

Title (en)
SEGMENTED RAPID HEATING OF FLUID

Title (de)
SEGMENTIERTE SCHNELLE FLÜSSIGKEITSERWÄRMUNG

Title (fr)
CHAUFFAGE DE FLUIDE RAPIDE SEGMENTÉ

Publication
EP 2247894 A4 20141203 (EN)

Application
EP 09710664 A 20090211

Priority
• AU 2009000158 W 20090211
• AU 2008900634 A 20080211

Abstract (en)
[origin: WO2009100486A1] A fluid heating apparatus has a fluid flow path from an inlet to an outlet, with multiple heating sections positioned along the flow path. Each heating section is at least one pair of electrodes between which an electric current is passed through the fluid to resistively heat the fluid during its passage along the flow path. At least one of the heating sections has a segmented electrode made up of a plurality of electrically separable segments. This allows an effective active area of the segmented electrode to be controlled by selectively activating the segments. A controller determines a required voltage and current to be delivered to the fluid by each heating section, and allows for input conductivity as well as variations in fluid conductivity with temperature. The controller activates selected segments of the segmented electrode to effect delivery of desired current and voltage by the segmented electrode to the fluid.

IPC 8 full level
F22B 1/30 (2006.01); **F24D 13/02** (2006.01); **F24H 1/10** (2006.01); **H05B 3/03** (2006.01)

CPC (source: EP US)
F22D 1/00 (2013.01 - EP US); **F24H 1/106** (2013.01 - EP US); **F24H 9/2028** (2013.01 - EP US); **F24H 15/168** (2022.01 - EP US); **F24H 15/175** (2022.01 - EP US); **F24H 15/215** (2022.01 - EP US); **F24H 15/219** (2022.01 - EP US); **F24H 15/238** (2022.01 - EP US); **F24H 15/281** (2022.01 - EP US); **F24H 15/37** (2022.01 - EP US); **H05B 1/0244** (2013.01 - EP US)

Citation (search report)
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Designated contracting state (EPC)
AT BE BG CH CY CZ DE DK EE ES FI FR GB GR HR HU IE IS IT LI LT LU LV MC MK MT NL NO PL PT RO SE SI SK TR

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WO 2009100486 A1 20090820; AU 2009214821 A1 20090820; AU 2009214821 B2 20121213; BR PI0908467 A2 20160621; BR PI0908467 B1 20191126; CA 2712301 A1 20090820; CA 2712301 C 20160816; CN 101952654 A 20110119; CN 101952654 B 20130717; EP 2247894 A1 20101110; EP 2247894 A4 20141203; EP 2247894 B1 20180620; ES 2687417 T3 20181025; JP 2011511919 A 20110414; MX 2010008829 A 20100907; NZ 587587 A 20120427; RU 2010137848 A 20120320; RU 2484366 C2 20130610; US 2010322605 A1 20101223; ZA 201005703 B 20120125

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