Raman Boards insulation product portfolio
A single source for a wide range of transformer insulation
ABB’s Raman Boards production unit is a market leader for transformer insulation in India. It offers wide range of high quality transformer insulation products to power and distribution transformer segments.
Raman Boards was acquired by ABB India Limited in 2007 to strengthen its global insulation capacity in order to meet the growing energy demand.
**ABB’s Raman Boards production unit**

A leading manufacturer of world-class insulation products

The Indian subcontinent has witnessed an unprecedented level of economic expansion in recent years. As one of the world’s leading engineering companies ABB has been steadily expanding its footprint to support this growth. 2007 ABB India Limited acquired Raman Boards, a market leader for transformer insulation in India, to strengthen its global insulation portfolio and capacity. ABB’s Raman Boards manufacturing facility has independently developed and introduced a wide range of high-quality transformer insulation products to power and distribution transformer segments.

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**Our background**

Raman Boards insulation manufacturing unit commenced its operation in 1980 with technical knowledge from Rogers Corporation. It has independently developed and introduced a wide range of high-quality transformer insulation products to power and distribution transformer segments. It is located in Mysore, in the state of Karnataka, India.

**Our offering**

ABB’s Raman Boards insulation offering cover the needs of virtually every transformer manufacturer in India and many leading transformer companies in Middle East, South East Asia and parts of China leveraging unique quality-cost position and on the strength of a wide product offering unmatched in the insulation industry. The unit also caters to medium and small enterprises with its strong distribution network.

**Quality**

We continuously invest in state-of-the-art manufacturing facilities in all its product lines with high standards defined and adhered at every step in the process. The product-testing laboratory has facilities to test products as per national and international standards.
A LEADING MANUFACTURER OF WORLD-CLASS INSULATION PRODUCTS

Pic1: Product quality testing laboratory | Pic2: Eco-friendly green campus | Pic3: High density pressboard manufacturing plant
ABB is also very proud to have qualified and committed employees with broad experience gained by continuous interactions with customers. People are our main source of our strength and success.


The principal requirement of insulation material is a combination of good mechanical and dielectric properties to withstand repeated short circuit (radial and axial) forces. The quality and reliability of the insulation used, results in extending life expectancy of transformer, savings in material costs and reducing losses.
ABB’s Raman Boards production unit
A wide range of products to meet every insulation application

Being an integral part of the transformer industry for more than 30 years ABB’s insulation manufacturing unit has developed capability to offer wide variety of insulation products as per customer requirement. The wide range of insulation products manufactured includes Precompressed and laminated pressboards, Moulded components, Machined components, Kraft paper, Pressphan paper, Crepe paper, Crepe tubes, Diamond dotted paper and calendered crepe paper.

Precompressed Raman Sigmacom 3.1
The Raman Sigmacom 3.1 is a precompressed pressboard used primarily in power transformers across the industry. The Raman Sigmacom 3.1 is a high density, excellent tensile strength and dielectric strength with uniform compressibility is ideal for usage in higher rating transformers. The Raman Sigmacom 3.1 conforms to IEC 60641/3-1 B 3.1 A specification.

Laminated Raman Sigmacom 3.1
The precompressed pressboards thickness above 6mm are produced by laminating Raman Sigmacom 3.1 with casein adhesive. The laminated boards meet to IEC 60763/3-1, LB 3.1A.1 specification. The laminated boards have very high flexural strength with good oil absorption and dielectric strength.
Raman moulded components
Moulded components from ABB’s Raman Boards manufacturing unit are being used in transformer industry for more than 20 years meeting to all the intricate designs and requirements of transformer designers. We supply a wide range of customized insulation components in the form of Angle Rings, Cap Rings, Snouts, Disc Angle Rings & Disc Angle Caps are used as insulation for transformer windings, tubular assemblies for high-voltage winding exits, covering caps for protruding metal parts in the higher rating transformers.

Raman machined components
The machined components are manufactured from Raman Sigmacom 3.1 & and laminated pre-compressed pressboards, includes strips of rect-
angular, trapezoidal and T-shapes, punched and milled spacers free of burrs & sharp edges, cylinders, washers and phase barriers. Raman machined components have accurate dimensions and tolerances as per customer drawings.

**Raman corrugated boards**

Raman corrugated board is manufactured in sine wave form in varied pitch and height and meets the requirements of IEC 61628 specifications. The Raman corrugated pressboard is manufactured from precompressed pressboards of thickness 1.0, 1.50 & 2.0mm. The corrugated boards are used as separation between high voltage and low voltage windings and as cooling channels or ducts. Raman Boards offering includes corrugated boards cut to size as per customer requirement.
ABB’s Raman Boards production unit
A wide range of products to meet every insulation application

Raman Sigma kraft paper
One of the prime insulating materials used for covering conductors used in transformers. The kraft paper with high purity, mechanical and dielectric strength properties is most appropriate for Double Paper Covering (DPC) application and also as layer insulation in transformer designs. The Raman Sigma kraft paper conforms to IEC 605544-3-5 specification and is supplied in thickness 2.0, 3.0, 4.0 & 5.0 mil up to width of 1500m in rolls and in pad forms.

Raman Sigma press paper
The Raman Sigma press paper is characterized by natural brown color, high purity, medium density and very high oil absorption enabling its usage as inter layer insulation in transformers, motors and capacitors applications. The Raman press paper is offered from 3 to 20 mil thickness and width up to 1500mm. The standard width of rolls is 500, 750 and 1500mm and standard roll diameter of 350mm.
A WIDE RANGE OF PRODUCTS TO MEET EVERY INSULATION APPLICATION

**Raman Sigma diamond dotted paper**
Manufactured from insulation press paper and partially coated with epoxy resin on one or both sides and dried. The epoxy resin is maintained in reactive B-stage, dry and tack free, will melt and cure at high temperature, this facilitates firm and permanent bonding with the conductor. The non-reactive irreversible thermo set C stage is reached and the insulation is then in the stable duro plastic condition, unaffected by further heating which will occur during service. The advantage in use of partially coated insulation press paper lies in the internal strengthening of the coil due to adhesion to conductor provides passage for quick evacuation of air and moisture during drying process thereby minimizing risks of partial discharge, quick impregnation and flow of oil through the channels. The bonding strength of the epoxy resin is sufficient to prevent displacement of winding layers due to short circuit forces.

**Raman Sigma crepe paper – calendared and uncalendared**
The insulation manufacturing unit has developed expertise to manufacture Raman Sigma crepe paper in calendared and uncalendared, in coarse and fine crepe varieties, in different elongation from 30 to 150 percent from 2, 3 and 5mil kraft paper conforming to IEC 60554-3-5 specification. Raman Sigma crepe paper conforms to IEC 60554-3-3 specification and other type tests in all respects. The crepe paper is available in the form of rolls, pads and flexible tubes. Crepe paper is used as insulation in distribution, power and instrument transformers. ABB’s Raman Boards unit has set up slitting facility to offer Raman Sigma crepe pads as per customer requirements. The pads are supplied in widths from 15 to 50 mm. Crepe paper is available in flexible tube form in a number of different internal diameters wall thicknesses and tube length up to 2000mm as per customer requirement.
ABB’s Raman Boards production unit
A wide range of products to meet every insulation application

- Angle and Cap Rings
- Crepe Paper & Pads
- Crepe Paper Pads
- Laminated Pressboards
- Foot Insulation
- Diamond Dotted Paper
A WIDE RANGE OF PRODUCTS TO MEET EVERY INSULATION APPLICATION

- Crepe Paper Tubes
- Kraft Paper
- Rectangular Strips
- Snouts
- Snouts
- Insulation Cups
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