

MEMORANDUM OF UNDERSTANDING

THIS Memorandum of Understanding ("MOU") is made on this 28 day of November 2024 ("the Effective Date") by and between

AIC-IPR PLASMATECH INNOVATION FOUNDATION (AIC-PLASMATECH), an Atal Incubation Centre established as a Special Purpose Vehicle (SPV) by the Institute for Plasma Research, Dept of Atomic Energy under the section 8 of Companies' Act 2013 having its registered office at IPR, Bhat, Nr. Indira Bridge, Gandhinagar - 382428, Gujarat (hereinafter referred to as "**AIC-Plasmatech**") which expression shall mean and include its successors-in-interest, executors and permitted assigns) of the **FIRST PART**

AND

NATIONAL COUNCIL FOR CEMENT AND BUILDING MATERIALS (NCB), an apex research organization under the administrative control of Ministry of Commerce and Industry, Government of India, and a society registered under the societies Registration Act 1860, as amended time to time, with inter alia objectives to promote research and scientific work connected with Cement, Building Materials, and allied industry, including, but not limited to technology development, technology transfer, continuing education, and industrial services for cement and construction industries. The registered office of NCB is located at Ballabgarh, Haryana-121004, India. The other Units/Project offices are located at Hyderabad, Ahmedabad and Bhubaneshwar and all the offices/units are administratively controlled by the registered office at Ballabgarh Haryana (hereinafter called "**NCB**") which expression shall where the context so admits include its successors and permitted assignees) of the **SECOND PART**

AIC-PLASMATECH and NCB shall herein individually be referred to as "PARTY" and collectively as "PARTIES".

Whereas:

The **Institute for Plasma Research** (hereinafter referred to as '**IPR**') is a grant-in-aid research institute of Department of Atomic Energy, Government of India and is engaged in advanced research in plasma science and technology and allied fields such as but not limited to tokamak systems, magnet technology, vacuum technology, cryogenics, remote handling and robotics, data acquisition and control, diagnostics, artificial intelligence and deeplearning, high performance computing and simulation activities, societal and industrial applications of plasma and allied technologies etc. IPR has been working on societally and industrially relevant plasma technologies since over 2.5 decades and has established a dedicated Facilitation Centre for Industrial Plasma Technologies (FCIPT) to facilitate the same.

AND WHEREAS IPR has established **AIC-IPR Plasmatech Innovation Foundation** (AIC-PLASMATECH) as a not-for-profit company (CIN# U72100GJ2023NPL146840) under section 8 of Companies' Act 2013 with 100% ownership of the Department of Atomic Energy. AIC-Plasmatech is authorized by IPR to act as a technology commercialization & technology translation



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& transfer partner of IPR and shall nurture and incubate technology based startups utilizing IPR's technology, infrastructure and expertise.

AND WHEREAS AIC-PLASMATECH wishes to exploit plasma technologies for various societal and industrial applications such as environment & waste remediation, space and aerospace, defense, heavy engineering and industrial areas etc. for nurturing and incubating Indian industries and startups using its capabilities. Few such areas of expertise of IPR as relevant for this specific MoU are equipment and processes related to thermal plasmas, atmospheric plasmas, plasma processing of materials, engineering & computational design simulation of systems & processes etc.

In pursuance of the aforesaid, both PARTIES wish to utilize each other's respective expertise for various programs as detailed under section 1 of this MOU which shall enable NCB to leverage its expertise in this field to create a quality program and collaborate with AIC-PLASMATECH for joint/sponsored projects.

AND WHEREAS

NCB is the premier body under the administrative control of Ministry of Commerce and Industry, Govt. of India, for technology development, transfer, continuing education and industrial services for cement and construction industries. NCB's areas of work span over the entire spectrum of cement manufacturing and usage – starting with geological exploration of raw materials through the processes, the machinery, the manufacturing aspects, energy and environmental considerations to the final utilization of materials in actual construction, condition monitoring & rehabilitation of buildings and structures.

NCB serves as the nodal agency for providing the Government the necessary support for formulation of its policy and planning activities related to growth and development of cement industry. It is devoted to protect the interests of consumers of cement and concrete in the country. NCB's stakeholders are Government, Industry and Society, who perceive NCB's role as discharging national responsibility, providing adequate technology support and improving the quality of life respectively.

The areas of mutual interest between both NCB and AIC-IPR include waste management using RAUDRA Plasma pyrolysis/gasification, plasma applications in rotary kiln system for clinker production, AI/ML technologies, CO₂ processing using thermal plasma, new ceramic materials for cement and construction technology etc. and other such areas identified from time to time.

NOW THEREFORE it is mutually agreed and declared by and between the Parties as under

1. Scope of Engagement for this MOU shall be

- a. Collaborate for joint R&D work/projects on immediate and future requirements of cement industry in the field of implementing the thermal plasma torch technology for the electrification of the pyro-processing system (calciner and kiln) and other such areas of mutual interest as identified from time-to-time.



- b. NCB and AIC-IPR will utilize each other facilities and infrastructure for research, testing and experimental purposes on mutually agreeable terms on project-to-project basis.
- c. Collaboratively work on trials and tests for performance analysis, optimization, compatibility, safety standards & regulations and long-term evaluation of the developed technology and its application. Perform techno-commercial analysis of the developed technology and understand the relative merit against other available options.
- d. Jointly work out funding for the collaborative projects through funding agencies, CSR funds as the case may be. Both sides will jointly prepare project proposals as needed under such conditions.
- e. Jointly write journal papers, conference papers and other material to publish the results of the work.
- f. Jointly participate in trade shows, press conferences, press releases or other similar means for publicizing the technology and its applications to the beneficiaries.
- g. To exchange information on research and educational programs.
- h. To exchange, on a reciprocal basis, faculty and officials for limited periods of time for purpose of education and for research.

2. Methodology:

NCB has the expertise on domains such as cement, building materials & construction technology etc. and IPR has the domain expertise on plasma science and technology and other areas as listed out in the preamble of this MoU. Both PARTIES shall explore joint collaborative R&D proposals on areas of mutual interest. Such projects may either be funded by NCB or through external funding agencies as the case may be. All such endeavours shall be explored through a separate collaboration agreement customized to the objective and deliverables required. Additionally, NCB and AIC-Plasmatech may also explore demonstrating proof-of-concept applications which may be a potential startup idea/disruptive idea to be explored further with a startup. Both PARTIES shall also seek utilization of each other's infrastructure and expertise as needed on case to case basis. Any financial aspects related to such engagements shall be separately agreed upon depending on the case.

3. Content development

- a. NCB hereby agrees that it will nominate experts to provide advisory support to AIC-PLASMATECH in creating the content & curriculum for any proposed programs/events as necessary.
- b. In the event of AIC-PLASMATECH developing any training courses/workshops, which can be availed by NCB team at independent capacity, AIC-PLASMATECH shall offer NCB the same on mutually agreeable terms.

Signature



- c. AIC-PLASMATECH and NCB may conduct joint IP Hackathon and other programmes as mutually agreed upon where NCB may involve its incubator for this purpose.

4. Faculty / Staff Development and Joint Seminars

- a. NCB will, nominate members as Guest Lecturers or presenters to impart trainings, guest lectures to the students, as may be requested by AIC-PLASMATECH.
- b. NCB and AIC-PLASMATECH shall support each other in carrying out faculty/corporate NCB development programs including but not limited to trainings, seminars, workshops, and other related activities

5. **Scholarship** – This MOU is non - financial in nature and no financial commitment is being made by either PARTIES for any kind of scholarships or internships.

6. Financial Terms

This MoU is non-financial in nature and does not involve any financial commitment from either PARTY. Neither NCB nor AIC-PLASMATECH will receive neither any compensation nor consideration in return for the support covered under this MoU nor would it be required to provide any fund or scholarship/internships or any expense under the scope of this MOU. If any such activity involving financial commitment from either sides is needed, the same shall be undertaken on mutually agreed basis in writing prior to the initiation of the same.

7. Terms and Termination

It is agreed that the Parties shall jointly explore and work together for a period of 5 years from the Effective Date hereof to give effect to the intent and purpose of this MOU, and which may be extended by such further period as may be mutually agreed upon by the Parties in writing. However, either party may terminate this MOU without giving any reason thereof but after giving notice of 30 days to the other party. Furthermore, this MOU may be terminated by either Party upon written notice to the other Party if the other Party commits a material breach of any of its obligations under the MoU and fails to cure such breach within thirty (30) days after receipt of notice of such breach.

8. Exclusivity

Both Parties hereby agree that this MOU is entered on non-exclusive basis and that both Parties shall have the right and the discretion to enter into similar agreements and arrangements with other parties also.

9. Force Majeure

Neither party shall be liable for any delay or failure in performance of its obligations under this MOU, to the extent such failure or delay is the actual and direct result of acts such as fire,



flood, earthquake, embargo, acts of civil or military unrest, epidemics, pandemics, war, riots or any other similar cause that are beyond such non-performing party's reasonable control (collectively "Force Majeure Event"),

Upon the occurrence of a Force Majeure Event, the non-performing party shall be excused from its non-performance or observance of the affected obligation(s), for as long as such circumstances prevail and such party continues to attempt to recommence performance using best efforts without delay. The party suffering Force Majeure Event shall give prompt notice to the other party, giving details of the event, its consequences and what actions it proposed to alleviate the situation along with the duration to recover from performing under this MOU. The party so affected shall use all reasonable endeavours to mitigate the effect and alleviate the act or condition in question and shall promptly resume performance when the causes are removed.

10. Entire agreement

This MOU constitutes the entire understanding between the Parties and may not be modified or amended, except as mutually agreed in writing and signed by both the Parties. This MOU supersedes any other prior arrangement or agreement hitherto before made by the Parties with respect to the subject matter hereof.

11. Legal status of the parties

This MOU shall not be construed as any agency, company, joint venture, partnership, or any other business relationship between the Parties and neither party shall have any authority or power to bind the other or to contract in the name of nor create any liability against the other in any way for any purpose.

12. Confidentiality

Both PARTIES ("Receiving Party") shall hold all Confidential Information in trust and confidence and not disclose any information or material nor make public by using the same degree of care as it uses to avoid unauthorized use, disclosure, or dissemination of its own confidential information of a similar nature, but not less than reasonable care, any literature including instruction material, books, videos, audios, presentations and/or any other material documents, any and all information or proprietary materials (in every form and media) not generally known in the relevant trade or industry, existing or contemplated products, services, designs, technology, processes, technical data, engineering, techniques, methodologies and concepts and any information related thereto; information relating to business plans, sales or marketing methods and customer lists or requirements, ("Confidential Information") that have been provided by either Party ("Disclosing Party") for the purpose of the course under this MOU. The confidentiality obligations shall survive termination of this MOU and shall continue for additional period of (3) three years from the date of disclosure of the respective Confidential Information. Receiving Party shall not use the Confidential Information for any purpose whatsoever except as expressly contemplated under this MOU.



In addition, Receiving Party may disclose Confidential Information as required to comply with binding orders of governmental entities that have jurisdiction over it; provided that the Receiving Party:

- (a) gives Disclosing Party reasonable written notice to allow Disclosing Party to seek a protective order or other appropriate remedy;
- (b) discloses only such Confidential Information as is required by the governmental entity; and
- (c) uses commercially reasonable efforts to obtain confidential treatment for any Confidential Information so disclosed.

13. Intellectual Property Rights, Trademarks/ Trade Names, Copyrights etc.

Background Intellectual Property (BIP) refers to pre-existing intellectual property rights of the PARTIES and their host Institutions (i.e. IPR & NCB) before the execution of this Agreement. This include but not limited to patents, copyrights, trademarks, and trade secrets, that are owned or controlled by a party prior to the commencement of a specific project, agreement, or collaboration. BIP may include inventions, creative works, proprietary information, or any other intangible assets that are relevant to the subject matter of the Agreement. The BIP for any background work already done and secured by the party on any relevant technology will remain with respective party. Nothing in this MoU will change a PARTY's ownership to its BIP which it brings for development of a product under this MoU. Except to the limited extent required to perform a PARTY's obligations under this Agreement, neither PARTY receives any right, title, or interest in or to any Research Materials provided to it by the other PARTY or any technology, works or inventions of the other PARTY that are not Research Program Inventions, or any patent, copyright, trade secret or other proprietary rights in any of the foregoing. Each PARTY shall retain its rights on all the BIP held prior to this agreement. Though this MoU does not include the possibility of generation of new intellectual property, any ownership of any new intellectual property shall be subject to a separate agreement as may be mutually agreed upon in writing by both PARTIES.

Any course content, curriculum, training manual, instruction material (physical or digital) or other relevant material that is integrated into the curriculum in pursuance of this MOU shall be owned exclusively by AIC-PLASMATECH with due recognition and credit to NCB wherever applicable

For all other purposes, it is clearly understood by & between parties herein that, all intellectual property rights, trademarks/trade names, copyrights, service marks, patents, logos, letter heads, other published material, stationary etc. in respect of NCB's name / brand name, shall solely and absolutely vest in NCB and AIC-PLASMATECH shall have no claim, lien or encumbrance thereof directly or indirectly except upon receiving the prior written consent of NCB for usage of trade mark/trade name, brochures, published material for the purpose of education/ training/non-commercial promotional activities. However, for any other usage, permission in writing is required from NCB and subject to conditions, restrictions & for the period as may be prescribed by NCB.



NCB hereby agrees to allow AIC-PLASMATECH to refer to it as an 'Industry Partner' and make use of its name and logo for publishing on AIC-PLASMATECH's website during the term of this MOU.

AIC-PLASMATECH hereby agrees to allow NCB to refer to it as a 'Technology Partner' or 'Knowledge Partner and make use of its name and logo for publishing on NCB's website during the term of this MOU.

NCB hereby agrees that the consent of no other person or entity is required to enable AIC-PLASMATECH to use its logos and that such use in accordance with the terms of this MoU will not violate or infringe upon the trademarks, trade names, copyright, artistic of NCB, and/or other rights of any third parties.

14. Limitation Of Liability:

In no event shall either PARTY be liable to the other PARTY or any other person or entity for any special, exemplary, indirect, incidental, consequential or punitive damages of any kind or nature whatsoever (including, without limitation, lost revenues, profits, savings or business, or contribution or indemnity in respect of any claim against the Party) or loss of records or data, whether in an action based on contract, warranty, strict liability, tort (including, without limitation, negligence) or otherwise, even if such Party has been informed in advance of the possibility of such damage or such damage could have been reasonably foreseen by such Party. In no event shall NCB's liability to AIC-PLASMATECH or any other person or entity, arising out of or in connection with this MOU or the Services exceed, in the aggregate.

15. Non-exclusivity:

This MoU is non-exclusive in nature and does not impose any binding of any sort on the EITHER PARTY towards exclusivity. Each party shall be free to pursue its R&D programmes and collaborations with any entity, unless specifically agreed upon in writing under any joint collaboration work.

16. Settlement of Disputes and Jurisdiction:

- a) If any dispute or difference arises between PARTIES hereto as to the construction, interpretation, effect and implementation of any provision of this MoU including the rights or liabilities or any claim or demand of any party against other or in regard to any other matter under the present MoU will be at first be attempted to be mutually resolved by heads of both PARTIES. If the disputes remain unresolved, the same shall be settled by an independent arbitrator under the Indian Arbitration and Conciliation Act 1996 and its enactments/amendments thereof from time-to-time. The language of arbitration shall be English and the seat of arbitration shall be Gandhinagar (Gujarat).
- b) This agreement and any disputes or claims arising in connection with, shall be governed and construed in accordance with the laws of India subject to the exclusive Jurisdiction of the courts of Gandhinagar.



17. **Disclaimer:** EXCEPT AS OTHERWISE EXPRESSLY SET FORTH IN THIS MOU OR EACH STATEMENT OF WORK, NEITHER PARTY MAKES ANY WARRANTIES, GUARANTEES, OR REPRESENTATIONS OF ANY KIND, EXPRESS OR IMPLIED, INCLUDING, WITHOUT LIMITATION, ANY IMPLIED WARRANTY OF MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE.

18. Compliance of Anti-Bribery Laws in India

AIC-PLASMATECH and NCB agrees to comply with all Anti-Corruption Laws in force in India in performance of this MOU.

This MOU is signed by the authorized representatives of both the Parties.

For and on behalf of

AIC-IPR Plasmatech Innovation Foundation



(AUTHORISED SIGNATORY)

Name: Dr. Nirav Jamnapara

Designation: Director – AIC-PLASMATECH

Date: 28-Nov-2024

Place: Gandhinagar

Seal:



Witness:



डॉ. पी. चौधुरी / Dr. P. CHAUDHURI
डीन (आर & डी) / Dean (R & D)
प्लाज्मा अनुसंधान संस्थान / Institute for Plasma Research
इन्दिरा पुल के निकट, भाट / Near Indira Bridge, Bhat
जि. गांधीनगर-382 428 / Dist. Gandhinagar-382 428

For and on behalf of

National Council for Cement and Building Materials



(AUTHORISED SIGNATORY)

Name: Dr L P Singh

Designation: Director General, NCB

Date:

Place:

Seal:



Witness:

