

Grid Impact Analysis of a HTSC Cable by Using an Enhanced Conventional Simulator

Gerard Del-Rosario-Calaf¹, Andreas Sumper^{1,3},
Xavier Granados² and Antoni Sudria-Andreu^{1,3}

¹CITCEA-UPC Escola Universit`aria d'Enginyeria T`ecnica Industrial de Barcelona, Universitat
Polit`ecnica de Catalunya,

C. Comte d'Urgell 187, 08036 Barcelona, Spain

²ICMAB-CSIC, Campus UAB, 08193 Cerdanyola del Vall`es, Spain

³Catalonia Institute for Energy Research (IREC)

E-mail: sumper@citcea.upc.edu

Abstract - Conventional simulators for power system studies do not include the new superconducting (SC) elements in order to perform analysis of their behaviour on the grid, however these simulators allow users to include external functions specifically designed. In this case, a specific library with the corresponding physical model of Very Low Impedance SC cables has been designed and included. This article reports on the developed algorithm and the results obtained by applying it to standard grids including SC cable.

IEEE/CSC & ESAS EUROPEAN SUPERCONDUCTIVITY NEWS FORUM (ESNF), No. 11, January 2010
Published in *Journal of Physics Conf. Series (SuST)* 234, 032007 (2010)