

Title (en)

Hybrid DC circuit breaker with zero current switching and method of switching

Title (de)

Verfahren zur Abschaltung von Gleichströmen und Gleichstrom-Schnellschaltanordnung für Bahnstromversorgungen

Title (fr)

Disjoncteur hybride pour courant continu et procédé de disjonction

Publication

**EP 1480241 B1 20060104 (DE)**

Application

**EP 03090155 A 20030523**

Priority

EP 03090155 A 20030523

Abstract (en)

[origin: EP1480241A1] The method involves using a DC rapid switching device with a switching unit (VS) and a quenching circuit parallel to the shaft section of the switching unit, consisting of a quenching capacitor (LK) connected in series with two antiparallel quenching thyristors (LT1,LT2) and an inductance (L). The switching process is initiated by a control command to open the metal contact of the switching unit at a certain time point. The first thyristor is fired at a defined time point dependent on the level and direction of the operating current. The second thyristor is fired at a time dependent on the quenching current's time profile. An independent claim is also included for rapid switching devices for quenching a DC current in a rectifier sub-mechanism for a railway current supply.

IPC 8 full level

**H01H 33/59** (2006.01); **H01H 9/54** (2006.01); **H01H 9/56** (2006.01)

CPC (source: EP)

**H01H 33/596** (2013.01); **H01H 9/541** (2013.01); **H01H 9/56** (2013.01)

Cited by

US2016329179A1; EP3091626A4; US10176947B2; US9742185B2; US8174801B2; US9178348B2; US9054530B2; DE102012008614A1; WO2013037589A1

Designated contracting state (EPC)

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DOCDB simple family (publication)

**EP 1480241 A1 20041124**; **EP 1480241 B1 20060104**; AT E315274 T1 20060215; DE 50302112 D1 20060330

DOCDB simple family (application)

**EP 03090155 A 20030523**; AT 03090155 T 20030523; DE 50302112 T 20030523