

Title (en)
IMPROVEMENTS RELATING TO HEATING ELEMENTS, PARTICULARLY IN THE FIELD OF THICK FILM HEATING ELEMENTS

Title (de)
VERBESSERUNGEN FÜR HEIZELEMENTE, INSBESONDERE FÜR DICKSCHICHTHEIZELEMENTE

Title (fr)
AMELIORATIONS APPORTEES A DES ELEMENTS CHAUFFANTS, NOTAMMENT DANS LE DOMAINE DES ELEMENTS CHAUFFANTS EN COUCHE EPAISSE

Publication
EP 1177708 B2 20121212 (EN)

Application
EP 00927490 A 20000504

Priority
• GB 0001695 W 20000504
• GB 9910286 A 19990504

Abstract (en)
[origin: WO0067527A1] A thick film heating element for a water boiling vessel is secured to the bottom of the vessel with a heat dispersion layer of copper or aluminium between the vessel bottom and the thick film heating element and extending laterally beyond the edges of the thick film heating element. The thick film heating element is about half the size of a conventional thick film heating element (about 60mm as compared to 110mm) with a corresponding cost reduction, and has at least twice as high a power density (60W/cm<2>) as compared to 30W/cm<2>) and yet does not generate excessive noise in operation.

IPC 8 full level
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CPC (source: EP)
H05B 3/262 (2013.01); **H05B 3/78** (2013.01); **H05B 3/82** (2013.01); **H05B 2203/013** (2013.01); **H05B 2203/017** (2013.01)

Citation (opposition)
Opponent :
• EP 0885579 A1 19981223 - EGO ELEKTRO GERAETEBAU GMBH [DE]
• DE 3625087 A1 19880128 - EGO ELEKTRO BLANC & FISCHER [DE]
• EP 0229928 A2 19870729 - BOSCH SIEMENS HAUSGERAETE [DE]
• EP 0585015 A1 19940302 - IST LAB LTD [GB]
• WO 9618331 A1 19960620 - STRIX LTD [GB], et al
• WO 9714269 A1 19970417 - STRIX LTD [GB], et al
• EP 0574310 A1 19931215 - SEB SA [FR]

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EP3338598A3; AU2018200033B2; US10874256B2

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WO 0067527 A1 20001109; AT E311083 T1 20051215; CN 1162044 C 20040811; CN 1358402 A 20020710; DE 60024253 D1 20051229; DE 60024253 T2 20060824; DE 60024253 T3 20130529; EP 1177708 A1 20020206; EP 1177708 B1 20051123; EP 1177708 B2 20121212; GB 2351894 A 20010110; GB 2351894 B 20031015; GB 9910286 D0 19990630

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