Coil in Coil – Components for the High Voltage Superconducting Resistive Current Limiter CULT 110

Steffen Elschner[2], Mark Stemmle[3], Frank Breuer[1], Heribert Walter[1], Christian Frohne[3], Mathias Noe[4] and Joachim Bock[1]

(1) Nexans SuperConductors GmbH, D 50351 Huerth, Germany
(2) Hochschule Mannheim, D 68163 Mannheim, Germany
(3) Nexans Deutschland Industries GmbH & Co. KG, D 30179 Hannover, Germany
(4) Forschungszentrum Karlsruhe GmbH, D 76021 Karlsruhe, Germany
E-Mail: mark.stemmle@nexans.com

Abstract **-** The project CULT 110 funded by German government (BMBF/VDI) is presently the largest current limiter project in Europe. It aims at the development of a one-phase resistive limiter for the 110 kV level and is based on melt cast processed BSCCO 2212 bulk superconductor. The innovative electrical protection concept uses a normal conducting coil arranged around the superconducting bulk coil and connected in parallel. This coil serves as an electrical bypass and simultaneously, under fault conditions, generates a magnetic field for quench homogenisation. Since no continuously connected shunt is needed, an increased voltage can be applied during faults.

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