copper conductor continuous 5.48 sq mm (12 SWG) G.I. earth wire complete erected with glands & lugs, on wall/ trusses/pole or laid in provided trench/ pipe as per specification no. CB-LT/CU	M	200.00	303.10	60620.00
17	Supplying & erecting original 1.25 mm CRCA sheet metal enclosures with 30 A, 3 pin plug & earth socket and 30 A 3 pin plug top with 30 A. triple pole MCB complete erected on angle iron frame.	AU	2.00	1953.79	3907.58

18	Supplying, erecting & terminating PVC armoured cable 4 core 6 sq mm copper conductor continuous 5.48 sq mm (12 SWG) G.I. earth wire complete erected with glands & lugs, on wall/ trusses/pole or laid in provided trench/ pipe as perspecification no. CB-LT/CU	M	200.00	409.60	81920.00
19	Supplying , erecting & Terminating PVC armoured cable 4 core 16 sq mm copper conduct or with continuous 5.48 sq mm (12 SWG) G.I. earth wire complete erected with glands & lugs, on wall/ trusses/pole or laid in provided trench/ pipe as per specification no. CB-LT/CU Note:1) Rate of all cables includes cost of lugs, glands, etc. required for erection and connection of cable.	M	100.00	912.38	91238.00
20	Supplying & erecting CRCA sheet metal one way enclosures suitable for D.P.M.C.B. /T.P. M.C.B. /F.P M.C.B. complete erected on angle iron frame.	AU	4.00	422.91	1691.64
21	Supplying, erecting & marking TPMCB 40A to 63A in provided distribution board as per specification No. SW-SWR/MCB	AU	4.00	1055.74	4222.96
	ELECTRICAL GRINDER MACHINE DB				
	INCOMING CABLE				
22	Supplying, erecting & terminating PVC armoured cable 4 core 10 sq mm copper conductor continuous 5.48 sq mm (12 SWG) G.I. earth wire complete erected with glands & lugs, on wall/ trusses/pole or laid in provided trench/ pipe as per specification no. CB-LT/CU	M	25.00	624.64	15616.00
	DB				
23	Supplying & erecting triple pole and neutral distribution board (TPNDB) with door surface/ flush mounted SP / TP MCBs 24 Poles on iron frame/wooden board. (Vertical Busbar type) as per specification No. SW-SWR/MCBDB	AU	1.00	6660.10	6660.10
	INCOMER				
24	Supplying, erecting & marking TPMCB 40A to 63A in provided distribution board as per specification No. SW-SWR/MCB	AU	1.00	1055.74	1055.74
	OUTGOING				

25	Supplying, erecting & marking TPMCB 6 A to 32A in provided distribution board as per specification No. SW-SWR/ MCB	AU	6.00	793.60	4761.60
26	Supplying, erecting & terminating PVC armoured cable 4 core 4 sq mm copper conductor continuous 5.48 sq mm (12 SWG) G.I. earth wire complete erected with glands & lugs, on wall/ trusses/pole or laid in provided trench/ pipe as per specification no. CB-LT/CU	M	200.00	303.10	60620.00
27	Supplying & erecting original 1.25 mm CRCA sheet metal enclosures with 30 A, 3 pin plug & earth socket and 30 A 3 pin plug top with 30 A. triple pole MCB complete erected on angle iron frame.	AU	6.00	1953.79	11722.74
	DOMESTIC POWER DB (32A) 3Phase				
	INCOMING CABLE				
28	Supplying, erecting & terminating PVC armoured cable 4 core 25 sq mm copper conductor with continuous 5.48 sq mm (12 SWG) G.I. earth wire complete erected with glands & lugs, on wall/ trusses/pole or laid in provided trench/ pipe as per specification no. CB-LT/CU	M	100.00	1378.30	137830.00
	DB				
29	Supplying & erecting triple pole and neutral distribution board (TPNDB) with door surface/ flush mounted SP / TP MCBs 24 Poles on iron frame/wooden board. (Vertical Busbar type) as per specification No. SW-SWR/MCBDB	AU	1.00	6660.10	6660.10
	INCOMMER				
30	Supplying, erecting & marking TPMCB 40A to 63A in provided distribution board as per specification No. SW-SWR/ MCB	AU	1.00	1055.74	1055.74
	OUTGOING				
31	Supplying, erecting & marking TPMCB 6 A to 32A in provided distribution board as per specification No. SW-SWR/ MCB	AU	8.00	793.60	6348.80
32	Supplying, erecting & terminating PVC armoured cable 4 core 6 sq mm copper conductor continuous 5.48 sq mm (12 SWG) G.I. earth wire complete erected with glands & lugs, on wall/ trusses/pole or laid in provided trench/ pipe as perspecification no. CB-LT/CU	M	300.00	409.60	122880.00

33	Supplying & erecting original 1.25 mm CRCA sheet metal enclosures with 30 A, 3 pin plug & earth socket and 30 A 3 pin plug top with 30 A. triple pole MCB complete erected on angle iron frame.	AU	8.00	1953.79	15630.32
	DOMESTIC POWER DB (16A) 1 Phase				
	INCOMING CABLE				
34	Supplying, erecting & terminating PVC armoured cable 4 core 10 sq mm copper conductor continuous 5.48 sq mm (12 SWG) G.I. earth wire complete erected with glands & lugs, on wall/ trusses/pole or laid in provided trench/ pipe as per specification no. CB-LT/CU	M	25.00	624.64	15616.00
	DB				
35	Supplying & erecting triple pole and neutral distribution board (TPNDB) with door surface/ flush mounted SP / TP MCBs 24 Poles on iron frame/wooden board. (Vertical Busbar type) as per specification No. SW-SWR/MCBDB	AU	1.00	6660.10	6660.10
	INCOMMER				
36	Supplying, erecting & marking TPMCB 40A to 63A in provided distribution board as per specification No. SW-SWR/MCB	AU	1.00	1055.74	1055.74
	OUTGOING				
37	Supplying, erecting & marking SPMCB 6A to 32A, C-series (for motor/power) in provided distribution board as per specification No. SW-SWR/MCB	AU	19.00	177.15	3365.85
38	Supplying & erecting original 1.25 mm CRCA sheet metal enclosures with 20A. 2 pin plug & earth socket and 20A. 3 pin plug top with 20A/30A single pole MCB complete erected on angle iron frame.	AU	19.00	896.00	17024.00
39	Supplying, erecting & terminating PVC armoured cable 4 core 4 sq mm copper conductor continuous 5.48 sq mm (12 SWG) G.I. earth wire complete erected with glands & lugs, on wall/ trusses/pole or laid in provided trench/ pipe as per specification no. CB-LT/CU	M	300.00	303.10	90930.00
	CABLE TRAY				



40	Providing & erecting Hot deeped Galvanised Perforated type Cable tray manufactured from 16 swg (1.6 mm thick) GI sheet of 300 mm width & 75 mm height complete with necessary coupler plates & hardware in approved manner.	M	140.00	746.50	104510.00
41	Providing & erecting Hot deeped Galvanised Perforated type Cable tray manufactured from 16 swg (1.6 mm thick) GI sheet of 200 mm width & 75 mm height complete with necessary coupler plates & hardware in approved manner.	M	100.00	593.92	59392.00
42	Providing & erecting Hot deeped Galvanised Perforated type Cable tray manufactured from 16 swg (1.6 mm thick) GI sheet of 150 mm width & 75 mm height complete with necessary coupler plates & hardware in approved manner.	M	200.00	518.14	103628.00
43	Supplying and erecting Iron work consisting of Various sections of MS and including Plates, Chequered Plates, Rods, Bars, MS pipes, etc. for panel board or any other purposes complete with bending, cutting, drilling and welding complete erected at the position with necessary materials duly painted with one coat of red oxide and two coats of enamel paint to match the switchgears or as per directions by the authority	Kg	250.00	111.62	27905.00
B	Earthing pits at various location EY & ALY (with Copper Strips)				
44	Supplying and erecting Copper earth plate size 30 x 30 x 0.6 cms.complete with all materials, testing & recording the results as per specification No. EA-EP Note:1)Additional GI / Copper wire from earth pit to installation to be provided separately.	AU	24.00	7618.56	182845.44

45	Supplying and erecting copper strip of required size used for earthing on wall and/or any other purpose with necessary copper clamps fixed on wall painted with bituminous paint in an approved manner with joints required. As per specification No (EA-EP).	kg	150.00	885.76	132864.00
	Excavation				
46	Excavating Hard Murum/metal road (B.T.) by chiselling for preparing pitfor poles stay or earth plates or for laying cables, pipes & clearing the site by removing debris & making the site good.	M3	60.00	171.01	10260.60
47	Excavating hard rock or bituminous road (BT) by chiselling for preparing pits for poles stay or earth plates or for laying cables, pipes and clearing the site by removing debris & making the site good	M3	20.00	695.30	13906.00
48	Supplying and erecting Annealed bare copper wire of high purity of different sizes used for earthing on wall with necessary	kg	10.00	907.26	9072.60
	Total				2497847.48
	Goods & Service Tax <b>(in Percentage)</b>				