SE DIVER Experts & Pioneers

ELECTRO MECHANICAL FAILING LOAD TEST

Sediver[®] High quality toughened glass insulators

sediver.com





Individual samples are put into tension while a power frequency voltage of no less than 75% of the dry power frequency flashover voltage for the given insulator type is simultaneously applied as required by the standards.

Electrical portion only applicable to porcelain due to the physical properties of toughened glass; binary in nature with no partial failure possible.

Failures noted upon mechanical and/or electrical failure of dielectric, metal components, or cement.

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Fundamental differences between dielectric materials

Porcelain units must undergo electrical testing during tensile testing to ensure the internal integrity of the dielectric.



<u>Porcelain</u>



The glass shell can only exist in either a <u>fully intact state</u>, or <u>completely shattered</u>, without the possibility of a partially punctured dielectric. This property results in an inability to hide internal punctures.

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<u>Glass</u>



Fundamental differences between dielectric materials

Porcelain dielectrics age through the propagation of microcracks these stresses are not only induced in service. Leaving them in long-term storage and the ensuing thermal stresses can lead to failure



<u>Porcelain</u>



Toughened glass insulators, as a consequence of the amorphous, non-crystalline structure of the material from which the dielectric is manufactured, do not age similarly to porcelain

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<u>Glass</u>



PROVEN RELIABILITY:

A Synthesized Analysis of High Voltage Insulators Returned from Service

4th December 2024

4PM- Time Zone: (UTC+02:00) Brussels, Copenhagen, Madrid, Paris

Online

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