



**GOVERNMENT OF INDIA
BHABHA ATOMIC RESEARCH
CENTRE
REACTOR ENGINEERING DIVISION**

Ref: RED/RCCS/RSS/4219/2CS /MF/223072/2017

Date: 18 /12 /2017

Dear Sir(s),

Sub: Fabrication of high temperature level measurement probe and high temperature triaxial cable as per schematic in Annexure-1.

Sealed quotations are invited by Head, RCCS, and RED, on behalf of the President of India for the Fabrication of high temperature level measurement probe and high temperature tri-axial cable as per schematic in Annexure-1. The bidder has quote in the format as shown in table below.

Sl. No.	Item description	Qty	Basic Price	Total Price
1	Fabrication of high temperature level measurement probe.	2Sets.		
2	High temperature tri-axial cable as per schematic in Annexure-1.	100 m		

High Temperature Winding wire material will be issued by the purchaser for the purpose of winding wire over the former of the probe. The materials will be issued to the bidder against RCIV from the Reactor Engineering Division. After the execution of the work RV will be raised to regularize the receipt of the stores issued for the work. It may be noted that insurance is required for the winding wire (issued by purchaser).The quantity of free issue material is given in the table below.

Sl. No.	Description of winding wire.	Quantity	Cost of material (Rs)
1	22 SWG wire	640 m	1,57,440/-
2	28 SWG wire	150 m	22,800/-

The bidder has to obtain insurance for the F.I.M. before it is issued by the purchaser. The insurance should cover for fire, theft, natural calamities.

General Notes:

- 1) The work shall be subject to inspection by the purchaser or his authorised representative at the supplier's premises. Work shall be conducted under their periodical supervision and to the full extent of satisfaction.
- 2) The quotations must reach by speed post to Head, RCCS, RED, Engg. Hall-7 latest by 07/02/2018
Quotations will be opened on 08/02/2018 at 2 P.M.
- 3) Supplied material should be free of any manufacturing defects and should be covered under warranty (inclusive of workmanship) for a period not less than 1 year from the date completion of work. The warranty certificate stating the same should be furnished along with Invoice at the time of completion of work.
- 4) The above mentioned **REFERENCE NO.** And **DATE AND TIME OF OPENING OF BIDS MUST BE CLEARLY MENTIONED ON THE SEALED ENVELOPE** containing the quotation.
- 5) Payment will be made as per rules, after the completion of the work to purchaser's satisfaction against submission of original bill in triplicate and advance stamped receipt.
- 6) Income tax @2% and Educational cess if applicable will be deducted from the bill.
- 7) Bidder shall mention their PAN and GSTIN No. in the quotation.
- 8) High Temperature Winding wire material will be issued by the purchaser for the purpose of winding wire over the former of the probe. The materials will be issued to the bidder against RCIV and Returnable Gate pass from the Reactor Engineering Division. After the execution of the work RV will be raised to regularize the receipt of the stores issued for the work. The returnable gate pass has to be regularised at North gate while delivering the finished product. It may be noted that insurance is required for the winding wire (issued by purchaser). The party should depute authorised personnel with authority letter to collect the free issue material from the REZ stores, BARC.
- 9) The offer shall be kept open for acceptance for a minimum period of 45 days from the date of opening of the quotation.
- 10) Head RCCS, RED reserve the right to accept/reject any or all the quotations received without assigning any reason whatsoever.
- 11) The bidder shall furnish the detailed information regarding whether an ex-employee of BARC is working in their organisation or whether any of their relative is working in DAE/BARC or whether he/she is an ex-employee of DAE/BARC. In case of absence of such information, or wrong information the quotation or contract is likely to be rejected or cancelled.

CONFIDENTIALITY CLAUSES:

I. 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-bidders, consultants, advisers or the employees engaged by the party with equal force.

II. "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 bidder, sub-bidder, consultant, adviser or the employees of a bidder will invite penal consequences under the aforesaid legislation.

III. Prohibition against use of BARC's name without permission for publicity purposes:-

The bidder or sub-bidder, consultant, adviser or the employees engaged by the bidder shall not use BARC's name for any publicity purpose through any public media like Press, Radio, T.V. or Internet without the prior written approval of BARC.

Thanking you,

Yours Sincerely,



(K. Madusoodanan)

Head, RCCS

For and on behalf of the President of India
(The Purchaser)

Enclosure: Annexure I.

Annexure-I

Technical specifications for Fabrication of high temperature level measurement probe and high temperature tri-axial cable.

1.0 General: The pulsed eddy current based level measurement probe is meant for non intrusive measurement of molten metal through container vessel casing. The excitation coil as well as the pickup coil has to be fabricated in rectangular coil shapes with help of suitable ceramic (Alumina Silicate Refractory-50% Alumina) formers. The pickup coil is assembled inside the excitation coil. The high temperature winding wires will be issued as free issue material. High temperature triaxial cable is also required to be suitable fabricated for High temperature capacitance based displacement measurement.

2.0 Scope of supply:

Sl. No.	Description	Quantity
1.	High temperature level measurement probe. (consisting of transmitter coil and receiver coil as per Para 3.1)	2 Sets.
2.	High temperature Triaxial wire (as per Para 3.2)	100 m

3.0 Detailed Technical specifications

3.1 High temperature level measurement probe.

The probe consists of transmitter coil and receiver coil. The transmitter coil details are shown in Figure. 1. The receiver coil details are shown in Figure.2. The dimensions of transmitter coil and receiver coil can be altered to suit to the dimensions of the finished formers made of Alumina Silicate Refractory-50% Alumina. The transmitter former details are shown in figure 3. The receiver former details are shown in figure 4.

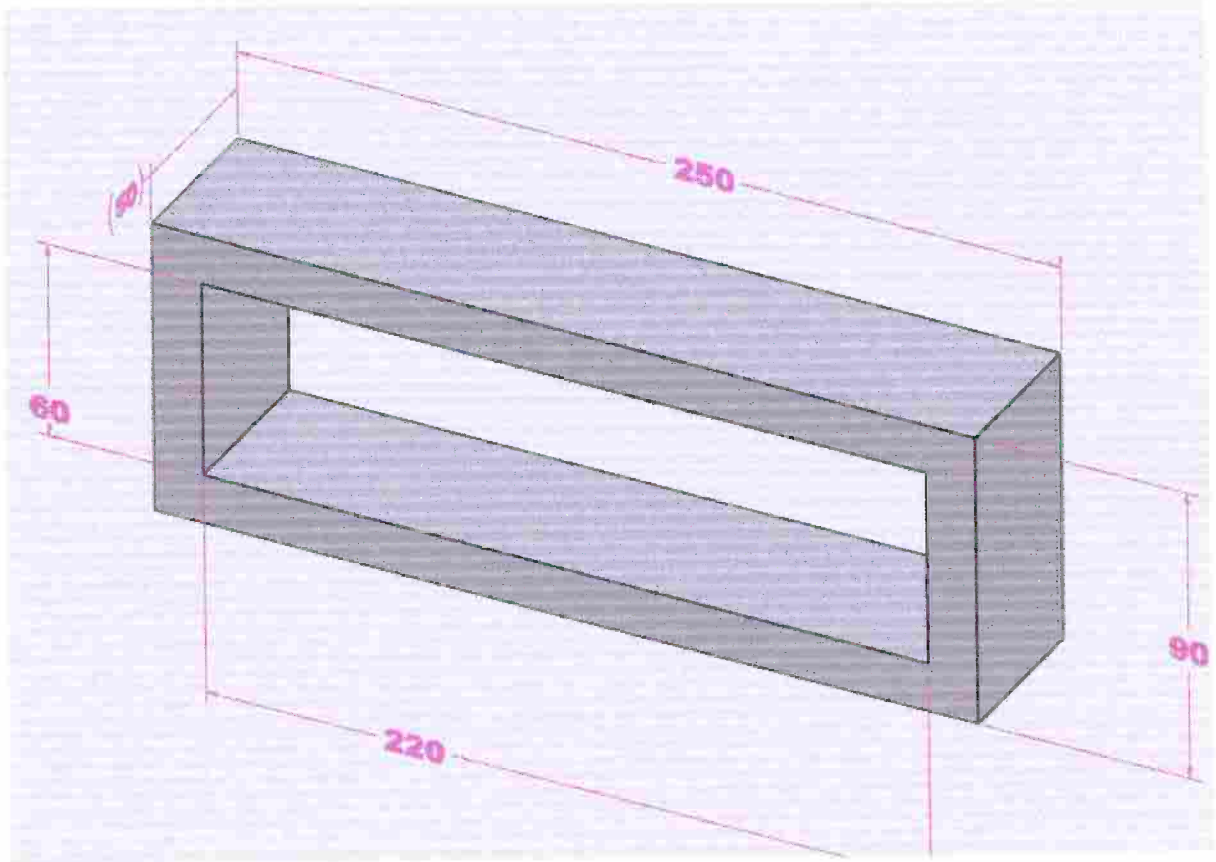


Figure.1 Transmitter Coil Dimensions

Dimensions shown are in mm.

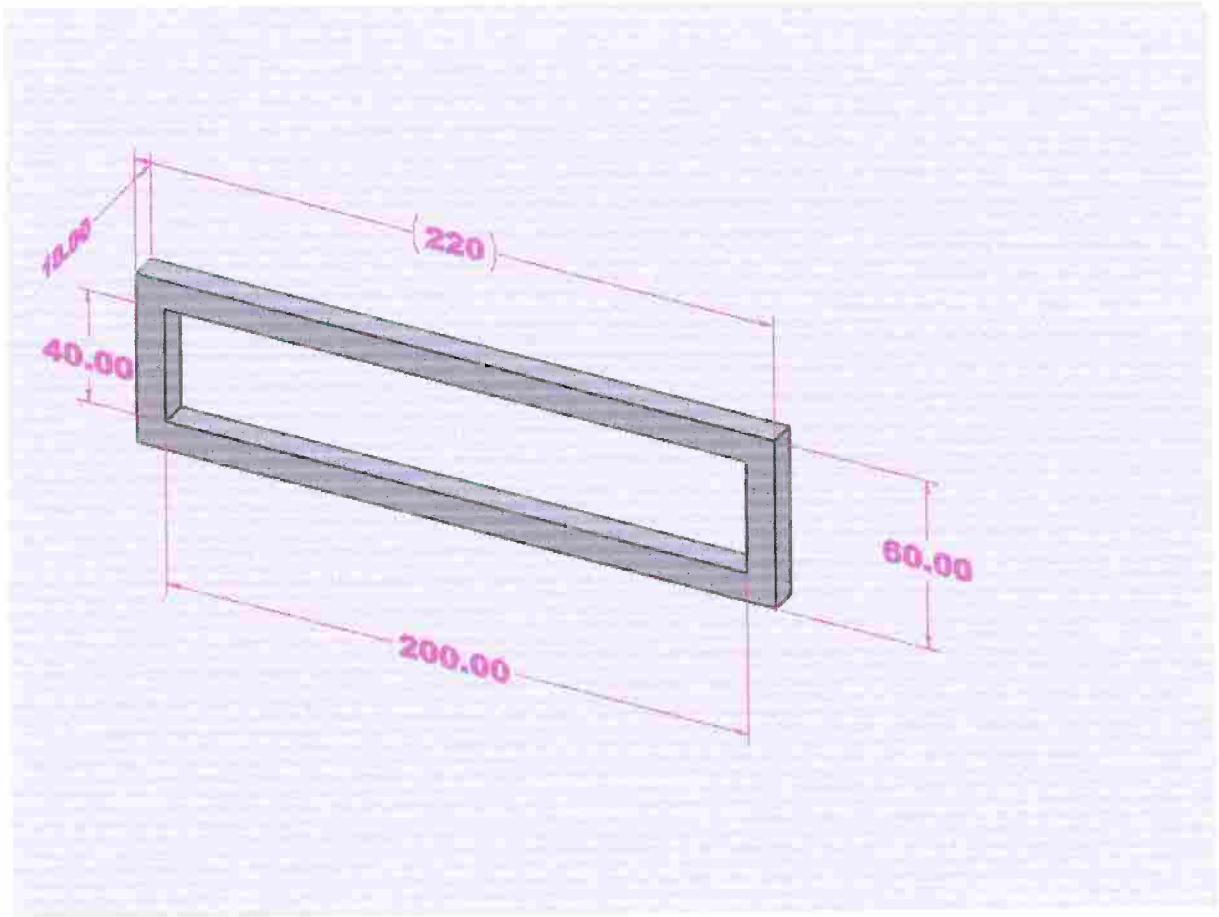


Figure.2 Receiver coil Dimensions

Dimensions shown are in mm.

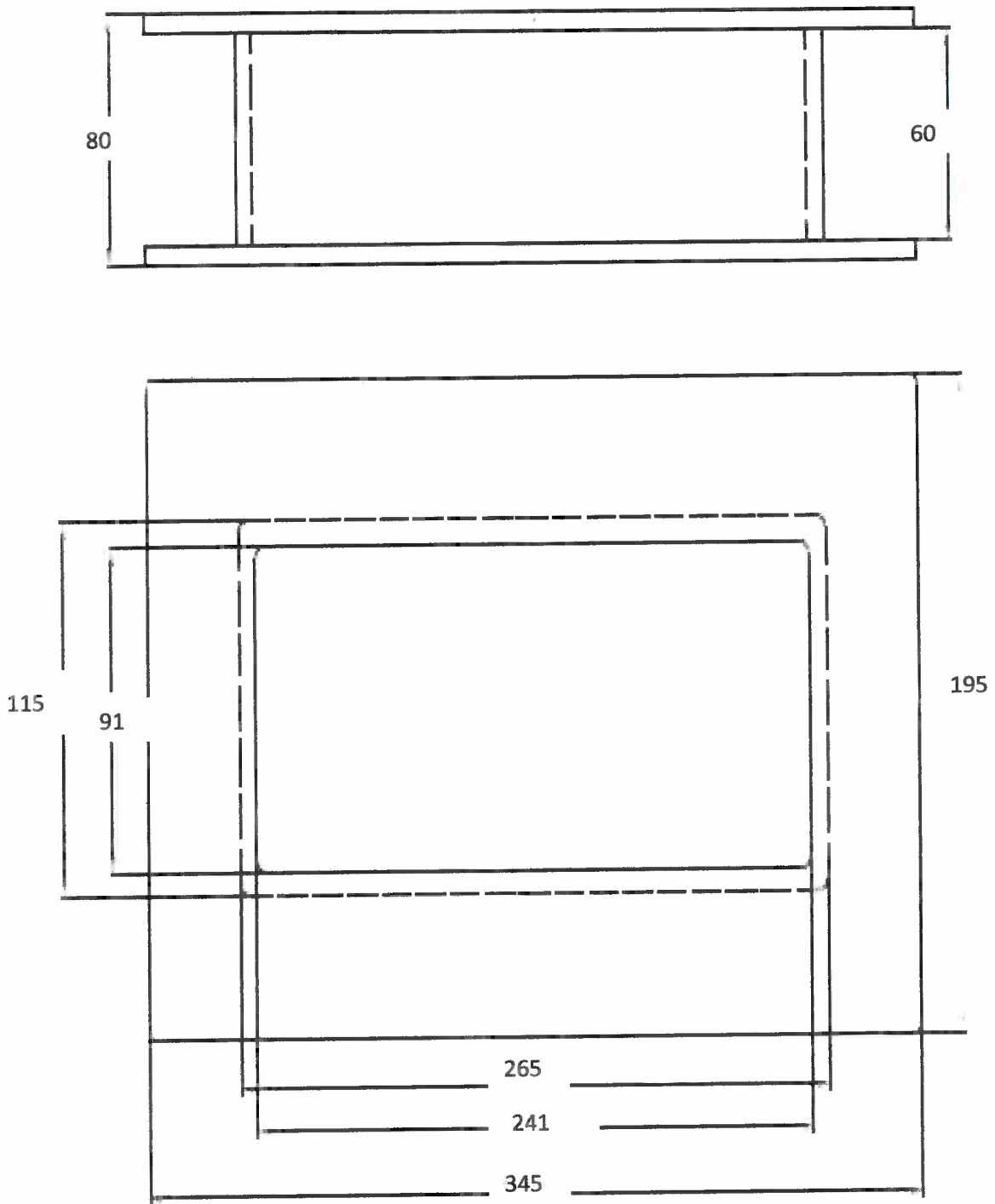


Figure 3: Former of transmitter coil.

Material: Alumina Silicate Refractory-50% Alumina

Dimensions shown are in mm.

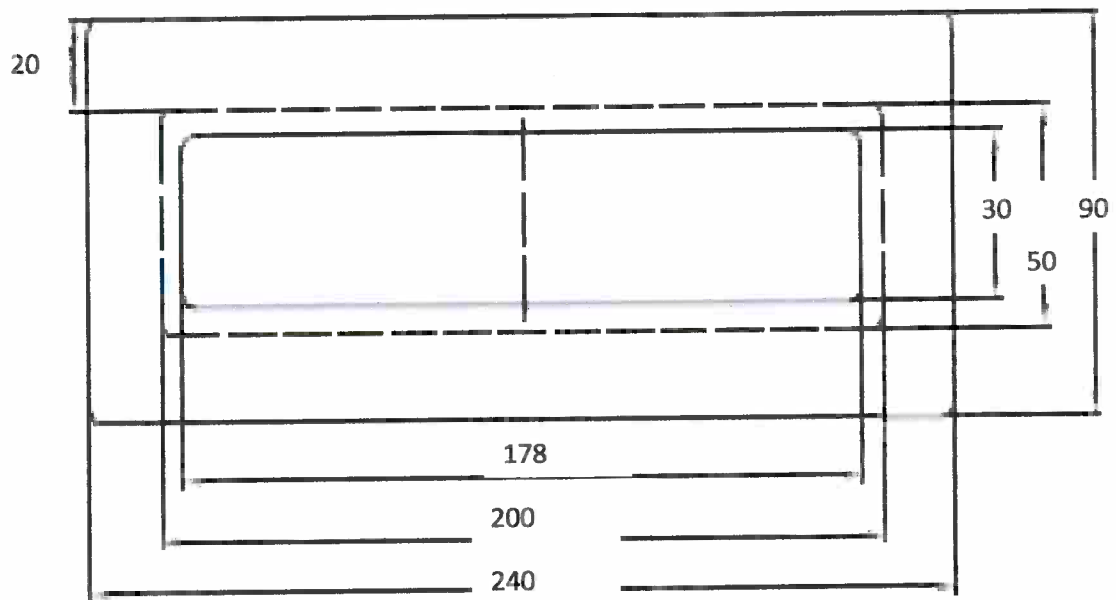


Figure 4: Former of receiver coil.

Material: Alumina Silicate Refractory-50% Alumina

Dimensions shown are in mm.

3.2 High temperature Triaxial wire

The construction details of the high temperature triaxial cable are shown in the table below.

3.2.1	Tri-axial cable	<p>a) Single core soft annealed high conductivity nickel plated copper Conductor of approximately 0.008Sq mm flexible as central conductor.</p> <p>b) High temperature synthetic ceramic fibre yarn standing up to 700 degree.C</p> <p>c) The inner braid and the outer braid should have sufficient number of weaving strands such that electric flux leakage is as minimum as possible.</p> <p>Cross section dimensions of Tri-axial cable as per sketch in Figure.5.</p>
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Construction details of the triaxial cable.

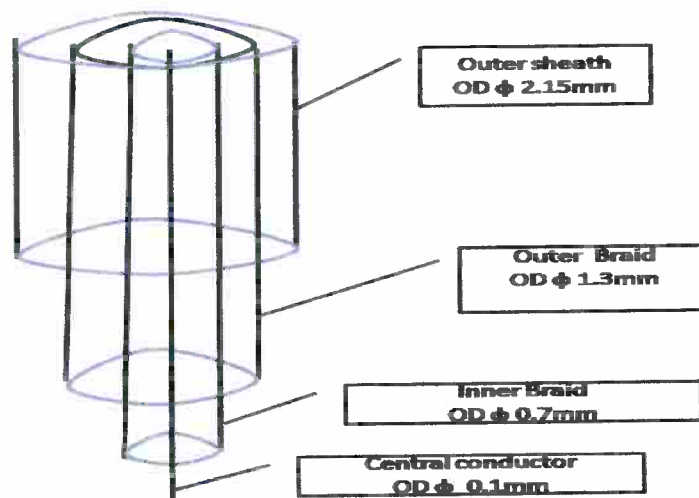


Figure 5. Cross section dimensions of Tri-axial cable.