

Title (en)

HIGH VOLTAGE ISOLATION DEVICE FOR TRANSFORMERS AND INDUCTANCES, ESPECIALLY DESTINATED TO HIGH VOLTAGE DIRECT CURRENT TRANSMISSION

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Application

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Abstract (en)

[origin: EP0285895A1] In electrical apparatuses of high-voltage direct current (HVDC) transmission systems, AC and DC voltage fields occur simultaneously alongside one another. In apparatuses of such systems the use of different materials as insulating materials to form insulating paths is unavoidable at some points. In consequence, heavily distorted electrical fields are produced from time to time because of the different characteristics of the dielectric constants and the specific resistances. According to the invention, to match the DC voltage field to the AC voltage field, solid material barriers (12 to 17) of pressboard are constructed, having an electrical conductivity increased in a graduated manner with respect to conventional pressboard, the specific resistance of the pressboard having the highest electrical conductivity being only approximately 2 to 10 times greater than that of the transformer oil, and the pressboard barriers (12, 13) having the highest electrical conductivity in each case being arranged at the end of the insulating path at which the field lines have the smaller radii of curvature. The high-voltage insulation arrangement according to the invention is advantageously suitable for the insulation of the inner end of high-voltage ducts and for the insulation of the high-voltage winding of transformers and inductances for HVDC transmission. <IMAGE>

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Cited by

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