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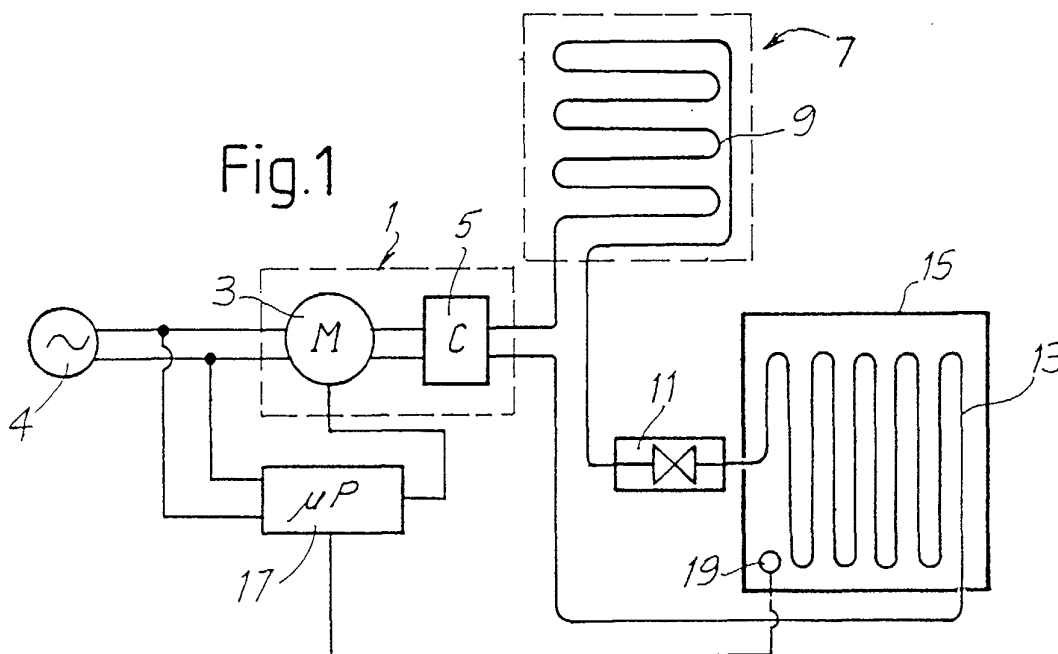
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(54) **Method for reducing energy consumption in a refrigerating machine, and refrigerating machine operating according to said method**

(57) The method for controlling a motor compressor (3, 5) in a refrigerating machine envisages determining an optimal rate (f_{ott}) of operation of the motor compressor, which minimizes energy consumption of the ma-

chine, and causing said motor compressor to operate, during each turning-on cycle, alternatively at said optimal rate (f_{ott}) or at a higher rate (f_{max}) according to the required cooling rate.





European Patent
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EUROPEAN SEARCH REPORT

Application Number
EP 01 83 0751

DOCUMENTS CONSIDERED TO BE RELEVANT			
Category	Citation of document with indication, where appropriate, of relevant passages	Relevant to claim	CLASSIFICATION OF THE APPLICATION (Int.Cl.7)
X	EP 0 490 089 A (ZANUSSI ELETTRODOMESTICI) 17 June 1992 (1992-06-17) * page 2, line 26 - line 54; claim 5 *	1,12	F25B49/02
A	* the whole document *	2-11,13	
X	US 5 673 568 A (ISSHIKI MASAO) 7 October 1997 (1997-10-07) * column 2, line 28 - line 45 *	1,12	
A	* the whole document *	2-13	
	* column 5, line 4 - line 45 *		
	* column 6, line 11 - line 16 *		
X	US 4 831 313 A (BEILFUSS ROBERT C) 16 May 1989 (1989-05-16) * abstract *	1,12	
A	* the whole document *	2-13	
X	PATENT ABSTRACTS OF JAPAN vol. 1999, no. 01, 29 January 1999 (1999-01-29) & JP 10 288408 A (YASKAWA ELECTRIC CORP;KANDENKO CO LTD), 27 October 1998 (1998-10-27) * abstract *	1,12	
A	US 4 608 833 A (KOUNTZ KENNETH J) 2 September 1986 (1986-09-02) * the whole document *	1-13	
A	US 6 134 901 A (AARESTRUP JAN ET AL) 24 October 2000 (2000-10-24) * the whole document *	1-13	TECHNICAL FIELDS SEARCHED (Int.Cl.7) F25B
A	EP 0 921 363 A (LIEBHERR HAUSGERAETE) 9 June 1999 (1999-06-09) * the whole document *	1-13	
		-/--	
The present search report has been drawn up for all claims			
Place of search MUNICH		Date of completion of the search 18 July 2002	Examiner Ritter, C
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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Office

EUROPEAN SEARCH REPORT

Application Number
EP 01 83 0751

DOCUMENTS CONSIDERED TO BE RELEVANT			
Category	Citation of document with indication, where appropriate, of relevant passages	Relevant to claim	CLASSIFICATION OF THE APPLICATION (Int.Cl.7)
A	EP 0 803 788 A (ROBERTSHAW CONTROLS CO) 29 October 1997 (1997-10-29) * the whole document *	1-13	
			TECHNICAL FIELDS SEARCHED (Int.Cl.7)
The present search report has been drawn up for all claims			
Place of search MUNICH		Date of completion of the search 18 July 2002	Examiner Ritter, C
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)

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

EP 01 83 0751

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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18-07-2002

Patent document cited in search report		Publication date	Patent family member(s)	Publication date
EP 0490089	A	17-06-1992	IT 1247635 B	28-12-1994
			AT 142312 T	15-09-1996
			DE 69121856 D1	10-10-1996
			DE 69121856 T2	27-02-1997
			DK 490089 T3	28-10-1996
			EP 0490089 A2	17-06-1992
			ES 2095284 T3	16-02-1997
			US 5282723 A	01-02-1994
US 5673568	A	07-10-1997	JP 7332740 A	22-12-1995
			CN 1115020 A	17-01-1996
			GB 2289962 A ,B	06-12-1995
			KR 164917 B1	15-01-1999
US 4831313	A	16-05-1989	NONE	
JP 10288408	A	27-10-1998	NONE	
US 4608833	A	02-09-1986	CA 1238395 A1	21-06-1988
			DE 3568470 D1	06-04-1989
			EP 0186332 A1	02-07-1986
			JP 2007225 C	11-01-1996
			JP 7042958 B	15-05-1995
			JP 61160597 A	21-07-1986
US 6134901	A	24-10-2000	DK 111096 A	10-04-1998
			AU 4452297 A	05-05-1998
			BR 9712984 A	18-04-2000
			WO 9815790 A1	16-04-1998
			EP 0931236 A1	28-07-1999
EP 0921363	A	09-06-1999	DE 19753425 C1	12-08-1999
			EP 0921363 A2	09-06-1999
EP 0803788	A	29-10-1997	US 5533349 A	09-07-1996
			EP 0803788 A1	29-10-1997
			DE 69616750 D1	13-12-2001