

Title (en)
A TUBULAR-SHAPED HEATING ELEMENT

Title (de)
ROHRFÖRMIGES HEIZELEMENT

Title (fr)
ELEMENT CHAUFFANT DE FORME TUBULAIRE

Publication
EP 1290381 A1 20030312 (EN)

Application
EP 01945250 A 20010605

Priority
• EP 0106357 W 20010605
• IT MO20000122 A 20000608

Abstract (en)
[origin: WO0194861A1] This invention describes a water heating element which can be used for both boilers and electrical appliances in general. A printed electrical resistor (4, 4.1) is applied to a piece of piping (3) used to dispense hot water, using a printing technique such as, for example, screen printing. The whole created by the said two elements constitutes the essential part of a heating element (1, 1.1) which is tubular and can have different sizes and conformations and it can incorporate other means required in water heating devices.

IPC 1-7
F24H 9/18; **F24H 1/20**; **F24H 1/12**

IPC 8 full level
F24H 1/12 (2006.01); **F24H 1/20** (2006.01); **F24H 9/18** (2006.01); **F24H 9/00** (2006.01)

CPC (source: EP US)
F24H 1/121 (2013.01 - EP); **F24H 1/202** (2013.01 - EP); **F24H 9/0021** (2013.01 - EP); **F24H 9/133** (2022.01 - EP); **F24H 9/1818** (2013.01 - EP); **F24H 9/45** (2022.01 - EP); **F24H 9/455** (2022.01 - EP US)

Citation (search report)
See references of WO 0194861A1

Designated contracting state (EPC)
AT BE CH CY DE DK ES FI FR GB GR IE IT LI LU MC NL PT SE TR

DOCDB simple family (publication)
WO 0194861 A1 20011213; AT E321985 T1 20060415; AU 6751901 A 20011217; CN 1232781 C 20051221; CN 1434915 A 20030806; DE 60118378 D1 20060518; DE 60118378 T2 20061207; DK 1290381 T3 20060731; EP 1290381 A1 20030312; EP 1290381 B1 20060329; ES 2261423 T3 20061116; HK 1056768 A1 20040227; IT 1315636 B1 20030314; IT MO20000122 A1 20011210

DOCDB simple family (application)
EP 0106357 W 20010605; AT 01945250 T 20010605; AU 6751901 A 20010605; CN 01810783 A 20010605; DE 60118378 T 20010605; DK 01945250 T 20010605; EP 01945250 A 20010605; ES 01945250 T 20010605; HK 03109001 A 20031211; IT MO20000122 A 20000608