

SC B1 Insulated Cables

WG B1.28

Working Group B1.28

On-site Partial Discharge Assessment of HV and EHV cable systems

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WG Membership

Henny Blandine	Member	BE	LABORELEC
Nadia Ribeiro de Louredo	Corresponding	BR	
Mark Fenger	Secretary	CA	KINECTRICS
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Ronald Plath	Member	DE	OMNICON
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Mats Sjøberg	Member	SE	ABB
Andrew Barclay	Member	UK	BALFOUR BEATTY
Nigel Hampton	Convener	US	NEETRAC
Matt Mashikian	Member May 2009	US	IMCORP

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Terms of Reference

The work should be limited to HV and EHV extruded AC cables, but addressing both commissioning and diagnostic testing,

The WG shall:

- collect experience with PD testing, with respect to methods/equipment and results
- 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

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DELIVERABLES

Deliverables

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An Executive Summary article for Electra

A full report to be published as a Technical Brochure

A Tutorial

The full report shall be made available for final review at the B1 annual meeting in 2011.

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Timeline

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Year	Q1	Q2	Q3	Q4
2008			TOR Approved	
2009	Meeting 1		Annual Report Poland Meet	
2010			Annual Report Paris Meet	
2011		Final Report	Electra Paper Tutorial	

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Task I Collect experience with PD testing

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What do we wish to collect?
What do we believe we can collect?

- System Voltage
- Length
- Year
- PD used – Y / N
- PD Type – On, Off (Power, DAC)
- Commissioning / Diagnostic
- Test Voltage
- Test Time
- Test Sequence
- Findings – no PD, PD
- References
- Detection points


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Responses from WG meeting

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Category	Response
HV Commission	76.2% (No), 4.8% (On), 4.8% (Some), 4.8% (Off), 9.5% (DAC)
HV Diagnostic	95.2% (No), 4.8% (On)
EHV Commission	68.8% (No), 31.3% (On)
EHV Diagnostic	87.5% (No), 6.3% (On), 6.3% (Some)

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 **Task II Evaluate the added value of PD test**


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Utilities believe that there is value in PD tests

Value is more of an impression rather than an assessment

Will try and garner Case Studies to provide definitive information

- PD Used
- PD Not Used

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 **Task III Evaluate the applied technology,**


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Calibration vs Sensitivity

Technologies

- Online
- Offline

Open Issues

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