

A 630kVA/10.5kV superconductor substation

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A 630kVA/10.5kV superconductor substation Located in the city of Baiyin in the Gansu province of China is built by the Institute of Electrical Engineering, China Academy of Science (IEE CAS). The substation includes the following systems: a 10.5kV/1.5kA three-phase high temperature superconducting (HTS) fault current limiter (FCL), a 1MJ/0.5MVA superconducting magnetic energy storage (SMES), a 630kVA, 10.5kV/0.4kV HTS power transformer and a 75 m long 1.5kA HTS power cable system, all of which were developed by IEE CAS.

The Baiyin substation began operation in February 2011, and is now supplying higher quality, highly reliable electricity with higher efficiency to customers. The Baiyin superconductor substation is one of the most ambitious superconductor projects undertaken to date anywhere in the world. As China's electricity needs continue to increase, these solutions will be essential to maintain a high level of efficiency and reliability for our homes and businesses.