Modern
INSULATORS LTD.
AN ISO 9001 & 14001 UNIT

Registered Office & Works : Talheti, Village : Karoli,
Tehsil : Abu Road, Dist. : Sirohi - 307510 (Rajasthan) India
Phone: 02974-228044 to 228047, Fax : 02974-228043
www.moderninsulators.com CIN- L31300RJ1982PLC002460
Email : milabu@moderninsulators.com

MODERN INSULATORS LIMITED

Comprehensive insulators range for all applications

Who are we?

Modern Insulators Limited (MIL) plant was setup in 1985 at Abu Road, Rajasthan, India in technical collaboration with Siemens AG, Germany for manufacturing porcelain insulators for high voltage power transmission and distribution applications, from 11kV to 1200 KV. MIL is a pioneer in manufacturing porcelain insulators for more than 3 decades with experience of supplying Porcelain Long Rod Insulator (PLRI) for transmission lines, hollow and solid core post insulators for power substations and electrification & traction insulators for railway applications. As a backward integration, MIL has also setup Aluminum and Ductile Iron foundries.

Currently MIL has an annual capacity to manufacture 26,000 MT of insulators of various types and ratings. MIL supplies to all OEMs including MNCs such as Siemens, GE, Hitachi-ABB, as well as EPC contractors in both India and abroad. MIL is approved in all utilities in India and by all consultants. We are the major supplier of Insulators for Indian Railways. MIL is an ISO- 9001: 2015 & ISO – 14001:2015 certified company. MIL's annual sales turnover during the financial year 2019-20 is around USD 53million (INR 3820 million) of which the export turnover is approximately 30%. MIL exports to more than 50 different countries worldwide like United States, Canada, Mexico, Brazil, United Kingdom, Germany, France, Switzerland, Italy, Spain, Russia, South Africa, Egypt, Australia, South Korea, etc. MIL has been conferred the top export award as well as the special export award multiple times by the Government of India.

Product Range

a) SOLID CORE POST INSULATORS

Solid core post Insulators are used in substations as support insulators. They are basically used in

- Isolators (Disconnectors)
- Pantographs
- Bus bar support
- Wave trap support
- Capacitor bank supports.
- Transmission & distribution as Line post insulators (Horizontal & Vertical).

These insulators are designed to provide a rigid support accounting for the bending and torsional loads. Modern's Solid core insulators are not only designed to meet the essential mechanical & electrical properties but also to effectively meet the loads arising out of short circuit, seismic, wind, thermal, ice and any other dynamic loads.

- The insulators are made of high quality Aluminous porcelain meeting the requirements of C130 in accordance with the IEC: 60672.

Registered Office & Works : Talheti, Village : Karoli,
Tehsil : Abu Road, Dist. : Sirohi - 307510 (Rajasthan) India
Phone: 02974-228044 to 228047, Fax : 02974-228043
www.moderninsulators.com CIN- L31300RJ1982PLC002460
Email : milabu@moderninsulators.com

- Precision machines are used to cut and grind the end faces to achieve the required surface finish and chamfer of the ends.
- The metal flanges (hardware) are manufactured in-house eliminating the dependency on external suppliers for consistency in quality and delivery.
- Every insulator is subjected to the requisite routine & acceptance tests prior to dispatch. Visual inspection & random dimension checks are also carried out prior to dispatch.

We are the largest manufacturer of Solid Core Insulators in the country and has installed over 10 million insulators in various projects across the world ranging from 33kV to 1200kV.

b) PORCELAIN LONG ROD INSULATORS

MIL was the first company in India to introduce Porcelain Long Rod Insulator (PLRI), which is a technically superior product for all transmission line requirements. Our PLRI are performing satisfactorily in the extreme weather conditions and highly polluting environment even in the coastal and chemical zones.
MIL took the lead in developing the new age PLRI conforming to most stringent requirements of IEC standards 60507 and 60815 and even surpassing the recommendations of IEC that enables improved self–cleaning and superior pollution withstand.

Some of the salient features of PLRI are as follows -

- Absolutely puncture proof. No Puncture Insulator detection (PID) required throughout its life time. Classified as type A insulator as per IEC.
- Best-in-class pollution performance meeting the maximum salinity of 224 kg/m3 as per IEC.
- Accumulates less pollution with good self-cleaning property.
- Repeatedly tested for a short circuit level of 40kA with various string configurations.
- No ball pin shearing due to Aeolian vibrations.
- Suitable for hot line / live line maintenance work.
- No deterioration in mechanical / electrical performance even with broken sheds.

PLRI have also proven to offer superior performance compared to conventional glass disc insulators under HVDC applications in humid and polluted environments in India.

In, all we have supplied more than 500,000 PLRI units (more than 1.1million in numbers)from 33kv to 765kV in the last 10 years alone.

c) HOLLOW INSULATORS

Hollow porcelain insulators are basically used as weather shields that protect the internal components from being exposed to the vagaries of the weather. They are used in:

- Current transformers
- Voltage transformers
- Capacitive voltage transformers

Registered Office & Works : Talheti, Village : Karoli,
Tehsil : Abu Road, Dist. : Sirohi - 307510 (Rajasthan) India
Phone: 02974-228044 to 228047, Fax : 02974-228043
www.moderninsulators.com CIN- L31300RJ1982PLC002460
Email : milabu@moderninsulators.com

- Circuit breakers – SF6 & Non-SF6
- Surge (Lightning) arresters.
- Power transformer bushings
- Wall through bushings

- Hollow insulators require special expertise in the design and manufacturing as hollow designs are subjected to an internal hoop (pressure) stress in addition to the mechanical bending stress.
- These insulators are manufactured using high strength Aluminous porcelain and subjected to strict process and dimensional controls.
- The chamfer of the internal and external diameter plays a critical role in the mechanical performance of the hollow porcelain insulators.
- All the shells are subjected to ultrasonic test prior to assembly. Completely assembled products are then subjected to routine and conformance tests in line with customer requirements, IS or IEC standards.

d) RAILWAY INSULATORS

Insulators for railway traction applications are a category apart from the regular insulators as they demand extremely stringent performance and safety requirements. Modern insulators offer various categories of 25kV railway insulators addressing every need for the electrification of railway lines.

Various types of railway insulators being offered are:

- Stay arm insulators
- Bracket insulators
- 9 Ton insulators
- Sectioning insulators
- Post insulators and
- Operating rod insulators

These insulators apart from being subjected to regular tests are also subjected to tests like

- Flexural strength of test specimen.
- X-Ray Diffraction (XRD) analysis
- Scanning Electron Microscope (SEM) investigation
- Energy Dispersive X-Ray (EDX) Analysis
- Check on Modulus of Elasticity
- Power arc tests

These tests and the stringent control of manufacturing process and strict adherence to quality control has made Modern railway insulators stand apart from the competition. Modern continues to hold a reputation of being the single largest supplier of insulators for railway application in India.