Government of India  
Bhabha Atomic Research Centre  
Electronics Division  

Modular Labs.,  
Trombay,  
Mumbai 400 085.  

Ref: BARC/ED/2020/140  
Dated: 18/03/2020  

Sub: Minor Fabrication-Invitation of quotations for development of high insulation resistance coaxial cable assembly as per specifications given in Annexure A and drawing given in Annexure B.  

Dear Sirs,  

Quotations are invited for the minor fabrication job as mentioned below:  

<table>
<thead>
<tr>
<th>Sr. No.</th>
<th>Description</th>
<th>Quantity</th>
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<tbody>
<tr>
<td>1</td>
<td>Development of high insulation resistance coaxial cable assembly as per specifications given in Annexure A and drawing given in Annexure B.</td>
<td>1 Nos.</td>
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The terms and conditions are as below:  

1. Bidder shall quote for development of high insulation resistance cable & other part including the material.  

2. Income Tax @ 2% and surcharge on IT as applicable will be deducted from your bill.  

3. Taxes shall be quoted separately. Excise duty is nil. Form AF shall be provided if necessary.  

4. The quotations must reach Head Electronics Division by 30/03/2020 and must be sent in a sealed envelope supercribed with the above reference number and due date given above.  

5. The address on the envelope should read:  
The Head, Electronics Division,  
Modular Lab D-block,  
Bhabha Atomic Research Centre,  
Trombay, Mumbai 400085.  

Attn.: Amit Kumar, SO/D, SD&TS, ED  

6. The bidder shall submit final design of the cable assembly within Two week after placing the purchase order. Fabrication work shall be started after approving the design by BARC engineers.  

7. The fabrication work shall be subject to inspection by our officers. The finished components shall not be dispatched prior to approval by our engineer, at bidder's works. Necessary inspection facilities should be provided to our engineers during inspection at bidder's premises.  

8. The bidder shall deliver the finished components after approval by our engineer within Six week from the date the firm purchase order issued to the bidder. The finished components shall be delivered by the bidder at BARC.  

9. Head Electronics Division, BARC reserves the right to accept/reject any or all quotations without assigning any reason.
10. Confidentiality Clause

10.1. 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.

10.2. "Restricted information" categories under Section 18 of the Atomic Energy Act, 1962 and "Official Secrets" under Section 5 of the Official Secrets Acts, 1923:-

Any contravention of the above-mentioned provision by any contractor, sub-contractor, consultant, adviser or the employees of a contractor will invite penal consequences under the aforesaid legislation.

10.3. 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 media like Press, Radio, TV or Internet without the prior written approval of BARC.

(Signed)
(Smt. Anita Behere)
Head, Electronics Division

(Stamp)
Annexure A

Specifications of required high temperature coaxial cable

- Sheath material – Inconel 600 as per ASTM B 167
- Wall thickness of sheath – 0.96 mm ± 0.05 mm
- Insulation of the cable – Magnesium oxide (purity > 99.4%) as per ASTM E 1652
- Insulation resistance @ room temperature > $10^{12} \, \Omega$ at 500 V DC
- Insulation resistance @ 400°C > $10^{11} \, \Omega$ at 100 V DC
- Central conductor wire – Bare copper (purity > 99%)
- Central conductor diameter – 1.2 mm ± 0.10 mm
- Capacitance of MI cable < 300 pF/m
- A standard BNC connector will be sealed at cold end
- Hot end of the cable will be connected to detector package using glass to metal seal as per the attached drawing
- Glass to metal seal
  - Type of glass – Soda lime
  - Material of central pin – Alloy 52 (N52)
  - Dielectric constant – 9.5
  - Outer shell material - Inconel 600 Alloy
  - Mean coefficient of thermal expansion – 14.20
  - Density = 8.47 g/cm³
  - Insulation resistance at 500 V DC > 10 TΩ
Annexure B

Schematic of the required cable assembly

Drawing of glass to metal seal