

Title (en)
SUPERCONDUCTING HEAVY-CURRENT DISCONNECTOR

Title (de)
SUPRALEITENDER HOCHSTROMSCHALTER

Title (fr)
DISJONCTEUR SUPRACONDUCTEUR POUR COURANT FORT

Publication
EP 0985236 A1 20000315 (DE)

Application
EP 98928272 A 19980515

Priority
• DE 19720397 A 19970515
• EP 9802873 W 19980515

Abstract (en)
[origin: WO9852236A1] In order to obtain a voltage-stable compact superconducting power switch with high operating speed, several layers (10a...10h) of windings with several windings in each layer are arranged next to each other in an axial direction. Cooling and heating elements (8a-8d) are arranged in between the individual layers (10a...10h) so that the heavy-current disconnecter unit (1) can be switched into a superconducting or normal conducting mode, i.e. closed or opened, by means of cooling/heating. Each adjacent conductor is cross-flown in an opposite direction by the heavy current so that the heavy current disconnecter unit (1) exhibits low induction, thereby enabling especially high operating speeds when the disconnecter is opened by an additional current pulse. The many windings of the conductor segment in each layer and the several layers in an axial direction result in a low current differential between the adjacent conductors. A high voltage-stable component is thus obtained.

IPC 1-7
H01L 39/20

IPC 8 full level
H01L 39/20 (2006.01)

CPC (source: EP US)
H10N 60/355 (2023.02 - EP US)

Citation (search report)
See references of WO 9852236A1

Designated contracting state (EPC)
CH DE FR GB LI NL

DOCDB simple family (publication)
WO 9852236 A1 19981119; DE 19720397 A1 19990401; EP 0985236 A1 20000315; US 6472966 B1 20021029

DOCDB simple family (application)
EP 9802873 W 19980515; DE 19720397 A 19970515; EP 98928272 A 19980515; US 42388000 A 20000306