Damage at Slot Exit

IN GRADING COATING INTERFACE

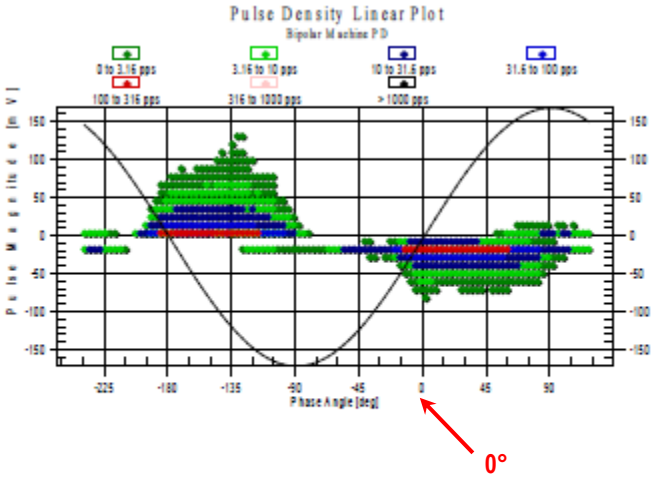

Figure 1. PD Analysis Plot –Activity at 0° Before Outage

Figure 2. PD Activity At Slot Exit

Company: Western US Utility
Type of Machine: Combustion Turbine Generator
Ratings: 206 MW, 15 kV, 3600 rpm
Manufacturer /Year: Confidential /2002
PD Couplers: BUS EMCs (80 pF sensors)
Instrument: TGA-B
Details:

- "... Zero crossings (0° and 180°): Phases B & C have a pattern that is normally indicative of sources of activity that are mechanically dependent, such as would occur just at the slot exit involving the voltage stress coatings...This activity is relatively minor in nature at this point in time; further testing will monitor this activity as it develops.." *From Partial Discharge Test Report (dated 2014-Dec-23).*
- Figure 1 from the above mentioned report, shows PD activity at 0° before outage. Note there is positive predominance indicating the PD is on the surface of the bar.
- Figure 2 corresponds to a picture taken during an outage in March 2015, showing the initial stages of surface PD at the stress relief coatings at slot exit.