

Applicability Evaluation of Superconducting Cables for Railway Systems

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DC electric railway systems are widely used in Japan, including the metropolitan areas. However, they have some problems, such as limited use of regenerative brakes and energy losses. In order to solve those problems, and to attain the essential energy saving of next-generation electric railway systems, we have been studying the feasibility of applying superconducting power cables to DC electric feeder systems. In this study, we have developed material of superconducting cables for railway systems. The results of material-characteristics evaluation tests, such as an electrical current test of superconducting tapes, are reported.