

## Title (en)

Arc-extinguishing device with pneumatic and magnetic self blow-out.

## Title (de)

Lichtbogenlöscheinrichtung mit pneumatischer und magnetischer Blasung.

## Title (fr)

Dispositif d'extinction d'arc à autosoufflage pneumatique et magnétique.

## Publication

**EP 0004213 A1 19790919 (FR)**

## Application

**EP 79400093 A 19790214**

## Priority

FR 7806078 A 19780301

## Abstract (en)

1. A self-blast arc-extinguishing device by thermal expansion and rotation of the arc, for an electrical circuit interrupter pole having a gas-tight casing (10) filled with a gas of high dielectric rigidity, particularly sulfur hexafluoride, comprising : - a first stationary intermediate wall (16) dividing the enclosure surrounded by the casing (10) into a first (22) and a second (20) compartments, - an axially movable tubular contact (28) connected to an actuating rod (30) and cooperating with a stationary contact structure (112), the contact zone being located within said first compartment (22), said movable contact (28) sliding gastight through an orifice provided in said first wall (16) and said movable contact (28) communicating with said second compartment (20) to provide a compressed gas exhaust path from the first compartment (22) into the second compartment (20), - a magnetic blast coil (56) forming a part of said stationary contact structure (112) and located coaxially with said contacts (28, 112) in said first compartment (22), - an annular the blast coil (56) energizing electrode (116) which covers the free face of the coil (56) facing the movable contact (28), the coil (56) being electrically connected between the stationary contact (112) and the annular electrode (116) in order to generate a magnetic field to blast in rotation the arc staying on the electrode (116), the gas compressed by the rotating arc exhausting from the first compartment and blasting pneumatically the arc, characterized by the fact that it further comprises : - a third compartment (24) of the enclosure (10) separated from the first compartment (22) by a second intermediate stationary wall (18) of insulating material, the first compartment (22) being located between the second (20) and third (24) compartments - a tubular pipe (118) projecting axially through the coil (56) supported by said second wall (18) and connecting with the annular electrode (116), the last covering with a collar (114) of the stationary contact (112) the free end face of the coil (56) leaving a small free gap (120) between the annular electrode and the collar, and the movable contact (28) facing the annular electrode (116) being of a diameter smaller than that of the stationary contact (112), said pipe (118) ending in the first compartment (22) and communicating with the third compartment (24) to establish a compressed gas exhaust path from the first compartment (22) into the third compartment (24), the roots of the rotating arc being blasted towards an area far away from the stationary contact (112) by the gases exhausting from the exhaust paths.

## Abstract (fr)

L'invention est relative à un dispositif d'extinction d'arc à autosoufflage et à arc tournant pour un disjoncteur moyenne tension. Ce dispositif comporte un premier compartiment (22) de logement d'une paire de contacts séparables (26, 28) creux et d'une bobine électromagnétique (56) susceptible d'engendrer un champ radial assurant la rotation de l'arc tiré entre les contacts séparés. Un deuxième (20) et un troisième (24) compartiments sont agencés de part et d'autre du premier compartiment (22) pour l'expansion du gaz isolant comprimé initialement dans le premier compartiment (22) et chassé vers les compartiments (20, 24) par l'intermédiaire des contacts creux.

## IPC 1-7

**H01H 33/98**

## IPC 8 full level

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## CPC (source: EP)

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## Citation (search report)

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- FR 2239750 A1 19750228 - BBC BROWN BOVERI & CIE [CH]
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