

## CIGRE HV EQUIPMENT PUBLICATIONS

AREA OF INTEREST		CIGRE PUBLICATIONS
Circuit Breakers	Switching and interruption devices, standardisation and testing	<ul style="list-style-type: none"> <li>• State of the art of circuit breaker modelling. SC13, Brochure 135 (1998).</li> <li>• Applications of black box modelling to circuit breakers. SC13, ELECTRA 149 (1993)</li> <li>• Specified time constants for testing a symmetric current capability of switchgear. SC13, ELECTRA 173 (1997)</li> <li>• Digital testing of high voltage circuit breakers. Summary report on a 4-year project, sponsored by the European Community and CENELEC. SC13, ELECTRA 204 (2002)</li> </ul>
	Switching applications and impact of networks on switching	<ul style="list-style-type: none"> <li>• Transient recovery voltages in medium voltage networks. SC 13, Brochure 134 (1998)</li> <li>• Flashovers of open circuit breakers caused by lightning strokes. SC33, ELECTRA 186 (1999)</li> <li>• Line charging switching of HV lines. Stresses and Testing Parts 1 and 2. SC13, Brochure 47 (1996)</li> <li>• Interruption of small inductive currents. SC13, Brochure 50 (1995)</li> <li>• Circuit breakers for meshed multi terminal HVDC systems. SC13, Brochure 114 (1997)</li> <li>• Capacitive current switching. State of the art. SC13, ELECTRA 155 (1994)</li> <li>• Shunt capacitor bank switching. Stresses and test methods. SC13, ELECTRA 182 and 183 (1999)</li> </ul>
	Condition monitoring	<ul style="list-style-type: none"> <li>• User guide for application of monitoring and diagnostic techniques for switching equipment for rated voltages of 72.5kV and above. SC13, Brochure 167 (2000)</li> <li>• Statistical analysis of electrical stresses on high-voltage circuit-breakers in service; TF A3.01 ELECTRA No.220, June 2005</li> </ul>
	Reliability	<ul style="list-style-type: none"> <li>• Life management of circuit breakers. SC13, Brochure 165 (2000)</li> <li>• Final report of the 2<sup>nd</sup> enquiry on HV circuit breaker failures and defects in service. SC13, Brochure 83 (1994)</li> </ul>
	Development and application of controlled switching	<ul style="list-style-type: none"> <li>• Controlled switching. A state of the art survey. SC13, ELECTRA 163 (1995) and 164 (1996)</li> <li>• Controlled switching of HVAC circuit breakers. Guide for application lines, reactors, capacitors, transformers. SC13, ELECTRA 183 and 185 (1999).</li> <li>• Controlled switching of HVAC circuit breakers – planning specification and testing. SC13, ELECTRA 197 (2001)</li> </ul>

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Fault Current Limiters	Guide to types and specifications	<ul style="list-style-type: none"> <li>• Functional Specification for a Fault Current Limiter WG A3.10; ELECTRA 194 (2001)</li> <li>• Fault Current Limiters – Application, principles and testing WG A3.10; ELECTRA 211 (2003)</li> <li>• Fault Current Limiters in Electrical Medium and High Voltage Systems. WG A3.10; CIGRE Technical Brochure No. 239, 2003.</li> </ul>
Current and voltage measurement and sensing	Traditional instrument transformers	<ul style="list-style-type: none"> <li>• HVDC current transformers. A review of specification content. SC12, ELECTRA 141 (1992)</li> </ul>
	Transformers	<ul style="list-style-type: none"> <li>• Electrical environment of transformers – Impact of fast transients JWG A2-A3-B3.21 (former JWG 12-13-23.21) ELECTRA 218, February 2005</li> </ul>
Surge Protection	Surge Arrestors and applications	<ul style="list-style-type: none"> <li>• Proposal for a test procedure to determine the lightning impulse energy capability for metal-oxide surge arresters. SC33, ELECTRA 183 (1999)</li> <li>• Metal oxide surge arresters in AC systems. SC33, Brochure 60 (1991)</li> <li>• Guidelines for selection of surge arresters for shunt capacitor banks. SC33, ELECTRA 159 (1995)</li> <li>• Metal oxide surge arresters in AC systems. SC33, ELECTRA 128, 130, 133 (1990)</li> </ul>
Reliability	General equipment reliability	<ul style="list-style-type: none"> <li>• General overview on experience feedback methods in the field of electrical equipment. SC23, ELECTRA 204 (2002)</li> </ul>
Dynamic Loading	Introduction to dynamic loading issues	<ul style="list-style-type: none"> <li>• Dynamic loading of transmission equipment – An overview. SC23, ELECTRA 202 (2002)</li> </ul>