



TRANSFORMER REPAIR WITH PES 104 POWER METAL FLUID XF

Transformers are susceptible to corrosion like any other mild steel structure. As you may be aware transformers house light grade oil as part of their process. Where the mild steel corrodes sufficiently the surface becomes porous or is prone to hairline cracks and the oil weeps out from the transformer.

Major issues for the operator and repair company is surface preparation is minimal, normally due to the location but also due to the nature of the transformer and job it performs.

Therefore trying to get standard epoxy repair materials to bond to an oily surface that can be only prepared using wire brushes or grinding pads has normally met without success.

We have been working with a UK based electricity company where they have trialed a PES material which bonds to oily steel surfaces. The product can be used for plate bonding or sealing transformer surfaces where cracks, holes have appeared or where the surface has become porous.

The material is 104 Power Metal Fluid XF, this is a fast curing solvent free epoxy fairing compound that can be applied by applicator tool or by brush. The material has a mixing ratio of 1:1 and a usable life of approx 5 mins (68F) and is hard dry in 40 mins (68F).

For a standard repair we would suggest that the surface of the transformer is cleaned using a wire brush or if possible with a grinding pad to create a key on the surface. The area must be cleaned using MEK to take as much oil from the surface as possible. However in tests the product has bonded to surfaces saturated in transformer oil.

The material can be used as either an adhesive for plate bonding or as a fairing compound filler to the surface of the transformer.

The product as stated, has a mixing ratio of 1:1 and once mixed should be applied by applicator tool and pressed onto the surface. If the user requires a more viscous material they can allow the product to cure slightly and it will become thicker and more of a paste.