



(11) **EP 1 995 542 A3**

(12) **EUROPEAN PATENT APPLICATION**

(88) Date of publication A3:
08.07.2009 Bulletin 2009/28

(51) Int Cl.:
F28D 7/10 (2006.01) **F28F 1/08** (2006.01)
F28F 9/26 (2006.01)

(43) Date of publication A2:
26.11.2008 Bulletin 2008/48

(21) Application number: **08156712.5**

(22) Date of filing: **22.05.2008**

(84) Designated Contracting States:
**AT BE BG CH CY CZ DE DK EE ES FI FR GB GR
HR HU IE IS IT LI LT LU LV MC MT NL NO PL PT
RO SE SI SK TR**
Designated Extension States:
AL BA MK RS

(72) Inventors:
• **Lai, Giovanni**
20039, Varedo (MI) (IT)
• **Destro, Bruno**
20093, Cologno Monzese (MI) (IT)

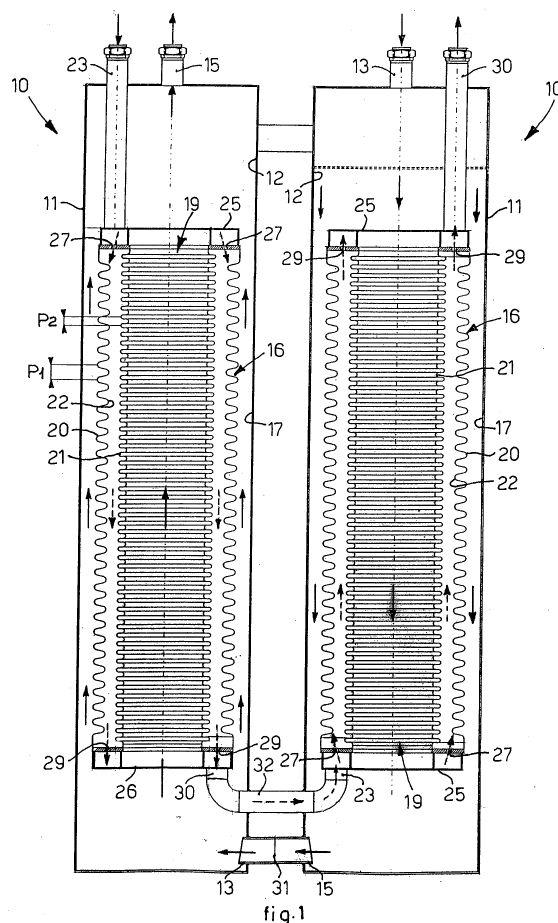
(30) Priority: **24.05.2007 IT UD20070087**

(74) Representative: **Petraz, Gilberto Luigi et al**
GLP S.r.l.
Piazzale Cavedalis 6/2
33100 Udine (IT)

(71) Applicant: **Emiflex SpA**
20039 Varedo (MI) (IT)

(54) **Heat exchange device**

(57) Heat exchange device (10) comprising a first tubular pipe (11) having inside it a first cylindrical cavity (12) in which a first fluid flows, and a second tubular pipe (16) in which a second fluid flows which in turn exchanges heat with the first fluid. The second tubular pipe (16) is disposed coaxial inside the first cylindrical cavity (12) of the first tubular pipe (11), creating with the first tubular pipe (11) a first annular interstice (17) for the passage of the first fluid. The device (10) is advantageously associated with a source of heating and the second tubular pipe (16) comprises inside it a second cylindrical through cavity (19), which defines another passage for the first fluid, so as to allow it to flow both outside the second tubular pipe (16), through the first annular interstice (17), and also inside the second tubular pipe (16), through the second cylindrical cavity (19).



EP 1 995 542 A3



EUROPEAN SEARCH REPORT

Application Number
EP 08 15 6712

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	EP 0 276 521 A (SCHMIDT W GMBH CO KG [DE]) 3 August 1988 (1988-08-03) * column 9, line 34 - line 58; claim 7; figures 1,13,14 *	1,3-6	INV. F28D7/10 F28F1/08 F28F9/26
X	DE 31 00 021 A1 (WITZENMANN METALLSCHLAUCHFAB [DE]) 29 July 1982 (1982-07-29) * page 11 - page 15; figures *	1,2,5,6	
X	EP 1 388 720 A (MAHLE TENNEX CORP [JP] MAHLE FILTER SYSTEMS JAPAN COR [JP]) 11 February 2004 (2004-02-11) * paragraph [0044]; figure 8 *	1,3-6	
X	GB 05943 A A.D. 1905 (BECKETT EDWARD HENRY) 14 September 1905 (1905-09-14) * the whole document *	1,3-7	
X	GB 158 483 A (WILLIAM ALBERT WHITE) 10 February 1921 (1921-02-10) * the whole document *	1,3-6	
			TECHNICAL FIELDS SEARCHED (IPC)
			F28D F28F
The present search report has been drawn up for all claims			
Place of search The Hague		Date of completion of the search 3 June 2009	Examiner Mootz, Frank
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			

1
EPO FORM 1503 03 82 (P04C01)

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

EP 08 15 6712

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
The European Patent Office is in no way liable for these particulars which are merely given for the purpose of information.

03-06-2009

Patent document cited in search report	Publication date	Patent family member(s)	Publication date
EP 0276521	A	03-08-1988	AU 1153688 A 27-07-1988
			DK 478888 A 26-08-1988
			WO 8805150 A1 14-07-1988
			EP 0295292 A1 21-12-1988
			JP 1502213 T 03-08-1989
DE 3100021	A1	29-07-1982	NONE
EP 1388720	A	11-02-2004	NONE
GB 190505943	A	14-09-1905	NONE
GB 158483	A	10-02-1921	NONE