

GROUNDWALL DISCHARGE IN HYDRO GENERATOR: COMPARISON OF FOUR METHODS

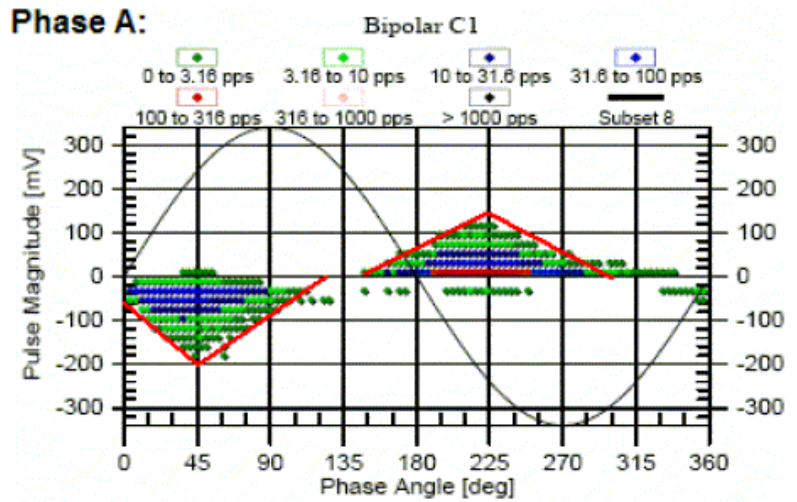


Figure 1. On-line PD Test Result - Phase A

Company: BC Hydro
Ratings: 30 MVA, 13.8 kV, Air Cooled Hydro Generator
Manufacturer: Confidential
Related Info: 50 years old
PD Sensors: Two PDA Couplers per phase

Details:

“...A condition assessment was conducted on the stator winding insulation using the following tests: on-line PD, off-line PD, corona probe, and dissipation factor tip-up...”

“...analysis of results from all four PD measurement test methods indicated there were voids within the groundwall insulation; however in comparison of the four methods, the on-line PD measurement had the advantage as it provided a more realistic view of the generator condition since the machine was in operation...”

“...a continuous on-line PD monitoring system, HydroTrac, was installed on this generator; by trending this winding’s PD activity over time, a rewinding project can be planned for when it is most cost effective...”

Excerpts from paper “Partial Discharge Measurements on Hydro Generator Stator Windings Case Studies”, by S. Li and M. Chow” in IRMC June 2006

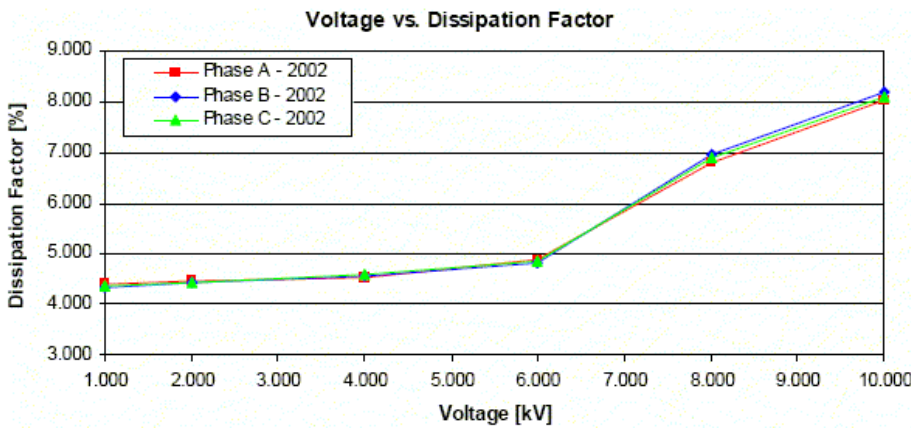


Figure 2. Dissipation Factor Test Results



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