



# Odisha Power Generation Corporation Limited IB Thermal Power Station

AT/P.O: BANHARPALI; DIST.: JHARSUGUDA, PIN:768234(ODISHA), INDIA

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**SAFE & CLEAN POWER IS OUR COMMITMENT**

**AN ISO-14001; OHSAS-18001 ORGANIZATION**

Tender documents against  
NIT No. ITPS/ (Purchase)/2016-2017 /29 (P) dt.20/03/2017  
For supply and installation of battery bank to IB Thermal Power Station.

Date for Issue of bid document	04/03/2017 to 18/04/2017
Last Date of receipt of Bid	24/04/2017 by 15:00 hours in the office under signed
Date of Techno commercial bid opening	24/04/2017 by at 15.30 hours
Date of Price bid opening	To be intimated later on
Cost of Tender Paper	NIL. It may be downloaded from our website.
Earnest Money Deposit	Rs.15,000.00 (Fifteen thousand only).

Note: Before Submission of bid please ensure proper documentation is made as mentioned in the bid.

Dy. General Manager, Purchase

Issued to M/s .....

.....

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# Odisha Power Generation Corporation Limited

## IB Thermal Power Station

NIT No. ITPS/ (Purchase)/2016-2017 /29 (P) dt.20/03/2017

Tender Specification for Supply of materials to ITPS.IB Thermal Power Station, At/PO: Banharpali, Dist. Jharsuguda (Odisha), PIN: 768234 is a unit of Orissa Power Generation Corporation Limited a Govt. of Odisha undertaking having 49 % of share by AES America and engaged in generation of 2x210 MW Thermal Electric Power. The Plant site is about 17 Kmtr from Belpahar Railway Station and 40Kms.from Jharsuguda Rly. Station on S.E. Rly. on the Mumbai- Howrah main line.

**Two bid** system sealed bids are invited from manufacturer / authorized stockiest /authorized dealer / authorized distributor only in their own letter heads for supply & installation of battery bank to IB-Thermal Power Station as per specification mentioned. The tenderer must have in line experience, financial capability and have supplied such items to other customer.

The tenders must have relevant credentials in support of their claim of being OEM / authorized stockiest /authorized dealer / authorized distributor and copy of purchase order in support of said items to other concern of repute along with their offer. The bidders shall have to submit their offer in two parts

**Part-I: Techno Commercial bid shall comprise of the following facts with required Documents.**

### QUALIFYING REQUIREMENT DATA (For Supply)

Bidder to satisfy all the following requirements.

1. The bidder shall be Original Equipment Manufacturer (OEM) of the offered battery set (220V, 400AH, Lead Acid Tubular High Discharge Performance (HDP) Type Battery Set). The offered battery set has to be designed, manufactured and tested as per relevant IS/IEC with latest amendments.
2. The minimum requirement of per annum manufacturing capacity of offered type, size and rating of equipment shall be **5 times tender / bid quantity**. The bidder should indicate manufacturing capacity by submitting latest updated certificate of a Chartered Engineer (CE).
3. Equipment proposed shall be of similar or higher rating and in service for a minimum period of THREE (3) years and satisfactory performance certificate in respect of this is to be submitted along with the offer.
4. The bidder should have executed during last three years:
  - i) One single contract for the supply of offered battery set, amount equivalent to 80% of the tender value.
  - OR**
  - ii) Two contracts for the supply of battery set, each contract equivalent to 40% of the tender value.

The details of the executed contracts are to be submitted in the format as given in Annexure II.

5. Equipment offered shall have Type Test Certificates from accredited laboratory (accredited based on ISO/IEC Guide 25 / 17025 or EN 45001 by the National accreditation body of the country where laboratory is located), as per IEC / IS / technical specifications not older than FIVE (5) years and valid till validity of offer.
6. Offer may not be considered without submission of valid authorization certificate in case of authorized stockiest /authorized dealer / authorized distributor only.
7. Bidder must mentioned the guarantee / warrantee period in their offer.



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8. Bidder must be submitted the order copies of other customer for same item for credential and price justification.
9. Photo copy Valid TIN, PAN No. VAT No., CST No. For outside state vendors. Offer may not be considered if vendor is failing to submit these documents.
10. EMD of Rs 15, 000/- (fifteen thousand only) in shape of DD payable on State Bank of India (Code No. 9510)/Central Bank of India, ITPS Banharpali (Code No.028399)/ Andhra Bank, Adapada (Code-0662), Ib Thermal Power Station, Banharpali, Jharsuguda in favour of Orissa Power Generation Corporation Limited.
11. Requisite EMD can be submit directly in our company name – Odisha Power Generation Corporation Limited, Banharpali. Account number of State Bank of India – 10765789090(Code No. 9510). Account number of Central Bank of India, ITPS Banharpali – 2062780721(Code No. 3899). Account number of Andhra Bank, Adapada – 066211011000005 (Code-0662).

### SPECIAL INSTRUCTIONS TO BIDDER

The bidder has to comply with the following points during submission of the bid.

1. The party has to supply the 220V, 400AH, Lead Acid Tubular High Discharge Performance (HDP) Type Battery set and its accessories as per the technical specifications given in Annexure I.
2. The bidder must fill up all the points of Guaranteed Technical Particular (GTP) for offered item/s as attached in Annexure III. Instead of indicating “refer drawing, or as per IS/IEC”, the exact value/s must be filled in.
3. In case if deviations are observed in the GTP with respect to Annexure I, OPGC reserves the right to cancel the bid.
4. The bidder shall bring out all the technical deviation/s only at the specified Annexure IV. However, acceptance of the deviation is prerogative to OPGC. Also, if required, financial loading will be done on the deviation taken for evaluation of the bid.
5. All the drawings, i.e. elevation, side view, plan, cross sectional view etc., in AutoCAD Format and manuals in PDF format, for offered item shall be submitted. Also the hard copies as per specification shall be submitted.
6. The bidder shall submit Quality Assurance Plan for manufacturing process and Field Quality Plan along with the technical bid.
7. The bidder shall have to submit all the required type test reports for the offered item. ***In case of non-submission of the type test reports with the offer, the bid shall be liable to be rejected.***
8. All the points other than Guaranteed Technical Particular (GTP), which are asked to confirm in technical specifications must be submitted separately with the bid.
9. Commissioning of the supplied battery set has to be done by the party awarded with the order to supply the battery set. The commissioning of the battery set has to be done as mentioned in clause (13) of Annexure I.
10. The bidder is required to impart training in view of manufacture, assembly, erection, Operation and maintenance for offered item, at his works, to the person/s identified by OPGC, in the event of an order, free of cost. OPGC will bear the cost of logistics.
11. Please note that the evaluation will be carried out on the strength of content of bid only. No further correspondence will be made.



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**Annexure-I**

### **TECHNICAL SPECIFICATIONS OF 220V, 400AH, LEAD ACID TUBULAR HDP TYPE BATTERY SET**

#### **1.0 SCOPE:**

1.1 This specification covers the design, manufacture & testing of 220V, 400 AH, Lead Acid Tubular HDP type battery set at the manufacturer's works and supply at site. It also includes supply of battery stand and all accessories mentioned in this specification.

#### **2.0 APPLICABLE STANDARDS:**

2.1 Unless otherwise specified in this specification, the lead acid batteries shall comply with the following standards and latest amendments revision thereof.

- |                 |  |
|-----------------|--|
| a) IEC 60896-11 | General requirements & methods of tests for stationary lead acid batteries.  |
| b) IS: 1885     | Electrical vocabulary – Stationary cells and batteries.  |
| c) IS: 1651     | Specification for Lead Acid Batteries with High Discharge Performance Tubular Cells                                |
| d) IS: 1146     | Specification for hard rubber and plastic containers for lead acid storage batteries.                              |
| e) IS: 6071     | Specification for synthetic separators for lead acid batteries   |
| f) IS: 266      | Specification for sulphuric acid   |
| g) IS: 1069     | Specification for water for storage batteries  |
| h) IS: 8320     | General requirements for methods of tests for lead acid storage batteries.   |
| i) IEEE - 485   | IEE recommended practice for sizing of large lead acid storage batteries for generating stations and sub stations. |
| j) IEEE-484     | Recommended practice for design and installation of storage batteries.   |
| k) IS: 652      | Specification for wooden separators for lead acid batteries.   |
| l) IS: 3116     | Specification for sealing compound for lead acid batteries.  |

#### **3.0 WEATHER CONDITION:**

For the purpose of designing, following climatic conditions shall have to be considered:

- 3.1 Monsoon prevails generally from the months of June to October will showers sometimes heavy, smoky, industrial and foggy.
- 3.2 Elevation above Mean Sea Level: 218 M
- 3.3 Maximum Ambient Temperature: 47°C
- 3.4 Minimum Ambient Temperature: 7°C
- 3.5 Maximum Daily average Air Temperature in shade: 40°C
- 3.6 Average Relative Humidity: 63.9%
- 3.7 Average Rainfall per Annum: 144.5 cm
- 3.8 Seismic Consideration: The sites fall within Seismic Zones – II as classified in the IS :1983 (1984)
- 3.9 Pollution Level: Heavily Polluted



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### 4.0 APPLICATION

The device shall be installed in indoor location within the Battery Room of Sub-stations to provide Auxiliary DC Power Supply for following applications:

- a) Emergency lighting
- b) Circuit breaker/ switchgear/ protective relay operations
- c) Equipment supervision indication
- d) Audio visual annunciation.

Under normal conditions, Auxiliary DC Power Supply for continuous load will be met from the Battery Charger and Storage batteries should be kept under float or boost charging condition.

But in case of Circuit Breaker/ Switchgear/ Protective Relay operation and/ or in the event of failure of incoming AC power supply to Battery Charger, required Auxiliary DC Power Supply shall be met from Storage Batteries.

### 5.0 CONSTRUCTIONAL FEATURES & GENERAL REQUIREMENT:

#### 5.1 Cell Voltage

- a) The battery set shall be of the capacity 220V, 400 AH, Lead Acid Tubular HDP type as per requirement of tender.
- b) Battery of 220V, 400 AH rating shall consist of 110 numbers of series connected HDP tubular lead acid cells of 2.0 Volts each, having 400 Ampere Hour capacity at 10 Hours discharge rate.
- c) The batteries shall be suitable for a long life under continuous float operations at 2.15 to 2.25 volts per cell and occasional discharges and shall be stationary lead acid type with high discharge performance (HDP) confirming to IS: 1651 (latest edition) suitable for Indoor operation.

#### 5.2 Charging Rate

- a) Fully discharged batteries get recharged at 25/35 Amps rate for 10 hours at room temperature. The trickle charge rate shall be **50-100mA**.
- b) The nominal voltage of a single cell shall be not less than 2 Volts at the beginning of the charging.
- c) The trickle charging voltage per cell shall be within 2.25 Volts to 2.3 Volts.
- d) The boost charging voltage per cell shall be within 2.35 Volts to 2.75 Volts.
- e) At the end of the charging, cell shall be floated easily around 2.25 Volts without causing adverse corrosion or loss of water.

#### 5.3 Positive Plates

The positive plate shall be of Tubular gauntlet type. Plates shall be made of high pressure cast special Lead Antimony alloy spines in complete contact with superior active material, effectively retained in multi-tube woven gauntlet of high tensile acid-resistant polyester & shall be free from any kind of manufacturing defects. It shall be electrochemically formed & shall be capable of operating under normal working condition without buckling or cracking. Welding together of smaller size lead casting/plates to form larger sizes will not be acceptable. It should be genuine Tubular type of plate only & not so called equivalent type. The plates shall be designed for maximum durability during all service condition including high rate of discharge and rapid fluctuation of load.



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### 5.4 Negative Plates

The negative plates shall be of flat pasted type consisting of sturdy lead antimony alloy grid filled with active material. It should have adequate mechanical strength and should be so designed that active material is maintained in intimate contact with the grid under normal working conditions throughout the life of the battery.

### 5.5 Plate Connections

The plug of the plates of like polarity shall be connected to terminal post for external connections. Suitable plastic buffer, molded bottom plate support shall be used for holding plates in proper position.

### 5.6 Separators

The separators should be of High Porosity polyethylene envelope form permanent insulating diaphragms between the plates. It should be acid resistance, chemically inert & should have excellent oxidation resistance & high degree of porosity to ensure low electrical resistance. It should not exhibit any tendency to swell or shrink at temperature encountered during operation.

### 5.7 Heavy Duty Terminal Posts & Polarity Marking

Positive and negative terminal posts of the cells shall be clearly and unmistakably identifiable. The polarity of the terminals shall be marked for identification. The positive terminals may be identified by "P" or a (+) sign of red colour mark and the negative terminals may be identified by "N" or (-) sign of blue colour mark. Marking shall be permanent and non-deteriorating. Terminal posts shall be designed to accommodate external bolted connections conveniently and positively. The terminal post size should be capable of carrying current so as to conform to BS 6290 Part II 1999. All metal parts of the terminals shall be of lead or lead coated type. Bolts, heads and nuts, except seal nuts, shall be hexagonal and shall be lead covered. Terminal posts shall be adequately fixed to prevent its turning or twisting when the connectors are being fixed or removed. The junction between terminal posts and cover shall be adequately sealed to prevent any seepage of the electrolyte. All terminals shall be provided with insulated covers (Shrouds).

### 5.8 Container

The containers should be moulded from transparent **Styrene Acrylonitrile (SAN)** giving excellent clarity, outstanding chemical resistance, rigidity and toughness with very high insulating qualities which eliminate the need for separate cell insulators. It should have adequate Mechanical strength to prevent bulging, cracking etc. during the life span of battery when operating under expected temperature range and due to action of static and dynamic loads and the action of electrolyte. The container shall provide permanent transparency to enable visual inspection of electrolyte level and internal condition of cell. Recommended electrolyte level shall be clearly and indelibly marked.

### 5.9 Cell Lid

Cell lid for covering cell container shall be made from high quality non-corrosive plastic materials and shall have provision for easy removal.



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### 5.10 Vent Plug

The vent plugs should be specially designed incorporating a micro porous ceramic filter which effectively returns all acid spray to the cell, but allow free exit of oxygen and hydrogen which is generated at the end of boost charging. On removal, the plugs shall permit draining of the electrolyte sample for servicing and of checking of the electrolyte level.

### 5.11 Electrolyte

The electrolyte shall be battery grade sulphuric acid conforming to latest edition of IS 266-1977 diluted with distilled water to specific gravity 1.20 at 27°C. The lead acid cell batteries shall be supplied in dry and uncharged condition. Diluted sulphuric acid of approved quality and required quantity shall be supplied in separate non-returnable porcelain or any other acid & corrosive proof jars. 10% extra quantity shall be supplied in non-returnable, non-degradable acid resistant strong plastic containers. Water used in preparation of electrolyte and also for periodic topping up during the course of operation or testing shall conform to the latest edition of IS-1069.

### 5.12 Cell Pillars and Connectors

Cell Pillars and Connectors should be adequately designed to offer minimum impedance and shall be made from highly conductive material of lead alloy having generous cross section ideally suited for high current duties.. The current carrying area of the connectors shall conform to the requirement of BS 6290 Part II 1999. While considering the terminal voltage of the cell at the time of testing for discharge, the voltage drop due to inter-row and inter-cell connectors shall be considered. Connectors shall be of lead plated copper.

The lead coating shall be adequate and tenacious. Minimum thickness of lead coating shall be 25 microns. Connectors shall be adequately designed to withstand various stress due to temperature changes, attack of acid and dynamic forces that could occur during the operation of the battery.

### 5.13 Battery Stand

The construction of the stand shall be suitable for mounting on a flat concrete floor. The stand shall be rigid, free standing type and free from warp and twist. The stand should be made up of MS channels/angles with FRP coating of min.5.0 mm or of pure FRP material. The FRP stand shall also be non reactant to acid. The stand should be designed considering all aspect of loading and safety, **so as to withstand the loading of battery set throughout its life, which shall be supported by load bearing calculation.** The lower tier of the stand will be at the height of 300 mm from the ground level. Support angle should be provided for each rack so as to safeguard each battery cell from falling or declining. There shall be sufficient space between two tiers of stand so that maintenance of battery cells of lower tier can be done easily. Necessary supports for power cable connected to end takeoff terminals shall be mounted on the stand. Number plate to designate each cell of battery shall be provided and shall be attached on the rack. Provision shall be made for clamping outgoing cable on the rack.

### 5.14 Important Design Consideration

Plate connectors and plate shall be designed to contribute maximum effective surface area, maximum electrical conductivity and superior voltage characteristics throughout service life. The



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plates shall be designed for maximum performance durability and shall not buckle during different service conditions, i.e. high rate of discharge and rapid fluctuation of load.

### 5.15 Accessories

The bidder shall supply the battery set with stand (as mentioned in clause 3.0 and its sub-clauses) with accessories and devices as stated here under:

5.15.1 List of accessories as part of the battery set for installation and commissioning of the battery as mentioned in tender:

- i. One set of inter-cell, inter raw, inter-tier, inter rack, end take off connectors and lugs for termination of cables as required for the complete installation.
- ii. One set of stand insulators of hard rubber material.
- iii. Required quantity of Electrolyte which shall be prepared from **battery grade sulphuric acid confirming to IS: 226 and distilled water confirming to IS: 1069**
- iv. Electrolyte for first filling with 10% extra shall be supplied in nonreturnable containers. (Type of electrolyte, qty per cell, total first filling qty and total qty, no. of containers (Carboys) may please be specified in GTP).
- v. 110 Nos. of cell number plates (**No stickers**) and fixing pins / screws
- vi. Lead plated MS or acid proof stainless steel Bolt & nuts. (Size and quantity may please be mentioned in GTP).
- vii. Each cell shall be provided with ceramic type vent plug. It shall be anti-splash type, having more than one exit hole and shall allow the gases to escape freely but shall prevent acid from coming out.
- viii. Nylon brushes with stout bristles for cleaning connections
- ix. Log book for maintenance.
- x. Any item not specified above but which is needed for maintenance & efficient working of batteries may be indicated separately without extra cost.

5.15.2 List of accessories required to be supplied separately for routine maintenance of battery

Sl. No	Details	Qty.
1	V2B Syringe type Hydrometer set	1 NO
2	Mercury in Glass Chemical Thermometer Range : 0-100°C having suitable scale representing 1°C temperature rise	1 NO
3	Wall mounting plastic holder for hydrometer & thermometer	1 Set
4	Insulated Spanner and other insulated special tools as required for Battery Maint.	1 Set
5	10 oz Plastic Syringe for battery maintenance	1 NO
6	Acid resistive Plastic funnel 150 mm dia	1 NO
7	Rubber Syphon, 12.7 mm dia, 2 meters long	1 NO
8	Rubber Apron for battery maintenance	1 NO
9	Rubber gloves for battery maintenance	1 Pair
10	Acid Resisting Plastic Jug, 2 liters capacity	1 NO





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### 5.16 QAP

Bidder shall submit the Manufacturing Quality Plan showing all the details along with the offer.

### 5.17 Spares

A separate **List of Spares** for each set as recommended by the supplier for 3 (three) years satisfactory operation **along with prices** shall be submitted with the tender.

### 6.0 Packing & Delivery:

Battery shall be supplied in dry and uncharged condition suitably packed, securely in wooden crates. Packing shall be suitable for handling during transit by Rail / Road and secured to avoid any loss or damage during transit.

### 7.0 PRICES

Prices shall be quoted separately for Lead Acid Cell Battery (without Acid), Electrolyte, Inter-row/ tier connector, battery stand and accessories. Prices shall be quoted separately also for recommended spares.

### 8.0 Tests & Reports:

The bidder shall submit the complete type, routine and acceptance test reports as stated hereunder for the offered item along with the offer otherwise **the offer shall be liable to be rejected**. These tests must have been conducted in the Govt. approved laboratory **as per IS 1651 & IEC 60896 – 11** within last 5 years prior to date of validation of the offer from CPRI/NABL accredited/Govt. recognized Test House or Laboratory.

### 8.1 Type Tests:-

- a) Verification of constructional requirements (As per IS 1651).
- b) Verification of marking and packing (As per IS 1651).
- c) Verifications of dimensions (As per IS 1651).
- d) Capacity test (As per IEC 60896 – 11)
- e) Charge Retention Test (As per IEC 60896 – 11)
- f) Endurance in discharge – charge cycles (As per IEC 60896 – 11)
- g) Endurance in overcharge (As per IEC 60896 – 11)
  
- h) Test of suitability for floating battery operation (As per IEC 60896 – 11)
  
- i) Short circuit current and internal resistance Test (As per IEC 60896 –11)
- j) Ampere- hour and watt-hour efficiency tests (As per IS 1651).
- k) Test for voltages during discharge (As per IS 1651).
- l) Any other recommended type tests not covered in the above list.

### 8.2 Routine & Acceptance Tests:-

Routine and Acceptance Tests shall have to be carried out in compliance with the provision made in the relevant standards at the works of the manufacturer. The Routine and Acceptance Tests shall have to be conducted in presence of authorized representatives of the purchaser before effecting delivery. The manufacturer shall have to arrange all facilities for such inspection and



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tests, free of cost.

- a) Visual inspection including marking and packing.
- b) Dimensional check.
- c) Capacity test.
- d) Test for voltage during discharge.
- e) **Battery Impedance Measurement Test.**
- f) All other routine and acceptance tests not covered in the above list.

**Note: - Battery Impedance Measurement Test shall also be the routine test and Signature Value (Battery Impedance) of all the cells shall invariably be submitted with routine test reports.**

### 8.3 Test Certificate

- a. Type Test Certificate(s) complete in all respect and **conducted on similar equipment** shall have to be submitted, in triplicate, along with the Tender.
- b. Six (6) copies of Routine and Acceptance Test Reports conducted on offered equipment shall be furnished to the purchaser by the successful Bidders for approval before effecting dispatch of equipment from the works.
- c. Type Tests (after issuance of order) :  
Besides submission of Type Test Report(s), carried out within five years as per Tender Specification, Type Tests, at the discretion of Ordering authority, shall have to be arranged by the successful contractor from any lot offered for inspection, sample chosen at random after successful Routine Test by our Inspection Team, as per relevant ISS from CPRI/NABL accredited/Government recognized Test House or Laboratory in presence of OPGC'S representative.

### 9.0 DRAWINGS AND DATA:

- 9.1 All the bidders shall submit along with their offer the following drawings in Hard and soft copy.
- i. Set of GA Drawing for complete battery sets, battery stand and individual battery cell drawing with sectional view.
  - ii. Technical literature/Manuals
  - iii. Manufacturing Quality Plan
  - iv. Quality Assurance Plan
  - v. Field Quality Plan
  - vi. Performance curves/write-up on working of battery. The Data submitted shall be adequate to evaluate the performance/quality of item offered.
  - vii. General Arrangement drawing showing details of the size & qty of steel sections for FRP stands and placement of batteries in battery stand as well as layout of rack with details of components
  - viii. Instruction, commissioning, operation and maintenance manual. The manual shall clearly indicate the installation and preservation methods, check-ups and tests to be carried out before during and after commissioning of the equipment.
  - ix. Descriptive leaflets showing characteristics of battery.



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9.2 The successful bidder shall submit three sets of following drawings in hard and soft copy for purchaser's approval before dispatch of.

- i. Set of GA Drawing for complete battery sets, battery stand and individual battery cell.
- ii. Complete bill of material of battery set and accessories indicating make, material, quantity, size & type wherever applicable.
- iii. Sectional view showing interior construction of the battery cell. It shall also include the information of C/S area of positive and negative plates, container dimensions, type/grade and quantity of electrolyte.
- iv. The detailed drawing showing the size & quantity of steel sections for FRP stand.
- v. Technical literature/Manuals covering manufacturer's instructions for filling and initial charging of the battery together with starting and finishing charging rate, maintenance instructions and storage conditions of electrolyte and battery cells.
- vi. In addition to above, every crate of complete set of equipments to be dispatched by the successful bidder shall also contain in water proof folder, necessary set of drawings, literatures, tests, manuals and leaflets for commissioning, operation and maintenance at site.

### **10.0 DEVIATION**

All deviations from the specification shall be recorded in the "Schedule of Deviation Sheet" as given in Annexure-IV with reference to respective clause of the specification. Tenderer shall draw specification for such departure. Unless deviations are recorded in the "Deviation Sheet" and submitted with the offer, it will be taken for granted that the offer is made in conformity with the specification.

### **11.0 CREDENTIALS**

Tenderer shall have to furnish documents in support of past supply, delivery and satisfactory performance of similar equipment as given in Annexure-II.

### **12.0 DOCUMENTS TO BE SUBMITTED AT THE TIME OF PHYSICAL DELIVERY TO THE CONSIGNEE STORES**

The following documents to be submitted by the Vendors to the Consignee Stores at the time of physical delivery:-

- a) Copy of Purchase Order.
- b) Copy of Dispatch Instruction.
- c) Inspection Test Certificate.
- d) Guarantee Certificate.
- e) Proforma Invoice.
- f) Calculation Sheet for price Variation on the basis of IEEMA or CACMAI as applicable with base date of order.
- g) Seal list and packing list.
- h) Challan in triplicate.
- i) Way bill, if applicable.



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### 13.0 COMMISSIONING:

The first commissioning of entire battery set at site shall be in the scope of the Bid. The successful Bidder/s shall have to carry out first commissioning of each battery set at site. The successful bidder shall arrange for all the necessary equipment, including the variable resistor, tools, tackles, and instruments along with mobilization of service engineer.

Scope of work and Terms and condition for Erection, testing and commissioning of 220 Volts, 400AH, Lead Acid Tubular HDP Type battery set at Coal Handling Plant Battery Room of ITPS.

(A) Dismantling of existing 220 V DC battery set. Specifications of existing battery set are: 110 nos. of 2VDC, 400AH, TM400H HDP II-MK1, M/s Exide make.

1. Contractor has to completely dismantle the existing 220 Volts D.C. battery set located at Coal Handling Plant Battery Room of ITPS.
2. Before starting of dismantling work, necessary clearance for carrying out said work will be given by EMD engineer after confirming proper isolation from system. However contractor has to confirm proper isolation from system and use of proper PPE's, acid proof apron, face visor, acid proof hand gloves, gum boots, etc prior to start of work.
3. Necessary power and control cables are to be disconnected. While disconnection, proper marking is to be carried out so that same can be re-commissioned with the new battery set.
4. All inter connection / links which are connected to existing 220 Volts battery set are to be disconnected safely.
5. After complete disconnection from the system, the battery set is to be dismantled from the foundation. Care has to be taken that there is no spillage of sulphuric acid from the old batteries while dismantling and shifting.
6. The dismantled battery set is to be taken by the vendor as per buyback scheme as mentioned in clause no. (14). Contractor has to arrange for the transport of the old dismantled battery from site to the workshop/factory of the contractor.
7. Contractor has to clean the site after complete dismantling of existing battery set so that work of erection of new battery set can be started without any delay.

(B) Erection, Testing and Commissioning of New 220 V DC battery set

1. Arrangement of supplied battery stand & locating cells on stand etc. work is to be arranged by party.
2. Shifting of cells, Electrolyte, standard accessories etc. and unpacking of cells, physical verification of cells etc. is to be carried out by party.
3. 1st Charging of cells is to be carried out as per standard procedure for installation and commissioning of OEM and taking reading thereof.
4. Checking of charger healthiness, connection of Nuts and bolts, filling of Electrolyte etc work is to be arranged by party.
5. Adjusting of Sp gravity/voltage and levels as per requirement.
6. Submission of record and report of charging-in duplicate.
7. Special end connector of suitable size to terminate cable at battery end is to be provided by the party without any extra cost.



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8. Required man power and other materials are to be arranged by party at his own cost. No material will given by OPGC.
9. Electrical supply connection will be given for above work free of cost at one point.
10. Tools and special arrangement required for the job will be arranged by the contractor.
11. The work has to be done and completed as per full satisfaction of Engineer in Charge.

#### **14. BUY BACK OF OLD BATTERY BANK**

Vendor shall quote buy back price along with the offer for the old 220VDC battery bank with the following specification.

Make: M/s Exide

Type: Lead Acid Tubular (HDP)

Capacity: 400 AH

Voltage of Each Cell: 2VDC

Model: TM400H HDP II-MK1

No. of Cell: 110

Container: Hard Rubber

Vendor shall provide credit note for the buyback rates of old battery bank after completion of all the work.



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**Annexure-II**

**SCHEDULE OF MAJOR SUPPLIES EFFECTED DURING LAST THREE YEARS**

<b>Sr. No.</b>	<b>Name &amp; Complete Address of the Purchaser</b>	<b>Purchase Order No.</b>	<b>Date on which equipment was supplied</b>	<b>Date on which the equipment was commissioned</b>	<b>Remarks.</b>
<b>1</b>	<b>2</b>	<b>3</b>	<b>4</b>	<b>5</b>	<b>6</b>



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## IB Thermal Power Station

NIT No. ITPS/ (Purchase)/2016-2017 /29 (P) dt.20/03/2017

**Annexure-III**

### **SCHEDULE OF GUARANTEED TECHNICAL PARTICULAR FOR 220 V, 400AH LEAD ACID TUBULAR HDP TYPE BATTERY (To be filled up along with offer of Battery Set)**

400 AH Battery Capacity

1. Name of Manufacturer :
2. Application Standards :
3. Type and designation as per standards :
4. Manufacturer's type & designation :
5. Capacity and voltage at 27°C : AH WH Final Voltage in Volts
  - a. At 10 hrs rate of discharge :
  - b. At 5 hrs rate of discharge :
  - c. At 3 hrs rate of discharge :
  - d. At 1 hrs rate of discharge :
  - e. At 1 minute rate of discharge :
6. Cell Details
  - a. No. of Cell per battery :
  - b. No. of positive plates per cell :
  - c. Total No. of plates per cell :
  - d. Type of positive plate :
  - e. Type of negative plate :
  - f. Surface area of plate in sqmm :
  - g. Construction details, cross sectional area, Dimensions and material of
    - i. Positive Plates :
    - ii. Negative Plates :
  - h. Rated current of each positive plate :
  - i. Construction details of separators including Thickness, type and material :
  - j. Cell Container Details
    - i. Length :
    - ii. Width :
    - iii. Height :
    - iv. Material of the container :
  - k. Overall dimension of cell in mm (Including cell height) :
  - l. Weight of each cell
    - i. Without acid :



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- ii. With acid :
- m. Clearance in mm between
  - i. Top of plates and top of container :
  - ii. Bottom of plates and bottom of Container :
  - iii. Edges of plates and inner surface of container :
- n. Cell Lid Details
  - i. Material :
  - ii. Type :
  - iii. Dimension in mm :
- o. Vent Plug Details
  - i. Material :
  - ii. Type :
  - iii. Feature :
- 7. Details of electrolyte
  - a. Applicable standard of electrolyte :
  - b. Type and Grade of Electrolyte :
  - c. Quantity of electrolyte & specific gravity at 27°C for first filling in each cell :
  - d. Quantity (ltr) of electrolyte required for 110 Nos. of Lead Acid Tubular HDP type cells :
  - e. Quantity of 10% extra electrolyte in Litres:
  - f. Grand total qty of electrolyte in Litres :
  - g. Specific gravity of electrolyte at 27°C with all cells fully charged :
  - h. Specific gravity of electrolyte at 27°C with all cells fully charged :
- 8. Voltage Rating of each cell when battery is
  - a. Floating :
  - b. Nominal charged :
  - c. Fully charged :
- 9. Ampere-hour capacity :
- 10. Charging Rate
  - a. Normal charging rate :
  - b. Starting charging rate :
  - c. Finishing charging rate :
  - d. Trickle charging rate :
  - e. Discharge rate on 3 Minutes basis in Amp. at end voltage 1.85 V/Cell for lead acid Battery cell :
- 11. Recommended rate of first charging
 

	Start	Finish
battery cells :		
a. Current in Amps :		





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- b. Voltage in volts :
- c. Total minimum input during initial charging in AH :
- 12. Recommended float charge rate :
- 13. Recommended float charge voltage across the battery terminals :
- 14. Recommended boost charge voltage across the battery terminals :
- 15. Guaranteed AH efficiency at 10 hr. rate of discharge :
- 16. Guaranteed WH efficiency at 10 hr. rate of discharge :
- 17. Internal Resistance of charged cell in Milli ohm :
- 18. Resistance of the charged battery including inter connector between the cell in ohms :
- 19. Short Circuit Current for dead short circuit across they battery terminals when
  - a. Battery in floating mode :
  - b. Battery in boost charge mode :
- 20. Cell voltage characteristics curves during charging at 0.5 1.0 and 1.5 times normal rate (to be furnished along with tender in triplicate) :
- 21. Battery layout arrangement (to be furnished along with the tender in triplicate) :
- 22. Average life of battery offered :
- 23. Battery Stand
  - a. Material of stand :
  - b. Size of MS channel/angle :
  - c. Size of support angle :
  - d. Thickness of FRP (mm) :
  - e. Formation of row and tier details :
  - f. Dimension (H X W X L) :
  - g. Min. weight (Kg.) :
  - h. No .of rack per battery set :
  - i. No. of Cells per rack :
  - j. Particulars of anti-sulphuric paint to be Provided :
  - k. Type and number of stand insulator to to be provided :
- 24. Performance curve (State design values)
  - a. % Ah after 5 yr. and 10yr. :
  - b. Discharge rate (end voltage) at 5 hr & 10 Hr :
  - c. Charging curve cell voltage At 60 hrs and 100 hrs. :



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- d. Discharge Amp v/s time curve  
Amp for 1 Hr. and 10 Hr. :
- 25. Indicate quantity for all the following accessories per set.**
- a. Lead plated Cu connector  
(Type, Material, Size and Quantity) :
- i. Inter cell :  
ii. Inter row :  
iii. Inter tier :  
iv. Inter rack :
- b. Details of Stand insulators  
i. Material :  
ii. Size :  
iii. Quantity :
- c. Hydrometer with stand :
- d. Rubber Syphon, 12.7 mm dia, 2 Mtr  
long :
- e. Thermometer with stand :
- f. Details of Electrolyte  
i. Type :  
ii. Litres per cell :  
iii. first filling + 10% extra in Ltr :  
iv. No of carboys (35 ltr) :
- g. Acid filler (Rubber Syringe) :  
h. Acid Resistance plastic jug :  
i. Acid Resistance Funnels :  
j. Cell Number plate :  
k. Lead plated SS Nut-Bolts, washers  
i. Size :  
ii. Qty (Nos+ extra= Total) :
- l. Ceramic Vent plug :  
m. Spanner set (Size and Nos) :  
n. Level Indicator :  
o. Petroleum Jelly 250 grams :  
p. Rubber boot Knee Height & Rubber Gloves :  
q. Rubber apron :  
r. Log book :

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SEAL OF THE FIRM

---

SIGNATURE OF BIDDER.

Name of the Company :

Date :

Place :



**Odisha Power Generation Corporation Limited**  
**IB Thermal Power Station**

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**Annexure- IV**

**SCHEDULE OF DEVIATIONS**

<b>Sr. No.</b>	<b>Specification Clause</b>	<b>Details of deviations</b>	<b>Justification for deviation</b>
<b>(1)</b>	<b>(2)</b>	<b>(3)</b>	<b>(4)</b>



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**PROFORMA FOR SUMMARY QUOTATION for Technical & un-priced Commercial bid ) Part-1**

Tender No.:

Sl. No.	Techno Commercial Points	OPGCL Needs	To be filled by the bidder
1	Technical Specification as per Tender Enquiry	Accepted/ Not accepted. If not accepted, detailed deviation and proposal.	
2	Party should have supplied same battery bank of same specification to other utilities	Party should have supplied same spares to other utilities	
3	Three years on site warrantee	Confirmed / Not Confirmed	
4	Submission of order copies of other customer in support of your Credentials	Submitted / Not submitted as per bid requirement.	
5	Bidder must be manufacturer/authorized stockiest /authorized dealer / authorized distributor.	Yes/ No.	
6	Bidder has to submit EMD either in shape of DD payable on State Bank of India (Code No. 9510) Banharpali/Central Bank of India, ITPS Banharpali (Code-028399)/ Andhra Bank, Adapada (Code-0662), Ib Thermal Power Station, Banharpali, Jharsuguda in favour of Orissa Power Generation Corporation Limited / RTGS/ NEFT.	Submitted/Not submitted details to be mention	
7	Price Basis	FOR Destination Ib Thermal Power Station. Parties offering FOR Ex. Works please give The place of works.	
8	Packing & Forwarding charges	..... % or Rs..... in Lumpsum Inclusive/ Exclusive.	
9	Excise Duty/ GST	.... % Inclusive/ Extra/Not applicable.	
10	Sales Tax/VAT	..... % of CST/VAT inclusive or Exclusive. OPGCL will provide " C-Form" for interstate sale.	
11	Transportation Cost	Rs.---- per No./Lump sum. As extra/Inclusive	
12	Transit Insurance	..... % extra/inclusive	
13	Odisha Entry Tax	.....% inclusive/Extra	
14	Delivery Schedule	Five weeks Accepted/ Not Accepted	
15	Validity of offer	120 days from the due	



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		date of opening date of the Part-1 bid.( Techno Commercial). Accepted/ Not accepted.	
16	Liquidated damage clause is applicable if delivery is delayed beyond quoted delivery date @0.5% per week/part of week subject to 5%of PO value.	Accepted/ not accepted. Non acceptance shall lead to loading of your Offer by 5%.	
17	The bidder has to accept our payment terms i.e. 90% payment shall be made within 30 days from the date of final acceptance of material & 10% shall be made within 90 days on submission of 10% of PO basic value as Performance Bank Guarantee till the completion of guaranty / warrantee period. Extra three months shall be provided for communication if anything happens at last moment	Accepted/ Not accepted.(in case non acceptance loading shall be done)	
18	Acceptance of part order quantity	Yes/ No	
19	Payment to be made through RTGS mode	Accepted/ Not accepted.	
20	All Bank charges to vendor account	Accepted/ Not accepted.	
21	Tender Notice NIT General Terms & Conditions	Accepted/ Not accepted.	
22	List of Deviation statement from tender norms.	Submitted/ Not submitted	

Authorised Signatory:

Name of the firm:

Designation:

Company Seal:

Place:

Date:



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### **NIT GENERAL TERMS & CONDITIONS**

1. Sealed Tender is invited for the supply of articles as per details overleaf addressed to the "Dy. General Manager – Purchase Materials, OPGCL- IB Thermal Power Station in variably giving on the cover Tender Notice No., Name of the Articles, the date of opening and EMD details.
2. The quantities mentioned in the Tender Notice shall be deemed to be only approximate and will not in any manner whatsoever be binding on the OPGCL.
3. All tenders are to be submitted up to 15.00 hours on the opening date & they will be opened at 15.30 hours on the date specified. Representatives of the bidders those who choose to be present may attend the bid opening. If in any case the bid opening date is declared a public holiday or falls on PH the bid shall be opened on the next working day.
4. The tender shall remain open for acceptance for a period of 60 DAYS FROM THE DATE OF OPENING OF THE TECHNICAL BID UNLESS OTHERWISE SPECIFIED. Tenders with a Validity of Less than 120 days are liable to be rejected/ or have lesser preference than those adhered the tender conditions.
5. The net price offered shall be on the basis of delivery F.O.R, Ib Thermal Power Station site including excise duty, cess, sales tax, packing, forwarding, freight, insurance, entry tax and third party inspection charges etc. if any. Packing should be made in transport worth packing to avoid any transit damage and should be clean and free from foreign materials. Special care for flammable and breakable items to be taken.. Actual /percentage of Sales Tax/VAT/Excise Duty leviable and declared to be charged should be distinctly shown along with price quoted so that any change during the contract period by Govt. & statutory authority as applicable can be adjusted. Where it is not mentioned claims for payment of Sales Tax and Excise Duty shall not be entertained on any ground.
6. TIN No/ VAT No. Sales Tax Registration Number/PAN must be indicated invariably.
7. Wherever tenderers have entered into the Rate Contract with DGSD/EPM they will indicate the same in their tender and submit a copy of rate contract as a proof of claim.
8. Special attention of the tender is invited about the receipt of the tender in time. Tenders received after the stipulated date and time due to any reason whatsoever shall not be considered. Bidders are requested to see that the tenders are delivered in the office before the prescribed date and time. The telegraphic quotation giving all the relevant details of stores offered also be received been posted at least one day before the date of opening of the tender and fully confirming in due respects to the offer by fax or mail.
9. The delivery period quoted must be specific and realistic. The inability of the successful tenderers to execute orders in accordance with delivery schedules will entitle OPGCL to purchase the stores at the risk and cost of the contractors such failures will also be kept in view while considering that subsequent tenders.
10. With regard to acceptance of tender for earlier delivery it should be noted that if the contract is placed on higher tender in preference to the lowest acceptable offer in consideration of earlier delivery the contractor will be liable to pay to OPGCL, the



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## IB Thermal Power Station

difference between the contract rate and the lowest acceptable, in case of failure to complete suppliers in terms of such contract within the date of delivery specified in the tender and incorporated in the contract. This is without prejudice to other rights of the OPGCL under the terms of contract.

11. The time given for delivery or dispatch shall commence from receipt by the contractor of the purchase order. The bidder should be able to complete delivery as per the delivery schedule of purchase order. LD shall be applicable @0.5% per week or part of a week subject to maximum of 5% of the undelivered materials for the delayed period. Further the failure to deliver or dispatch the stores or any consignment within the period prescribed for delivery or dispatch the purchased shall be entitled to withhold payment until the whole of the stores have been supplied. Also it is at the option of the Purchaser to purchase the materials from other at the risk of the contractor the store of any consignment thereof which the contractor has failed to deliver or dispatch and the differential amount shall be recovered from the vendor. The purchaser has also at the option to cancel the contract if delay in delivery occurs and the contractor shall be liable for all loss or damage which may sustain by reason of such failure on the part of the contractor. In case where delivery schedule is not adhered to and there are increase in ED and Sales Tax and impose of new duties after scheduled delivery period you shall bear the impact of those levies.
12. Printed Terms and Conditions on letter heads or Quotation form of tenderers shall not be applicable.
13. Tendering firms are advised to quote as per our serials number specified in tender notice.
14. OPGCL Reserves the right to reject all or to any of the tenders or to accept the tender or to accept the tender either in full or in part or to split of the contract without assigning any reason.
15. Price discount if any should be typed both in words as well as in figure without any cover typing. Alternations if any should be made clearly by crossing already entered rates and all such corrections should be attested by the tenderers under their full signature in no case there should be over writing and all tender with such over writing and all tender with such over writing shall be liable for rejection.
16. Quality of materials to be supplied should be brand new, free from all flaws, good finish and should be as per technical specification and relevant to IS specification. As a commitment use of asbestos material, recycled plastic carry bags and containers are banned. Pre dispatch inspection if any may be carried out before dispatch at the vendor premises.
17. The material supplied shall be guaranteed for any manufacturing defect or bad workmanship for a period of 12 months from the date of use or 18 months from the date of supply whichever is less from the date receipt.
18. These terms and conditions shall form a part of the contract. The contract besides shall also be exclusively governed by our standard conditions of contract prescribed by OPGCL. No other terms and conditions whatsoever will be applicable in this contract.
19. All disputes or differences arises shall be subject to the exclusive jurisdiction of court within the limit of Jharsuguda.
20. Arbitration: In case of any dispute arising out of the supply or interpretation of meaning of the terms in these conditions of purchase or any alleged breach thereof, the same shall be



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referred to independent Arbitrator/s selected by the aggrieved party and consented by the other party. The arbitration shall be conducted in accordance with the provision of Indian Arbitration Act of 1996 or modifications thereof and award of Arbitrator shall be final and binding on both parties. The arbitrations shall be conducted at Jharsuguda or at such place as decided by Arbitrator. The cost, incidentally shall be borne by the vendor.

21. Litigation: All expenses and cost in connection with litigation, if any, will be to vendor account.
22. (a) Preparation of comparative statement

The Proforma for comparative statement has been standardized and is as per annexure of Manual. CS should be prepared as per proforma and loading actors to be used for loading are as mentioned below (if not mentioned specifically in the offer).

P&F charges 2%

Freight 2% WITHIN 300 km

300 Kms. to 500 Kms. 3%

500 Kms. To 1000 Kms. 4%

Above 1000 Kms. 5%

Insurance 0.086%

(NOTE: Percentage loading will be limited to full truck/trailer load rate for each truck load).

(b) Payment terms loading

1.5% per month (wherever parties have quoted 100% through bank/advance against our standard and payment terms of 100% after receipt and acceptance of materials within 30 days.) In case of payment through bank loading for a period 30 days and in case of advance payment along with P.O. the loading for the period of delivery period plus 30 days, may be taken. In case of 90% through bank & balance 10% within 30 days after receipt and acceptance of materials.

Loading factor will be  $1.5 \times 0.9 = 1.35\%$ . Accordingly for other payment terms loading factors will be calculated.

(C) Delivery term loading: If the delivery period required as per bid requirement is deviated the loading shall be done @0.5% per week or part thereof for the period over and above the stipulated delivery period.

(D) If the PBG clause is not accepted or deviated loading for the same shall be done. Loading procedures-

Basic Price

Packing & Forwarding charges (on basic price only)

Excise Duty on (Basic + P&F)

Sales Tax on (Basic + P&F+ ED)

Freight on (Basic + P&F)

Insurance on (Basic + P&F + ED+ ST)

Payment Terms Loading on (Basic + P&F + ED + ST)

In case on variable prices, Variable excise duty etc. the following norms/systems will be taken into consideration.





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(e) In case of price variation clause (without specific mention of quantum), 10% price escalation per annum may be proportionality loaded.

(f) In case of the bidder stipulates Excise Duty as applicable at the time of dispatch & specifies the present rate of Excise duty( a numeric percentage or nil ), in such case the offer shall be evaluated considering the maximum rate of E.D. applicable for the product as per Excise Tariff of Govt. Of India or as evident from the other bids received in the tender.

However, the liability of OPGCL shall be as per actual ED applicable at the time of dispatch, subject to production of Excise invoice. Further the rate of ED shall be restricted to as applicable within the contractual delivery period only. Increase in ED rate in any due delay in supply beyond the contractual delivery period shall not be payable by OPGCL. However the benefit of any decrease in ED shall be passed on to OPGCL.

In case bidders quote with Fixed Rate of ED OR Special ED as NIL" the offer shall be evaluated accordingly. This will be subject to submission of Excise invoice copy for having actually paid the Excise Duty or otherwise but claim for any upward revision will not be accepted at a later stage.

(Adverse loading in each factor to be done for comparison purposes, in case vender has not mentioned specifically; however, for placement of order the lowest/beneficial terms will be indicated.)

### **IMPORTANT NOTICES:**

1. Please fill in the proforma for summary quotation as per specimen given above. Tenders not prepared in this proforma shall liable for rejection.
2. Tenders not specifying the exact rates of taxes and duties (wherever applicable) shall be loaded to the highest slab or may not be considered.
3. Any deviation in Technical Specification/ terms & conditions shall be clearly specified in details, failing which shall be deemed the NIT specification & Terms conditions are acceptable in totally unless and otherwise specified.
4. The suppliers/contractor is required to manufacture the product/carryout the work in controlled condition so as to contain Air pollution, water/land contamination within relevant legislative & statutory requirement.
5. Driver must carry valid driving license and vehicle pollution control card for transporting the materials to OPGCL.
6. Vendor/Representative/Vehicle driver must wear Safety Helmet, Shoes inside the Plant premises.
7. All person(s) connected with OPGCL shall have to adhere the safety rule regulations of the Company.



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### **NIT GENERAL TERMS & CONDITIONS FOR INSTALLATION & LIFT OF OLD BATTERIES**

- 1.0 Taxes, Duties and Statutory Deductions:**  
Income tax & any other taxes, duties & levies and statutory dues as applicable shall be deducted from your bills at the rate ruling at the time of payment of bills.
- 2.0 Contract Period:**  
The contract period is indefinite depending up on the readiness of site.
- 3.0 Submission of bill:**  
Bills for the measured work along with the Service Tax Account Code shall be submitted to Engineer-in-charge in triplicate for verification. The bills shall be prepared & raised as per Rule 4(A) 1 of the Service Tax Rules showing-
- (a) Name, address & registration number of such Service Provider
  - (b) Name & address of the person receiving taxable service
  - (c) Description, classification & value of taxable service provided
  - (d) Service tax payable thereon.
- 4.0 Payment of bill:**  
Full service payment shall be made after completion of job.
- 5.0 Permit to Work:**  
Before the start of each work, you shall ensure that a valid and duly signed **Permit to Work** has been issued. Also, you shall ensure the issue of valid and duly signed **Confined Space permit** and **Hot Work Permit** if the same is required as per OPGC rule. All the permits shall be returned to the concerned engineer after completion of the job.
- 6.0 Works Programme/Quality Assurance Plan /Safety Plan:**  
Before starting the work, you shall submit detailed works programme, milestone of different activities, safety and quality assurance plan of the work to the Engineer-in-charge for his approval after which work shall be started as per the approved programme. Any other documents required by the Engineer-in-charge for the above work shall be submitted.
- 7.0 Measurement of work:**  
The work shall be inspected / measured as directed by Engineer-in-charge and entered in the measurement sheet with signatures of both contractor and Engineer-in-charge or their representatives as a token of acceptance.
- 8.0 Termination of contract:**
- a) In case of failure to start the work within due date, OPGC reserves the right to terminate the contract without reference to you.
  - b) If the quality of the work is found to be unsatisfactory, the contract shall be terminated with immediate notice and the security deposit shall be forfeited.
- 9.0 Penalty:**
- a) In case of failure to make payment to the workmen within 07(seven) days after wage period i.e. any month, penalty @0.1% of gross value of bill for corresponding period for which wage is due per day of default shall be imposed & deducted from the interim running bill maximum to the extent of 01(one)% of the gross value of bill for the said period. Repetition of such default for



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more than three times shall lead for termination of the contract with 07(seven) days advance notice to you.

- b) In case of non-performance / continuous poor performance, the contract shall be terminated with 07(seven) days notice and the work shall be done by any other means at your cost and risk till engagement of other agency. If the price of contract for the balance work shall be higher, the additional amount shall be recovered from the security or any dues of the contract or any other contract taken by you in OPGC.
- c) In case of labour strikes, you shall arrange fresh workmen and perform the contract without any discontinuation. If there is a discontinuation of work for consecutive 03(three) days, the "Termination of Contract" clause shall apply. This will debar you to participate in any future bid in OPGC for next 05 years.
- d) In case of failure to remove the scraps/debris within the stipulated period, the same shall be executed by other agencies at the cost and risk of the vendor and a liquidated damage @1(one)% of the contract value shall be imposed.
- e) In case of any OPGC material is lost or damaged during execution of work due to your negligence or wrong workmanship, the cost of the same as per prevailing market rate plus departmental expenses shall be recovered from your bills.

### 10.0 Subletting:

The work shall not be sublet in any manner or degree without prior written approval of OPGC. The work shall be executed under the direct supervision of your firm.

### 11.0 Tools and Tackles:

You should have adequate Tools and tackles for execution of the job and such Tools & tackles to be made available during the entire tenure of contract shall be submitted to the satisfaction of Engineer-in-charge. All Lifting Tools and Tackles brought by you shall have valid test certificate issued by the competent person.

### 12.0 Labour and Statutory Regulations:

- a) You shall submit a copy of valid Labour License (if applicable) from competent authority to the Engineer-in-charge.
- b) You shall submit a copy of Provident Fund Registration No. to the Engineer-in-charge.
- c) You shall abide by all provisions of Contract Labour (R&A) Act 1970 and provisions of other applicable Labour Laws and rules made there under from time to time.
- d) You shall comply with all provisions of Factories Act-1948 and rules made there under from time to time.
- e) Before commencement of work, you shall submit a copy of '**Group Insurance Policy**' covering employment accidental benefit in respect of your workmen to meet your liabilities against **Employees Compensation Act (Workmen Compensation Act-1923)** and furnish a copy of the same to the Engineer-in-charge. The work shall commence only after submission of the Group Insurance Policy to the EIC.
- f) Payment to your workmen shall be disbursed on or before the 7th day of the wage period in the presence of Engineer-in-charge or his duly authorized representative who shall certify on the payment sheet / register for fulfillment of provision of the Law.

### 13.0 Employees Provident Fund:

Provident Fund dues of all your workmen shall be deposited against the PF number allotted to you by competent authority. You shall declare that Provident Fund amount for the people engaged by you has been deposited as per rule.



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### 14.0 Safety, Health, Environment:

- a) Your service personnel shall abide by Safety, Health & Environment (SHE) Rules & Regulations for Contractors as per enclosure and obtain safety induction training from OPGC Safety Officer before starting the work. Any violation in the safety rules shall be viewed seriously and you shall be penalized as per OPGC Safety Rules.
- b) You shall ensure the medical fitness of your service personnel before start of work.
- c) You shall submit Safety Plan of the work to the Engineer-in-charge before start of the work.
- d) While driving two wheelers inside the plant boundary Crash Helmet to be used positively. Violation of this rule will attract penalty.

### 15.0 Security Management Procedure:

- a) Entry Permit/Gate Access Card shall be issued to the contractor employee free of cost and to be displayed in person whenever they are inside ITPS premises.
- b) At any time if the worker of any contractor leaves the job, it is the responsibility of the contractor or his representative to withdraw his Entry Permit/Gate Access Card and deposit at Security Pass Section.
- c) In the event of expiry of the Contract, the contractor has to deposit the Entry Permits/Gate Access Cards to Security at Pass Section and collect required No Objection Certificate (NOC) for the purpose of Bill Clearance by Finance Department.
- d) Against non deposit of Entry Permits/Gate Access Cards after expiry of the Contract by the Contractor, penalty @Rs. 300.00 (Rupees Three Hundred Only) per each Entry Permit/Gate Access Card shall be recovered from the Bill of the contractor by Finance Department.
- e) No Final Bill of the contractor shall be released by Finance Department unless No Objection Certificate (NOC) is obtained by the contractor from Security Department against issue/deposit of Entry Permits/Gate Access Cards..

### 16.0 Dispute settlement:

Any dispute or difference arising out of this contract shall be mutually settled and the decision of Managing Director, OPGC or his authorized representative shall be final & binding.

### 17.0 Jurisdiction:

Appropriate Court at Bhubaneswar under the Odisha High Court shall have exclusive jurisdiction over all matters related to this contract.



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## Part-II

**Part-II** is the Price Bid only which should contain the price & details of breakup of the trade discount, Packing, forwarding, Excise duty, Sales Tax, VAT, freight, insurance & Odisha Entry Tax. Supervision and Installation Charges, Third party inspection charges etc.

### PROFORMA FOR SUMMARY QUOTATION for Price Bid( Part-II)

BIDDERS REF.:

DATE:

Sl. No	Description of the Materials Equipment Service Item wise	Unit of Measurement	Qty. offered	Unit Rate	Price Basis	Packing & Forwarding charges	E.D.	Sales Tax/ VAT	Estimated freight /Specify mode of transport	Transit Insurance (specify rate)	Odisha Entry tax	Total price F.O.R. Destination

1. BANK CHARGES (IF ANY)
2. INSPECTION Charges if any:
3. Super vision and installation charges:
4. (i) Deviation in tech. Specification- YES OR NO/ if yes details of the same.  
(ii) Deviation in commercial Terms & conditions- YES OR NO /if yes details with clause No.

Authorised Signatory:

Name of the firm:

Designation:

Company Seal:

Place & Date



# Odisha Power Generation Corporation Limited IB Thermal Power Station

NIT No. ITPS/ (Purchase)/2016-2017 /29 (P) dt.20/03/2017

- Annexure -

SN	Item Description	Qty.
1	<b>Supply &amp; installation of battery bank at switchyard</b>	As per annexure

NIT No. ITPS/ (Purchase)/2016-2017 /29 (P) dt.20/03/2017

The above two bids should be sealed separately super scribing as Technical Bid/Price bid as the case may be and enclosed in third sealed envelope super scribing "N.I.T No. ITPS/ (Purchase) /2016-2017/29(P) dt.20 /03/2017 for "Supply & installation of battery bank" to ITPS due on 24/04/2017. Your offer should reach this office on or before 24/04/2017 up to 15:00 hours. Part-I (Technical Bid) shall be opened on same day at 15.30 hours in presence of either the bidder or their authorized representative. Parties who shall qualify in Technical bid shall be intimated to attend on a future date & venue to keep them present in the opening of Price Bid.

Tenders without EMD shall not be accepted. Offer received late due to postal or courier delay shall not be entertained. The bidder at their interest should ensure delivery of the bid well in advance.

Dy. General Manager, Purchase



# Odisha Power Generation Corporation Limited IB Thermal Power Station

## Bank MANDATE FORM for e-payment (To be submitted in Duplicate)

To,  
Orissa Power Generation Corporation Ltd.,  
Ib thermal power station,  
Banharpali,  
Orissa

Dear Sir,

Sub:- Authorization for release of payment due from OPGC Ltd through e-mode facilities of RTGS / NEFT / Internet Banking.

We are the regular contractor/Supplier to your organization and are executing work /supplying materials under different Contracts/ Purchase Orders to OPGC Ltd. We request you to release the payment of the outstanding amount electronically i.e. through RTGS, NEFT, Fund Transfer or any other suitable way. The details of our bank account are as follows: -

(Please fill in the information in CAPITAL LETTERS. Please TICK wherever it is applicable)

1. Name of the Party: .....
2. Address of the Party .....

City ..... Pin Code .....

E-mail ID .....

Permanent Account Number .....

Telephone/Cell No.....

3. Particulars of Bank :

Bank Name		Branch Name	
Branch Place		Branch City	
Pin code		Branch Code	
MICR No			
Account Type	Savings:	Current:	Cash Credit:
Account No. ( as appearing in the Cheque Book) :			
(9 Digits code number appearing on the MICR Bank of the cheque supplied by the Bank. Please attach Xerox copy of a cheque of your bank for ensuring accuracy of the bank name, branch name & code and Account number)			
IFSC Code			

4. Date from which the mandate should be effective :

I hereby declare that the particulars given above are correct and complete. If any transaction is delayed or not effected for reasons of incomplete or incorrect information, I shall not hold Orissa Power Generation Corporation Ltd responsible. I also undertake to advise any change in the particulars of my account to facilitate up-dation of records for purpose of credit of amount through internet / RTGS / NEFT.

Place:

Date: Signature of the Party / Authorized Signatory  
.....

Certified that particulars furnished above are correct as per our records.

Bank's Stamp:

Date: (Signature of the Authorized Official from the Banks)

Annexure-IV



**Odisha Power Generation Corporation Limited**  
**IB Thermal Power Station**

**PROFORMA OF BANK GUARANTEE FOR CONTRACT PERFORMANCE**  
**(On Non-Judicial Stamp paper of Appropriate Value)**

1.0 In consideration of OPGC Ltd. Having its registered office at Zone-A, 7<sup>th</sup> Floor, Fortune Tower, Chandrasekaharpur, Bhubaneswar-751023, Orissa herein-in after called the “Owner” which expression shall unless repugnant to the subject or context include its successor & assignees) having awarded to M/s .....with its Registered/Head office at..... here-in after referred to as the “Contractor” which expression shall unless repugnant to the subject or context include its successor, executors & assignees) a contract by issue of Owner’s Letter of Intent No. .... dt. .... and the same having been unequivocally accepted by the contractor resulting in a contract bearing No.....dated.....valued at Rs.....for .....and the contractor having agreed to

(Scope of work)

provide a contract performance Guarantee for the faithful performance of the entire contract equivalent Rs. .... 10% (ten percent) of the said value of the contract to the owner for satisfactory performance of the equipment/materials supplied (as detailed in the said agreement) during the Guarantee period (as detailed in the said agreement) and for the due fulfillment by the contractor(s) of the terms and conditions contained in the said agreement.

2.0 We .....(here-in after referred to as “ the bank”

(Name & address of Bank)

having its Head Office at .....do hereby guarantee and undertake to pay the owner, on demand any and all amount payable by the contractor not exceeding Rs.....(Rupees .....) only as aforesaid at any time up to.. ..

(days/month/year)

3.0 We ..... do hereby undertake to pay the

(Name of Bank)





# Odisha Power Generation Corporation Limited

## IB Thermal Power Station

Amounts due to and payable under this guarantee without any demur, reservation, contest, recourse or protest and/or without any reference to the contractor. Any such demand made by the owner on the Bank shall be conclusive and binding notwithstanding any difference between the owner and contractor or any dispute pending before any court, tribunal or any other authority. The bank undertakes not to revoke this guarantee during the currency without previous consent of the Owner and further agrees that the guarantee herein contained shall continue to be enforceable till the owner discharges this guarantee.

The payment so made by us under this bond shall be a valid discharge of our liability for payment there under and the contractor(s)/suppliers shall have no claim against us for making such payment.

4.0 We ..... further agree that the

(Name of Bank)

guarantee herein contained shall remain in full force and effect during the period that would be taken for the performance of the said Agreement and that it shall continue to be enforceable till all dues of OPGC have been fully paid and its claims satisfied or discharged until OPGC certifies that the terms & conditions of the said Agreement have been fully and properly carried out by the said contractor(s) and accordingly discharges this guarantee.

5.0 We .....further agree with the

(Name of Bank)

OPGC that OPGC have the fullest liberty without our consent and without affecting in any manner our obligations hereunder to vary any of the terms and conditions of the said agreement or to extend time of performance by the said contractor(s) from time to time or to postpone for any time or from time to time any of the powers exercisable by the OPGC against the said contractor(s) and to for bear or enforce any of the terms and conditions relating to the said agreement and we shall not be relieved from our liability by reason of any such variation, postponement or extension being granted to the said contractor(s) or for any forbearance, act or omission on the part of the OPGC or any indulgence by the OPGC to the said contractor(s) or by any such matter or thing whatsoever which under the law relating to sureties would but for this provision have effect of so relieving us.

6.0 This guarantee will not be discharged due to the change in the name, style and constitution of the Bank or the contractor(s)/suppliers(s).



# Odisha Power Generation Corporation Limited IB Thermal Power Station

7.0 Notwithstanding anything contained herein a)Our liability under this bank guarantee shall not exceed Rs.....[Rupees .....] b) This bank guarantee shall be valid up to .....c) We are liable to pay the guaranteed amount or any part thereof under this B.G only and only if the beneficiary/Govt. serves upon the bank a written claim or demand on or before .....

8.0 We .....lastly undertake not to revoke this  
(Name of Bank)

Guarantee during its currency except with the previous consent of the OPGC in writing.

Dated the .....day of .....200.....

9.0 Notwithstanding anything contained hereinabove our liability under this guarantee is restricted to Rs.....(Rupees .....only) and this guarantee is valid up to ..... We shall be released and discharged from all liabilities hereunder unless a written claim for payment under this guarantee is lodged on us within three months from the date of expiry of the guarantee i.e. on or before ..... Irrespective of whether or not the original guarantee is returned to us.

The confirmation of this Bank Guarantee is available within our controlling office. The beneficiary in his own interest should obtain such confirmation from the controlling office at the following address

WITNESS with address

1. ....

2. ....

For and on behalf of (the Bank)

Signature .....

Name .....

Designation.....

Authorisation No.....

Seal of the Bank .....



# Odisha Power Generation Corporation Limited IB Thermal Power Station

Annexure-V

## PROFORMA FOR BANK GUARANTEE IN LIEU OF DD FOR EARNEST MONEY (On Non Judicial stamp paper of appropriate value)

Ref:

Date:

Bank Guarantee No.

To

Orissa Power Generation Corporation Ltd.,  
Ib Thermal Power Station,  
At/Po- Banharpali,  
Dist-Jharsuguda-768234.

Dear Sir,

In consideration of Orissa Power Generation Corporation having its Registered office at 7<sup>th</sup> Floor, Zone – A, Fortune Towers, Chandrasekharpur, Bhubaneswar-751 023 (hereinafter called the “Owner” which expression shall unless repugnant to the subject or context include its successors and assigns) having issued Tender Specification Against NIT No. \_\_\_\_\_ dt. \_\_\_\_\_ to M/s \_\_\_\_\_ having its Registered / Head office at \_\_\_\_\_ (hereinafter called the Bidder) who wishes to participate in the said tender for and you, as a special favour, have agreed to accept an irrevocable and unconditional Bank Bid Guarantee for an amount of Rs. \_\_\_\_\_ valid up to \_\_\_\_\_. On behalf of the Bidder, as a condition for participation in the said tender.

We, the \_\_\_\_\_ Bank incorporated under \_\_\_\_\_ law and having one of our branches at \_\_\_\_\_ and having our Registered office/Head office at \_\_\_\_\_ do here by unconditionally and irrevocably guarantee and under take to pay to the “ Owner” immediately on demand without any demur reservation, protest, contest and recourse to the extent of the said sum of Rs. \_\_\_\_\_ (Rupees \_\_\_\_\_ only). Any such claim/demand made by the said “Owner” on us shall be conclusive and binding on us irrespective of any dispute or differences raised by the Bidder.

This guarantee shall be irrevocable and shall remain valid up to \_\_\_\_\_. If any further extension of this guarantee is required, the same shall be extended to such required period on receiving instructions from M/s \_\_\_\_\_ on whose behalf this guarantee is issued.

We, the said Bank lastly undertake not to revoke this guarantee during its currency except with the previous consent of the owner in writing and agree that any change in the constitution of the said tenderer or the said Bank shall not discharge our liability. In witness where of the Bank, through its authorised officer, has set its hand and stamp on this \_\_\_\_\_ day of \_\_\_\_\_ 20\_\_\_\_\_

Witness:

(Signature)

(Signature)

\_\_\_\_\_  
Name

\_\_\_\_\_  
Name

(Designation with Bank stamp)

\_\_\_\_\_  
Official Address

Attorney as per Power of Attorney

No. \_\_\_\_\_

Date \_\_\_\_\_



# Odisha Power Generation Corporation Limited IB Thermal Power Station

## **FORM OF BANK GUARANTEE IN LIEU OF SECURITY DEPOSIT** (ON NON-JUDICIAL STAMP PAPER OF APPROPRIATE VALUE) (Applicable to Bid value more than Rs.25 lakh only)

To  
Orissa Power Generation Corporation Ltd.,  
Ib Thermal Power Station,  
At/Po- Banharpali,  
Dist-Jharsuguda-768 234.

In consideration of the Orissa Power Generation Corporation Ltd. (Ib- Thermal Power Station) having registered office at 7<sup>th</sup> Floor, Module – A, Fortune Towers, Chandrasekharpur, Bhubaneswar-751 023 (hereinafter called the “Owner / OPGC” which expression shall unless repugnant to the subject or context include its administrators successors and assigns) having agreed to the price, terms and conditions of Tender and Letter of Intent bearing no. \_\_\_\_\_ dated \_\_\_\_\_ issued which has been unequivocally accepted by the Contractor M/s \_\_\_\_\_ for the work of \_\_\_\_\_ (hereinafter called the said contract) to accept a performance Guarantee as herein provided for Rs. \_\_\_\_\_ (Rupees \_\_\_\_\_ only) from a Nationalized bank in lieu of the security deposit to be made by the contractor or in lieu of the deduction to be made from the contractor’s bills, for the due fulfillment of the terms and conditions contained in the said contract by the said contractor, We the \_\_\_\_\_ Bank (hereinafter referred to as “the said Bank” and having our registered office at \_\_\_\_\_ do hereby undertake and agree to indemnify and keep indemnified OPGC from time to time to the extent of Rs. \_\_\_\_\_ (Rupees \_\_\_\_\_ only) against any loss or damage, costs, charges and expenses caused to or suffered by or that may be caused to or suffered by OPGC by reason of any breach or breaches by the said Contractor of any of the terms and conditions contained in the said contract and to unconditionally pay the amount claimed by OPGC on demand and without demur to the extent aforesaid.

2. We \_\_\_\_\_ Bank, further agree that OPGC shall be the sole judge of and as to whether the said Contractor has committed any breach or breaches of any of the terms and conditions of the said Contract and the extent of loss, damage, costs, charges and expenses caused to or suffered by or that may be caused to or suffered by OPGC on account thereof and the decision of OPGC that the said contractor has Committed such breach or breaches and as to the amount or amount of loss, damage, costs charges and expenses caused to or suffered by or that may be caused to or suffered by OPGC from time to time shall be final and binding on us.

3. We the said Bank further agree that the Guarantee herein contained shall remain in full force and effect during the period that would be taken for the performance of the said Contract and till all the dues of OPGC under the said Contract or by virtue of any of the terms and conditions governing the said Contract have been fully and properly carried out by the said contractor and accordingly discharges this Guarantee, subject, however, that OPGC shall have no claim under the Guarantee after 90 (Ninety) days from the date of expiry of the Defects Liability period as provided in the said Contract i.e. (Date) or from the date of cancellation of the said contract, as the case may be, unless a notice of the claim under this Guarantee has been served on the Bank before the expiry of the said period in which case the same shall be enforceable against the Bank notwithstanding the fact, that the same is enforced after the expiry of the said period.

4. OPGC shall have the full liberty without affecting in any way the liability of the Bank under this Guarantee or indemnity, from time to time to vary any of the terms and conditions of the said Contract or to extend time of performance by the said Contractor or to postpone for any time and from time to time any of the powers exercisable by it against the said Contractor and either to enforce or forbear from enforcing any of the terms and conditions governing the said Contract and either securities available to OPGC and the said Bank shall not be



# Odisha Power Generation Corporation Limited IB Thermal Power Station

released from its liability under these presents by any exercise by OPGC or of the liberty with reference to the matters aforesaid or by reason of time being given to the said

Contractor or any other forbearance, act or omission on the part of OPGC or any indulgence by OPGC to the said Contractor or any other matter or thing whatsoever which under the law relating to sureties would but for this provision have effect of so releasing the Bank from its such liability.

5. It shall not be necessary for OPGC to proceed against the Contractor before proceeding against the Bank and the Guarantee herein contained shall be enforceable against the Bank notwithstanding any security, which OPGC may have retained or obtained from the Contractor shall at the time when proceedings are taken against the Bank hereunder be outstanding or unrealized.

6. We, the said Bank, lastly undertake not to revoke this Guarantee during its currency except with the prior consent of OPGC in writing and agree that any change in the Constitution of the said Contractor or the said Bank shall not discharge our liability hereunder. If any further extension of this Guarantee is required the same shall be extended to such required periods on receiving instructions from M/s \_\_\_\_\_ on whose behalf this guarantee is issued.

*IN PRESENCE OF WITNESS*

*For and on behalf of (Bank)*

1. ....

Signature \_\_\_\_\_

Name & Designation \_\_\_\_\_

Authorization No. \_\_\_\_\_

2. ....

Date: \_\_\_\_\_ Place: \_\_\_\_\_

Banker's Seal \_\_\_\_\_

**Notes:**

**1.01: For Proprietary Concerns:**

Sri. \_\_\_\_\_ S/o \_\_\_\_\_ resident of \_\_\_\_\_ carrying on business under the same & style of \_\_\_\_\_ at \_\_\_\_\_ (hereinafter called "the said contractor" which expression shall unless the context requires otherwise include his heirs executors, administrators and legal representatives).

**Section 1.02: For partnership Concerns.**

M/s \_\_\_\_\_ a partnership firms with its Office \_\_\_\_\_ (hereinafter called the said contractor" which expression shall unless the context requires otherwise include his heirs executors, administrators and legal representatives). The names of their partners being (I) Sri \_\_\_\_\_ S/o \_\_\_\_\_

(II) Sri \_\_\_\_\_ S/o \_\_\_\_\_ etc.

**Section 1.03: For Companies:**

M/s \_\_\_\_\_ a company registered under the Companies Act, 1956 & having its registered office in the state of \_\_\_\_\_ (hereinafter called "the said contractor" which expression shall unless the context requires otherwise include its Administrators, Successor & Assigns).