## **Technical Specifications**

# **Rebar Corrosion Detector & Resistivity meter**

- Supply, installation and commissioning of portable type Rebar Corrosion Detector to determine the level of rebar corrosion in concrete through measurement of corrosion potential and Resistivity meter to estimate the corrosion rate and likelihood of concrete corrosion.
- 2. The rebar corrosion detector should include a two electrode handle system with flexibility for test using one electrode based on half-cell potential method or Test using two electrodes based on gradient method.
- 3. Electrodes: copper sulphate type.
- 4. The rebar corrosion detector should be able to generate rebar corrosion potential contour graph
- 5. Software should have provision for Data Processing of Corrosion Potential Measurement
- 6. Rebar Corrosion detection method: Double electrode without exposing rebar
- 7. Measuring Range: 0 ~1000 mV
- 8. Accuracy: ±1mV
- 9. Power: Built-in rechargeable battery
- 10. Battery operating Time: >20 hours
- 11. Data transmission: USB thumb drive storage
- 12. The supply should include ass the accessories like Electrodes, Signal wire and Waterproof carry case.
- 13. The resistivity meter should operate on the principle of the Wenner probe.
- 14. The resistivity meter should be able to estimate the likelihood of corrosion, indication of corrosion rate, correlation to chloride permeability, onsite assessment of concrete curing efficiency, and identification of wet and dry areas in concrete structure.
- 15. The resistivity meter should be able to provide warning of poor connectivity automatically (if happens) during the resistivity measurement.
- 16. The resistivity meter should have provision for connection to computer and the resistivity analysis software (windows based) should be provided.
- 17. Resistivity range: 0-1000 kOhm.cm
- 18. Resolution: ± 1% (current 200 μA)
- 19. Frequency: 40 Hz
- 20. Power source: battery operated
- 21. All the required accessories for the resistivity meter like 50 mm probe spacing, test strip, foam contact pads, charger with USB cable, software, carrying case, carrying strap should be provided with the equipment.

#### **Terms & Conditions**

- 1. **Scope of Supply**: Supply of Goods as per specifications.
- 2. Qualification Requirement: Please refer to the technical specifications of the bid document.
- 3. **Delivery Period:** Delivery should be completed in full within a period of six (6) months from the date of purchase order. Liquidated Damage clause will be imposed in the event of non-completion of delivery within the stipulated time.
- 4. **Liquidated Damage clause**: The penalty shall be 0.5% per week or part of a week towards late delivery and installation, commissioning, training etc. including all contractual obligations beyond contractual deadline. The maximum amount of penalty shall be 10%.
- 5. Delivery Site: Delivery F.O.R. CSIR-NML, Jamshedpur-831007 (Jharkhand).
- 6. There can be only one bid from the following:
- a. The original manufacturer directly or through one authorized dealer on his behalf; and
- b. Authorized dealer on behalf of only one manufacturer.
- Installation and commissioning: To be installed and commissioned at site by the supplier within ten (30) days from the receipt of goods. The inspection of the material shall be done within 30 days after installation of the goods.
- 8. **Training:** Training to be provided by supplier at CSIR-NML for two (2) day for two (2) nos. of person in AAC division.
- 9. Warranty: 03 (three) years from the date of acceptance certificate issued by the end user.
- 10. **AMC:** Vendor must quote consecutive 1 year non-comprehensive AMC rate (minimum 02 preventive + 1 breakdown) for equipment after warranty. The prices will be included in evaluation.
- 11. **OEM Certificate** (*applicable for manufacturer only*): In case the Bidder is the OEM, a declaration to this effect must be attached along with the offer. This certificate with valid date must contain Name, Designation, Email Address and Mobile Phone Number of the authorized signatory along with the address of the office.
- 12. **MAF Certificate** (applicable for dealer only): In case the Bidder is offering products on behalf of the OEM, a proper Manufacturer's Authorization Certificate (MAF) with valid date must be attached with the quotation and it should contain Name, Designation, Email Address and Mobile Phone Number of the authorized signatory along with the address of the office.
- 13. **Taxes, Duties etc.**: The buyer should indicate full GST rates.
- 14. **Make In India:** Preference will be given to offer/s for Class-I MII product. The Bidder must furnish a declaration/Certificate to this effect along with the bid mentioning about the percentage of Local Input of the offered product and the detailed address of the place (manufacturing unit) where the input is being added. The Declaration/Certificate should have full name and designation of the signatory along with his/her email ID, direct phone number, office address.

As per Govt. of India procurement policies the eligibility of the suppliers for this bidding is restricted to Class I and Class II local suppliers as per Department for Promotion of Industry and Internal Trade, Govt. of India, vide OM No. P-45021/2/2017-PP (BE-II) dated 04 June 2020 and OM No. P-45021/2/2017-PP (BE-II) dated 16 September 2020.

- 15. **MSE:** Preference will be given to MSEs. The bidder must submit valid documents for claiming them as eligible MSEs for the particular bid/item.
- 16. Other certificate/s:
- 17. Certificate reg. Land Border Sharing is compulsory. Any bidder from a country which shares a land border with India will be eligible to bid in this tender only if the bidder is registered with the Competent Authority. While participating in bid, Bidder has to undertake compliance of this and any false declaration and non-compliance of this would be a ground for immediate termination of the contract and further legal action in accordance with the laws.

- 18. **EMD:** The bidder has to submit an EMD along with the bid for amount mentioned in EMD details. EMD should be provided on the name of Director, CSIR-NML, Jamshedpur.
- 19. **Payment Terms**: Hundred percent (100%) of the Contract Price of Goods received shall be paid within thirty (30) days of receipt of Goods in good condition upon submission of claim supported by the acceptance certificate issued by the Purchaser along with the Performance security if any.

ЭR

70% against delivery of goods, inspection and acceptance by the user and 30% after successful installation and commissioning and submission of Performance Security if any.

- 20. **Performance Security:** The vendor has to submit a Performance Security equivalent to 3 (three) per cent of the purchase order value before release of payment. The performance security should remain valid for a period of warranty plus sixty (60) days from the date of successful installation and commission of the supplied equipment.
- 21. **Bid Securing declaration**: Submission of Bid Securing Declaration is compulsory.
- 22. The place of jurisdiction is Jamshedpur, Jharkhand, India.
- 23. Catalogue/Leaflet/Brochure: Bidder must submit Catalogue / Leaflet / Brochure to justify the specification/feature of their offered equipment.
- 24. The bidder should ONLY attach the requisite documents, asked for. The Bidder should not attach "IRRELEVANT DOCUMENTS" or "DOCUMENTS WHICH HAVE NOT BEEN ASKED FOR".
- 25. In the event of non-compliance of any of the aforesaid guidelines, the offer of the bidder may be treated as non-responsive.

#### **Bidder Information Form**

(a) The Bidder shall fill in this Form in accordance with the instructions indicated below. No alterations to its format shall be permitted and no substitutions shall be accepted. This should be done of the letter head of the firm]

Date: [insert date (as day, month and year) of Bid Submission]

Tender No.: [insert number from Invitation for bids]

01.	Bidder's Legal Name [insert Bidder's legal name]
02.	In case of JV, legal name of each party: [insert legal name of each party in JV]
03.	Bidder's actual or intended Country of Registration: [insert actual or intended Country of Registration]
04.	Bidder's Year of Registration: [insert Bidder's year of registration]
05.	Bidder's Legal Address in Country of Registration: [insert Bidder's legal address in country of registration]
06.	Bidder's Authorized Representative Information
	Name: [insert Authorized Representative's name]
	Address: [insert Authorized Representative's Address]
	Telephone/Fax numbers: [insert Authorized Representative's telephone/fax numbers]
	Email Address: [insert Authorized Representative's email address]
07.	Attached are copies of original documents of: [check the box(es) of the attached original documents]
	Articles of Incorporation or Registration of firm named in 1, above.

Signature of Bidder	
Name	
Business Address	

#### MANUFACTURERS' AUTHORIZATION FORM

[The Bidder shall require the Manufacturer to fill in this Form in accordance with the instructions indicated. This letter of authorization should be on the letterhead of the Manufacturer and should be signed by a person with the proper authority to sign documents that are binding on the Manufacturer and be enclosed with the technical bid.

Date: [insert date (as day, month and year) of Bid Submission]
Tender No.: [insert number from Invitation for Bids]
To: [insert complete name and address of Purchaser]
WHEREAS
We [insert complete name of Manufacturer], who are official manufacturers of [insert type of goods manufactured], having factories at [insert full address of Manufacturer's factories], do hereby authorized [insert complete name of Bidder] to submit a bid the purpose of which is to provide the following Goods, manufactured by us [insert name and or brief description of the Goods], and to subsequently negotiate and sign the Contract.
We hereby extend our full guarantee and warranty in accordance with Clause 2.21 of the General Conditions of Contract, with respect to the Goods offered by the above firm.
Signed: [insert signature(s) of authorized representative(s) of the Manufacturer]
Name: [insert complete name(s) of authorized representative(s) of the Manufacturer] Title: [insert title]
Duly authorized to sign this Authorization on behalf of: [insert complete name of Bidder]
Dated onday of,[insert date of signing]

## [To be submitted by the bidding/participating firm in their letter Head]

With reference to NML tender Enquiry bearing No	dated
t is certified that:	i
We have read clause regarding restriction on procurement from a bidder of a country land border with India and on sub-contracting to contractors from such countries; We bidder is not from such a country or, if from a such a country, has been registered with Authority and will not sub-contract any work to a contractor from such countries unless is registered with the competent Authority. A valid certificate issued by the Competent been attached with the bid. I hereby certify that this bidder fulfill all requirements in the eligible to be considered. (As per requirements under P-45021/112/2020-PP(BE-II)(24.08.2020 of Ministry of Commerce and Industry, Department for Promotion of Industrade and any amendments thereon.)	e certify that the the Competent such contractor of Authority has his regard and is (E-43780) dated
For and on behalf of M/s	
	Seal of the firm]
Place:-	
Date:-	

## **Bid-Securing Declaration Form**

Γ	Γο (insert complete name and address of the purchaser) I/We. The undersigned, decl	lare that:
	Date: Bid No	
	I/We understand that, according to your conditions, bids must be supported by a Bid	l Securing
	Declaration.	
	I/We accept that I/We may be disqualified from bidding for any contract with you for	a period of one year
	from the date of notification if I am /We are in a breach of any obligation under	the bid conditions,
	because I/We	
	(a) have withdrawn/modified/amended, impairs or derogates from the tender, n	ny/our Bid during the
	period of bid validity specified in the form of Bid; or	
	(b) having been notified of the acceptance of our Bid by the purchaser during the	•
	(i) fail or reuse to execute the contract, if required, or (ii) fail or refuse to furn	ish the Performance
	Security, in accordance with the Instructions to Bidders.	
	I/We understand this Bid Securing Declaration shall cease to be valid if I am/we as	re not the successful
	Bidder, upon the earlier of (i) the receipt of your notification of the name of the suc	
	thirty days after the expiration of the validity of my/our Bid.	cessial blader, or (ii)
		pacity of (insort logal
	Signed: (insert signature of person whose name and capacity are shown) in the cap	Jacity of (insert legal
	capacity of person signing the Bid Securing Declaration).	
	Name: (insert complete name of person signing he Bid Securing Declaration)	
	, , , , , , , , , , , , , , , , , , , ,	
	Duly authorized to sign the bid for an on behalf of : (insert complete	
	name of Bidder) Dated onday of(insert date	
	of signing)	
	Corporate Seal (where appropriate)	
		<b>.</b>
	(Note: In case of a Joint Venture, the Bid Securing Declaration must be in the name	or all partners to the
	Joint Venture that submits the hid)	

#### PERFORMANCE SECURITY FORM

MODEL BANK GUARANTEE FORMAT FOR PERFORMANCE SECURITY

To,
WHEREAS (name and address of the supplier) (hereinafter called "the supplier")
has undertaken, in pursuance of contract No dated to supply
(description of goods and services) (herein after called "the contract").
AND WHEREAS it has been stipulated by you in the said contract that the supplier shall furnish you with a bank guarantee by a scheduled commercial bank recognized by you for the sum specified therein as security for compliance with its obligations in accordance with the contract;
AND WHEREAS we have agreed to give the supplier such a bank guarantee;
NOW THEREFORE we hereby affirm that we are guarantors and responsible to you, on behalf of the supplier, up to a total of
we undertake to pay you, upon your first written demand declaring the supplier to be in default under the contract and without cavil or argument, any sum or sums within the limits of (amount of guarantee) as aforesaid, without your needing to prove or to show grounds or reasons for your demand or the sum specified therein.
We hereby waive the necessity of your demanding the said debt from the supplier before presenting us with the demand.
We further agree that no change or addition to or other modification of the terms of the contract to be performed there under or of any of the contract documents which may be made between you and the supplier shall in any way release us from any liability under this guarantee and we hereby waive notice of any such change, addition or modification.
This guarantee shall be valid until the day of
(Signature of the authorized officer of the Bank)
Name and designation of the officer
Seal, Name & Address of the Issuing Branch of the Bank

Note: Whenever, the bidder chooses to submit the Performance Security in the form of Bank Guarantee, then he should advise the banker issuing the Bank Guarantee to immediately send by Registered Post (A.D.) an unstamped duplicate copy of the Guarantee directly to the Purchaser with a covering letter to compare with the original BG for the correctness, genuineness, etc.