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MUMBAI - 400085

GOVERNMENT OF INDIA
BHABHA ATOMIC RESEARCH CENTRE
REACTOR DESIGN & DEVELOPMENT GROUP (RD&DG)
DIVISION OF REMOTE HANDLING & ROBOTICS (DRHR)

Ref: DRHR/SB/MF/ENQ/2019/254

01/10/2019

Sub: Minor Fabrication - Invitation of Quotation for

“Manufacture and supply of Sintered Alumina Pellets” as per enclosed technical specification (Annexure-II).

1. Quotations are invited for Manufacture and supply of Sintered Alumina Pellets as per enclosed technical specification & Annexure-I.
2. The quotation includes procurement of standard components, fabrication of parts and delivery of the system to DRHR, BARC, Trombay, Mumbai.
3. Taxes, other charges, if any, shall be quoted separately.
4. **No Free issue material will be supplied by BARC.**
5. The quotation must reach Head, DRHR, BARC by **October 22, 2019** and must be sent in a sealed envelope superscribed with the **Reference number & the due date given above.**
6. Quotation should be sent by **speed post only**. Hand delivery or deliver by private courier will not be accepted.
7. The address on the envelope should read:

**Head, DRHR
BARC, Trombay, Mumbai - 400 085.
(Attn.: B Sony, SO/H, DRHR)**

8. Finished products shall be subjected to inspection by our engineer. The finished unit shall not be dispatched prior to approval by our engineer at bidder's premises. The unit shall be delivered by the bidder at **DRHR, BARC, Trombay, Mumbai, 400085.**
9. Head, DRHR, BARC reserves the right to accept / reject any or all quotations without assigning any reason.
10. Incomplete offer / offer received after the due date shall not be considered.
11. Quotations should be preferably neatly typed and any corrections in the offer are not acceptable.
12. Quotation must indicate the **delivery period** and the **validity of offer.**
13. Quotation received in computer-generated form shall not be acceptable.
14. Quotation must be submitted in printed letterhead, mentioning clearly GST registration No., PAN. Submission of challan and Invoice shall also comply the same, in case, work order is placed.

Encl.:

Annexure-I,
Annexure-II

Head, DRHR

Annexure-I

(A) Scope of work:

- Manufacture and supply of Sintered Alumina Pellet as per enclosed technical specification (Annexure-II).
- Material required for manufacturing and procedure qualification shall be arranged by supplier.

Minor fabrication: Job description	Quantity	Reference document
Manufacture and supply of "Sintered Alumina Pellet"	One Set	Annexure-II

(B) Delivery and Guarantee

1. **Consignee:** DRHR, BARC, Trombay, Mumbai-85.
2. **Delivery Period: 2 months** from date of issue of work order.
3. **Guarantee:** The items under the work order shall be guaranteed for a satisfactory performance against manufacturing defects and faulty workmanship, for a period of 12 months from the date of final acceptance.
4. All work shall be done with good workmanship. Our supervisor will supervise the quality of work.

I General Specifications

1. *Quality surveillance, inspection*

- 1.1. All work covered shall be subject to quality surveillance / inspection by the purchaser or his authorized representative.
- 1.2. No Insurance policy is required for the material as the job is to be done by supplier's material.

2. *Delivery*

- 2.1. The bidder shall finish the work after due approval by our engineer and supply the item to consignee within the above-mentioned delivery period.
- 2.2. Any delay which is attributable to the supplier is liable for penalty @ 0.5% per week (max5%) to be imposed on supplier.
- 2.3. In case any extension in delivery is to be granted to the supplier. The supplier should request for the extension before expiry of the work order. The same may be justified by the Division, whether extension granted is with or without levy of liquidated damages.

Head, DRHR

3. **Sub-Contract**

3.1. The fabricator shall not sub-contract any or all the work without written consent from the purchaser. The fabricator shall be responsible to the purchaser for all work carried out the sub-contractor, of the fabricator, if allowed by the purchaser.

4. **Payment**

4.1. Payment will be made only after satisfactory completion of work and against submission of original bill and advance stamped receipt.

5. **GST Exemption**

5.1. The job is for R&D activity and hence, concessional rate of GST is applicable against the GST exemption certificate. *The GST exemption certificate will be issued by BARC.*

5.2. Supplier shall give the undertaking that the GST has been promptly deposited with the Authorities (as per enclosed format).

6. **Tax**

6.1. Income Tax of 2% on the bill amount and surcharge on IT as applicable and education Cess @ 4% (on IT& SC) shall be deducted in payment.

7. **Confidentiality**

7.1. 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 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.

7.2. This clause shall apply to sub-contractors, consultants, advisors or the employees engaged by a party with equal force.

7.3. **"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, advisor or the employees of the contractor will invite penal consequences under the aforesaid legislation.

7.4. **Publication against use of BARC's name without permission for publicity purpose:-**

The contractor or sub-contractor, consultant, advisor or the employees engaged by the contractor 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.

Head, DRHR

Annexure-II

Technical Specification for Sintered Alumina Pellets

General Specification:

1. Colour of pellet: Dark grey
2. Surface finish: Matt
3. Pellets should be medium hard. They should generate powder if rubbed strongly.
4. Mass variation of pellets: 1.2 gram to 2.0 gram

Quantity: One Set

1. Solid Pellet:

Length variation = 7 mm to 8 mm

Diameter variation = 5.4 mm to 5.6 mm

Quantity = 400 nos

2. Annular Pellet: (It has a concentric hole at the centre)

Length variation = 7 mm to 8 mm

Inside diameter variation = 1.6 mm to 2.0 mm

a. Outside diameter variation = 5.5 mm to 5.6 mm; Quantity = 500 nos

b. Outside diameter variation = 5.2 mm to 5.49 mm; Quantity = 100 nos

c. Outside diameter variation = 5.61 mm to 5.8 mm; Quantity = 100 nos

3. Pellets with surface defects:

Surface defects are required to be developed on both solid pellets and annular pellets as per enclosed SKETCH-1 & SKETCH-2. Different type of surface defects to be developed are;

- a. Scratch mark along length
- b. Scratch mark along circumference
- c. Crater formation on end faces
- d. Crater formation on cylindrical face

4. Spacer Pellet

Length variation = 3 mm to 4 mm

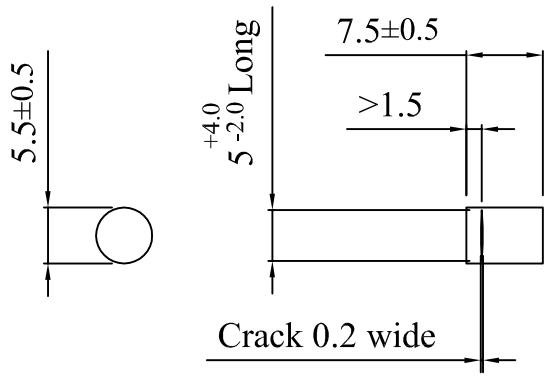
Diameter variation = 5.5 mm to 5.6 mm

Quantity: 100 nos

Acceptance Criteria:

Random sample inspection of 10 pellets from each category shall be carried out by purchaser for acceptance of each lot. Pellet length, diameter and surface defects will be inspected.

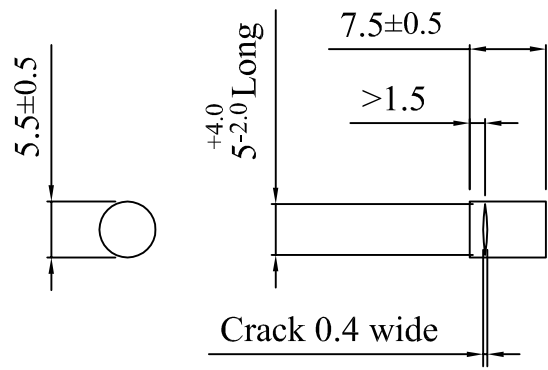
Encl: Sketch-1 & 2



Circumferential Crack - 1
(Narrow Crack)

Qty: 50 nos Solid Pellets

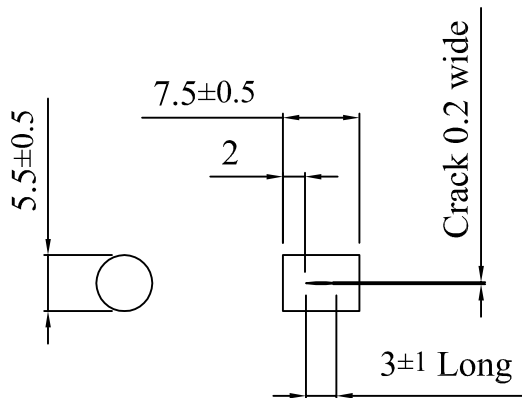
Qty: 50 nos Annular Pellets



Circumferential Crack - 2
(Wide crack)

Qty: 50 nos Solid Pellets

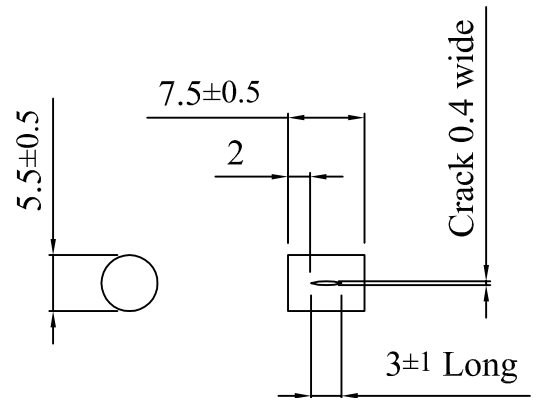
Qty: 50 nos Annular Pellets



Axial Crack - 1
(Narrow Crack)

Qty: 50 nos Solid Pellets

Qty: 50 nos Annular Pellets



Axial Crack - 2
(Wide Crack)

Qty: 50 nos Solid Pellets

Qty: 50 nos Annular Pellets

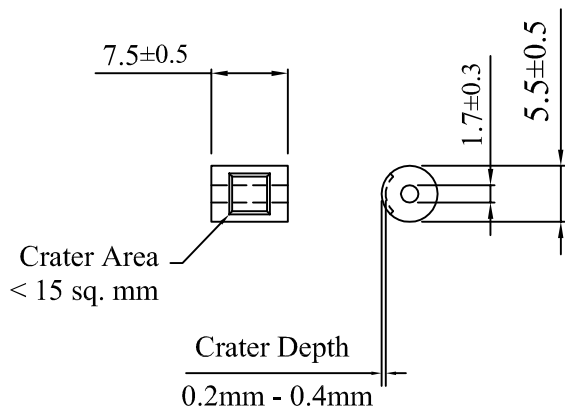
SINTERED PELLETS WITH CRACK DEFECT

Matl: Alumina Powder

Colour: Dark Grey / Brown (After Sintering)

NOTE: Defects are required on both Solid and Annular Pellets

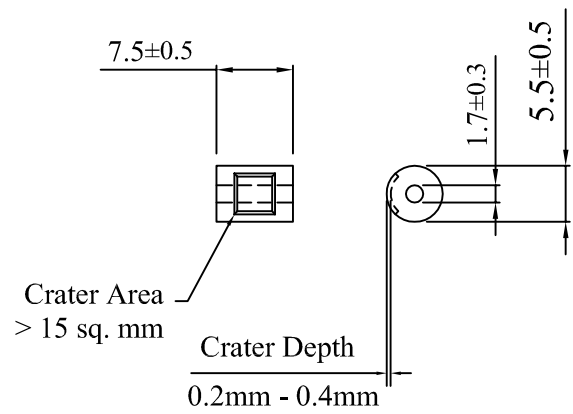
SKETCH-1



Circumferential Crater - 1
(Small Crater)

Qty: 50 nos Solid Pellets

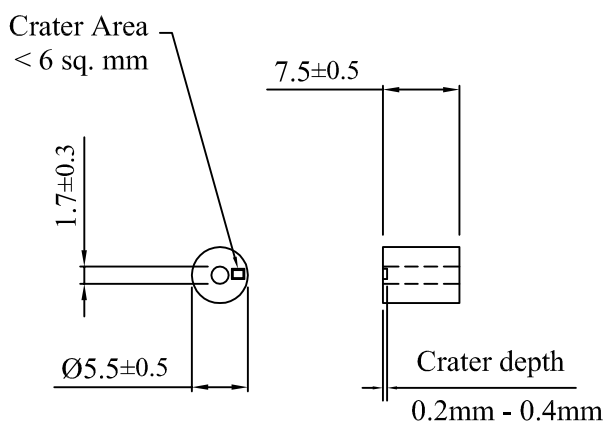
Qty: 50 nos Annular Pellets



Circumferential Crater - 2
(Large Crater)

Qty: 50 nos Solid Pellets

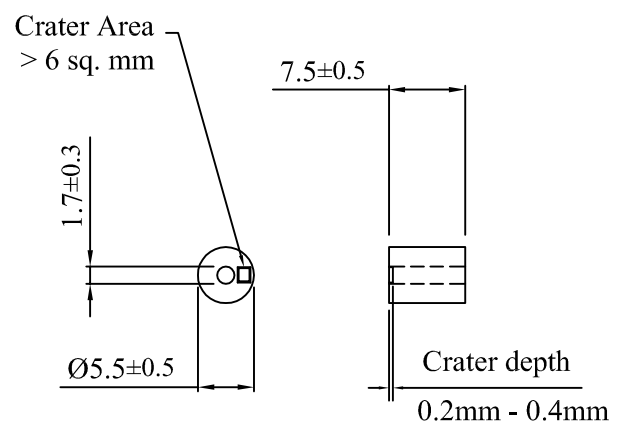
Qty: 50 nos Annular Pellets



Axial Crater - 1
(Small Crater)

Qty: 50 nos Solid Pellets

Qty: 50 nos Annular Pellets



Axial Crater - 2
(Large Crater)

Qty: 50 nos Solid Pellets

Qty: 50 nos Annular Pellets

SINTERED PELLETS WITH CRATER DEFECT

Mat: Alumina Powder

Colour: Dark Grey / Brown (After Sintering)

SKETCH-2

NOTE: Defects are required on both Solid and Annular Pellets