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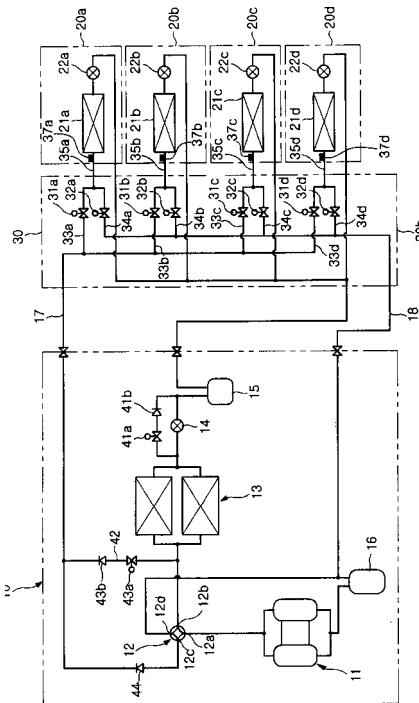
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## (54) Checking Air Conditioning System Installation

(57) A multi air conditioning system and a method for inspecting pipe connection thereof, in which the pipe connection is rapidly inspected and the reliability in inspecting the pipe connection is improved. The method for inspecting the multi air conditioning system, which includes a plurality of indoor units and a mode converter having a plurality of heating valve-cooling valve sets for controlling refrigerant flowing into the indoor units, includes: changing opened and closed states of one heating valve-cooling valve set out of the plural heating valve-cooling valve sets during the operation of the system; detecting the indoor unit having a heat exchanger, the temperature of which varies corresponding to the change of the opened and closed states of the heating valve-cooling valve set; and determining, when the indoor unit having the heat exchanger, the temperature of which varies, matches with the heating valve-cooling valve set having the changed opened and closed states thereof, that the connection between the indoor unit having the heat exchanger, the temperature of which varies, and the heating valve-cooling valve set, having the changed the opened and closed states thereof, is normal.

FIG. 1





## EUROPEAN SEARCH REPORT

Application Number  
EP 05 10 0920

DOCUMENTS CONSIDERED TO BE RELEVANT			CLASSIFICATION OF THE APPLICATION (IPC)
Category	Citation of document with indication, where appropriate, of relevant passages	Relevant to claim	
X	JP 2 097848 A (DAIKIN IND LTD) 10 April 1990 (1990-04-10) * the whole document * -----	1-17	INV. F24F3/06 F24F11/00 F25B49/00
X	JP 2002 013777 A (SANYO ELECTRIC CO; SANYO ELECTRIC AIR CONDITION) 18 January 2002 (2002-01-18) * the whole document * -----	1-17	
A	JP 2003 254582 A (MATSUSHITA ELECTRIC IND CO LTD) 10 September 2003 (2003-09-10) * the whole document * -----	1-17	
A	JP 2 230045 A (DAIKIN IND LTD) 12 September 1990 (1990-09-12) * the whole document * -----	1-17	
A	JP 9 112998 A (MITSUBISHI HEAVY IND LTD) 2 May 1997 (1997-05-02) * the whole document * -----	1-17	
A	JP 7 305879 A (DAIKIN IND LTD) 21 November 1995 (1995-11-21) * the whole document * -----	1-17	
A	JP 5 203228 A (MITSUBISHI HEAVY IND LTD) 10 August 1993 (1993-08-10) * the whole document * -----	1-17	
			TECHNICAL FIELDS SEARCHED (IPC)
			F24F F25B
The present search report has been drawn up for all claims			
1	Place of search	Date of completion of the search	Examiner
EPO FORM 1503 03.82 (P04C01)	Munich	15 November 2010	González-Granda, C
CATEGORY OF CITED DOCUMENTS		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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ON EUROPEAN PATENT APPLICATION NO.**

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15-11-2010

Patent document cited in search report		Publication date		Patent family member(s)		Publication date
JP 2097848	A	10-04-1990	JP	2094148 C	02-10-1996	
			JP	8014439 B	14-02-1996	
JP 2002013777	A	18-01-2002		NONE		
JP 2003254582	A	10-09-2003		NONE		
JP 2230045	A	12-09-1990	JP	2028618 C	19-03-1996	
			JP	7065792 B	19-07-1995	
JP 9112998	A	02-05-1997	JP	3492050 B2	03-02-2004	
JP 7305879	A	21-11-1995		NONE		
JP 5203228	A	10-08-1993		NONE		