

Note No. #1**APPROVAL OF THE CALL FOR PROPOSAL "METALS AND CERAMICS 3D PRINTING INDUSTRY AND IT'S ECOSYSTEM ENABLER TECHNOLOGIES"**

Technology Development Board (TDB) is planning a call a proposal on the topic "Metal And Ceramics 3D Printing Industry And It's Ecosystem Enabler Technologies".

BACKGROUND

1. The global metal 3D printing market size was valued at USD 7.73 billion in 2023 and is projected to grow at a compound annual growth rate (CAGR) of 24.6% from 2024 to 2030 (as per study).

2. The Global 3D Printing Ceramic market is valued at USD 220.1 Million in 2023 and is projected to reach a value of USD 1721.3 Million by 2032 at a CAGR of 28.5% during the forecast period (as per study).

3. Metal/Ceramic 3D printing is one such market that has benefited significantly from the growing necessity of rapid prototyping and advanced manufacturing practices. The industry is poised to witness unprecedented growth over the forecast period owing to the rising application of additive manufacturing in various industry verticals. Increasing adoption of metal/ceramic 3D printers for designing and prototyping products and objects coupled with the reduced manufacturing expenditure and accuracy in the end-product is a key growth proliferating factor. The market is poised to witness high demand arising prominently from the healthcare, automotive, and aerospace & defense sectors.

4. The development of printers that are compatible with metals and ceramics along with growing investments in 3D Printing are some of the key opportunities in the global 3D Printed product market. In addition, the increased public-private partnership and the increased demand for 3D Printed product in emerging nations are further estimated to enhance the market growth

5. 3D printing metals or ceramics is the type of process of forming metal/ceramic parts/products, under computer control to produce a 3D model of the scanned object. The objects can be of different shapes and sizes and are created through

the help of 3D imaging and scanning.

6. The ceramics used for 3D printing are versatile in nature and have a high amount of heat resistance capable of withstanding high temperatures of more than 1700 Celsius.

7. India metal/ceramic 3D printing market is expected to account for a significant revenue share in the global metal/ceramic 3D printing market. India metal/ceramic 3D printing market benefits from a vibrant ecosystem of startups and research institutions focused on developing innovative technologies and applications. These entities contribute to the diversification and expansion of the metal/ceramic additive manufacturing market in India, particularly in industries such as aerospace, automotive, healthcare, and consumer goods.

PROPOSAL

8. Aligning with the national requirement and focus in the Metal/Ceramic Additive Manufacturing sector, it is proposed that Technology Development Board (TDB) may issue a 'Call for Proposal' inviting applications from Indian companies having innovative/indigenous technologies at commercialization stage in this emerging sector. The call shall include companies with innovative/indigenous technologies for the following

- a. Innovative Metal/ceramic 3D printed products
- b. Metal/ceramic 3D printer and parts
- c. Associated equipment used in 3D printed product manufacturing process
- d. Metal/ceramic feed-stock for 3D printer (raw materials)
- e. Binders/additives used for feed-stock preparation etc.
- f. Or any other thing required for Metal and/or Ceramic Additive Manufacturing industry.

The eligibility criteria and financial support shall be as per the TDB guidelines

9. TDB may do the planned outreach for this call for proposal through websites, newspaper, social media, interaction with the associations of the Industry, Innovators etc. to reach all the stakeholders in the relevant fields.

10. Last date for submission of online proposals may be 30.09.2025.

APPROVAL SOUGHT

11. In view of the above, approval is sought for issuing a call for proposals in the Metal/Ceramic Additive Manufacturing sector as proposed above.

12. If para (11) is approved then the under sign may initiate the process and strategize a time line for the same.

Submitted for consideration and approval please

07/07/2025 4:27 PM

गौरव गर्ग|GAURAV GARG
(परियोजना समन्वयक|PROJECT COORDINATOR)

Note No. #2

Pl. advice

07/07/2025 4:41 PM

राजेश कुमार पाठक|RAJESH KUMAR PATHAK
(सचिव|SECRETARY)

Note No. #3

We may discuss

08/07/2025 3:57 PM

राजेश जैन|RAJESH JAIN
(निदेशक (वित्त)|DIRECTOR (FINANCE))

Note No. #4

as discussed

Submitted, please.

08/07/2025 4:08 PM

गौरव गर्ग|GAURAV GARG
(परियोजना समन्वयक|PROJECT COORDINATOR)

Note No. #5

Refer above. It's quite interesting to target 3D printing industry; in my view TDB shall be opening a new domain so far untouched. Recommended for approval please.

09/07/2025 9:10 AM

राजेश जैन|RAJESH JAIN
(निदेशक (वित्त)|DIRECTOR (FINANCE))

Note No. #6

Approved.

10/07/2025 4:15 PM

राजेश कुमार पाठक|RAJESH KUMAR PATHAK
(सचिव|SECRETARY)

Note No. #7

Refer note ante

The call for proposal on " Metal And Ceramics 3D Printing Industry And It's Ecosystem Enabler Technologies " has been approved by the competent authority TDB.

The file has been submitted for the proposal's digital advertisement/pamphlet design and the social media and digital print media representation of the CFP on the relevant websites.

10/07/2025 4:52 PM

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