

STEATITE CERAMIC SPACERS



Application



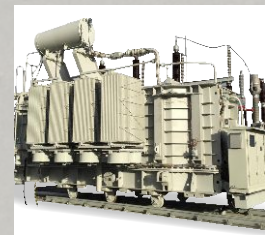
Ceramic Spacers
pasted over cake



Low Noise
Shunt Reactor Core



Column stacked



Shunt Reactor





Plant - I



Plant - II



Our Founder
Late Mr. Shyam Merani

Jyoti Ceramic Industries Pvt. Ltd. is a family owned company founded by late Mr. Shyam Merani who pioneered manufacturing of advanced industrial & bio ceramic products in India. During this journey of 5 decades, Jyoti Ceramic Industries has garnered rich manufacturing experience and today is considered to be amongst the leaders in the field of technical ceramics.

Jyoti Ceramic Industries has been producing HF-82 Steatite ceramic since its inception. But in the year 2010, looking at the demand Jyoti ventured out into production of Steatite ceramic spacers for the use of building shunt reactors.

Shunt reactors are the most compact & cost efficient means of compensating capacitive generation in long transmission high voltage power lines & extendable systems.

Why Steatite ? Steatite ceramic main features are • High resistivity • Moderate strength • Excellent electrical insulation properties • Low coefficient of thermal expansion • Good mechanical stability • Economically manufactured to close tolerances & complicated shapes.

The heart of every reactor is its core. Precisely ground ceramic spacers are the key to manufacture a high quality core.

To produce low noise & low levels of vibrations a very high quality precise core is required, for that ceramic spacer are very precisely ground to parallelism of 0.01mm. These ceramic spacers are tightly glued on top surface of case pocket with special adhesive under vacuum and then subsequently pressed tightly under pressure so as to achieve desired flatness and parallelism on top & bottom surface. Ceramic spacers are manufactured as per customer's specification.

State of the Art Manufacturing Unit



Wire EDM, Spark EDM



Production facilities



Press Shop



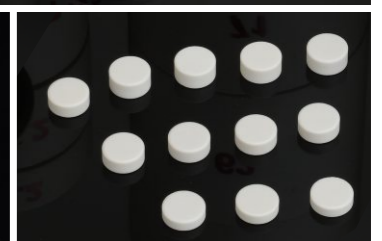
Micro processor controlled high temp. gas fired tunnel Kiln

Properties Equivalent To	Units	Steatite HF-82
Colour	--	Off White
Chemical content	--	MgO Si O ₂
Density	g/cm ³	2.65 - 2.70
Water absorption	%	0.00
Porosity	%	0.00
Flexural strength	Mpa	130
Compressive strength	Mpa	850
Vicker's hardness Hv ₃	Hv	520 - 550
Hardness on Moh's scale	--	7
Co-efficient of Thermal Expansion (25 - 1000°C)	10 ⁻⁶ K ⁻¹	8.5
Safe operating temperature (No load)	°C	1,050
Thermal Shock Resistance (Down Shock)	°C	100-150
Thermal Conductivity (25°C)	W/M ⁻¹ K ⁻¹	2.3
Max. Temperature of Operation	°C	1050
Parallelism minimum	mm	0.01

Precisely ground steatite ceramic spacer elements ensure limb rigidity for low noise.

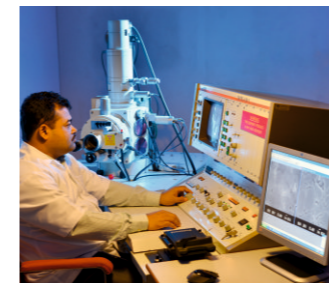


Precisely ground spacer

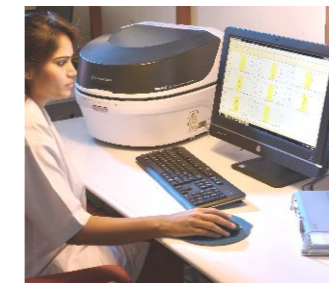


Ceramic pill carpet as core cooling insulator.

Jyoti Research & Development at Glance



Scanning Electron Microscope (S.E.M.)



Energy Dispersive X-ray Fluorescence Spectrometer (E.D.X.R.F.)



Atomic absorption spectrophotometer (A.A.S.)



Universal Testing Machine (U.T.M.)



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