

Dr.Srikrishna Sahu  
Assistant Professor



206 A, Thermodynamics and  
Combustion Engineering Laboratory  
Department of Mechanical Engineering  
Indian Institute of Technology Madras  
Chennai 600 036 India

## Form for Inviting Quotations

Reference No. MEE/13-14/637/NFSC/SRIS

Date: 18-04-2014

**Subject:** Supply and Installation of dual pulsed Nd:YAG laser for lab use by Indian Institute of Technology Madras

Dear Sir,

**Due Date: 15.05.2014**

Quotations are invited (technical bid and financial bid separately) for supply and installation of the equipment as per details in Annexure-I under the following terms and conditions.

1. Quotations are invited **in duplicate** for the supply of **dual pulsed Nd:YAG laser, and accessories** details of which are shown in overleaf.
2. The Quotations **duly sealed and superscribed on the envelope** with the reference No. and due date, should be addressed to the undersigned so as to reach him on or before the due date stipulated above.
3. The Quotations should be **valid for sixty days** from the due date and the period of delivery required should also be clearly indicated.
4. If the item is under DGS&D Rate Contract, Rate Contract Number and the price must be mentioned. It may also please be indicated whether the supply can be made direct to us at the Rate Contract price. If so, please send copy of the R. C. (Please note that we are not Direct Demanding Officers).
5. Relevant literature pertaining to the items quoted with full specifications (and drawing, if any) should be sent along with the Quotations, wherever applicable. Samples if called for, should be submitted free of charges, and collected back at the supplier's expenses.
6. **Local Firms:** Quotations should be for free delivery to this Institute, if Quotations are for Ex-Godown delivery charges should be indicated separately.
7. **Firms Outside Madras:** Quotations should be F.O.B. Madras. If F.O.B. consignor station, freight charges by passenger train / lorry transport must be indicated. If Ex-Godown, packing, forwarding and freight charges must be indicated. The following set of documents is required in all cases: a. Complete set of Clean Bill of Lading / Airway Bill / Air or surface Parcel Receipt, showing that the goods have been shipped and freight prepaid. b. Insurance Policies / Certificates in duplicate covering Marine Insurance as per Institute Cargo Clauses (All risks) and perils as per Institute Strikes, Riots and Civil Commotion Clauses, War risks as per Institute, Clauses. Cover for CIF value plus 10 percent.
8. The rate of Sales / General Taxes and the percentage of such other taxes legally leviable and intended to be claimed should be distinctly shown along with the price quoted. Where this is not done, no claim for Sales / General Taxes will be admitted at any stage and on any ground whatsoever. **The taxes leviable should take into consideration that we are entitled to have Concessional Sales Tax applicable to non-Government Educational Institutions run with no profit motive for which a concessional. Sales Tax Certificate will be issued at the time of final settlement of the bill.**
9. Goods should be supplied carriage paid and insured.
10. Goods shall not be supplied without an official supply order.
11. **Payment:** Every attempt will be made to make payment within 30 days from the date of receipt of bill / acceptance of goods, whichever is later.

Yours sincerely,

Dr.Srikrishna Sahu,  
206 A, Thermodynamics and  
Combustion Engineering Laboratory  
Department of Mechanical Engineering  
Indian Institute of Technology Madras  
Chennai-600036, Tamil Nadu, India  
Phone: +91-44-2257 4713  
Mobile: +91-9566246096  
Fax: +91-44-2257 4652  
E-mail: ssahu@iitm.ac.in

## **Annexure-I**

### **PULSED Nd:YAG LASER AND ACCESSORIES**

#### **Laser requirement:**

- Dual Pulsed, dual cavity Nd:YAG laser, enclosed in a single box
- Pulse width  $\leq 10\text{ns}$
- Wavelength: 532 nm
- Pulse energy: 140-180 mJ per pulse @ 532 nm wavelength
- Repetition rate:  $\leq 15\text{ Hz}$
- Divergence:  $\leq 5\text{ mrad}$
- Near field beam diameter:  $<6.5\text{mm}$
- Pulse to pulse energy stability  $<2.5\%$  RMS
- Cooling: water-air heat exchanger built in to the power supply
- Flash lamp life time: 100 million shots
- Low power alignment mode for alignment
- Ability to use laser head in non-horizontal orientations
- Integrated cooling
- Linearly polarized, vertical
- Control: through TTL signal or RS 232 interface (external control of Q-switch and flash lamp separately through TTL signal should be possible)
- Operating temperature: up to 25-30 degrees C ambient temperature
- Power requirements: should be able to work with 220 V AC power supply
- Weight of laser head  $<10\text{kg}$ , weight of power supply  $< 20\text{kg}$
- Warranty for 2 year (including optics)

Each quotation of Laser should also include a catalogue, containing technical specification of the Laser offered, failing which the offer is liable to be rejected. Also, include the offer for the provision to extend warranty to 1 and 2 years.

#### **Accessories:**

Accessories should include details and pricing information (if applicable) of the following items:

- Protective Laser-safety goggles with sufficiently high OD to covering the range of wave lengths of a Nd:YAG laser (532 nm, 355 nm, 266 nm)
- DI cartridge