# WG B1.28

# On-site Partial Discharge Assessment of HV and EHV Cable Systems

Convener

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# Introduction

- HV and EHV extruded cables are tested after installation, according to IEC 60840 and 62067 using an applied AC voltage
- The AC test is more effective than DC, however both carry the risk of rupture
- The PD test on site is an additional test which provides an opprotunity for finding problems pre rupture

# Present Status

Utilities are interested, however:

- There are no formal requirements – the commonly used phrase “no measurable PD’s” has a limited meaning,
- The application of the PD test is often complicated
- In most cases intesnssive interpretation is required
- The interpretation is strongly dependent upon
  - Noise conditions (weather),
  - PD technology
  - Cable system technology
  - Sensitivity / Calibration

# Scope

- Work should be limited to HV and EHV extruded AC cables
- Addresses both:
  - Commissioning tests
  - diagnostic tests

# Route Map

- Collect experience with PD testing, with respect to methods, timing, implementation, equipment, results and subsequent actions
- Evaluate the added value of the PD testing at site for commissioning and diagnostic testing
- Evaluate the applied technology, taking into account what previous CIGRE and ICC WG's have done so far
- Recommend the protocol, to validate the on-site measurement results (calibration, sensitivity assessment)
- Recommend guidelines for PD test procedures at site (voltage level, measuring time, measuring conditions
- Identify widely acceptable requirements for commissioning and diagnostic testing

# Working Group Members

The Working Group is currently forming:

- Nigel Hampton US Convener
- Mark Fenger CA
- Matt Mashikian US
- Edwin Pultrum NL