

Title (en)
HIGH-VOLTAGE CIRCUIT BREAKER COMPRISING A ROTARY ARC

Title (de)
HOCHSPANNUNGSLEISTUNGSSCHALTER MIT ROTIERENDEM SCHALTLICHTBOGEN

Title (fr)
DISJONCTEUR HAUTE TENSION À ARC DE COUPURE TOURNANT

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Application
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Abstract (en)
[origin: WO2008055753A1] The invention relates to a high-voltage circuit breaker comprising a housing (10) filled with insulating gas and a heat space (14) for receiving compressed quenching gas. When a current (I) with a small, average or high intensity is interrupted, the quenching gas is heated and pressurised by a rotary arc (S) which is exposed to a current-dependent magnetic flux density (B). Two contact pieces (20, 30) that can be moved in relation to each other along an axis (A) are arranged in the housing (10), one (30) of said contact pieces comprising a coaxial arrangement of an arcing contact (31), an arcing ring (15), and a coil (C) surrounding the arcing contact (31). Said coil (C) is electroconductively connected to the arcing ring (15) and leads to the current (I) to be interrupted. The coil (C) comprises two windings (40, 50) wound in opposite directions. Said windings are embodied and arranged in such a way that, when a current with a high intensity is interrupted, the component of the magnetic flux density (B), contributing to the rotation of the arc (S), is smaller on the arcing ring than in a switch which is identical but comprises a coil (C) which is wound in the same direction. The heat space (14) can therefore be small, enabling a compact switch.

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