

Title (en)
Surge arrester with a gas-filled housing.

Title (de)
Überspannungsableiter mit einem gasgefüllten Gehäuse.

Title (fr)
Dérivateur de surtension muni d'un boîtier rempli d'un gaz.

Publication
EP 0087820 A1 19830907 (DE)

Application
EP 83102084 A 19830303

Priority
DE 3207663 A 19820303

Abstract (en)
[origin: US4493004A] A surge arrester, includes a gas-filled housing, copper electrodes disposed opposite each other in the housing, the electrodes each including a relatively thin-walled truncated conical part having a flange integral therewith and a solid cylindrical part, the cylindrical parts each having a respective end surface facing each other, the end surfaces being mutually spaced apart by a given distance and each having a trough-shaped axially-symmetrical depression formed therein, a highly active electrode activating compound filling each of the depressions, a tubular ceramic insulator at least partly surrounding the electrodes defining respective annular gaps between the insulator and each of the cylindrical parts having widths being substantially between 0.2 mm and 0.4 mm, the gaps including rear spaces being low in vapor depositions, the insulator having end surfaces being vacuum-tightly hard soldered to the flanges, and at least one ignition line disposed on the insulator and respectively projecting into each of the gaps and into the rear spaces by at least 1.5 mm, the given distance between the end surfaces of the cylindrical parts being at most 3.5 times the width of one of the gaps in vicinity of the at least one ignition line, the electrodes defining a discharge space including the gaps having a volume of at least 20 mm³.

Abstract (de)
Eine Verkleinerung des Außendurchmessers von Überspannungsableitern wird bei gleicher Leistungsfähigkeit erreicht, indem die Spalte (14, 15) zwischen zylindrischen Teilen (3) der Elektroden (1, 2) und dem Keramikrohr durch entsprechende Dimensionierung zum Abfangen der Druckwelle von kurzzeitigen Überschlägen mitherangezogen wird, indem Zündstriche (13) angebracht werden, die bis in einen bedampfungsarmen Hinterraum reichen, und indem das Volumen des Entladungsraumes zusammen mit den Spalten (14, 15) einen Wert von 20 mm³ nicht unterschreitet, wenn das Keramikrohr durch Hartlöten mit Flanschen (5) der Elektroden (1, 2) vakuumdicht verbunden ist. Die Erfindung eignet sich für Hauptverteiler mit großer Packungsdichte von Überspannungsableitern.

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H01T 1/20; **H01T 3/00**

IPC 8 full level
H01T 2/02 (2006.01); **H01T 1/20** (2006.01); **H01T 1/22** (2006.01); **H01T 4/04** (2006.01); **H01T 4/12** (2006.01)

CPC (source: EP US)
H01T 1/20 (2013.01 - EP US); **H01T 1/22** (2013.01 - EP US); **H01T 4/04** (2013.01 - EP US)

Citation (search report)
• [A] GB 2075252 A 19811111 - CERBERUS AG
• [A] US 3564473 A 19710216 - KAWIECKI CHESTER J
• [A] US 3904910 A 19750909 - SCHLEIMANN-JENSEN CARL ARNE
• [A] US 4104693 A 19780801 - TODA TOSHIHARU, et al

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CN105556771A; EP0482542A1; US5243257A; WO2015028436A1

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DOCDB simple family (application)
EP 83102084 A 19830303; BR 8301014 A 19830302; DE 3207663 A 19820303; DE 3373244 T 19830303; JP 3430283 A 19830302; US 47070983 A 19830228