

Title (en)  
High efficiency fluid heating apparatus

Title (de)  
Flüssigkeitserhitzer mit hohem Wirkungsgrad

Title (fr)  
Réchauffeur de fluide à haut rendement

Publication  
**EP 1130336 A3 20030402 (EN)**

Application  
**EP 01301253 A 20010214**

Priority  
GB 0003802 A 20000219

Abstract (en)  
[origin: EP1130336A2] An apparatus for heating fluids comprises a flow duct for the fluid to be heated, an electrically inductive impeller 13 disposed in the flow duct, a motor 10 arranged to rotate the impeller 13 to cause the fluid to flow along the flow duct and a coil 21 disposed adjacent the impeller 13. A high frequency signal is applied to the coil 21, which generates a magnetic field that induces eddy currents in impeller 13. The impeller 13 is not an ideal conductor, and thus the electrical energy is dissipated as heat as current flows through the impeller. The heat generated in the impeller 13 is transferred to the fluid as it is driven along the duct by the impeller 13. <IMAGE>

IPC 1-7  
**F24H 1/22**; **H05B 6/02**

IPC 8 full level  
**F24H 1/22** (2006.01); **F24J 3/00** (2006.01); **H05B 6/02** (2006.01)

CPC (source: EP)  
**F24H 1/225** (2013.01); **F24V 99/00** (2018.04); **H05B 6/108** (2013.01); **H05B 6/129** (2013.01)

Citation (search report)

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- [A] DE 19915842 A1 19991223 - USUI KOKUSAI SANGYO KK [JP]
- [A] US 5914065 A 19990622 - ALAVI KAMAL [US]
- [A] PATENT ABSTRACTS OF JAPAN vol. 018, no. 418 (M - 1650) 5 August 1994 (1994-08-05)

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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)  
**EP 1130336 A2 20010905**; **EP 1130336 A3 20030402**; GB 0003802 D0 20000405; GB 2362306 A 20011114

DOCDB simple family (application)  
**EP 01301253 A 20010214**; GB 0003802 A 20000219