



Study Committee No: B1
WORKING BODY FORM

Group No : WG B1.43	Name of Convener : N N
TITLE of the Working Group: Recommendations for mechanical testing of submarine cables	
Background: Update of mechanical tests for submarine cables is needed since submarine cable installations are growing for higher powers and new applications (wind farm connections, dynamic power cables and deeper sea installations etc). The existing recommendation is from 1997 (Electra 171) needs to be updated.	
Terms of Reference: <ul style="list-style-type: none">• Cover both impregnated paper cables and extruded cables (AC and DC) including a review of cable installation methods and cable protection for submarine cables• Examination of relevant IEC standards, CIGRE recommendations and standards from the offshore industry (e.g. umbilical testing)• Assess the risk for mechanical damage during installation and cable protection• Assess the risk for mechanical damage after installation (anchoring, drag-net fishing, pile driving)• Calculation of tensile tests to be updated and a more detailed background to be described to the selected factors (security factors and torsion as well as dynamic forces)• Propose test methods to cover:<ul style="list-style-type: none">• Dynamic cable system installations• Very deep sea installations (including extruded cables)• Impact tests• Consider the heat cycling influence on the metallic sheath and evaluate possible test methods• Update/introduce mechanical tests for rigid joint• Consider tests with for free-spans, strumming• Consider tests for the cable interaction with e.g. J-tubes, bend restrictors etc. <p>The WG should not consider umbilicals in general but follow the development of umbilical power cables.</p>	
Deliverables: <ul style="list-style-type: none">• The Working Group should prepare a Technical Brochure, a summary in Electra and a tutorial.	
Created: 2011 Duration : 3 years	
Convener e-mail:	
Members : x	
Approval by TC Chairman : N N	Date :