A.3.4.

Development project on HTS cables

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The increasing constraints for right of way location coupled with renewed emphasis on environmental concerns and emerging trends in energy market models challenge the electric power industry to develop new technologies for Transmission and Distribution. High Temperature Superconducting (HTS) cable systems, characterized by high power carrying capacity coupled with reduced dimensions and environmental friendliness, could have the potential to become a solution.

The paper presents the latest results achieved during the collaboration between Pirelli and EDF aimed at evaluating the technical feasibility of a high power superconducting link.

Information is provided regarding the prototype cable construction, its mechanical conditioning to simulate installation stresses, and the tests required in order to assess its performance.

Considerations about future steps of development and targets to be reached for technology deployment conclude the paper.