

546 – How Medium Voltage Cables Fail – Fundamentals to Ensure Long Cable Life

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Abstract: Solid dielectric cable system failure mechanisms are often presumed unknown due to collateral damage at the failure site. On the basis tens of thousands of meter by meter cable profiles, thousands of defect locations, and hundreds of dissection, this paper will provided evidence to debunk three common myths namely, “cables last 40 years”, “Water trees fail cable”, and “electrical trees have very short lives.” A utility case study involving thousands of kilometers of cable systems will be presented showing how effective cable system partial discharge (PD) assessments can be used to direct precise rehabilitation actions and extend the life of cable systems at a significantly lower cost.