



## POLYURETHANE FOAM DILATATION LAYER product information

### INTENDED USE

The polyurethane foam dilatation layer (DL) developed and produced by KBR Magneto is designated for magnetic cores of medium voltage (MV) transformers. The dilatation layer is always used to compensate mechanical stresses induced by the outside epoxy resin (ER) coat during hardening.



Examples of Magneto's DL placed on typical transformer cores

### PRINCIPLE OF OPERATION

In MV transducers the ER coat creates an electrical isolation barrier and mechanical construction element. Dilatation layer to present is manufactured in the way of:

- wrapping with tape,
- gluing rubber pieces,
- a monolith outer rubber form.

The technological processes shown above are time-consuming and require much more space than when Magneto's DL is used.



Profiled spaces for compensation wires or grounding and place for electrical coil, respectively

### ADVANTAGES:

- Magneto's DL can substitute all of the mentioned methods and is superior to all presently known dilatation layers in the sense of quality,
- Magneto's DL protects the magnetic core from mechanical stresses,
- Magneto's DL creates a monolith together with the protected magnetic core and epoxy resin casing (produced by a high pressure method or with vacuum technology),
- Magneto's DL includes profiled spaces for compensation wires and grounding,
- Magneto's DL greatly simplifies the production process of middle voltage transformers,
- The final product is delivered together with a bending strip with Magneto's DL.



Mechanical fastening of transformer core with Magneto's DL



Bending strips with Magneto's DL

### TECHNICAL DATA:

- Volumetric density: 0.30 g/ccm
- Hardness: 17 Shore A  
65 Shore 00
- Temperature resistance:
  - 40 °C ÷ +80 °C – permanent resistant
  - 40 °C ÷ +210 °C – short-term resistant

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