	PRE-QUALIFICATION REQUIREMENTS (PQR) MICA SPLITTING TAPE HW25287	Date: 08-08-2015	
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1. PRODUCT DETAILS :

- 1.1 The resin poor mica splitting tape is used as main insulation for vacuum impregnated bars of large sized (500 MW & above) turbogenerators. **Annual consumption of this material is approximately 2000000 Meter.**
- 1.2 This tape consists of mica splittings (clear Muscovite mica splitting free from iron or iron oxide, having thickness 0.020 to 0.025 mm), bonding agent (Epoxy resin type Bisphenol A), polyester fleece (with a limiting temperature of $\geq 130^{\circ}\text{C}$) on each of the tape as carrier and covering layer and also the accelerator (Zinc Naphthenate) required for curing with the impregnating resin.
- 1.3 Tape should not be stiff and should not contain any foreign, especially conducting particles. Mica splitting and polyester fleece should be glued to each other firmly (without any creases) and must not loosen / flake off during winding / unwinding during manual or machine taping. The tapes are to be coloured red with colouring agent like Sudan Red which does not affect the impregnating resin.


1.4 DIMENSIONS AND SALENT PROPERTIES :

a) Nominal thickness	0.18 mm
Tolerance on thickness	± 0.08 (individual value) ± 0.02 (average value)
b) Width*	i) 40 ± 1 mm, ii) 35 ± 1 mm
c) Weight per unit length	i) $11.7 \pm 14\%$ gm/m, ii) $10.2 \pm 14\%$ gm/m
d) Tensile strength	1.3 N/mm ² minimum
e) Composition	
i) Mica	230 ± 30 gm/ m ²
ii) Fleece (2x)	20 ± 3 gm/ m ²
iii) Bond	20 ± 5 gm/ m ²
iv) Accelerator	2 ± 0.5 gm/ m ²
f) Shelf Life	24 months when material is stored $\leq 12^{\circ}\text{C}$

* Other widths also possible as per requirement

- 1.5 The vendor should furnish copies of Test Certificates of previously supplied material

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2. EXPERIENCE :

The vendor should have manufactured and supplied resin poor mica splitting tapes used as main wall insulation for vacuum impregnated bars of large size (200MW & above) high voltage turbogenerators to reputed power equipment manufacturers (e.g. Siemens, GE, Alstom, Hitachi, Mitsubishi etc) world-wide for at least last 3 years.

2.1 Vendor should have supplied more than 500000 Meter of this type of tape during the last 3 years. Data regarding output/year with customer-wise break-up to be provided.

2.2 Vendor to provide operational feedback of the supplied material and documentary evidence for the same like Acceptance Certificate or letter from Customer

3. MANUFACTURING AND TESTING FACILITIES :

3.1 The vendor should have adequate facilities for manufacturing & in-process and final testing of mica based tapes used for insulation of high voltage rotating machines. Vendor to finish details (including make, model and year of manufacture) and technical specifications of the manufacturing & testing facilities available with them along with photographs.

3.2 Vendor to provide detailed Manufacturing & Inspection Plan.

3.3 The vendor shall source raw material like Mica Splittings, Epoxy Resins, Polyester Fleece, Zinc Naphthenate Accelerator etc. from reputed suppliers and shall furnish details of the same to BHEL along with the Test Certificates

4. GENERAL CONDITIONS :

4.1 Vendor to submit 3 Rolls of Tape of 100/150 meters (free of cost) to BHEL Haridwar for technical evaluation and clearance.

4.2 Un-registered vendors shall submit duly filled-in Supplier Registration Form (SRF) to get themselves registered, as per registration procedure (Can be referred at www.bhelhwr.co.in).

4.3 BHEL reserves the right to verify the information submitted by the vendor. In case the information is found to be false or incorrect, the offer shall be rejected. The vendor shall not be considered further

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