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Design of 10 KA DC terminal connector for HTS cable

Content :

HTS cables are designed to carry bulk power with high ampacity in superconducting state. These cables require terminal connectors of same ampacity to transfer power from power converter module at room temperature to the HTS cable maintained at cryogenic temperature. This paper deals with thermal analysis of 10 kA DC terminal connector for HTS cable. The ohmic losses were computed which are used as input for transient thermal analysis of HTS terminal connector. Based on the thermal gradient obtained from thermal analysis length of conductor for terminal connector is computed for thermal stability of HTS cable.

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