

Title (en)
Fluid heater

Title (de)
Vorrichtung zum Erwärmen einer Flüssigkeit

Title (fr)
Réchauffeur de fluide

Publication
EP 0908685 A3 20010509 (DE)

Application
EP 98119017 A 19981008

Priority
DE 19744478 A 19971009

Abstract (en)
[origin: EP0908685A2] Flue gases are introduced into water via a diving bell submerged in the top region of the vessel. A heat exchanger is linked to different heights in the vessel wall. Water (4) is heated inside a non-pressurised vessel (2) which contains an immersed diving bell (6). Liquid fuel is burnt inside a combustion chamber (8) and flue gases exit the burner (10) to enter the diving bell and then leave through an exit region (12) of the diving bell to enter the water, resulting in it being directly heated. A distributor plate (14) is provided at the diving bell exit to ensure good distribution of flue gases in the water. The diving bell is immersed only in the top region of the liquid so that layers of water with different temperature are formed. A heat exchanger (24) is connected to the vessel wall at different heights corresponding to different temperature layers. Useful heat is effectively recovered from flue gases.

IPC 1-7
F24H 1/10

IPC 8 full level
F24H 1/10 (2006.01)

CPC (source: EP)
F24H 1/107 (2013.01)

Citation (search report)
• [A] DE 2130770 A1 19721228 - LINDE ROBERT VON DIPL ING
• [A] US 4685444 A 19870811 - DUERRENBURGER WILLY [CH]
• [A] DE 9310503 U1 19940217 - HERLE ALEXANDER P [DE]

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

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