SECTION 07

TECHNICAL SPECIFICATIONS OF HYDRAULIC CUTTER
7.0 TECHNICAL SPECIFICATIONS/ REQUIREMENTS OF HYDRAULIC CUTTER

7.1 GENERAL
This section of the document includes the design, manufacture, testing & inspection of Hydraulic Cutter as specified.

7.2 CLIMATE DATA
The equipments to be supplied against this tender shall be suitable for satisfactory use under the following climatic condition:

Climate: Tropical, intense sunshine, heavy rain, humid. Maximum Humidity and Temperature sometimes occur simultaneously.

Maximum Temperature: 40\(^\circ\)C
Minimum Temperature: 03\(^\circ\)C
Average daily Temperature: 30\(^\circ\)C
Average isokeraunic level: 80 days/year
Relative humidity: 50-100%
Average annual rain fall: 3454 mm
Maximum wind velocity: 200 km/hour
Altitude above the ea level: Up to 300 metres
Atmospherical, Mechanical and Chemical impurities: Moderately polluted

Equipment as specified will be installed in tropical locations and in a hot humid environment with presence of the insects and vermin. The information is given as a guide for Tenderer and no responsibility for its accuracy will be accepted, nor will any claim based on the above be entertained.

7.3 SYSTEM PARTICULARS

<table>
<thead>
<tr>
<th>SL. NO.</th>
<th>SYSTEM CHARACTERISTICS</th>
<th>VOLTAGE LEVEL</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.</td>
<td>Normal System Voltage, KV (Voltage Class)</td>
<td>230 132 33 11</td>
</tr>
<tr>
<td>2.</td>
<td>Maximum System Voltage, KV</td>
<td>245 145 36 12</td>
</tr>
<tr>
<td>3.</td>
<td>System Frequency, Hz</td>
<td>50 50 50 50</td>
</tr>
<tr>
<td>4.</td>
<td>Phase Rotation (Anti-Clock wise)</td>
<td>RST RST RST RST</td>
</tr>
<tr>
<td>5.</td>
<td>Type of System Grounding</td>
<td>Solid Solid Solid Solid</td>
</tr>
<tr>
<td>6.</td>
<td>Rated Fault Level (3-Phase Symmetrical), MVA 3 sec.</td>
<td>12550 6000 1500 381</td>
</tr>
<tr>
<td>7.</td>
<td>Basic Insulation Level, KV</td>
<td>750 650 170 75</td>
</tr>
</tbody>
</table>

LOW VOLTAGE 415/ 240V CHARACTERISTICS:

| 8.      | Normal System Voltage, V (Voltage Class)           | 415/ 240 |
| 9.      | Type of System Grounding                            | Solid |

7.4 STANDARDS
7.5 **SPECIFICATIONS**

The Hydraulic Cutter shall be portable, easy to carry, hydraulic type (automatic pumping), light weight and capable to provide clean cut of conductors and wires at ACSR, AAC (bare and Insulated), Guy wire, Copper wire (Bare and Insulated), Soft Steel bar (max. 5/8 inch) & Rebar (max. ½ inch) used on the BPDB electrical distribution system.

Hand operated Hydraulic Cutter as per specification must comply with the requirements of standard as specified. The Hydraulic Cutter shall be automatic pumping & twist handle release mechanism to easy operation with maximum 40mm Jaw opening and have accessibility with 180° swivel cutting head. Cutting blades shall be long durable made of heat treated steel.

7.6 **FEATURES & ACCESSORIES**

- Original manufacturer’s printed catalogue, drawings and operation and maintenance manual along with all necessary accessories to be supplied along with each Hydraulic Cutter.
- Two sets of spare blades.

7.7 **DOCUMENTATION**

1) Test Report for the offered type test set from an independent testing laboratory/ Institute/Manufacturer’s own testing laboratory/ Calibration Report from manufacturer as per relevant standard.

7.8 **OTHER INFORMATION/ DOCUMENTS REQUIRED**

The Tenderer/ Manufacturer as per tender requirements shall provide all information. Besides these, the following information has to be submitted along with the tender:
1) Constructional and Outline Dimensional drawings (if any)
2) Installation, Operation & Maintenance Manual in English.
3) Manufacturer’s printed catalogue in English.
4) Manufacturer’s valid ISO Certificate.
5) Manufacturer’s EU/ CE Certificate of Conformity.
6) Test/Calibration Certificate for the offer type Equipment.

7.9 **APPROVAL OF DRAWINGS AND SPECIFICATIONS**

Design, Drawing, Diagrams, Specification and Guaranteed Technical Particulars etc. shall be submitted to the Engineer, Director, Design & Inspection II, BPDB by the Bidder for approval, prior to the manufacturing of the goods. The Bidder shall have to submit 3 (three) sets of the same for Approval within 15 days from the date of signing Contract. It is noted that the supplier shall have to deliver the goods within the stipulated time. The submittal shall include the catalogues of the offered goods.

7.10 **TESTS AT MANUFACTURERS WORKS**

**GENERAL**

Functional electrical, material, mechanical and hydraulic tests shall be carried out at manufacturers’ premises. The extent and method of recording the results shall be agreed by the Purchaser in ample time to enable the tests to be satisfactorily witnessed or to make any changes to the proposed program of tests.

**MATERIAL TESTS**

The supplier shall provide test pieces free of charge as required to enable the quality of the material to be determined at the supplier’s expense. Purchaser may at its own discretion and by specific arrangement accept certified particulars of tests carried out in the absence of his authorized representative.

**TYPE TEST**

Type tests are required to prove the general design of the offered equipments/ materials. The Tenderer shall submit the type test reports of the offered equipments/ materials from internationally reputed manufacturers.
independent testing laboratory as per latest version of relevant IEC/ BS or equivalent international standards as mentioned in the tender.

**ROUTINE TESTS**

All equipments/ materials shall be subjected to routine tests as per latest version of relevant IEC/ BS or equivalent international standards as mentioned in the tender at the manufacturers works and shall include, but not be limited to, an operational test.

### 7.11 TECHNICAL ORIENTATION AND QUALITY TEST WITNESS

Witnessing of the manufacturing process and tests of the equipment at manufacturer’s premises including transfer of technical know-how shall be required/held as detailed elsewhere in Particular Conditions of Contract (GCC 32.1) of tender document and other than this the following will be as follows:

The Purchaser or its representative shall have the right to inspect, examine and test the workmanship and performance of the goods/materials to confirm their conformity to the specification. The Purchaser or its representative shall be entitled at all reasonable time during manufacture or after manufacture to inspect, examine and test of goods/materials at the manufacturers’ premises, workmanship and performance. The test shall be carried out as per latest version of relevant IEC/ BS or equivalent international standards as mentioned in the contract at the manufacturer premises.

An inspection team will be formed by Purchaser or its representative immediate after signing of the contract to control the quality and monitoring the manufacturing process (where required). The manufacturer will allow inspection team to inspect the manufacturing process and quality control and progress of the work at any time need by BPDB’s inspection team. This team will witness the Factory/Technical orientation & Quality test at the manufacturer's plant. The Manufacturer shall have facilities to carry out all tests at its premises and shall provide free of charge such assistance, labor, materials, electricity, fuel, stores, apparatus and instruments as may be requisite and as may be reasonably demanded to carry out such test efficiently.

The inspection team maximum 2 (two) times may inspect (if required) the goods during the manufacturing process or after manufacture of Goods as required and shall also request to supplier for the purchase/import/ shipping documents of major/key materials of Goods and shall check in accordance with Guaranteed Technical Particulars (GTP) and guarantees of the contract. All expenses for such tests shall be borne by the supplier.

The manufacturer shall have all testing facilities at the manufacturer's premises to carry out the tests in accordance with the relevant IEC Standards. If, any test(s) pending due to lack of testing facilities at the manufacturer's premises, then the Inspection team shall select sample of Goods and sent the selected sample to any independent Testing Laboratory of the manufacturer's country to carry out the test(s). All cost of testing of the selected sample(s) including carrying, loading, un-loading etc. will be borne by the supplier.

The Supplier shall, after consulting the purchaser, give notice to the Purchaser in writing of the date and the place where the material or equipment will be ready for quality witness testing.

When the purchaser intends to attend the test he shall promptly inform the supplier accordingly in writing, so that supplier can take action. The purchaser shall give the supplier timely notice in writing of his intention to attend the test.

The supplier/ manufacturer shall submit (if required by inspection team) the testing procedure & list of testing/ measuring equipment, meters etc. used for Factory/Technical orientation & Quality test witness prior to carry out such witness test(s).

The supplier/ manufacturer shall submit the valid Calibration Certificate from competent authority of the testing/ measuring equipments, meters etc. used for Factory/Technical orientation & Quality test and the following documents to inspection team prior to carry out such witness test(s).

I. Updated valid Calibration Certificates of the testing/ measuring equipments, meters etc. used for Factory/Technical orientation & Quality test.

II. The factory test report (Routine test report) of Goods to be supplied under the contract.

Failing to submit the above documents, the inspection team may not perform to carry out such witness test(s) and all the liabilities along with delay (if any) will be borne by the Bidder/Manufacturer.
It is noted that at the time of Factory/Technical orientation & Quality Test witness BPDB's Inspection team will check the calibration seal/ certificate of the testing/ measuring equipment, meters etc. by the competent authority. If the calibration seal/ certificate of the testing/ measuring equipment, meters etc. are not found and the calibration not done within the due date then BPDB's Inspection team will not witness the test. In that case the Bidder/ Manufacturer shall complete the calibration of the testing/ measuring equipment, meters etc. from the competent authority within a reasonable period without any delay in delivery period.

The Factory/Technical orientation & Quality Test witness shall be carried out as per latest version of relevant IEC/BS/ANSI/ASTM/BDS or equivalent international standards as mentioned in the contract at the manufacturer's premises or other places where the required test facilities are available and only routine tests as agreed upon inspection team will be performed. All expenses for such tests shall be borne by the supplier.

When the purchaser intends to attend the test he shall promptly inform the supplier accordingly in writing, so that he can take action. The purchaser shall give the supplier timely notice in writing of his intention to attend the test.

Where the supplier provides for tests on the premises of the supplier or of any manufacturer of the supplier, except where otherwise specified, shall provide free of charge such assistance, labor, materials, electricity, fuel, stores, apparatus and instruments as may be requisite and as may be reasonably demanded to carry out such test efficiently. These tests shall be performed as per latest version of relevant IEC/ BS or equivalent international standards as mentioned in the tender and only routine tests as agreed upon will be performed.

As and when the purchaser is satisfied that any materials/ equipments shall have passes the tests referred to in this clause, purchaser shall notify the contractor in writing to that effect.

Should any inspected/ tested goods fail to conform to the specification, the Purchaser shall have the right to reject any of the items or complete batch if necessary. In that case Supplier has to replace the equipment and to make good of them and the supplier shall conduct similar pre-delivery Inspection and factory tests without any financial involvement to the purchaser. In case any of the Equipment found not conforming to the specification at the time of post landing Inspection, the supplier will in no way be relieved from the responsibility of replacing them on making them good at their own cost, despite the Equipment were found good at the time of Factory Acceptance Test. Nothing in this clause shall in any way release the supplier from any warranty or other obligations under the tender.

No goods shall be packed, prepared for shipment/delivery unless it has been approved including factory Test reports and written instructions have been issued by the Purchaser. On successful completion of Pre-shipment inspection/quality test witness, delivery of goods will be made to the designated stores under contractor's/supplier's responsibility until Post-Landing Inspection is successfully completed without any obligation on part of BPDB. Quality and quantity of the delivered goods will be determined at the time of post-landing inspection at the designated stores in presence of the authorized representative of the contractor/supplier. After approval of the satisfactory Post-Landing Inspection, R&I Report will be issued following the contractual obligations.

The goods supplied under this Contract shall be fully insured in addition, “All risks” insurance, including “war risks, riots, strikes and/or theft” shall be acquired for 110% of the delivered cost of the goods on “Warehouse to Warehouse” basis until the issuance of the R & I after satisfactory completion of Post-Landing Inspection of the goods supplied.

The Tenderer has mentioned the place of Technical Orientation and Quality Test Witness in the following table:

<table>
<thead>
<tr>
<th>Sl. No.</th>
<th>Item</th>
<th>Period of Technical Orientation and Quality Test Witness</th>
<th>Place &amp; Country of Technical Orientation and Quality Test Witness</th>
</tr>
</thead>
</table>

7.12 POST-LANDING INSPECTION AND TESTING:

The Supplier shall inform the purchaser immediately after arrival of the goods at the designated store of BPDB (as per delivery schedule). An Inspection team of BPDB shall perform the post-landing inspection in
presence of supplier's representative. The Supplier shall arrange the program of post-landing inspection. Any defect or damage have been found at post-landing inspection, the defective or damaged materials/goods to be replaced by the supplier at his own cost within the stipulated time.

The purchaser's right to inspect, test (where necessary) and reject the goods after delivery at the designated store of BPDB shall in no way be limited or waived by reason of the goods having previously been inspected, tested and passed by the purchaser prior to the good's delivery.

The Inspection team will check the physical conditions and quantity of the goods delivered. If necessary, the inspection team will select the sample of good(s) and sent the selected sample goods to CERS, BPDB or BUET/ CUET/ KUET /RUET (as selected by the inspection team) to carryout the test(s) as per contract to confirm the conformity to the approved Technical Specifications, Guaranteed Technical Particulars (GTP), drawings and relevant standards. If the tested sample(s) fail to confirm the specifications in tests, the full consignment will be rejected. All cost of testing of Materials/ Goods including carrying, loading, unloading etc. will be borne by the supplier.

7.13. **PACKAGING AND SHIPPING**

Packing of equipment has been detailed elsewhere in Particular Conditions of Contract of tender document.

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SECTION 08

GUARANTEED TECHNICAL PARTICULARS (GTP) OF HYDRAULIC CUTTER
# 8.0 Guaranteed Technical Particulars (GTP) for Hydraulic Cutter

(To be filled up with the Seal & Signed by both manufacturer and bidder in Manufacturer’s Letterhead Pad, otherwise the bid will be rejected)

<table>
<thead>
<tr>
<th>SL. No.</th>
<th>Description</th>
<th>BPDB’s Requirement</th>
<th>Manufacturer’s Guaranteed Data</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.</td>
<td>Manufacturer’s Name &amp; address</td>
<td>To be mentioned</td>
<td></td>
</tr>
<tr>
<td>2.</td>
<td>Manufacturer’s Type/ Model</td>
<td>To be mentioned</td>
<td></td>
</tr>
<tr>
<td>3.</td>
<td>Country of origin</td>
<td>To be mentioned</td>
<td></td>
</tr>
<tr>
<td>5.</td>
<td>Applicable Cutting of Conductor, Cable &amp; Wire</td>
<td>ACSR, AAC (bare and Insulated), Guy wire, Copper wire (Bare and Insulated), Soft Steel bar (max.5/8 inch) &amp; Rebar (max. ½ inch)</td>
<td></td>
</tr>
<tr>
<td>6.</td>
<td>Operating Pressure</td>
<td>≥10,000 psi</td>
<td></td>
</tr>
<tr>
<td>7.</td>
<td>Diameter for cutting (Jaw Diameter)</td>
<td>Up to 40mm</td>
<td></td>
</tr>
<tr>
<td>8.</td>
<td>Materials of Handles</td>
<td>Fiberglass or higher composite materials</td>
<td></td>
</tr>
<tr>
<td>9.</td>
<td>Materials of blades</td>
<td>Heat Treated Steel</td>
<td></td>
</tr>
<tr>
<td>10.</td>
<td>Dimension</td>
<td>To be mentioned</td>
<td></td>
</tr>
<tr>
<td>11.</td>
<td>Weight in Kg</td>
<td>To be mentioned</td>
<td></td>
</tr>
<tr>
<td>12.</td>
<td>Features &amp; Accessories</td>
<td>As per Sec 7.5 &amp; 7.6</td>
<td></td>
</tr>
<tr>
<td>13.</td>
<td>Printed Catalogue in English</td>
<td>To be submitted</td>
<td></td>
</tr>
</tbody>
</table>

Seal and Signature of the Manufacturer

Seal and Signature of the Tenderer
SECTION 9

DRAWINGS (TO BE SUBMITTED BY TENDERER)