



Study Committee No : B1
WORKING BODY FORM

Group No: WG B1.31	Name of Convener : David LINDSAY (US)
TITLE of the Working Group :	Testing of superconducting cable systems
Background: IEC TC20 and TC90 has requested B1 to provide testing recommendations for HTSC cable systems, as the technology has made notable progress during the last years.	
Terms of Reference: 1.Scope of the WG should be limited to AC High Temperature Superconductors (HTS) only and exclude those materials considered Low Temperature Superconductors (LTS). Voltage range: 10 to 145 kV 2.Cryogenic cooling hardware is outside the scope. However, Performance specification, reliability, functional requirements should be addressed 3.The WG shall collect detailed experience from existing HTS cable projects. 4.The WG shall address HTS cable systems operating under normal and short circuit conditions – including cable, joints and terminations. 5.The guideline shall include considerations for all known cable design options including single-core, three-core and three concentric phases. 6.The guideline shall address those test requirements associated with design and operation of a pressurized piping and pressure-vessel system as applicable to HTS cable systems. 7.The WG shall recommend testing requirements and guidelines for HTS cable system in the following areas: <ul style="list-style-type: none">· Type / Qualification tests· Factory Tests· After Laying Tests	
8.The WG shall discuss and document the prospective of technology up scaling to 275 kV	
<ul style="list-style-type: none">• The full report shall be made available for final review at the B1 annual meeting in 2013.	
Deliverables: <ul style="list-style-type: none">• An Executive Summary article for Electra• A full report to be published as a Technical Brochure• A Tutorial	
Created: 2009	
WG members from: CA, FR, DE, KO, IT, JP, NL, ES, US	
Other stakeholding SC's: C3	
Approval by TC Chairman : Klaus Fröhlich	Date : 08/01/2010