

**Fundamental Study on Large-Capacity of High Temperature Superconducting Cylindrical Windings
for AC Electrical Equipment**

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Superconducting conductors must possess a large current capacity for their application to large capacity power equipment. To increase the capacity, tape-shaped high temperature superconducting wires are stacked to constitute superconducting parallel conductors. Superconducting windings are primary components of superconducting power equipment. When the winding is composed of a superconducting parallel conductor and the inductance of each strand is unbalanced, there will be a decrease in capacity and an increase in loss in superconducting power equipment. Therefore, we propose transposition pattern as a winding method. The transposition pattern can balance the inductance and as a result, can suppress a decrease in capacity and an increase in loss. In this paper, we numerically calculate the characteristics of the proposed transposition pattern and reports the results.