

# END- WINDING DISCHARGE SIGNIFICANT REDUCTION IN PD LEVELS AFTER REPAIR

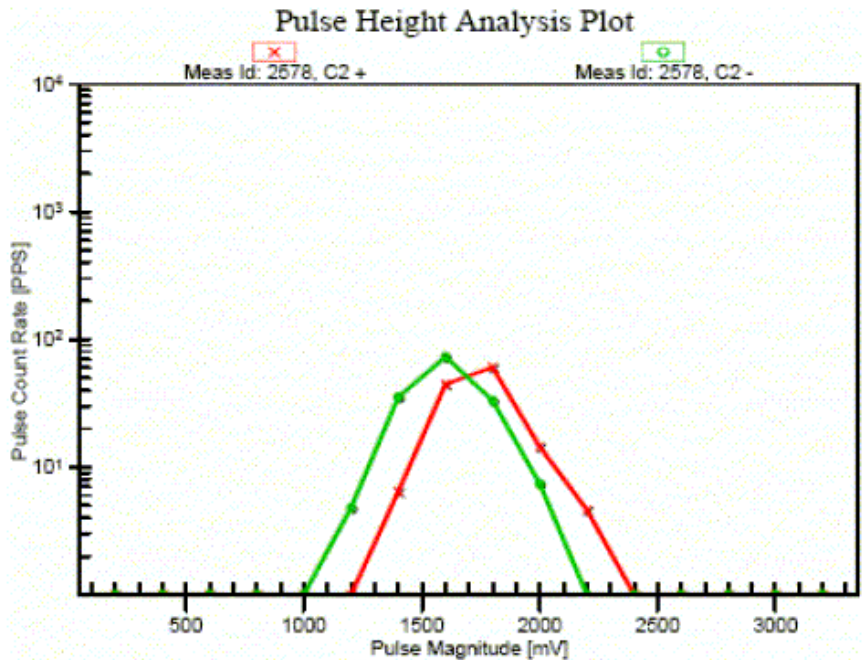


Figure 1. 2D PD Plot Showing Hump at High Magnitudes – Phase C

**Company:** BC Hydro  
**Ratings:** 239 MVA, 13.8 kV, Air Cooled Hydro Generator  
**Manufacturer:** Confidential  
**Related Info:** 37 years old  
**PD Sensors:** Six PDA Couplers per phase

**Details:**  
 "... This winding was subjected to PD activity in the end-turns of the winding... In the 2D PD plot, it can be seen that a large hump appeared at high magnitudes in both the positive and negative PD activities... The winding was repaired by cleaning the 10 bars closest to the PD couplers; these bars were coated with red glyptal epoxy. After the repair, trending of HydroTrac data showed a significant reduction in PD levels as shown in Figure..."

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

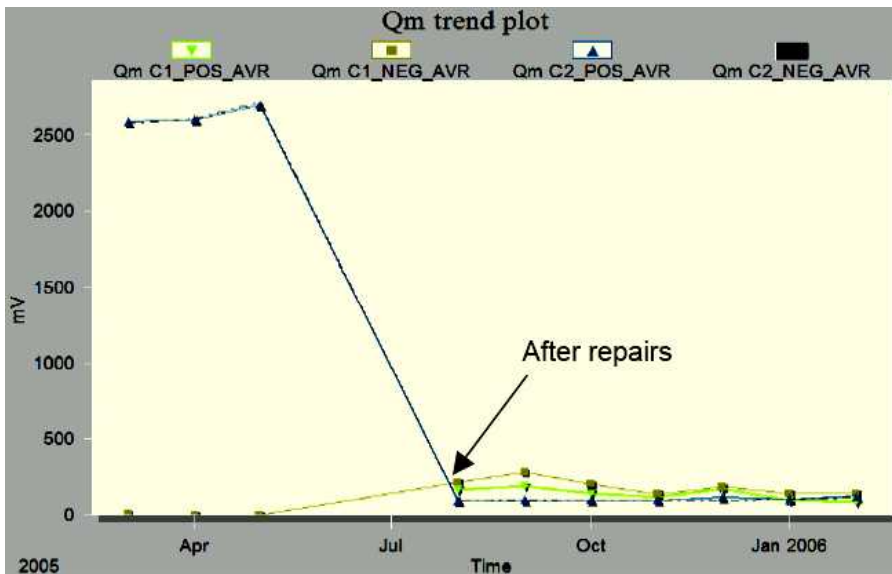


Figure 2. Trend of PD activity – Phase C



Iris Power LP  
 1 Westside Drive, Unit 2  
 Toronto, Ontario, Canada  
 M9C 1B2  
 Phone: (416) 620- 5600  
 Fax: (416) 620- 1995