

Improvements on dry type design for GIS and transformer termination up to 300kV, by means of adjustable compression force.

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Experiences from identical in house technology up to 170kV at Brugg Kabel AG and existing finite element simulation allowed developing a new GIS/transformer termination for 300kV XLPE-Cable with cross section up to 2500 mm². Such product has specific peculiarities like wide application range and optional plug-in characteristics.

Developed design has a wide application range for each stress cone. Such application range allows compensating to a quite large extent the manufacturing tolerances of the cable insulation diameter. As further improvement adjustable pre-load of the compression springs further allow an extended installation temperature range of 0 ÷ 40°C, granting optimal interface contact pressure at the cable-stress cone and stress cone-epoxy insulator interfaces at any operating temperature. In addition, depending on the chosen application, it is possible to either install the plug-in or the locked-in dry-type termination.

Development activity has been finalized with type tests at three different voltage levels: 170, 245 and 300kV and having been documented and certified by an independent third party authority.