Addendum No. - 01

DLI/C&E/WI-665/533R

Date 07.12.2018

Tender for Design, Engineering, manufacturing, testing at works, Supply of 09 (Nine) Nos. 3Ph.-N 415V non draw out type Control Panels for the Project of Augmentation of Raw Material Handling Receipt and Handling facilities with new OHP Part-B (Package-061) of Bhilai Steel Plant (SAIL)"

Ref.: 1) NIT No. DLI/C&E/WI-665/533R Dated: 28.09.2018
2) Corrigendum No.01 dated:22.10.2018
3) Corrigendum No.02 dated:29.10.2018
4) Corrigendum No. 03 dated 12.11.2018
5) Corrigendum No. 04 dated 22.11.2018

<table>
<thead>
<tr>
<th>SL. NO</th>
<th>Document</th>
<th>Written as</th>
<th>Read as</th>
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<tbody>
<tr>
<td>1.</td>
<td>VOL-2C</td>
<td>Drawing Title:- SLD FOR LOCAL CONTROL PANEL FOR COMPRESSOR HOUSE, PH-1, PH-2, PH-3, PH-4, PH-5, PH-6</td>
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<td>Project Drawing no.: BSP-EPI-01-061-01-013-29-BE-03041, 03042, 03043, 03044, 03045, 03046, 03047</td>
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<tr>
<td></td>
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<td>FEEDERS: ALL FEEDERS OF EXHUASt FANS OF RATING 1.5KW DOL FEEDER with 4amp MPCB &amp; with EOLR 3-5 amp</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>ALL FEEDERS OF ACTUATOR RATING 0.2KW DOL with EOLR</td>
<td>Incomer-minimum 1amp MPCB with O/L &amp; S/C protection, EOLR shall be removed, Contactor shall be of minimum 12amp rating as per the drawings attached.</td>
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<tr>
<td></td>
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<td>ALL FEEDERS OF ACTUATOR RATING 0.09KW DOL with EOLR</td>
<td>Incomer-minimum 0.4amp MPCB with O/L &amp; S/C protection, EOLR shall be removed, Contactor shall be of minimum 12amp rating as per the drawings attached.</td>
</tr>
<tr>
<td></td>
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<td>ALL FEEDERS OF ACTUATOR RATING 0.2KW RDOL with EOLR</td>
<td>Incomer-1amp MPCB with O/L &amp; S/C protection, EOLR shall be removed, Contactor shall be of minimum 12amp rating as per the drawings attached. Forward, Reverse, Trip &amp; OFF indication to be considered instead of ON, OFF, Trip</td>
</tr>
</tbody>
</table>


All feeders of actuator rating 0.09KW RDOL with EOLR

Incomer- 1amp MPCB with O/L & S/C protection, EOLR shall be removed,
Contactor shall be of minimum 12amp rating as per the drawings attached.
Forward ON, Reverse ON, Trip & OFF indication to be considered instead of ON,OFF,Trip

All other terms and conditions of the tender remain unchanged.

Executive Director
(Consultancy & Engineering Division)
ENGINEERING PROJECTS (INDIA) LTD.
3rd Floor, Core-3, Scope Complex,
7 Lodhi Road,
New Delhi – 110003
TEL. NO. : - 011-2436 6226, 24361666 Ext. 2328,2343 , 2330
FAX NO. : - 011-2436 3426
MAX DEMAND 42.75 KW

415V 3PH -N, 50Hz, NON DRAW OUT TYPE
LOCAL CONTROL PANEL
FOR WATER SUPPLY SYSTEM, LOCATION AT
COMPRESSOR HOUSE

NOTES:-
1. THe RATING OF MCB/ MCCB/U/C/S MAY VARY FOR THE DIFFERENT MANUFACTURER.
2. RATING OF POWER CONTROLLER SHALL BE AS PER SIE & SELECTION OF RATING FOR MCB/MCCB/U/C/S. SHALL BE AS PER TYPE-2, CO-OPERATION CHART.
3. MCB'S SHALL BE PROVIDED IN PST 0/10 KVA.
4. ALL SHALL BE READ IN CONJUNCTION WITH TECHNICAL SPEC.
5. SELECTOR SWITCH SHALL BE PROVIDED FOR SELECTION OF PUMP COMBINATION.
6. LOCAL/REMOTE SELECTION SWITCH WILL BE MOUNTED ON CONTROL PANEL.
7. EXHAUST/EXHAUST FAN FOR COMPRESSOR HOUSE.
8. CONTROL PANEL SHALL BE PROVIDED WITH CT, PT, METERING AND PROTECTION ETC. AS REQUIRED.
9. THE POWER SUPPLY VOLTAGE 415V ± 10%-15%. 50Hz ± 4% -6% 50A/150A.
10. FOR SYSTEM FOLLOWING SHALL BE CONSIDERED:
(a) Compressor Cooling Water Pump (240/415V)

MAXIMUM DEMAND CALCULATION

S.NO. DESCRIPTION QTY. WORK LOAD FACTOR AS TOTAL MAX REMARKS
01 Compressor Cooling Water Pump 30 3 60 0.6 36 PUMP 1A/B/C/D
02 Exhaust Fan for Compressor House 1.5 5 7.5 0.9 6.75

TOTAL LOAD = 42.75

FOR TENDER PURPOSE ONLY
MAX DEMAND 28.05 KW

415V 3PH–N, 50Hz, LOCAL CONTROL PANEL FOR WATER SUPPLY SYSTEM, NON DRAWOUT TYPE LOCATION AT PUMP HOUSE–2

MAXIMUM DEMAND CALCULATION

<table>
<thead>
<tr>
<th>S.NO.</th>
<th>DESCRIPTION</th>
<th>RATING (KW)</th>
<th>QTY.</th>
<th>WORK LOAD (KW)</th>
<th>FACTOR AS PER GTS</th>
<th>TOTAL MAX DEMAND (KW)</th>
<th>REMARKS</th>
</tr>
</thead>
<tbody>
<tr>
<td>01</td>
<td>DFDS PUMP</td>
<td>7.5</td>
<td>2</td>
<td>7.5</td>
<td>0.9</td>
<td>6.75</td>
<td>PUMP 7A/B (1W+15)</td>
</tr>
<tr>
<td>02</td>
<td>SERVICE WATER PUMP FOR PM-2</td>
<td>15</td>
<td>4</td>
<td>30</td>
<td>0.6</td>
<td>18</td>
<td>PUMP 8A/B/C/O (2W+25)</td>
</tr>
<tr>
<td>03</td>
<td>DRINKING WATER PUMP FOR PM-2</td>
<td>5.5</td>
<td>3</td>
<td>5.5</td>
<td>0.6</td>
<td>3.3</td>
<td>PUMP 8A/B/C (1W+25)</td>
</tr>
<tr>
<td></td>
<td>TOTAL LOAD</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>28.05</td>
<td></td>
</tr>
</tbody>
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FOR TENDER PURPOSE ONLY

NOTES:
1. THE RATING OF MPCB/MCCB/G/L MAY VERY FOR THE DIFFERENT MANUFACTURER, HOWEVER WE HAVE TAKEN AS PER TYPE-2, CO-ORDINATION CHART OF "L&T".
2. RATING OF POWER CONTACTOR SHALL BE AS PER GTS & SELECTION OF RATING FOR MPCB/MCCB/G/L SHALL BE TAKEN AS PER TYPE-2, CO-ORDINATION CHART.
3. EQUIL BE PROVIDED AS PER STUFFS.
4. SSD SHALL BE READ IN CONJUNCTION WITH GTS/TECHNICAL SPEC.
5. SELECTOR SWITCH SHALL BE PROVIDED FOR SELECTION OF PUMP COMBINATION.
6. LOCAL/REMOTE SELECTOR SWITCH WILL BE MOUNTED ON CONTROL PANEL.
7. CONTROL PANEL WILL BE FREE STANDING, FLOOR MOUNTED, FRONT ATTENDED, MADE OF CORR SHEET STEEL OF THICKNESS NOT LESS THAN 2MM WITH IP54 ENCLOSURE CLASS. IV–BIOMETERED FEEDER WILL HAVE LOAD BREAK SWITCH OR MCCB INTERLOCKED WITH THE DOOR.
8. CONTROL PANEL SHALL BE PROVIDED WITH CT, PT, METERING AND PROTECTION ETC. AS REQUIRED.
9. THE POWER SUPPLY VOLTAGE 415V ±10%–15%, 50Hz ±5–6Hz S/C 50KA/15SEC.
10. FOR SCHEME FOLLOWING SHALL BE CONSIDERED
   (A) SERVICE WATER PUMP (2W–25B)
   (B) DRINKING WATER PUMP (1W–25B)
   (C) DFDS PUMP (1W+15)
11. FOR VENTILATION SYSTEM POWER FEEDER HAS BEEN CONSIDERED IN RESPECTIVELY MCC.
12. BIDDER TO CONSIDER MINIMUM 6A DP MCC FOR 24V DC OUTGOING FEEDERS OF SOLENOID VOLT.
MAX DEMAND 28.05 KW

INCOMER FROM 6F3 CONV MCC-4

415V 3PH-N, 50HZ, LOCAL CONTROL PANEL FOR WATER SUPPLY SYSTEM, NON DRAWOUT TYPE LOCATION AT PUMP HOUSE-4

MAXIMUM DEMAND CALCULATION

<table>
<thead>
<tr>
<th>S.NO</th>
<th>DESCRIPTION</th>
<th>RATING (KW)</th>
<th>QTY</th>
<th>WORK LOAD (KW)</th>
<th>FACTOR AS PER GTS</th>
<th>TOTAL MAX DEMAND (KW)</th>
<th>REMARKS</th>
</tr>
</thead>
<tbody>
<tr>
<td>01</td>
<td>SERVICE WATER PUMP FOR PH-4</td>
<td>15</td>
<td>4</td>
<td>30</td>
<td>0.6</td>
<td>18</td>
<td>PUMP 12A/B/C/D (2W=25)</td>
</tr>
<tr>
<td>02</td>
<td>DRINKING WATER PUMP FOR PH-4</td>
<td>5.5</td>
<td>3</td>
<td>5.5</td>
<td>0.6</td>
<td>3.3</td>
<td>PUMP 14A/B/C (1W=25)</td>
</tr>
<tr>
<td>03</td>
<td>DFDS PUMP</td>
<td>7.5</td>
<td>2</td>
<td>7.5</td>
<td>0.6</td>
<td>6.75</td>
<td>PUMP 13A/B (1W=15)</td>
</tr>
</tbody>
</table>

TOTAL LOAD 28.05

NOTES:
- The rating of MCBs/ACB/MCCB may vary for different manufacturers.
- All equipment shall be tested as per IS: 1497-2003, 1519-2018, 4423, and 4423-2000 standards.
- The equipment shall be tested for insulation resistance at 500V.
- All electrical equipment shall be labeled with the manufacturer's name, model number, and voltage rating.
- Panel space heater shall be provided as shown.
- Panel control supply shall be provided as shown.
- All electrical equipment shall be protected by MCBs as shown.
INCOMER FROM 2F2 CONV MCC-5

MAX DEMAND 33.75 KW

415V 3PH-N, 50HZ, LOCAL
CONTROL PANEL FOR WATER
SUPPLY SYSTEM, NON DRAWOUT
TYPE LOCATION AT PUMP
HOUSE-5

415V/110V 50KVA

MCB

100A

MCB

MCB

100A

MCB

ASS (0 - 100 A)

100 / 5A

CL-1.0

NOTES:
1. The ratings of MPCB, MCCB, etc., may vary for different manufacturers.
2. Numbers of MCCB switches shall be as indicated in the bill of materials.
3. Control panel shall be provided with overcurrent protection.
4. Local/remote selector switch shall be provided on control panel.
5. Service water pump(s) shall be provided for water supply.
6. Control panel shall be provided with PT, CT, metering and protection.

MAXIMUM DEMAND CALCULATION

<table>
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<tr>
<th>SL NO.</th>
<th>DESCRIPTION</th>
<th>RATING (kW)</th>
<th>QTY</th>
<th>WORK LOAD (kW)</th>
<th>FACTOR AS PER CTS</th>
<th>TOTAL MAX DEMAND (kW)</th>
<th>REMARKS</th>
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<tr>
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<td>SERVICE WATER PUMP FOR PH-5</td>
<td>15</td>
<td>4</td>
<td>30</td>
<td>0.6</td>
<td>18</td>
<td>PUMP 15/3/C/O (2W+25)</td>
</tr>
<tr>
<td>02</td>
<td>DRINKING WATER PUMP FOR PH-5</td>
<td>15</td>
<td>3</td>
<td>15</td>
<td>0.6</td>
<td>9</td>
<td>PUMP 17/3/C (1W+25)</td>
</tr>
<tr>
<td>03</td>
<td>EPFD PUMP</td>
<td>7.5</td>
<td>2</td>
<td>7.5</td>
<td>0.9</td>
<td>6.75</td>
<td>PUMP 16/3 (1W+15)</td>
</tr>
<tr>
<td></td>
<td>TOTAL LOAD</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>33.75</td>
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</table>

FOR TENDER PURPOSE ONLY

The drawing is confidential. It should not be divulged to anyone other than the company for whom the drawing is prepared.

This drawing is not a substitute for the written specifications. It is not to be used by any third party without written consent of the original designer.

CONSTRUCTION, OPERATION AND MAINTENANCE OF THE SYSTEM WILL BE GIVEN TO THE USER BY THE MANUFACTURER.


MECON LIMITED
MAX DEMAND 4.5 KW

415V 3PH- N, 50HZ,
LOCAL CONTROL
PANEL FOR
DEWATERING
PUMP SYSTEM,
NON DRAWOUT
TYPE LOCATION
AT WT COMPLEX

FOR TENDER PURPOSE ONLY

NOTES:
1. THE RATING OF MPCBs/MCCB/0/L MAY VERY FOR THE DIFFERENT MANUFACTURER,
   HOWEVER WE HAVE TAKEN AS PER TYPE-2, CO-ORDINATION CHART OF "L&T".
2. RATING OF POWER CONSUMER SHALL BE AS PER GTS & SELECTION OF RATING
   FOR MPCB/MCCB/0/L SHALL BE TAKEN AS PER TYPE-2, CO-ORDINATION CHART.
3. EOLR SHALL BE PROVIDED AS PER GTS/IS.
4. SLO SHALL BE READ IN CONJUNCTION WITH GTS/TECHNICAL SPEC.
5. SELECTOR SWITCH SHALL BE PROVIDED FOR SELECTION OF PUMP COMBINATION.
6. LOCAL/REMOTE SELECTOR SWITCH WILL BE MOUNTED ON CONTROL PANEL.
7. CONTROL PANEL WILL BE FREE STANDING, FLOOR MOUNTED, FRONT ATTENDED,
   MADE OF CORR SHEET STEEL OF THICKNESS NOT LESS THAN 2MM WITH IP54
   ENCLOSURE CLASS. IN-COMER FEEDER WILL HAVE LOAD BREAK SWITCH OR
   MCB INTERLOCKED WITH THE DOOR.
8. CONTROL PANEL SHALL BE PROVIDED WITH CT, PT, METERING AND PROTECTION ETC.
   AS REQUIRED.
9. THE POWER SUPPLY VOLTAGE 415V +10%/-15%, 50HZ ±6% S/C 50KVA/1SEC
10. FOR SCHEME FOLLOWING SHALL BE CONSIDERED

(A/D/DEWATERING PUMP 24V/250V)

11. BIDDER TO CONSIDER MINIMUM 6A DP MCB FOR 24V DC OUTGOING FEEDERS OF SOLENOID VALVE.