

सत्यमेव जयते

GOVERNMENT OF INDIA
DEPARTMENT OF ATOMIC ENERGY
BHABHA ATOMIC RESEARCH CENTRE
VISAKHAPATNAM



भारतीय परमाणु अनुसंधान केंद्र
BHABHA ATOMIC RESEARCH CENTRE

Computational Analysis Division

Ref: CAD /HEDM/WO/IND/18-19/05

Date 24-05-2018

Sub: Notice inviting tender for "Fabrication and supply of FRP pipes."

1. **Scope :** Fabrication and supply of FRP pipes.
(Details: Annexure 1)

Note: The items are for delivery at BARC, Visakhapatnam

2. General guidelines for submitting tender

- You shall send your offer in a **sealed envelope** indicating delivery period, price inclusive of taxes and other relevant information by speed post to:

(Kind Attention : Shri. Rahulnath P.P., SO/C)

Head,
Computational Analysis Division
Bhabha Atomic Research Centre
IDA Block-B, 4th Cross Road
Autonagar
Visakhapatnam 530012

- Quotation shall reach us on or before **15.06.2018 by Speed Post/Courier Only**
- On top left corner of the envelope please indicate

Quotation For – " Fabrication and supply of FRP pipes" as per Annexure 1 and due date 15.06.2018

- Overwriting, scratching etc. must be avoided in the quotation. Rewriting the whole figure shall carry out any alteration in the figure. The authorised person from the firm shall countersign such figure.
- 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.
- Minimum Guarantee / Warranty period of the material shall be one year.
- **Supplier shall mention clearly the PAN /TAN no. on quotation.**
- **GST number shall be clearly mentioned on Quotation**
- All the charges and taxes shall be mentioned clearly.

Please note that BARC being an R&D institution, GST

- @ 2.5% shall only be applicable for Intra-state Supply of Goods
- @ 5.0% shall only be applicable for Inter-state Supply of Goods.
- GST exemption certificate shall be issued to the supplier.

(This is as per Office Order No. BARC/GST/12/2017 dt. 27.12.2017)

- You may contact us for any clarification before **15.06.2018** (Shri Rahulnath P.P., 0891-2892-235, rahulnath@barc.gov.in)

3. PLACE OF DELIVERY: Visakhapatnam

The inspected and accepted components shall be delivered to:
Stores Officer,
Bhabha Atomic Research Centre
IDA Block-B,4th Cross Road,
Autonagar
Visakhapatnam- 530012.

4. PAYMENT TERMS:

- Part payment/Advance or against delivery cannot be made.
- Payment will be made only after satisfactory completion of work and on production of (along with Delivery Challan):
 - (i)Bill/Invoice containing Location of supply, separate tax components along with PAN and GSTN numbers
 - (ii)Advance Stamped Receipt
 - (iii)Bank Account No, Bank and Branch name with IFSC code.
 - (iv)Undertaking stating that GST has been promptly deposited with the authorities
- It may be noted that:
 - Income tax @2% will be deducted from your bill.
 - TDS(under GST) will be deducted as applicable from your bill of taxable goods and/or services, where the total value of such supply exceeds 2.50lakh.

5. CONFIDENTIALITY CLAUSE :

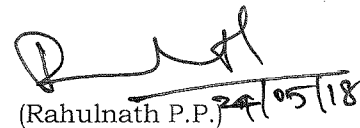
No, party shall disclose any information to any third party, concerning the matters under this contract generally. In particular, any information identified as "Proprietary" in nature by the disclosing party shall be kept strictly confidential by the receiving party and shall not be disclosed to any 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.


(Rahulnath P.P.) 24/05/18

SO/C, CAD

Phone: 0891-2892-235,

Email: rahulnath@barc.gov.in

Scope of work**Fabrication and supply of FRP pipes**

I. Quantity: 10Nos.


II. Fabrication technique and critical dimensions.

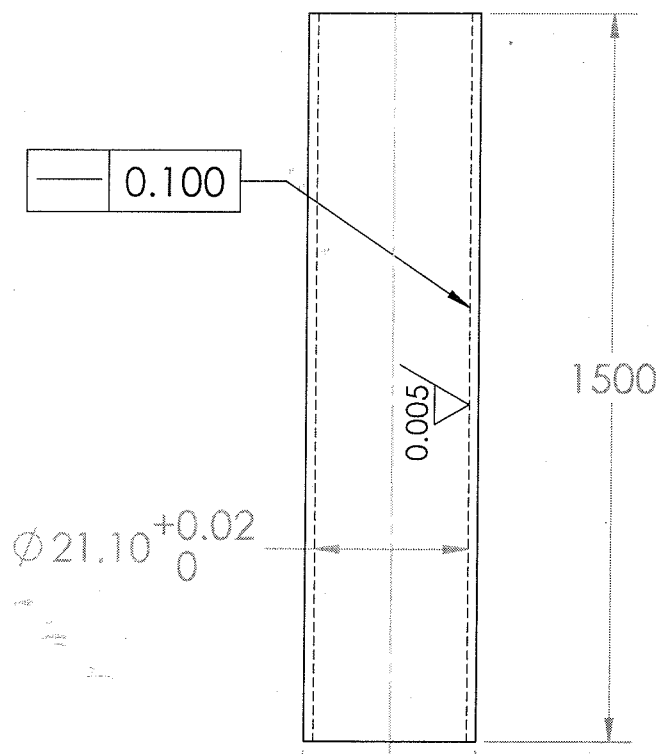
(See Drw.No. 01 for details)

1. The FRP pipe dimensions should be as per given drawing;
 - Nominal ID=21.10mm. (Important: tolerance +0.02mm,0.0mm)
 - Nominal OD=23.70mm. (Important: tolerance +0.05mm,0.05mm)
 - Nominal length=1500mm.
2. The pipe has to be made with glass fibre/epoxy filament of linear mass density 300tex.
3. Fibre tensile strength should be 2500-3000MPa and specific gravity between 2.5-3.0.
4. Dynamic viscosity of epoxy used must be 1200-1600cps and that of hardener used should be 40-100cps.
5. Winding angle should be $\pm 60^0$ cross-ply (i.e. $+60^0, -60^0, +60^0, -60^0$ etc. until desired thickness is obtained).
6. Volume fraction of fibre epoxy should be 60-65%.
7. Winding tension of 1-1.5kgf must be provided during the winding process.
8. Inner surface of pipe should have roughness value of the order of 0.005mm(5microns).
9. Axis Straightness of pipe must be ensured within 0.100mm(100microns).
10. Straightness of inner surface of pipe should be ensured within 0.100mm(100micro)

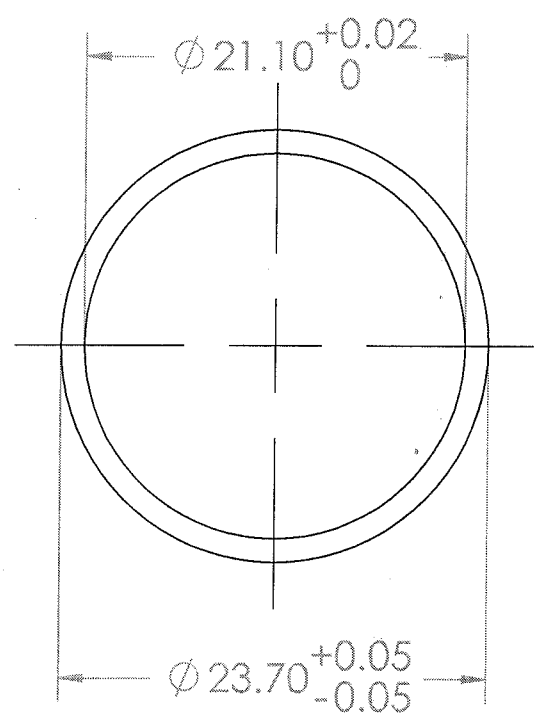
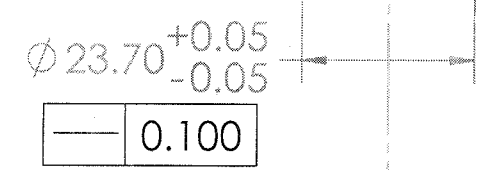
GENERAL REQUIREMENTS

1. The vendor
 - Should have **adequate composite fabrication and testing facility**. Facility inspection will be carried out by our engineers. If the facilities are not satisfactory the bid will be rejected. Rejection/acceptance is at the sole discretion of our engineers.
 - Have **experience of developing similar "defense grade" composite barrels** and have supplied to defence and other entities.(Ref. of work orders/Po's must be provided).
 - Inspection rights will have to be provided during the fabrication process to ensure compliance to our specifications.
 - Material test certificate have to be provided for the fibre and epoxy.
2. The vendors are encouraged to hold prior discussions with the indenter for any clarifications or suggestions.
3. Quotation must contain the basic cost of each type of coil and the total basic cost in a tabled form.

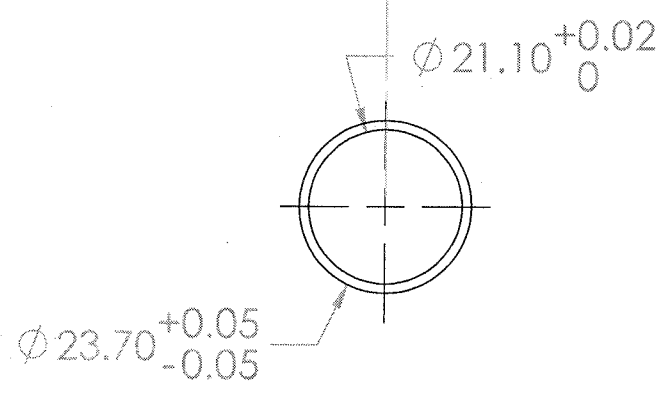

 Rahulnath P.P. 24/05/18
 SO/C, CAD
 Indenting Officer



Material: Glass Fibre/Epoxy
 Technique: Filament winding
 Winding angle: ± 60 Degree cross-ply
 Fibre thickness: 300Tex
 Winding tension: 1-1.5kgf



Cross Section of Pipe



All dimensions are in mm

FRP Pipe

DIV: CAD	DRG. No.: 01	SCALE:- 1:15
WO/MF: CAD/HEDM/WO/IND/18-19/05		
Name & Signature: Rahulnath <i>Rahulnath</i> 29/10/18		