### **TENDER DOCUMENT**

Supply & installation of sewage cutter pump to install at IUAC for supply of effluent to NIPGR Campus New Delhi. SUB.:

CLIENT: DIRECTOR NIPGR,

**NEW DELHI** 

COST OF TENDER DOCUMENT:- Rs. 500/-

### **TENDER DOCUMENTS**

SUB .:

Supply & installation of sewage cutter pump to install at IUAC for supply of

effluent to NIPGR Campus New Delhi.

Owner:

Director, NIPGR Campus, New Delhi

Tender issued to:

Place for submission/ Place opening of tender document:

NIPGR Campus, Aruna Asaf Ali Marg, New Delhi-110067

> **Consultant Engineer** NIPGR Campus, New Delhi

Last date for sale of tenders: Date/Time of submission:

Date/Time of opening:

22.04.2016 before 16.00hrs. 25.04.2016 before 14.30hrs. 25.04.2016 at 15.00hrs.

> **Consultant Engineer** NIPGR Campus, New Delhi.

То

The Director NIPGR CAMPUS, New Delhi.

Dear Sir,

I/We have read and examined the following Tender Documents relating to the "SUB.: Supply & installation of sewage cutter pump to install at IUAC for supply of effluent to NIPGR Campus New Delhi.

### **Tender Form**

- Tender Notice
- General Conditions
- > Instruction to bidders
- General Information
- General conditions of contract
- Special terms and conditions of contract
- Schedule of Quantity Not to be filled.
- Specifications of Cutter Pump
- > Terms & Conditions
- > Certificate for Physical Inspection of Site as per Annexure 'A'
- > Financial Bid
- > Schedule of Quantity
- Specifications of Cutter Pump

I/We hereby offer to execute the work complete in all respects specified in the under written Memorandum within the time specified therein or during the allowed extended time at the rates specified in the bill of Quantities and in accordance, with the specifications, designs, drawings and instructions in writing referred to in the conditions of tender.

(Seal & Signature of Contractor)

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## NATIONAL INSTITUTE OF PLANT GENOME RESEARCH

(Department of Biotechnology, Ministry of Science and Technology, Govt. of India)
Aruna Asaf Ali Marg, New Delhi-110067
Phone: 011-26735161, 26735138 Fax: 011-26741658

### **TENDER NOTICE**

File No.: NIPGR/Engg./7/1(3)/ETP/2015-16

Dated: 05.04.2016

Sealed item rate Tenders (in two bid system) are invited on behalf of the Director, NIPGR, New Delhi from the eligible contractors who have experience in supply and installation of pumps with Govt. Departments or other reputed organizations, so as to reach this office up to 2.30 P.M. on or before 25.04.2016 for the following work:

Name of Work: Supply & installation of sewage cutter pump to install at IUAC for supply of effluent to NIPGR Campus, New Delhi.

SI. No. 1.	Estimated Cost 2.	EMD (In ₹) 3.	Time for Completion 4.	Last date & time for sale of Tender Documents 5.	Last date & Time of receipt of Tender 6.	Date & time of opening of tenders 7.
1.	₹ 2,22,550.00	₹ 4,460.00	6 weeks	22.04.2016 16.00 Hrs.	25.04.2016 14.30 Hrs.	25.04.2016 15.00 Hrs.

Tender document can be obtained up to 16.00 Hrs. on all working days on payment of ₹ 500.00 (₹ Five hundred only) in cash (Non-refundable) towards the cost of tender. The earnest money shall be in the form of Demand Draft of a Scheduled Bank issued in favour of the **Director, NIPGR, New Delhi**.

The tender document can also be downloaded from our website  $\underline{\text{www.nipgr.ac.in}}$  and CPP Portal. The tender document downloaded from website must be accompanied with ₹ 500.00 (₹ Five hundred only) in the form of Demand draft in favour of the "Director, NIPGR, New Delhi" towards the cost of tender document, otherwise the tender will not be considered.

The bids will be accepted in respect of eligible agencies having successfully completed at least one work of similar nature at a cost of ₹ 2.00 lakhs or more with Govt. Departments or other reputed organizations during the last three years ending 31<sup>st</sup> March, 2016. Copies of the completion certificate of satisfactory completion of work to be enclosed.

The Director, NIPGR, reserves the right to accept or reject all or any of the tender without assigning any reasons thereof.

Consultant Engineer NIPGR, New Delhi



### **GENERAL CONDITIONS**

1. Sealed tenders on item rate basis are hereby invited from pre-qualified contractors for the work of "SUB.: Supply & installation of sewage cutter pump to install at IUAC for supply of effluent to NIPGR Campus New Delhi.

The tender document consists of Tender form, Notice inviting tender, Instructions to bidders, General Information, Schedule of quantity, General Conditions of contract Agreement, List of tests and technical specification, Bill of quantities etc. which can be had at a cost of Rs. 500.00 (Rs. Five hundred only) from the office of NIPGR, NIPGR, Aruna Asaf Ali Marg ,New Delhi. Purchase of tender document is obligatory on the part of the tenderers & bid in no other form will be accepted.

- The tender documents shall be placed in sealed cover as mentioned in Procedure of Submission of tender and addressed to the Director, NIPGR Campus, New Delhi. The tender shall be received by the Director, NIPGR Campus, New Delhi before 14.30 hrs. on 25.04.2016 and shall be opened on the same day at 15.00 hrs. in presence of the tenderers or their authorized representatives who may like to be present. Any envelope received after the said date and time shall not be entertained under any circumstances and no consideration what so-ever shall be given to anything that might be contained in any such envelope.
- 3. The time allowed for the completion of work is **6 weeks** to be reckoned from the 10th day after the date of written order to commence the work.
- 4. Every tender shall be accompanied by earnest money for ₹ 4,460.00 (₹ Four thousand four hundred sixty only) in the form of demand draft drawn in favour of the Director, NIPGR payable at New Delhi. Any tender not accompanied by such earnest money will be rejected straight away.
- 5. The contractor will submit his tender after examining the tender documents, scope of work, specifications, clauses, additional terms of contract agreement, special terms & conditions, bill of quantities etc.
- 6. The offer shall remain valid for 180 days from the date of opening of Tender. The value of tender can be increased or decreased and any item can be added, deleted, withdrawn or substituted without any notice as per the requirements of NIPGR without assigning any reason.
- 7. If a tenderer whose tender is accepted fails to undertake the work as per terms of the contract within 10 days to be reckoned from the date of issue of allotment letter, the earnest Money deposited will be forfeited.
- 8. NIPGR does not bind itself to accept the lowest or any tender and reserves the right to reject any or all tenders without assigning any reason.
- 9. NIPGR will not pay any expense, whatsoever incurred by tenderer for the preparation and submission of tenders.
- 10. This notice inviting tender, will form part of the contract agreement to be executed by the successful tenderer with the NIPGR
- 11. The successful tenderer shall have to sign the contract agreement within 10 days of the allotment of work.

Consultant Engineer NIPGR, New Delhi

Contractor



### **INSTRUCTIONS TO BIDDERS**

### 1. GENERAL INSTRUCTIONS:

The works referred here-in shall cover the entire scope of the proposal. The "Owner" where appearing in these documents shall mean Director, NIPGR.

### 2. PROCEDURE FOR SUBMISSION OF TENDERS:

The following procedure shall be adopted for submission and opening of tenders The sealed envelope SUPERSCRIBED Tender for: "SUB.: Supply & installation of sewage cutter pump to install at IUAC for supply of effluent to NIPGR Campus New Delhi.

### **ENVELOPE NO.-1**

This envelope shall contain only the earnest money deposit & technical bid as well as site visit certificate enclosed with tender and will be opened first.

### **ENVELOPE NO.-2**

This sealed envelope shall contain the financial bid of the contractor as per bill of quantities. This envelope shall be opened only after the EMD contained in envelope No.1 & technical bid is found in order as per the requirements of NIPGR. The date of opening of price bid shall be intimated later on. The sealed cover containing envelope 1 & 2 shall be opened on the prescribed date and time in the presence of tenderers or their authorized representatives who may wish to be present.

### TENDERERS TO STUDY ENTIRE TENDER DOCUMENT CAREFULLY:

Submission of a tender by a tenderer implies that he has read all the stipulations contained in this tender document and has acquainted himself of the nature, scope and specifications of the works to be followed.

### 4. TENDERER TO SUBMIT THE ENTIRE TENDER DOCUMENT:

The tenderer shall submit all documents issued to him for the purpose of this tender after duly filling the same in all respects. Tenders which are found to be vague or incomplete shall be rejected summarily.

### 5. TENDERERS TO QUOTE FOR ALL ITEMS:

The tenderer shall quote his rates in words and figures with reference to each item and must enter for all the items shown in the attached Bill of quantities. Incomplete offer shall be liable for rejection. In case there is a discrepancy in "words" and "figures", the rate in words will be taken as correct for evaluation of tender. All quantities should be calculated as per percentage given by the contractor and total should be given of every sub head and grand total should also be given of all heads.

### 6. VALIDITY PERIOD OF OFFERS:

The rates quoted in the tender shall hold good for 180 days from the date of opening of the tender. The validity period shall be extendable with the mutual consent of both the parties. No tenderer can withdraw/or modify his tender or revoke the same within the said period of 90 days. If a tenderer on his own withdraws or revokes the tender or revises or alters or modifies the tender for any item or condition within a period of aforesaid 90 days his earnest money deposit shall stand forfeited.

### 7. TENDERER TO SIGN ALL PAGES:

The tenderer shall stamp and sign at the bottom right hand corner of every page of the tender documents in token of acceptance of tender conditions and for the purpose of identification.

### 8. ERASURES AND ALTERATIONS:

Tenders containing erasures and alterations of the tender documents are liable to be rejected unless these are authenticated by the person signing the Tender Documents.

### 9. TENDERER TO SATISFY HIMSELF OF SITE CONDITIONS:

Tenderers are advised to inspect and examine the site and its surroundings and also signed a certificate of site visit enclosed as per Annexure 'A' and satisfy themselves before submitting their tender regarding nature of the site conditions, the means of access of the site, the accommodation they may require and in general obtain all necessary information as to risks, contingencies and other circumstances which may influence or affect their tender in any manner. A tenderer shall be deemed to have full knowledge of the site, whether he inspects it or not and no compensation or otherwise of any charges incurred or to be incurred consequent on any misunderstanding or otherwise shall be admissible.

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### 10. EARNEST MONEY:

The tender shall be accompanied by earnest money of ₹ 4,460.00 (₹ Four thousand four hundred sixty only) in the form of Demand Draft only drawn in favour of the **Director, NIPGR payable at New Delhi.** Earnest money of the unsuccessful bidder(s) shall be refunded after expiry of the validity period of the tenders/allotment of works whichever is earlier.

### 11. TENDERER TO QUOTE BOTH IN FIGURES AND WORDS:

All tenderers shall quote the rate in figures as well as in words, the amount of each item shall be worked out and the requisite total given. The total amount shall be written both in figures and in words.

### 12. TENDER LIABLE TO REJECTION:

Tenders which do not fulfill all or any of the conditions laid down in this notice, or contain conditions not covered and / or not contemplated by the Conditions of contract and/or expressly prohibited therein or stipulate additional/alternative conditions shall be liable to be rejected and his earnest money will be forfeited.

Tenders shall also be liable for rejection on any of the following grounds :-

- i) Tenders submitted late
- ii) Tenders containing remarks uncalled for.
- iii) Conditional tenders
- iv) Tenders not submitted on prescribed Performa.
- v) Telegraphic tenders.
- vi) Not submitted the physical inspection of site certificate Annexure 'A'.

### 13. CORRESPONDENCE:

Tenderers must mention their postal address and telephone number(s) of the Chief Executive/authorized agent or attorney in the tender. The tender submitted by the tenderer will be rejected if he or his agent cannot be contacted on the last known address or on the intimated telephone number(s) after reasonable search in which event earnest money may be forfeited by the NIPGR.

### 14.NIPGR NOT TO ASSIGN ANY REASON FOR REJECTION OF TENDER:

NIPGR hold absolute discretion to accept or reject the lowest or any other tender without assigning any reason. No claim on this account shall be entertained.

### **15.AMENDMENT IN TENDER DOCUMENTS:**

NIPGR reserves the right to revise or amend the Bid Documents upto the date prior to the date notified for opening of the tenders and also the right to postpone the date of submission and opening of tenders without assigning any reason, whatsoever.

### 16. REFERENCE IN TENDER DOCUMENTS:

Director, NIPGR, shall be referred as "Owner" in all the documents of Tender documents/contract agreement.

Consultant Engineer NIPGR, New Delhi

Seal & Sign of Contractor

### **GENERAL INFORMATION**

1 Accepting Authority

Director,

NIPGR, New Delhi.

2 Earnest money

₹ 4,460.00 (₹ Four thousand four hundred sixty only) to be furnished with the tender in the form of the demand draft (No interest is payable on security deposit)

3 Security deposit

The security deposit will be collected by deductions from the running bills of the contractors at the rate mentioned below and the earnest money, if deposited at the time of tender, will be treated as part of security deposit. Performance security may be accepted as Bank Guarantee/DD of Scheduled Banks and State Bank of India. A sum @ 10% of the gross amount of the bill shall be deducted from each running bill of the contractor till the sum along with the sum already deposited as earnest money, will amount to Security Deposit of 5% of the tendered value of the work. In addition, the contractor shall be required to deposit an amount equal to 5% of the tendered value of the contract as Performance Security within the period prescribed for commencement of work in the letter of award issued to him.

4 Authority competent to grant extension of time

Director, NIPGR or authorized person by Director, NIPGR

5 Tools & plants

To be arranged by contractor

6 Authority competent to reduce the compensation amount

Director, NIPGR

7 Defect Liability Period

One year from the date of acceptance of completion by the NIPGR.

8 Release Security Deposit

The performance security shall be refunded to the contractor on completion of the work and recording of completion certificate by Institute and the security deposit of 5% of work done shall be released after defect liability period.

9 Periodicity of submission of Bills

After completion of work.

Seal, Sign of Contractor

Consultant Engineer NIPGR, New Delhi

## GENERAL CONDITIONS OF CONTRACT COMPENSATION CLAUSE

The time allowed for carrying out the work as entered in the tender shall be strictly observed by the contractor, and shall be reckoned from the 10th day of the date on which the order to commence the work is given to the contractor within ten days of issue of Letter of acceptance of work. If the contractor fails to complete the work within 6 weeks, being a time bound contract, the contractor shall be liable to pay compensation @ 1% per week subject to maximum of 10% of quoted amount. The entire amount of compensation to be paid under the provisions of this clause shall not exceed ten percent of the awarded cost of work as shown in the tender. The Director, NIPGR, on a representation from the Contractor, is however; empowered to reduce the amount of compensation and his decision in writing shall be final.

### TIME EXTENSION

If the contractor shall desire an extension of the time limit for completion of the work on the grounds of his having been unavoidably hindered in its execution or on any other ground he shall apply in writing to the Director, NIPGR within 5 days of the date of the hindrance on account of which he desires such extensions as aforesaid but before the expiry of time limit and the NIPGR, if in his opinion(which shall be final)reasonable grounds as shown thereof, authorized such extension of time if any, as may, in his opinion be necessary or proper.

### **COMPLETION OF WORK**

Without prejudice to the rights of Institute under any clause here in after contained on completion of the work. The contractor shall furnished with a certificate to NIPGR of such completion, if the contractor shall fail to the removal of scaffolding, surplus materials, and rubbish and cleaning off dirt on or before the date fixed for the completion of the work. NIPGR may take the action for same at the expense of the contractor to remove such scaffolding, surplus materials and rubbish and dispose of the same as he thinks fit and clean off such dirt as aforesaid and the contractor shall forth with pay the amount of all expenses so incurred, and shall have no claim in respect of any such scaffolding or surplus materials as aforesaid.

### **CARRYING OUT OF WORK**

All the work shall be carried out in accordance with tender & strictly as per the specifications given in the tender to the total satisfaction of the NIPGR. In the case of an item for which specification are not available in the said specifications relevant BIS specifications applicable as on the date of tenders shall be followed.

### **INSPECTION OF WORK**

All work under or in course of execution or executed in pursuance of the contract shall at all times be open to the inspection and supervision to NIPGR for the work and the contractor shall at all times, during the usual working hours and at all other times at which reasonable notice of the intention of the NIPGR to visit the works shall have been given to the contractor either himself be present to receive order and instructions or have a responsible agent duly accredited in writing present for that purpose. Orders given to the contractor's agent shall be considered to have the same force as if they had been given to the contractor himself.

The contractor shall give not less than 5 days notice in writing to NIPGR, of the work before covering up or otherwise placing beyond the reach of measurement any work in order that the same may be measured and correct dimensions there of be taken before the same is so covered up or placed beyond the reach of measurement and any work without the consent in writing of NIPGR or placed beyond the reach of measurement without such notice having been given to or consent obtained, the same shall be uncovered at the contractor's expense or in default thereof, no payment or allowance shall be made for such work of the materials with which the same was executed.

The work during its progress shall from time to time inspected by the Engineer or their consultants on behalf of Director, NIPGR and the contractor shall extend all co-operation to the inspection of the work

Consultant Engineer NIPGR, New Delhi

Contractor



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### SPECIAL TERMS AND CONDITIONS OF CONTRACT

### 1. SPECIFICATIONS:

If specifications for an item of work are not covered by B.I.S. Specifications prevailing as on date of tender, the same shall be decided by the NIPGR and shall be binding on the contractor.

The Director shall have the power to insist upon the contractor to purchase and use such materials of particular approved make which may in his opinion be necessary for proper and reasonable compliance with the specifications and execution of work.

### 2. WORK AND WORKMANSHIP:

To determine the acceptable standard or workmanship, the NIPGR may order the contractor to execute certain portions of works and services and the like under the close supervision of Engineer, NIPGR/Consultant. On approval, these items shall be labeled as guiding samples and works executed to conform to these samples.

### 3. CONTRACTOR TO BE LIABLE FOR ALL TAXES ETC.

The rates specified in the tender shall be inclusive of VAT, sales taxes, service tax, toll, Customs fees, octroi, royalty etc. or any other taxes However if any fresh taxes are imposed by State/Central/Statuary bodies during the currency of contract, the same shall be borne by NIPGR.

### 4. FORCE MAJEURE:

The right of the contractor to proceed with the work shall not be terminated because of any delay in the completion of the work due to unforeseeable causes beyond the control and without the fault or negligence of the contractor, including not limited to acts of God, or of the public enemy, restraints of a sovereign state, firms, floods, unusually severe weather.

### 5. APPROVAL OF SAMPLES

Before undertaking of item or any item of work for use in work the contractor shall arrange and manufacture at his own cost the relevant samples which shall be approved by NIPGR. These samples will be sealed by the NIPGR in the presence of the contractor, if he so desires and shall remain in the custody of the NIPGR for reference and comparison till the completion of work.

### 6. JURISDICTION:

Not with standing any other courts having jurisdiction to decide the questions forming subject matter of a suit any and all actions and proceedings arising out of or relative to this contract (including any arbitration in terms thereof) shall lie only in the court of competent Civil jurisdiction in this behalf at New Delhi, where this contract is to be signed on behalf of Director NIPGR and only the said court shall have jurisdiction to try any such actions and/or proceedings to the exclusion of all other courts.

### 7. SCOPE OF WORK:

The scope of work is as per enclosed schedule of quantity and preliminary drawings. The contractor should note that during the preparation of detailed working drawings, according to which the contractor has to execute the work covered under this contract, may undergo changes. The scope drawings for the entire work are not enclosed, but only a few indicating the probable nature of work are attached. The scope of work is thus not limited only to the drawings attached.

### 8. CONTRACTOR'S RESPONSIBILITY FOR THE MANNER OF EXECUTION OF WORKS

The contractor shall be solely responsible for the manner and the method of executing the work. The work shall be subject to the approval of NIPGR from time to time for purposes of determination of the question whether the work is executed by the contractor in accordance with the contract.

### 9. SUBMISSION OF BILLS:

Contractor is to submit the bills and record of measurements in approved Performa of the NIPGR for works executed by him. The Bill shall be submitted after completion of work.

- 10. The works shall be inspected by Engineers & Consultants of NIPGR. The contractor shall extend full co-operation and render all necessary facilities for inspection of the work to the inspecting authority without any additional cost to NIPGR. It must be noted that any observations/ comments/ recommendations of the said Technical personals shall be binding on the contractor
- 11. It shall always prevail, unless otherwise specifically stated, that the entire provisions of Tender document been opened upon and accepted for compliance by the contractor without any reservation.

Consultant Engineer, NIPGR

Contractor

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**Schedule of Quantity** 

Name of Work: Supply & Installation of Sewage Cutter pump at IUAC for supply of effluent to NIPGR Campus New Delhi.

.NO	Description	Unit	Qty	Rates	Amount
1	Supply,Installation & Commssioning of Sewage Grinder pump with cutter having folowing Specifications.  Impeller, Pump Casting and Suction & Delivery of CI,  Shaft-SS316, Type-Vertical Phase -  Three Phase  Type: Vertical Speed(RPM)- 2900  Motor Power-4Kw. Voltage-3x400-415V and manufacture have been registered according to ISO9002 for Quality  ** Certification and international environmental standard of IS14001.  All compele as per attached Material Specification and will be executed as per instruction of Engineer-in-Charge	No.	1	BEFILL	
				Total Amount	
		(In word Rs			)
				Seal &	Sign of Agency
Cons	ultant Engineer,NIPGR				

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### **SPECIFICATIONS OF CUTTER PUMP:**

The pumps are submersible pumps with horizontal discharge port, specifically designed for pressurized pumping of waste water with discharge effluent. The pump equipped with a grinder system, grinding destructible solids into small pieces so that they can be led away through pipes of a relatively small diameter.

The surface of the pump is smooth to prevent dirt and impurities from sticking to the pump.

The pump is primarily made of cast iron. The clamp securing the motor to the pump housing is made of stainless steel to prevent corrosion and allow for ease of service of the pump.

The power cable of the pump shall also incorporates wires for the thermal sensors in the motor winding.

The cable connection with plug solution. The totally sealed plug connection to prevents moisture from entering the pump through the cable in case of cable breakage or adverse and/or careless handling of the pump cable.

The pump must be connected to a control box or a controller.

### Controls:

Moisture sensor:

Without moisture sensors

Liquid:

Liquid temperature range:

0..40°C

Density:

1000 kg/m<sup>3</sup>

Technical:

Type of impeller:

**GRINDER SYSTEM** 

Primary shaft seal:

SIC/SIC

Maximum operating pressure:

6 bar

Approvals on nameplate:

PA-I

Materials:

Pump housing

Cast iron

EN-JL1030

Impeller:

Cast iron

EN-JL1030

Gasket:

SIC/SIC

Installation:

Maximum ambient temperature:

40°C

Maximum operating pressure:

6 bar

Flange standard:

DIN

Pump outlet:

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rump outlet.

DN 40 PN 10

Pressure stage: Maximum installation depth:

10 m

Electrical data:

2

Number of poles: Power input – P1:

5.2 kW

Rates power – P2:

4 kW

Mains frequency:

50 Hz

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Rated voltage: 3 x 400-415 V Voltage tolerance: +6/-10 % Start method: direct-on-line Max starts per hour: 30 Rated current: 8.2 A Starting current: 43 A Rated current at no load: 3.5 A Cos phi – power factor: 0.92 Cost phi – p.f. at ¾ load: 0.89 Cos phi - p.f. at ½ load: 0.81 Rated speed: 2830 rpm Moment of inertia: 0.011 kg m<sup>2</sup> Motor efficiency at full load: 82 % Motor efficiency at ¾ load: 82 % Motor efficiency at ½ load: 80 % Enclosure class (IEC 34-5): 68 Insulation class (IEC 85): F Length of cable: 10 m Cable type: H07RN-F Type of cable plug: No plug

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### TERMS AND CONDITIONS

**Name of Work**: Supply & Installation of Sewage Cutter pump at IUAC for supply of effluent to NIPGR Campus New Delhi.

- The contractor should visit the site and make them self-acquainted with the location of site.
  The Department shall not entertain any extra claim later on. Agency must submit the Certificate
  for site Inspection as per Annexure-A of tender along with Technical bid. if not submitted, their
  tender will not be considered.
- 2. The site of work is at NIPGR/IUAC Campus, Aruna Asaf Ali Marg New Delhi-110067.
- 3. The rates shall be inclusive of Transportation, loading, unloading and handling charges of material.
- 4. The rates shall be inclusive of all taxes including VAT etc.
- 5. The contractor shall follow all labour laws as prevailing in Delhi.
- 6. All materials shall be supplied to the entire satisfaction of the Institute.
- 7. All works shall be completed to the entire satisfaction of description & specification of supply order and the Engineer-in-charge.
- 8. The Institute reserves the right to reject / accept any or all tender without assigning any reason.
- 9. In case of any dispute the decision of the Engineer-in-charge shall be final & binding on the Agency.
- 10. Supply & Installation shall be completed in all respects within Six weeks from the date of issue of work order.
- 11. The Contractor shall be responsible for any damages and site clearance and nothing extra will be paid. In case the site clearance and damages are not attended, a recovery amounting to ₹. 5000/- (₹. Five thousand only) shall be made.
- 12. The quotation must be accompanied with EMD of ₹.4460/- (₹. Four thousand & Four Hundred Sixty only) .The earnest money (EMD) shall be in the form of DD of scheduled bank drawn in favour of "Director NIPGR" New Delhi.
- 13. The EMD shall be enclosed in a separate envelope duly marked 'EMD' which shall be opened first.
- 14. The quotation not accompanied with EMD shall not be considered. If a tenderer on his own withdraw\or revokes the tender of any item or condition in the tender notice, his earnest money deposit shall stand forfeited. Notwithstanding foregoing, the Institute reverses the right to take other actions as deemed appropriate
- 15. **Copy of PAN/TIN** issued by the respective departments must be enclosed while quoting the rates.
- 16. The contractor shall write the rates & Amount in word.
- 17. All papers attached with this Tender should be signed & returned in original.
- 18. The rates shall be valid for period of one year from the date of award of work.

Consulting Engineer NIPGR New Delhi

PAN:

TIN:

Seal & Sign of Agency

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# 'CERTIFICATE FOR SITE INSPECTION' Pre-qualification criteria of NIT

Certificate that we have visited the site on	and assessed the nature and amount
of work involved before submitting our offer.	We will be able to complete the works within the
stipulated time and also that we will be able to	execute the work suit to the site conditions.

(Signature of Bidder with Seal)

Name:

Address:

Date:

Consultant Engineer

## **FINANCIAL BID**

Name of work: Supply & installation of sewage cutter pump to install at IUAC for supply of effluent to NIPGR Campus New Delhi.

CLIENT

: DIRECTOR NIPGR NEW DELHI

## Schedule of Quantity

Name of Work: Supply & Installation of Sewage Cutter pump at IUAC for supply of effluent to NIPGR Campus New Delhi.

.NO	Description	Unit	Qty	Rates	Amount
1	Supply,Installation & Commssioning of Sewage Grinder pump with cutter having folowing Specifications.  Impeller, Pump Casting and Suction & Delivery of CI,  Shaft-SS316, Type-Vertical Phase -  Three Phase  Type: Vertical Speed(RPM)- 2900  Motor Power-4Kw. Voltage-3x400-415V and manufacture have been registered according to ISO9002 for Quality Certification and international environmental standard of IS14001.  All compele as per attached Material Specification and will be executed as per instruction of Engineer-in-Charge	No.	1		
		Total Amount			
		(In word Rs			)
				Seal &	Sign of Agency
Cama	sultant Engineer,NIPGR				3 - 7



### **SPECIFICATIONS OF CUTTER PUMP:**

The pumps are submersible pumps with horizontal discharge port, specifically designed for pressurized pumping of waste water with discharge effluent. The pump equipped with a grinder system, grinding destructible solids into small pieces so that they can be led away through pipes of a relatively small diameter.

The surface of the pump is smooth to prevent dirt and impurities from sticking to the pump.

The pump is primarily made of cast iron. The clamp securing the motor to the pump housing is made of stainless steel to prevent corrosion and allow for ease of service of the pump.

The power cable of the pump shall also incorporates wires for the thermal sensors in the motor winding.

The cable connection with plug solution. The totally sealed plug connection to prevents moisture from entering the pump through the cable in case of cable breakage or adverse and/or careless handling of the pump cable.

The pump must be connected to a control box or a controller.

Controls:

Moisture sensor:

Without moisture sensors

Liquid:

Liquid temperature range:

0..40°C

Density:

1000 kg/m<sup>3</sup>

Technical:

Type of impeller:

**GRINDER SYSTEM** 

Primary shaft seal:

SIC/SIC

Maximum operating pressure:

6 bar

Approvals on nameplate:

PA-I

Materials:

Pump housing

Cast iron

EN-JL1030

Impeller:

Cast iron

EN-JL1030

Gasket:

SIC/SIC

Installation:

Maximum ambient temperature:

40°C

Maximum operating pressure:

6 bar

Flange standard:

DIN

Pump outlet:

DN 40

Pressure stage:

PN 10

Maximum installation depth:

10 m

Electrical data:

Number of poles:

2

Power input – P1:

5.2 kW

Rates power – P2: Mains frequency:

4 kW 50 Hz

Rated voltage: 3 x 400-415 V Voltage tolerance: +6/-10 % Start method: direct-on-line Max starts per hour: 30 Rated current: 8.2 A Starting current: 43 A Rated current at no load: 3.5 A Cos phi – power factor: 0.92 Cost phi – p.f. at ¾ load: 0.89 Cos phi - p.f. at ½ load: 0.81 Rated speed: 2830 rpm Moment of inertia: 0.011 kg m<sup>2</sup> Motor efficiency at full load: 82 % Motor efficiency at 3/4 load: 82 % Motor efficiency at ½ load: 80 % Enclosure class (IEC 34-5): 68 Insulation class (IEC 85): F Length of cable: 10 m Cable type: H07RN-F Type of cable plug: No plug

V