



CSIR-NATIONAL METALLURGICAL LABORATORY

[COUNCIL OF SCIENTIFIC & INDUSTRIAL RESEARCH]

BURMA MINES, JAMSHEDPUR, JHARKHAND – 831007

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Ref. No. :- **P/NC/712/KK/DB/OTE/24-25**

Dated **30.05.2025**

NOTICE FOR NON-COMMITTAL EXPRESSION OF INTEREST FOR DESIGN & FABRICATION OF RETORT BASED VACUUM REDUCTION PILOT PLANT FOR MAGNESIUM EXTRACTION

DESIGN & FABRICATION OF RETORT BASED VACUUM REDUCTION PILOT PLANT FOR MAGNESIUM EXTRACTION

**The General Description for DESIGN & FABRICATION OF RETORT BASED
VACUUM REDUCTION PILOT PLANT FOR MAGNESIUM EXTRACTION is
attached in Annexure-A**

SINGLE COVER BASIS

**The EOI Proposals must be submitted in the Central Public Procurement Portal
(URL: <https://etenders.gov.in/eprocure/app>) only.**

Last Date and Time of Submission of EOI proposal for Equipment / Services in CPP Portal (https://etenders.gov.in/eprocure/app)		Date and Time of Opening of NON-COMMITTAL EOI Proposals in CPP Portal https://etenders.gov.in/eprocure/app	
Date	Time	Date	Time
20.06.2025	Upto 03.00 PM	23.06.2025	At 11.00 AM

CSIR- National Metallurgical Laboratory, (CSIR-NML), Jamshedpur, Jharkhand, INDIA is an Institute of Council of Scientific and Industrial Research, an autonomous body under Department of Scientific and Industrial Research (Government of India), New Delhi.

Director, CSIR-NML is interested in procuring the above mentioned Equipment/Services for R&D activity and invites prospective manufacturers/ Class – I Local Supplier and Class – II Local Supplier to discuss with the Technical Committee about the specifications and also demonstration / technical presentation of above mentioned Equipments / Services by interested manufacturer's/ Class – I Local Suppliers and Class – II Local Suppliers.

Meeting will be held through MS-Team or another similar platform. The date of meeting will be informed along with MS Team link after opening the Technical Proposal.

Please mention the below reference for submitting the Technical Proposal, Leaflet, Literature and other technical supporting documents of the Equipment against NON-COMMITTAL EOI			
Sl. No.	File Number	Description of Item	Date, Time and Place of meeting
01	P/NC/712/KK/DB/OTE/24-25	Design & Fabrication of Retort Based Vacuum Reduction Pilot Plant for Magnesium Extraction	Will be informed after opening the Technical Proposal in CPP Portal.

1. The NON-COMMITTAL EOI document can be downloaded free of cost directly from Central Public Procurement Portal (CPPPP) of Government of India (website <https://etenders.gov.in/eprocure/app>) and CSIR-NML website (<https://www.nml.res.in>).
2. **Schedule for submission of EOI Proposal in CPP Portal:** The schedule of submission of Technical proposals, Technical leaflet/ literature and other Technical supporting documents and opening of proposals is as follows:

Last Date and Time of Submission of EOI proposal for Equipment / Services in CPP Portal (https://etenders.gov.in/eprocure/app)		Date and Time of Opening of NON-COMMITTAL EOI Proposals in CPP Portal (https://etenders.gov.in/eprocure/app)	
Date	Time	Date	Time
20.06.2025	Upto 03.00 PM	23.06.2025	At 11.00 AM

3. Date and Time for receipt of Proposals: Technical Proposal, Technical leaflet/ literature and other Technical supporting documents may be submitted through CPP Portal (<https://etenders.gov.in/eprocure/app>) only before due date and time mentioned in Point No. 2, for submission of Technical proposals etc..
4. The technical evaluation committee shall finalize the specifications after knowing/obtaining details about relevant/available technology in the market suiting to the requirement and needs of our Laboratory/ Institute.
5. The tender document and contract will be finalized based on past experience of performance in a similar context, financial strength and technical capabilities and other allied technical services.

Contract will be awarded to the lowest evaluated bidder after a separate bidding process based on two bid system.

6. Integrity Pact will required to be submitted during separate bidding process based on two-bid system.
7. For evaluating the responses, CSIR-NML may call for further presentations of their case.
8. The Director, CSIR-National Metallurgical Labortory, Jamshedpur, Jharkhand, INDIA reserves the right to accept or reject any or all NON-COMMITTAL EOI Notification/ tenders/offers or withdraw the Notice at any stage of processing without assigning any reason whatsoever, such an event would not cause obligation of any kind to CSIR-NML.

Sd/-

Stores & Purchase Officer

For & on behalf of the Council of Scientific & Industrial Research

1. INTRODUCTION

CSIR-NML is interested in purchasing various R&D Fabrication services which will be utilized in R&D activities.

2. OBJECTIVE

The objective this NON-COMMITTAL EOI is to identify prospective supplier to supply the required equipment / services, Eligibility criteria for bidders are mentioned in the NON-COMMITTAL EOI document etc. **Full specification of DESIGN & FABRICATION OF RETORT BASED VACUUM REDUCTION PILOT PLANT FOR MAGNESIUM EXTRACTION will be finalized after evaluation of NON-COMMITTAL EOI and a separate tender will be floated for the DESIGN & FABRICATION OF RETORT BASED VACUUM REDUCTION PILOT PLANT FOR MAGNESIUM EXTRACTION on the recommendations of Technical Sub Committee, after NON-COMMITTAL EOI.**

3. SCOPE OF SUPPLY

The DESIGN & FABRICATION OF RETORT BASED VACUUM REDUCTION PILOT PLANT FOR MAGNESIUM EXTRACTION are required for on-going R&D mission project and activities.

4. Eligibility Criteria

Technical

- a) Indian Manufacturers, Class – I Local Supplier and Class – II Local Suppliers are eligible for submission of Proposals against this NON-COMMITTAL EOI as defined by OM No. P-45021/2/2017-PP(BE-II)-Part(4)Vol.II, dated 19th July, 2024 issued by DPIIT, Govt. of India, a copy of which is available on their website www.dpiit.gov.in. Foreign Suppliers / Non-local Suppliers are not eligible to participate in the NON-COMMITTAL EOI. **Vendors must submit the Certificate on their Letter Head that they are Class – I Local Supplier or Class – II Local Supplier and also mentioned the percentage of local contents which are manufacturing in India.**

Commercial

- a) The bidder should not have been black listed / holiday listed by any other CSIR laboratory, or by any other R&D organization or by Government of India. **A self declaratory letter in this regard must be enclosed. Not submission of this Self-declaratory letter with the Proposal, the firm shall be summarily rejected.**

5. Proposals [TO BE SUBMITTED THROUGH CPP Portal (<https://etenders.gov.in/eprocure/app>)]

Technical

- a) Detailed specifications of the Fabrication of Devices supported by technical brochures/ data sheets in English. The Bidder shall provide the complete technical information.
- b) Detailed brochure / datasheet on the technologies / techniques involved.
- c) Other utilities if any.

Bidder Information

- a) Company information – Status of bidder, registration certificate, and detailed write up about bidder history.
- b) Details of Personnel – Details of all key technical, commercial and service personnel.
- c) Details of financial information about company in the last 3 years, like turnover, copies of audited balance sheet etc.
- d) Details of their offices setup in India.
- e) **Self certified letter about holiday listing / black listing in bidder letter head. Not submission of this Self-certified letter with the Proposal, the firm shall be summarily rejected.**
- f) **Code of Integrity and conflict of interest duly signed and stamped by the authorized representative must be enclosed as per the format provided. Not submission of this format with the Proposal, the firm shall be summarily rejected.**

- g) Copies of Purchase orders / contracts of similar Fabricated Devices supplied in the last 3 years and the performance certificate from the respective clients.
- h) The Bidder shall indicate the timelines necessary for supply.
- i) **Vendors must submit the Certificate on their Letter Head that they are Class – I Local Supplier or Class – II Local Supplier and also mentioned the percentage of local contents which are manufacturing in India.**

6. Other terms

Purchase of Non-Committal EOI Document

The Expression of Interest document shall be downloaded from Central Public Procurement Portal (CPPP) website <http://etenders.gov.in> and CSIR-NML Website www.nml.res.in free of cost.

Clarifications of the EOI Document

Any clarification in the Non-Committal EOI document may be sent in writing to the following through email: Stores & Purchase Officer, CSIR-NML; Email: spo@nml.res.in and bholaazad@nml.res.in. However, no extension of the time or date of EOI submitted will be provided on the ground that CSIR-NML has not responded to any query/clarification raised by any Prospective Bidder.

Amendment of Terms and Conditions of EOI

1. CSIR-NML may at its discretion or as a result of query, suggestion or comment of Bidder, may modify the EOI document by issuing an amendment or a corrigendum at any time before opening the EOI. Any such addendum or corrigendum will be uploaded on CPP Portal <http://etenders.gov.in> and CSIR-NML Website www.nml.res.in and the same will be binding on all the Bidders, as the case may be.
2. CSIR-NML at its discretion may extend the due date of submission of EOI and the decision of CSIR-NML in this respect would be final and binding on the respondents. In the event of changes in the time schedule. CSIR-NML website www.nml.res.in . Interested Bidders are advised to check the above website regularly for corrigendum / addendum, if any, which will be published only in the website.
3. No oral modification or interpretation of any provisions of this EOI shall be valid. Written communication shall be issued by CSIR-NML when changes, clarifications or amendments to the EOI document are deemed necessary by CSIR-NML at its sole discretion.
4. EOI submission should be in English language, EOI response should be free from correction, over writing, errors or omissions etc. Duly authorized representative of the prospective bidder shall sign on each page of the EOI documents. EOI documents should be prepared in such a way so as to provide a straight forward, concise description of the equipments, bidder and capabilities to satisfy the requirements of this EOI.
5. EOI that are incomplete in any respect or those that nor consistent with the requirements as specified in this document may be considered non-responsive and may be liable for rejection and no further correspondence will be entertained with such Bidders.
6. If at any time during the examination, evaluation and comparison of EOI, CSIR-NML its discretion can ask the Bidder for the clarification of its EOI. The request for clarification and the response shall be in writing. However, no post submission of EOI, clarification at the initiative of the Bidder shall be entertained.
7. Canvassing by bidders in any form, including unsolicited letters on EOI, submitted or post corrections shall render their EOI response liable for summarily rejection.
8. The cost of charges incurred in preparation and submission of EOI response shall not be entitled by any bidder.
9. Conditional offers will be summarily rejected. EOI which is found to be incomplete in content and / or attachments and / or authentication etc. is liable to be rejected.

10. CSIR-NML is not responsible for any firm/ agency expression of representing to express himself/ themselves to be the agent or third party representing CSIR-NML in this process.

11. Disregard of any instruction may result in offer being ignored.

12. All cost and expenses associated with submission of EOI shall be borne by the Bidder while submitting the EOI. CSIR-NML shall have no liability, in any manner in this regard, or if it decides to terminate the process of short listing for any reason whatsoever.

Sd/-
Stores & Purchase Officer

Ref: "Design and Fabrication of Retort based Vacuum Reduction Pilot Plant for Magnesium Extraction"/Indent (NML/MER/KK/09/2024/1984)]/CSPS-PPP240009(HQRF)

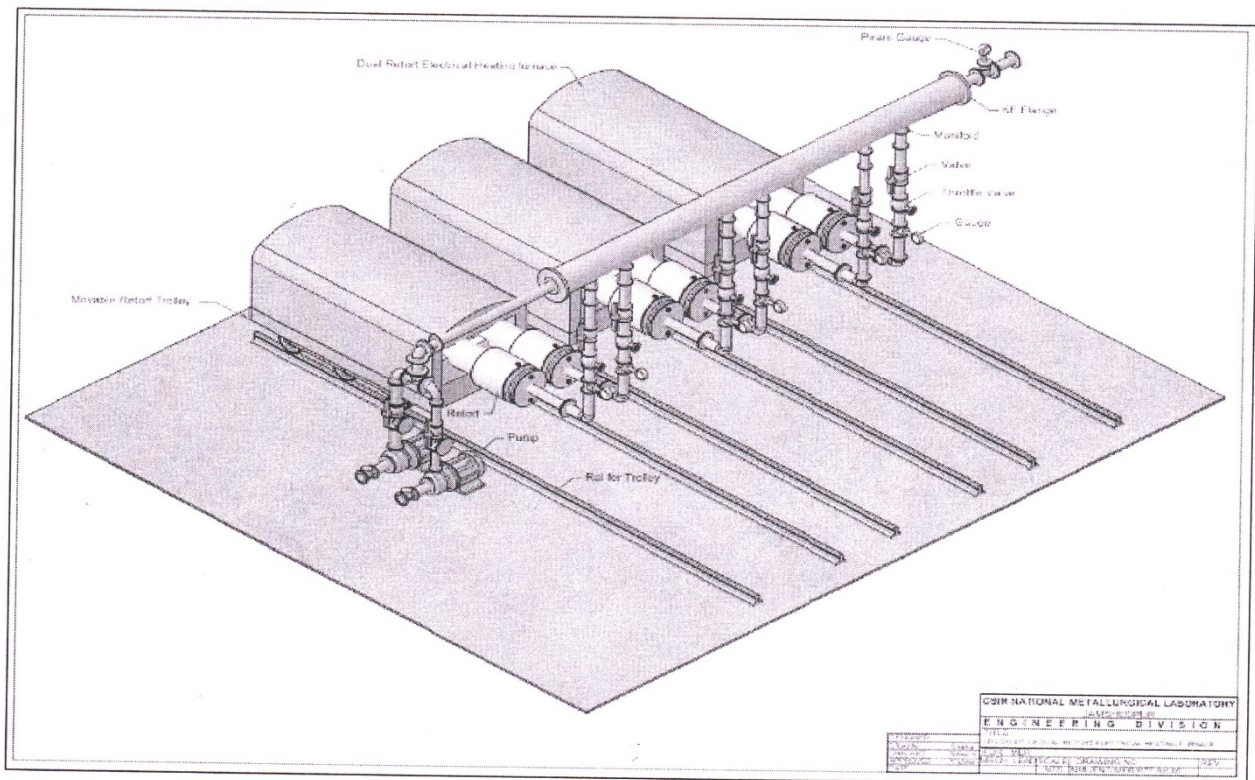
General Description of EoI

Vacuum Retort-Reduction Pilot Plant for silicothermic reduction of calcined oxide of magnesium at a capacity of 120 kg/day. About 200-300 kg raw material will be fed into retorts and on end of each cycle (10 hrs) about 120 kg Mg metal crowns would be collected from MS condensers cooled using water jackets. The pilot plant consists of following parts:

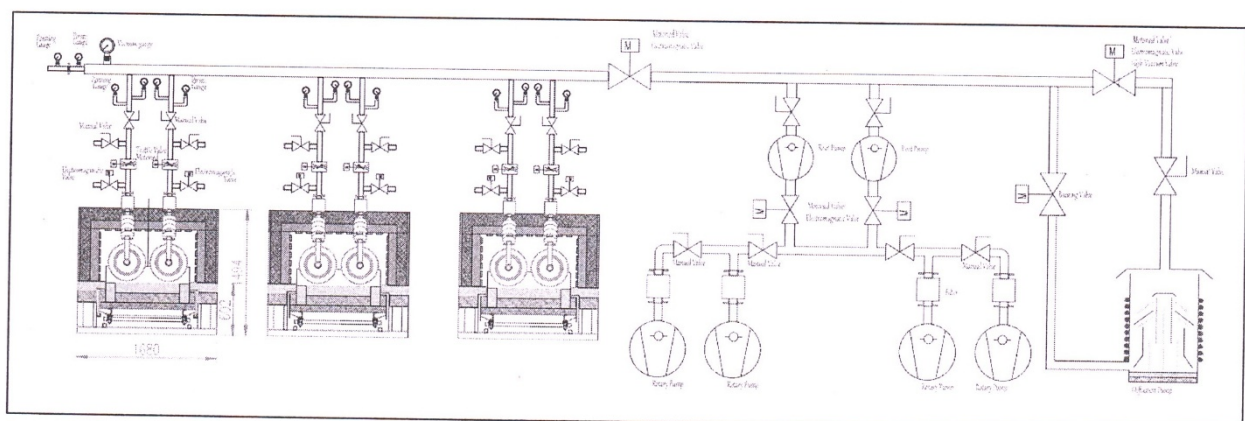
- A. Centrifugal Casted 22H / Ni-Cr alloy material retorts for 1150-1160 °C applications as per dimensional specifications
- B. Three lines of Dual Retort Electrical Heating Furnace (120-140 kW load), working temperature 1350°C
- C. Central integrated vacuum system for 0.0005 mbar ultimate vacuum (cold) and 0.005 mbar (hot working conditions) for 6 retorts having volume 180-200 liters each
- D. Centralized Controls with display, Provision of utilities as per actual requirements cooling water system and compressed air utilities and Material handling for briquettes, hot slag and Mg sponge, crane for retort handling and a portable leak detector machine

Two retorts will be placed on the hearth of each furnace horizontally side by side. Hearth shall be bogey-hearth kind of arrangement and user shall be able to pull the hearth loaded with retorts out of the furnace chamber for maintenance requirements. Similarly, the user shall be able to push the furnace hearth back inside the chamber. Adequate thermal insulation shall be provided to minimize heat losses, but the thickness of the refractories shall be kept within 600 mm by using high quality refractories and ceramic insulation boards. One trolley based chain pulley arrangement capable to lift and hold 2-3 tons load shall be provided for retort handling. Each line of furnace shall be equipped with individual controls with electrical and instrumentations. Centrifugal casted Retorts of 22H/Ni-Cr alloy material shall be 3200 mm long, 260-270 mm ID and 330-350 mm OD. One end of the retort shall be cap welded and other end shall contain a water cooled jacket, water cooled flanges with suitable O-rings and water cooled lid with a vacuum port of 60-80 mm diameter with KF 75 fittings. All weldings of retorts shall leak proof through TIG or suitably welding technologies. Retorts shall be reinforced across length. Retorts shall be able to hold stated vacuum 0.005-0.0005 mbar in hot and cold conditions respectively for prolonged furnace-heating exposures (minimum 72 hrs). Each Retort shall be connected with a vacuum line connected with central vacuum header. Vacuum connections shall be with suitable SS grade vacuum pipelines/bellows and KF fittings wherever required in assembly. Throttle valve arrangement shall be equipped in each line feedback control. For vacuum control in each retort, feedback controlled throttle

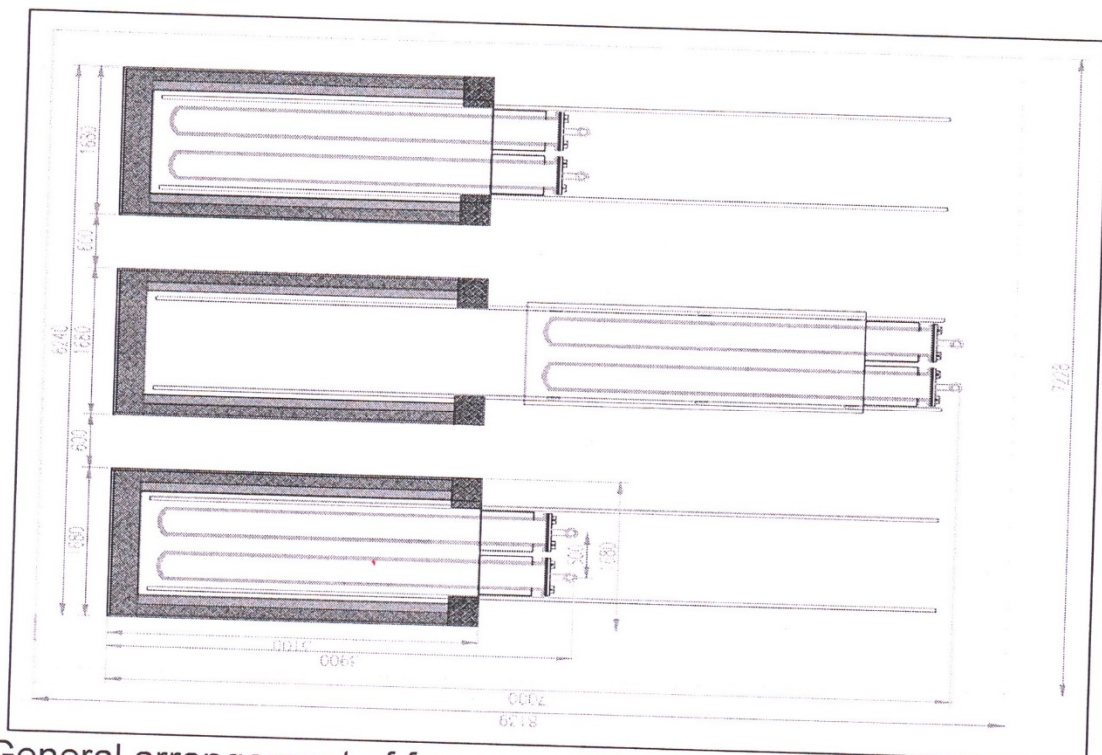
valve operations equipped with pirani gauges shall be used for in all vacuum lines for all retorts to measure vacuum during operations. There will be stainless steel dust trap in each line with manual valves, pressure/vacuum display and utilities to maintain, measure and monitor the vacuum of each retort separately and for continuous campaigns. All controls of vacuum system and furnaces shall be placed at central control room (CCR) at 10-15 m distance from furnace lines and vacuum system. Control panels shall be equipped with adequate instrumentations i.e. LED based indicators, HMI systems, PID, safety interlocks, PF&ID diagrams and all essential items to run the system for 72-120 hrs prolonged campaigns. All fabrications, instrumentation items shall be equipped as per industrial/BIS standards and item shall be supply with warranty of 24 months. Detailed design/schematics would be shared to interested firms during discussions. Diagrams for reference are given below.



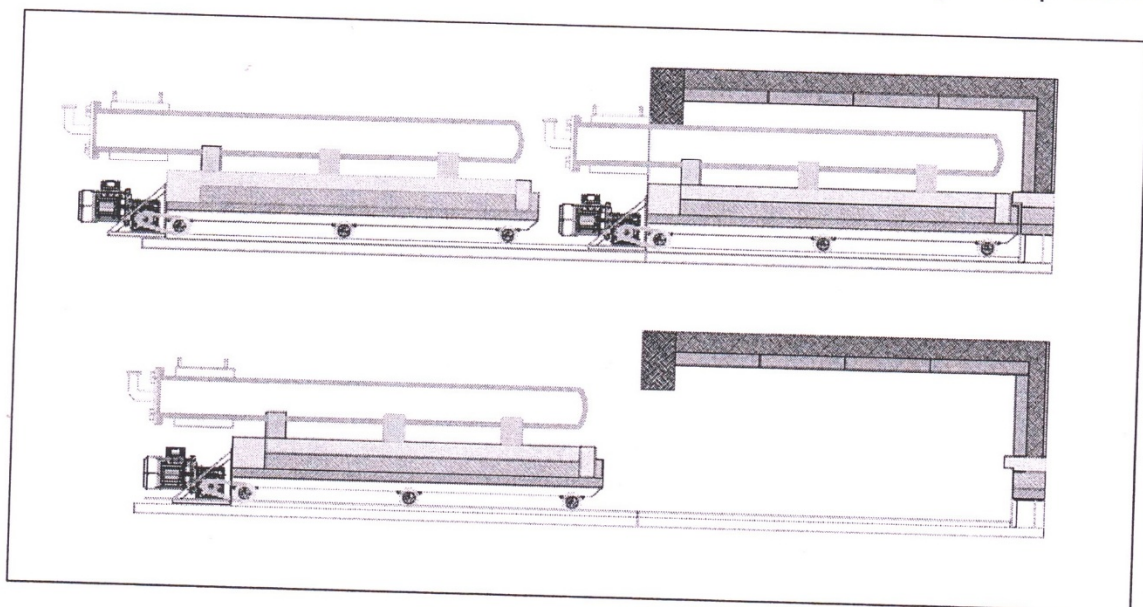
General 3-D assembly schematics and layout



General diagram of equipment and fittings integrated with vacuum system



General arrangement of furnaces with retorts on trolleys –top view



General arrangement of furnaces with retorts on trolleys-side view

Format for declaration by the Bidder for Code of Integrity & conflict of interest

(On the Letter Head of the Bidder)

Ref. No: _____

Date _____

To,

(Name & address of the Purchaser)

Sir,

With reference to your Invitation to EOI No. _____ dated _____ I/We hereby declare that we shall abide by the Code of Integrity for Public Procurement as mentioned under and have no conflict of interest.

Code of Integrity

The bidders/suppliers should sign a declaration about abiding by the Code of Integrity for Public Procurement in bid documents / EOI Proposal. In case of any transgression of this code, the bidder /firm is not only liable to be removed from the list of registered suppliers, but it would be liable for other punitive actions such as cancellation of contracts, banning and blacklisting or action in Competition Commission of India, and so on.

1. Code of integrity for Public Procurement: The Purchaser as well as bidders, suppliers, contractors and consultants should observe the highest standard of ethics and should not indulge in the following prohibited practices, either directly or indirectly, at any stage during the procurement process or during execution of resultant contracts:

- i) **“corrupt practice”**: making offers, solicitation or acceptance of bribe, rewards or gifts or any material benefit, in exchange for an unfair advantage in the procurement process or to otherwise influence the procurement process or contract execution;
- ii) **“Fraudulent practice”**: any omission or misrepresentation that may mislead or attempt to mislead so that financial or other benefits may be obtained or an obligation avoided. This includes making false declaration or providing false information for participation in a tender process or to secure a contract or in execution of the contract;
- iii) **“anti-competitive practice”**: any collusion, bid rigging or anti-competitive arrangement, or any other practice coming under the purview of the Competition Act, 2002, between two or more bidders, with or without the knowledge of the purchaser, that may impair the transparency, fairness and the progress of the procurement process or to establish bid prices at artificial, non-competitive levels;
- iv) **“coercive practice”**: harming or threatening to harm, persons or their property to influence their participation in the procurement process or affect the execution of a contract;
- v) **“conflict of interest”**: participation by a bidding firm or any of its affiliates that are either involved in the consultancy contract to which this procurement is linked; or if they are part of more than one bid in the procurement; or if the bidding firm or their personnel have relationships or financial or business transactions with any official of purchaser who are directly or indirectly related to tender or execution process of contract; or improper use of information obtained by the (prospective) bidder from the purchaser with an intent to gain unfair advantage in the procurement process or for personal gain; and
- vi) **“Obstructive practice”**: materially impede the purchaser’s investigation into allegations of one or more of the above mentioned prohibited practices either by deliberately destroying, falsifying, altering; or by concealing of evidence material to the investigation; or by making false statements to investigators and/or by threatening, harassing or intimidating any party to prevent it from disclosing its knowledge of matters relevant to the investigation or from pursuing the investigation; or by impeding the purchaser’s Entity’s rights of audit or access to information;

2. Obligations for Proactive disclosures

- i) The Purchaser as well as bidders, suppliers, contractors and consultants, are obliged under Code of Integrity for Public Procurement to sue-moto proactively declare any conflicts of interest (coming under the definition mentioned above – pre-existing or as and as soon as these arise at any stage) in any procurement process or execution of contract. Failure to do so would amount to violation of this code of integrity; and
- ii) The bidder must declare, whether asked or not in a bid document, any previous transgressions of such a code of integrity with any entity in any country during the last three years or of being debarred by any other Procuring Entity. Failure to do so would amount to violation of this code of integrity;
- iii) To encourage voluntary disclosures, such declarations would not mean automatic disqualification for the bidder making such declarations. The declared conflict of interest would be evaluated and mitigation steps, if possible, taken by the purchaser.

3. Punitive Provisions

Without prejudice to and in addition to the rights of the Purchaser to other penal provisions as per the bid documents or contract, if the Purchaser comes to a conclusion that a (prospective) bidder/supplier, directly or through an agent, has violated this code of integrity in competing for the contract or in executing a contract, the purchaser may take appropriate measures including one or more of the following:

- i) **If his offers / bids are under consideration in any procurement:**
 - a) Forfeiture or encashment of bid security;
 - b) Calling off of any pre-contract negotiations; and
 - c) Rejection and exclusion of the bidder/firm from the procurement process.
- ii) **If a contract has already been awarded**
 - a) Cancellation of the relevant contract and recovery of compensation for loss incurred by the purchaser;
 - b) Forfeiture or encashment of any other security or bond relating to the procurement;
 - c) Recovery of payments including advance payments, if any, made by the purchaser along with interest thereon at the prevailing rate.
- iii) **Provisions in addition to above:**
 - a) Removal from the list of registered suppliers and banning/debarment of the bidder from participation in future procurements of the purchaser for a period not less than one year;
 - b) In case of anti-competitive practices, information for further processing may be filed under a signature of the Joint Secretary level officer, with the Competition Commission of India;
 - c) Initiation of suitable disciplinary or criminal proceedings against any individual or staff found responsible.

The details of any previous transgressions of the code of integrity with any entity in any country during the last three years or of being debarred by any other Procuring Entity are as under:

- a
- b
- c

We undertake that we shall be liable for any punitive action in case of transgression/ contravention of this code.

Thanking you,

Yours sincerely,

Signature

(Name of the Authorized Signatory)

Company Seal