

### **Cooling Methods of Superconducting Feeder Cables**

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When superconducting cables are installed in feeder cables, it is expected to improve regenerative efficiency, reduce power loss, level the load between substations and consolidate substations by suppressing voltage drops. On the other hand, it is needed to cool superconducting cables by a refrigerant such as liquid nitrogen for keeping a superconducting state. In this paper, the design concept of superconducting cables and cooling systems which constitute superconducting feeder systems is introduced, and the efficient circulation method of refrigerants is discussed. Also, the result of cooling tests performed after constructing a cooling system is reported.