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(54) **A system and method for heating fluids, and an adapter for use with a boiler**

(57) A fluid heating system, comprising: a heater having an inlet and an outlet; a storage vessel; a fluid mixer having a first inlet for receiving fluid stored in or passing through the storage vessel, a second inlet for receiving fluid from a cold fluid supply, and an outlet for supplying fluid to the heater inlet; wherein in a first mode the heater

is operable to heat fluid in the storage vessel, and in a second mode the fluid mixer mixes fluid from or passing through the storage vessel with fluid from the cold fluid supply at a predefined volumetric ratio to provide mixed fluid to the inlet of the heater to be heated further to an output temperature.

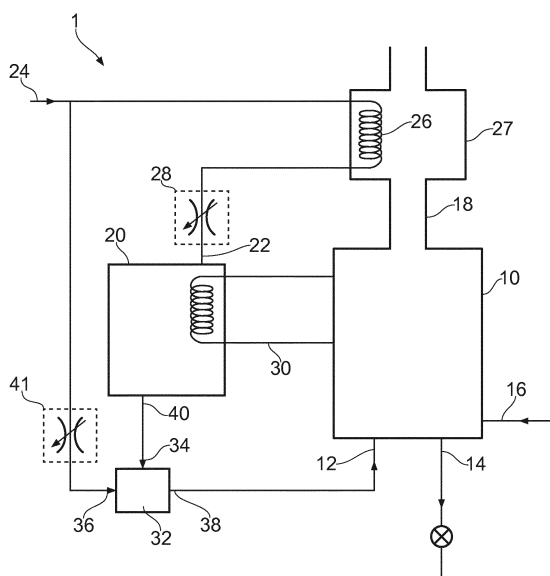


FIG. 1



EUROPEAN SEARCH REPORT

Application Number
EP 13 19 7862

DOCUMENTS CONSIDERED TO BE RELEVANT			
Category	Citation of document with indication, where appropriate, of relevant passages	Relevant to claim	CLASSIFICATION OF THE APPLICATION (IPC)
X	WO 2006/051259 A1 (ZENEX TECHNOLOGIES LTD [GB]; FARRELL CHRISTOPHER CHARLES [GB]) 18 May 2006 (2006-05-18) * page 5 - page 11; figure 3 *	1,4-7,18	INV. F24D3/08 F28D21/00
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Y	----- US 4 406 402 A (HENRIQUES JOSEPH [US]) 27 September 1983 (1983-09-27) * column 10; figure 1c *	2	
Y	----- GB 2 200 439 A (CARADON MIRA LTD CARADON MIRA LTD [GB]) 3 August 1988 (1988-08-03) * the whole document *	3	
A	----- US 4 462 542 A (PERSON THOMAS C [US]) 31 July 1984 (1984-07-31) * the whole document *	1,2,4,5,7	
A	----- EP 1 139 029 A2 (BOSCH GMBH ROBERT [DE]) 4 October 2001 (2001-10-04) * paragraph [0018] *	1,2,4,5,7	
A	----- EP 1 249 666 A2 (BOSCH GMBH ROBERT [DE]) 16 October 2002 (2002-10-16) * the whole document *	2	TECHNICAL FIELDS SEARCHED (IPC) F24D F28D
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The present search report has been drawn up for all claims			
Place of search Munich		Date of completion of the search 7 April 2014	Examiner Riesen, Jörg
CATEGORY OF CITED DOCUMENTS X : particularly relevant if taken alone Y : particularly relevant if combined with another document of the same category A : technological background O : non-written disclosure P : intermediate document T : theory or principle underlying the invention E : earlier patent document, but published on, or after the filing date D : document cited in the application L : document cited for other reasons & : member of the same patent family, corresponding document			

EPO FORM 1503 03.82 (P04C01)



Application Number

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CLAIMS INCURRING FEES

The present European patent application comprised at the time of filing claims for which payment was due.

☐ Only part of the claims have been paid within the prescribed time limit. The present European search report has been drawn up for those claims for which no payment was due and for those claims for which claims fees have been paid, namely claim(s):

☐ No claims fees have been paid within the prescribed time limit. The present European search report has been drawn up for those claims for which no payment was due.

LACK OF UNITY OF INVENTION

The Search Division considers that the present European patent application does not comply with the requirements of unity of invention and relates to several inventions or groups of inventions, namely:

see sheet B

☐ All further search fees have been paid within the fixed time limit. The present European search report has been drawn up for all claims.

☐ As all searchable claims could be searched without effort justifying an additional fee, the Search Division did not invite payment of any additional fee.

☐ Only part of the further search fees have been paid within the fixed time limit. The present European search report has been drawn up for those parts of the European patent application which relate to the inventions in respect of which search fees have been paid, namely claims:

☒ None of the further search fees have been paid within the fixed time limit. The present European search report has been drawn up for those parts of the European patent application which relate to the invention first mentioned in the claims, namely claims:

1-7, 18

☐ The present supplementary European search report has been drawn up for those parts of the European patent application which relate to the invention first mentioned in the claims (Rule 164 (1) EPC).



**LACK OF UNITY OF INVENTION
SHEET B**

Application Number

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The Search Division considers that the present European patent application does not comply with the requirements of unity of invention and relates to several inventions or groups of inventions, namely:

1. claims: 1-7, 18

A fluid heating system and a method of operating a fluid heating system

2. claims: 8-17

An adapter and the application of the adapter in a fluid heating system

**ANNEX TO THE EUROPEAN SEARCH REPORT
ON EUROPEAN PATENT APPLICATION NO.**

EP 13 19 7862

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This annex lists the patent family members relating to the patent documents cited in the above-mentioned European search report.
The members are as contained in the European Patent Office EDP file on
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07-04-2014

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For more details about this annex : see Official Journal of the European Patent Office, No. 12/82