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(54) **MULTIPLE COOLING SYSTEMS ARRANGEMENT FOR SUPERCONDUCTING CABLE SYSTEM**

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(57) **ABSTRACT**

A superconducting wired electrical circuit has two portions (**1***a*, **1***b*) each having a superconducting cable core (**2***a*, **2***b*), an electrical insulation layer (**3***a*, **3***b*), a screen (**4***a*, **4***b*) and a cryogenic jacket (**5***a*, **5***b*) surrounding the screen (**4***a*, **4***b*) to allow the circulation of a cryogenic fluid. At least a first arrangement (A) has a cryostatic junction unit (**7**) electrically connecting, in series, the two portions (**1***a*, **1***b*), an inlet/outlet duct (**14**) for cryogenic fluid. A distinct tap-off module (**12**) has at least one inlet/outlet tapping (**15**) for the flow of a cryogenic fluid in the second portion (**1***b*). A device (**13**) for blocking the passage of cryogenic fluid is interposed between the duct (**14**) and the tapping (**15**) and positioned around and in contact with the screen (**4***b*) of the second portion (**1***b*).