

Study of Transformer and Motor Winding under Pulsed Power Application

Authors : Arijit Basuray, Saibal Chatterjee

Abstract : Pulsed Power in the form of Recurrent Surge Generator (RSG) can be used for testing various parameters of Motor or Transformer windings including inter-turn, interlayer insulation. Windings with solid insulation in motor and transformer have many interfaces and undesirable defects, and these defects can be exposed under this nondestructive testing methodology. Due to rapid development in power electronics variable frequency drives (VFD), Dry Type or cast resin Transformer used with PWM Sine wave inverters for solar power, solid insulation system used nowadays are shifting more and more to a high-frequency application. Authors have used the recurrent surge generator for testing winding integrity as well as Partial Discharge(PD) at fast rising voltage enabling PD measurement at closer situation under which the insulation system is supposed to work. Authors have discussed test results on a different system with recurrent surge voltages of different rise time.

Keywords : fast rising voltage, partial discharge, pulsed power, recurrent surge generator, solid insulation

Conference Title : ICPMHV 2017 : International Conference on Power Modulator and High Voltage

Conference Location : Amsterdam, Netherlands

Conference Dates : May 14-15, 2017