

## TOPICAL REVIEW

### **High temperature superconductors for commercial magnets**

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This paper is related to high temperature superconducting wires for real commercial magnets and provides a very good and effective review of the present status and future prospects of high temperature superconductors for commercial magnet applications.

At first, present limitations and potential for further improvements of commercial low temperature superconductors such as Nb-Ti and Nb<sub>3</sub>Sn are mentioned. To overcome these limitations, high temperature superconductors are expected from the view point of high field operation at 4.2K and operation temperature above 4.2K. Examples of commercial applications using high temperature superconductors and the present status of commercial high temperature superconductors, such as Bi2212 conductors and cables, Bi2223 conductors and cables, and REBCO conductors and cables, are reviewed.

This paper also describes the differences of several conductor properties such as current density, mechanical performance, critical current anisotropy, etc., and offers cost case studies between high temperature superconductors and low temperature superconductors.