

Global Tender notification for the procurement of Laser deposition head(powder feeding) for additive manufacturing (Last date: 02.06.2024)
GTE: IISc-GTE-2024-347
Date: 02.05.2024

Dear Sir/Madam,

This is a tender for the procurement of a laser head for additive manufacturing. In order to accomplish the goals of a DRDO funded project we plan to acquire a laser deposition head. In the following we list the minimum specifications.

Minimum specifications

- a) Lasertype: It should be possible to integrate the head with a programmable Fiber/Diode Laser
- b) Max. laser power: The maximum permissible power should be 6 KW
- c) Numerical aperture or beam parameter product: 3–20 mm-rad and beam diameters from 100–300 micrometers
- d) Fiber diameter: 100–300 micron (depending on beam diameter requirements)
- e) Needed spot diameter on specimen: 1--2 mm
- f) Minimum needed working distance: 7mm--15mm
(lower edge of the head to specimen):

- g) Fibre-head socket type: QBH/LLK-D
- h) Collimation Focal length : 100--125 mm
- i) Motorized collimation should be possible
- j) Flange for mounting camera should be available
- k) Observation Camera: VGA/Kappa
- k) Focussing focal length : 250--400 mm
- l) Protective window control : Temperature, presence and degree of pollution
Pyrometer temperature measurement and closed-loop control

- m) Cladding nozzle type: Co-axial ring type and Co-axial 4 way nozzle
- n) Closed-loop control for maintaining constant deposition temperature

Other specifications

- a) Warranty of three years for all parts
- b) Spares should be provided for components for the period of warranty
- c) All requirements with respect to cooling and compressed air requirements should be mentioned technical-bid.

Terms and conditions

1. Two-bid system (separate technical and financial bids) in sealed tenders.

2. The technical bid must clearly specify the prescribed technical specifications without including the prices. Please provide in detail the specifications under each subhead and bullet point. Unique characteristics may be highlighted.

3. Vendors who include price information in the technical bids will be automatically disqualified.
4. Technical bids will be opened first. IISc may seek clarifications after opening of technical bids and may ask vendors to perform some example experiments on the samples given by IISc to demonstrate the promised technical specifications. Vendors may be required to give presentations.
5. There are several items that require detailed information to be provided by the supplier. If information is not provided against any of these items, this will disqualify the supplier.
6. After technical evaluation by a committee, vendors may be asked to re-quote in a specific format to facilitate comparison of prices.
7. Price bids of only technically qualified vendors will be considered.
8. The price bids must offer CIF Bangalore prices.
9. IISc also reserves the right to cancel the tender at any time without assigning any reason whatsoever.
10. Indicate delivery period.
11. Order will be placed on lowest bid from technically qualified vendor.
13. Prices for the individual items should be quoted separately.
14. The tender documents can be sent at the following address:
The Chairman
Department of Materials Engineering
Indian Institute of Science, Bangalore 560012
Karnataka (INDIA)
Attn: Prof. Abhik Narayan Choudhury