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Testing of EAST high-temperature superconducting current leads

In order to reduce the heat load to liquid helium, totally 13 pairs of HTS current leads were used in EAST facility. This paper is focused on testing of the current leads. A test facility was set up and used to test the HTS current leads. A 500W/4.5K refrigerator was used to cool down the test system. The top side of the HTS current leads was cooled by LN2 and bottom side cooled by 4.5K supercritical helium. The current was ramped up to 16kA and sustained about 20min. The test results showed that all HTS current leads fit the requirement of the EAST.

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