

**Government of India
Bhabha Atomic Research Centre
Metallic Fuels Division**

Ref: MFD/AJ/OPA/21/071

Date: 09-11-2021

To,

M/s

Dear Sir,

We request you to submit your quotation for **“Design, Fabrication, supply and guarantee of engraving unit with 50 W Fiber optic laser head to meet the indexing requirement of products fabricated by hot roll bonding operation”**. (Details of technical specifications and dimensions are enclosed in Annexure-I).”

Yours Faithfully,

Arihant Jain

(Arihant Jain)
Scientific Officer (D)

Encl.: 1. Annexure (4 pages)

ANNEXURE-1

SCOPE:

“Design, Fabrication, supply and guarantee of engraving unit with 50 W Fiber optic laser head to meet the indexing requirement of products fabricated by hot roll bonding operation”. (Details of technical specifications and dimensions are enclosed in Annexure-I).”

GENERAL:

Bidder Qualification: In order to qualify the bidder to participate in this tender, it is mandatory that the bidder has some prior experience in fabrication of Laser engraving systems. Therefore the bidder is required to submit necessary documentation/proof (Purchase Orders, Work Orders, Contract etc) where he has been awarded the contract by any government agencies only for similar kind of work (preferably on Aluminium and Stainless Steel). It is also desired that the bidder must also demonstrate by submitting documents demonstrating the timely completion of such contracts/work within stipulated time frame. In order to qualify it is also required that bidder must have completed minimum 5 number of tenders/work contracts in the last 2 year duration on SS machining.

Scope of work:

Material on which engraving has to be done: Aluminium alloy.

Details of the job on which engraving has to be done:

Geometry 1: plate: thickness 1.2mm, width 75mm, length 1000mm

Geometry 2: plate: thickness 1.5mm, width 75mm, length 1000mm

Geometry 3: cuboid box assembly: 100mm X 100mm X 1000mm (Aluminium 6061 alloy)

Geometry 4: plate: thickness 1.5, width- 35 mm, length 135mm

Font (for geometry 1, 2 3): A different type of font has to be developed in which the width of the letters shall be 8mm, height of the letters 60mm. Depth required 0.1 to 0.3mm.

Font (for geometry 4): Arial size 5, depth varying from 0.1 to 0.3mm.

Specification of laser cutting machine:

- 1) IPG 50-watt average power.
- 2) Operating temperature 25 degree Celsius.

The indent details the design and fabrication of pulsed fibre laser of 50 watt with single head scanning system with user friendly software, enabling to mark on virtually any surface, radial marking, with automatic serialisation. Control panel shall also be provided which shall be used for various operation of laser marking machine. Z axis requires a motorization of up to 250mm. The system shall also contain the latest data acquisition system with laser engraving software. System shall be enclosed from all side with two sides operable doors. One door is required for maintenance of the laser head and the second door shall be required for fixing the job on the fixture. Online 2 KVA UPS with 15 min backup shall be provided with the system. The machine shall also be provided with detachable aluminium scaled fixture for holding the

job on which engraving has to be done. Laser head movement of Y axis shall also be provided for 500mm. Further a detachable table of length of 2 m shall also be in the scope of supply.

Specifications of Laser

Laser	Fiber Laser IPG
Average Power	50 watt
Pulse Energy	1 mJ
Power consumption	< 175 W
Laser Beam Positioning	Visible Red Light
Nominal Repetition Rate	50 KHZ
Repetition Rate Range	2 To 500 kHz
Pulse Duration	100ns
Wavelength	1064nm
Beam Quality(M ²)	< 2
Marking Area	100X100 mm
Focusing optics	Multi element F-theta
Cooling	Air-cooled
Supply required	230 Vac 15 amps.
Fiber Cable length	2 m
Software	Suitable software for engraving
Operating temperature	20~35 degree Celsius
Humidity	5% - 95%
Computer	Latest Pc with 19" TFT Screen
Galvo scanner	Marking speed for good writing quality 800cps
Marking Depth	0.1 mm To 0.3 mm
Laser Trigger	Yes - Both Software & Foot Switch options
Laser Process Requirement	Marking/Engraving of Alphanumeric text character. A separate file has to be created by the supplier in which user defined font has to be incorporated in the software.

Other Important Requirements:

Bidder should send only a consolidated quote for “**Design, Fabrication, supply and guarantee of engraving unit with 50 W Fiber optic laser head to meet the indexing requirement of products fabricated by hot roll bonding operation**”. (Details of technical specifications and dimensions are enclosed in Annexure-I).” Only consolidated and no part bidding will be accepted for any further consideration. The make along with the product ID of some parts of the tender shall be strictly adhered to. Any deviations from the specification mentioned in the Annexure shall lead to rejection of the bid.

- You shall send your offer in a sealed envelope (**strictly by registered post/Speed post only**) indicating delivery period, price inclusive of taxes and other relevant information, to:

Arihant Jain
Metallic Fuels Division
Bhabha Atomic Research Centre
Trombay,
Mumbai 400 085

- Quotation shall reach us by speed post/register post only on or before **19-11-2021** before **11.30 hrs.**

- Please send "REGRET" if not quoting.

- On top left corner of the sealed envelope please indicate

“Design, Fabrication, supply and guarantee of engraving unit with 50 W Fiber optic laser head to meet the indexing requirement of products fabricated by hot roll bonding operation”. (Details of technical specifications and dimensions are enclosed in Annexure-I).”

All applicable taxes should be clearly mentioned.

- Overwriting, scratching etc. must be avoided in the quotation. Rewriting the whole figure shall carry out any alteration in the figure. The authorized person from the firm shall countersign such figure.

1. The delivery period mentioned in the quotation shall be strictly adhered to. If the contractor fails to supply and secure extension of delivery date before effecting delivery of the supply against the contract, acceptance of such item by the purchaser will in no way prejudice the right of the purchaser to levy liquidated damage nor will it be entitled to the contractor for payment of statutory levies that comes into force after the expiry of the delivery date.

- Guarantee / Warranty of the material supplied for one year.

- Early delivery schedule will be given a consideration.

- You may contact Shri Arihant Jain (25595008) for any clarification.

PLACE OF DELIVERY:

- The inspected and accepted assemblies shall be delivered to:

Stores Officer
Radiological Zonal Stores
Bhabha Atomic research centre
BOMBAY 400 085

INSPECTION AND TESTING:

The purchaser will have access at all reasonable times to all shops of the contractor and the sub-contractors where material is being fabricated and assembled and all reasonable facilities for such inspection shall be provided. Prior to the supply of item the manufacture has to get it approved from the purchaser.

PAYMENT TERMS:

Full payment will be made only after the satisfactory completion of Work order and delivery of **“Design, Fabrication, supply and guarantee of engraving unit with 50 W Fiber**

optic laser head to meet the indexing requirement of products fabricated by hot roll bonding operation". (Details of technical specifications and dimensions are enclosed in Annexure-I)." Please note that income tax @ 2% will be deducted from your bill. *No part payment or advance payment will be made.* For this mode of payment, you are required to draw your invoice in the name of Director, Nuclear Fuels Group, Bhabha Atomic Research Centre, Mumbai 400085, in triplicate along with Advance Stamp receipt and to be submitted along with "Design, Fabrication, supply and guarantee of engraving unit with 50 W Fiber optic laser head to meet the indexing requirement of products fabricated by hot roll bonding operation". (Details of technical specifications and dimensions are enclosed in Annexure-I)."

Company's PAN No. should be furnished along with the bill.

- Company's copy of Sales Tax /Service Tax Registration Certificate has also to be furnished along with the bill.

DELAY CLAUSE:

Any delay which is attributable to the contractor is liable for penalty @0.5% per week (max. 5%) to be imposed on the contractor.

CONFIDENTIALITY:

No, party shall disclose any information to any third party, concerning the matters under this contract generally. In particular, any information identified as "Proprietary" in nature by the disclosing party shall be kept strictly confidential by the receiving party and shall not be disclosed to any third party without the prior written consent of the original disclosing party. This clause shall apply to the sub-contractors, consultants, advisers or the employees engaged by a party with equal force. "Restricted information" categories under section 18 of the Atomic Energy Act, 1962 and "official Secrets" under section 5 of the official secrets act, 1923:- Any contravention of the above-mentioned provisions by any contractor, sub-contractor, consultant, adviser or the employees of a contractor will invite penal consequences under the aforesaid legislation. Prohibition against use of BARC's name without permission for publicity purposes:- The contractor or sub-contractor, consultant, adviser or the employees engaged by the contractor shall not use BARC's name for any publicity purpose through any public medial like press, radio, T.V. or Internet without the prior written approval of BARC.

Arihant Jain

Arihant Jain

Scientific officer (D)

(On behalf of the President of India)