

Title (en)
Circuit breaker

Title (de)
Leistungsschalter

Title (fr)
Disjoncteur

Publication
EP 1403891 B2 20160928 (DE)

Application
EP 02405825 A 20020924

Priority
EP 02405825 A 20020924

Abstract (en)
[origin: EP1403891A1] The breaker has an arcing chamber filled with an isolating gas, extends along a longitudinal axis. A deflection device (4) interacts with an opening in a hollow contact (2). The device is arranged on a side of the contact facing away from an arc area, for radial deflection of hot gases into an exhaust volume. An intermediate volume (7) is provided between the hollow contact and an exhaust body (10).

IPC 8 full level
H01H 33/02 (2006.01); **H01H 33/70** (2006.01); **H01H 33/76** (2006.01)

CPC (source: EP US)
H01H 33/7015 (2013.01 - EP US); **H01H 33/76** (2013.01 - EP US); **H01H 2033/888** (2013.01 - EP US)

Citation (opposition)

Opponent :

- DE 69017752 T2 19950713 - ALSTHOM GEC [FR]
- GB 219527 A 19240731 - WESTINGHOUSE ELECTRIC & MFG CO
- US 4182942 A 19800108 - KOYANAGI OSAMU [JP], et al
- EP 0075668 A2 19830406 - SPRECHER & SCHUH AG [CH]
- US 2002113040 A1 20020822 - IMAMURA MASAOKI [JP], et al
- DD 109120 A1 19741012
- US 3987261 A 19761019 - MCCONNELL LORNE D
- US 4144426 A 19790313 - KOWALIK PETER M, et al
- US 4160888 A 19790710 - NATSUI KEN-ICHI, et al
- DE 2812945 A1 19781005 - MITSUBISHI ELECTRIC CORP
- DE 3009504 A1 19810604 - SPRECHER & SCHUH AG [CH]
- DE 3132825 A1 19830113 - SPRECHER & SCHUH AG [CH]
- EP 0150079 A2 19850731 - SACE SPA [IT]
- EP 0195904 A1 19861001 - BBC BROWN BOVERI & CIE [CH]
- EP 0308626 A2 19890329 - LICENTIA GMBH [DE]
- DE 69007136 T3 19970306 - ALSTHOM GEC [FR]
- DE 69314411 T2 19980226 - MITSUBISHI ELECTRIC CORP [JP]
- US 5939692 A 19990817 - PERRET MICHEL [FR]
- DE 10156535 C1 20030626 - SIEMENS AG [DE]
- JP 2000268688 A 20000929 - MITSUBISHI ELECTRIC CORP

Cited by
WO2013013741A1; DE102011083588A1; DE102013209663A1; EP2549500A1; EP2551869A1; CN109196615A; EP1768150A1;
KR101320770B1; RU2706233C2; EP3767659A1; WO2017032667A1; US7893379B2; US8389886B2; WO2017162517A1; WO2021009148A1;
WO2006066420A1; WO2013010651A1; EP1811537A1; US9251981B2; WO2017174496A1

Designated contracting state (EPC)
AT BE BG CH CY CZ DE DK EE ES FI FR GB GR IE IT LI LU MC NL PT SE SK TR

DOCDB simple family (publication)

EP 1403891 A1 20040331; EP 1403891 B1 20080305; EP 1403891 B2 20160928; AT E388478 T1 20080315; CN 1296951 C 20070124;
CN 1497632 A 20040519; CN 1983487 A 20070620; CN 1983487 B 20150520; DE 50211839 D1 20080417; JP 2004119378 A 20040415;
JP 4351009 B2 20091028; US 2004057167 A1 20040325; US 2005146406 A1 20050707; US 6872907 B2 20050329; US 7202435 B2 20070410

DOCDB simple family (application)

EP 02405825 A 20020924; AT 02405825 T 20020924; CN 03159737 A 20030924; CN 200610163689 A 20030924; DE 50211839 T 20020924;
JP 2003327600 A 20030919; US 6255605 A 20050223; US 66053203 A 20030912