

Title (en)
Self-regulating heating element.

Title (de)
Selbstregelndes Heizelement.

Title (fr)
Élément chauffant auto-régulateur.

Publication
EP 0057172 A2 19820804 (DE)

Application
EP 82890012 A 19820126

Priority
AT 32081 A 19810126

Abstract (en)
1. Self-regulating heating element having at least one resistor heating member (1) arranged electrically insulated in a metal shell (11; 24; 30) and made of an electrically conducting ceramic material having a positive temperature coefficient of electrical resistivity, for the electrical insulation of the heating member against the metal shell (11; 24; 30) an electrically insulating foil (7, 8, 9) and a heat-conducting electrically insulating mass is used, characterized in that between the resistor heating member and the metal shell there is arranged a single or multiple layer wound insulation (7, 8, 9) surrounding the heating member (1) and made from electrically insulating foil material, which insulation contacts on the one hand the heating member (1) and on the other hand the inner surface (10) of the metal shell (11; 24; 30), interstices (12, 14, 18; 25, 26) being present between the layers of the foil winding in case there are several layers (7, 8, 9) provided, and interstices being present between the inner surface of the foil winding (7, 8, 9) which faces the heating member and the outer surface of the heating member (1), and interstices being present between the outer surface of the foil winding (7, 8, 9) and the inner surface (10) of the metal shell (11; 24; 30) are filled by said heat conducting electrically insulating mass.

Abstract (de)
Selbstregelndes Heizelement mit einem in einer Metallhülse elektrisch isoliert angeordneten Widerstands-Heizkörper aus stromleitendem Keramikmaterial mit positivem Temperaturkoeffizienten des elektrischen Widerstandes. Bei diesem Heizelement ist die Isolierung durch eine oder mehrere Folienlagen, die einerseits am Heizkörper und andererseits an der Innenfläche der Metallhülse anliegen, gebildet. Die Zwischenräume sind mit einer wärmeleitenden Masse gefüllt.

IPC 1-7
H05B 3/14; **H05B 3/42**

IPC 8 full level
H05B 3/14 (2006.01); **H05B 3/42** (2006.01)

CPC (source: EP)
H05B 3/141 (2013.01); **H05B 3/42** (2013.01); **H05B 2203/02** (2013.01)

Cited by
EP1429084A1; EP1036930A1; CN102798218A; EP0340550A3; EP0234608A1; EP2571330A4; GB2493486B; US6402943B1; WO9619139A1; WO9107068A1; EP3101999A1; US10524310B2

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