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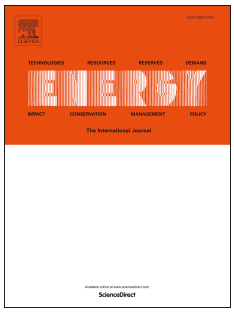

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Energy-Saving Railway Systems based on Superconducting Power Transmission

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Abstract

The new railway transmission feeder systems using superconducting materials was proposed. With energy issues becoming increasingly important in this century, it is important to assess the situation in the transportation sector. In recent years, direct current (DC) systems has been progressing mainly in urban areas. Developing superconducting cable for railway power transmission should lead to increased regeneration efficiency, reduced power loss, equalization of load between substations, and fewer substations due to the smaller voltage drop. In order to verify to be formed as a system, it's needed to evaluate the circulation cooling, electrical current, cooling stress, laying through