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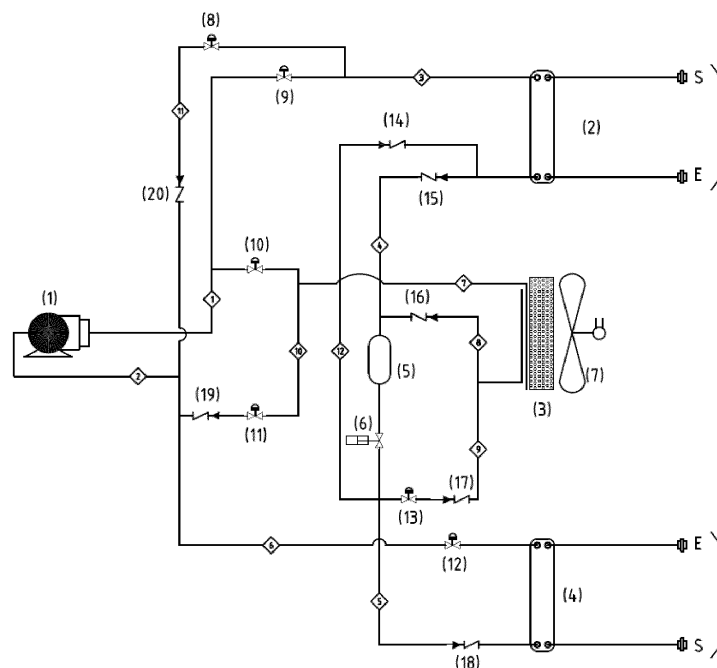
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(54) **Refrigeration circuit for an air-conditioning machine.**

(57) Refrigeration circuit for a water-air-water mechanical compression air-conditioning machine that can produce simultaneously or alternately cold water for cooling and hot water for heating, which, under the opening and closing position to take the electro-valves and the

constraints-return valves that compose it, can take different operating configurations, called Water-Water, Air, Water Cooling, Air-Water Heating, Efficient Defrosting and Defrosting.

FIGURE 1





EUROPEAN SEARCH REPORT

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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 2012/144137 A1 (TGK CO LTD) 26 October 2012 (2012-10-26) * paragraph [0011] - paragraph [0045]; figures 1-3 *	1-6	INV. F25B25/00 F25B41/00 F25B47/02
E	& EP 2 700 853 A1 (TGK CO LTD [JP]) 26 February 2014 (2014-02-26) * paragraph [0011] - paragraph [0045]; figures 1-3 *	1-6	ADD. F25B5/04 F25B6/04
X	----- US 5 239 838 A (TRESSLER STEVEN N [US]) 31 August 1993 (1993-08-31) * column 2, line 45 - column 4, line 40; figure 1 * -----	1-6	
			TECHNICAL FIELDS SEARCHED (IPC)
			F25B
The present search report has been drawn up for all claims			
Place of search Munich		Date of completion of the search 28 February 2018	Examiner Szilagyi, Barnabas
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			

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

EP 13 38 2443

5 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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28-02-2018

Patent document cited in search report	Publication date	Patent family member(s)	Publication date
WO 2012144137 A1	26-10-2012	EP 2700853 A1	26-02-2014
		JP 5740596 B2	24-06-2015
		JP 2012225438 A	15-11-2012
		KR 20140027282 A	06-03-2014
		WO 2012144137 A1	26-10-2012

US 5239838 A	31-08-1993	NONE	
