Rasim Salkoski
EMO Transformatori DOOEL - Ohrid

# HIGH VOLTAGE REACTORS DESIGN AND TESTS

## ABSTRACT

The paper deals with the design and tests of high voltage reactors. The advantages of magnetic core construction with radial laminated sections) and a small number of air gaps, which result in a more simple mechanical construction, are outlined. The test methods of transformers and reactors are being compared, with a special reference to the test power, measurement of power losses, the accuracy of measurement and special type tests. Besides the different dielectric tests which are described, special attention is given to induced voltage test and its unreal representation under normal operating conditions. It is suggested that this test be replaced by impuls test. The need for vibration measurements as a check on mechanical behavior is stressed. "As built" form of the magnetic core and winding of the arc suppression reactor 3800 kVA, 66 kV, and current adjustment in the range 20A to 100 A on load are shown in the paper.

**Keywords**: reactor, magnetic core, coil, transformer, air gaps, magnetic flux, flux density.