

Title (en)
Self-blow switch with filling and excess pressure valve

Title (de)
Selbstblasschalter mit Füll- und Überdruckventil

Title (fr)
Commutateur à auto-extinction doté d'une vanne de remplissage et d'un clapet de décharge

Publication
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Application
EP 09170549 A 20090917

Priority
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Abstract (en)
Self-blowout circuit breaker (1) has compression volume (4) connected to a heating volume (19) by at least one non-return valve (14), which heating volume is connected to an arc zone (3), such that when first arcing contact (2a) is being disconnected from associated second arcing contact (2b), an arc (15) is produced between the two arcing contacts in the arc zone. The compression volume is separated from an exhaust volume (5) by a combined filling and overpressure valve (9) formed by at least one plate having at least one tab (7) formed in the plate. Self-blowout circuit breaker (1) comprises contacts for connecting or disconnecting a circuit, at least one first arcing contact (2a) and one first rated current contact (2c) moveable back and forth in a direction of a longitudinal axis of the circuit breaker, and an exhaust volume (5). A compression volume (4) is connected to a heating volume (19) by at least one non-return valve (14), which heating volume is connected to an arc zone (3), such that when the first arcing contact is being disconnected from at least one associated second arcing contact (2b), an arc (15) is produced between the first and second arcing contacts in the arc zone. The compression volume and the exhaust volume are filled with a gas. The compression volume is separated from the exhaust volume by a combined filling and overpressure valve (9) formed by at least one plate having at least one tab (7) formed in the plate. The combined filling and overpressure valve consists entirely of an elastic material.

Abstract (de)
Der erfindungsgemäße Selbstblasschalter (1) mit Kontakten für eine Zu- bzw. Abschaltung eines Stromkreises weist ein Heizvolumen (19), ein Kompressionsvolumen (4) und ein Auspuffvolumen (5) auf, wobei das Kompressionsvolumen (4) mittels mindestens eines ersten Ventils (14) mit dem Heizvolumen verbunden ist, das seinerseits mit einer Lichtbogenzone (3) verbunden ist. In der Lichtbogenzone (3) entsteht bei der Abschaltung des Stromkreises während der Trennung eines ersten Lichtbogenkontakts (2a) von einem zugeordneten zweiten Lichtbogenkontakt (2b) ein Lichtbogen (15) zwischen den zwei Lichtbogenkontakten (2a, 2b). Das Kompressionsvolumen (4) ist mittels eines als mindestens eine Platte ausgebildeten kombinierten Füll- und Überdruckventils (9) mit mindestens einer in der Platte ausgeformten Lasche (7) vom Auspuffvolumen (5) getrennt.

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Citation (applicant)
• EP 1939910 A1 20080702 - ABB TECHNOLOGY AG [CH]
• US 5589673 A 19961231 - LEHMANN VOLKER [DE], et al

Citation (search report)
• [XD] DE 4211159 A1 19931007 - SIEMENS AG [DE] & US 5589673 A 19961231 - LEHMANN VOLKER [DE], et al
• [A] DE 2316009 A1 19741010 - SIEMENS AG
• [A] DE 4107673 A1 19920910 - SACHSENWERK AG [DE]

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WO2012123032A1; US8822868B2

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