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RYU et al.(10) **Pub. No.: US 2024/0222960 A1**(43) **Pub. Date: Jul. 4, 2024**(54) **COOLING CONTROL APPARATUS FOR
SUPERCONDUCTING FAULT CURRENT
LIMITER****Publication Classification**(51) **Int. Cl.***H02H 9/02* (2006.01)*H05K 7/20* (2006.01)*H10N 60/30* (2006.01)(52) **U.S. Cl.**CPC *H02H 9/023* (2013.01); *H05K 7/20236*
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(57) **ABSTRACT**

The present disclosure relates to a cooling control device for a superconducting fault current limiter, the cooling control device comprising a superconducting fault current limiter for cooling a saturated liquid coolant with a freezer to maintain a temperature of a subcooled liquid coolant in which a superconducting element is immersed, a pressure sensor for detecting a pressure of a second container in which the saturated liquid coolant of the superconducting fault current limiter is accommodated, and a control unit for estimating a temperature of the saturated liquid coolant by using a result of detecting the pressure of the pressure sensor, and controlling a temperature of the freezer depending on the estimated temperature of the saturated liquid coolant.

