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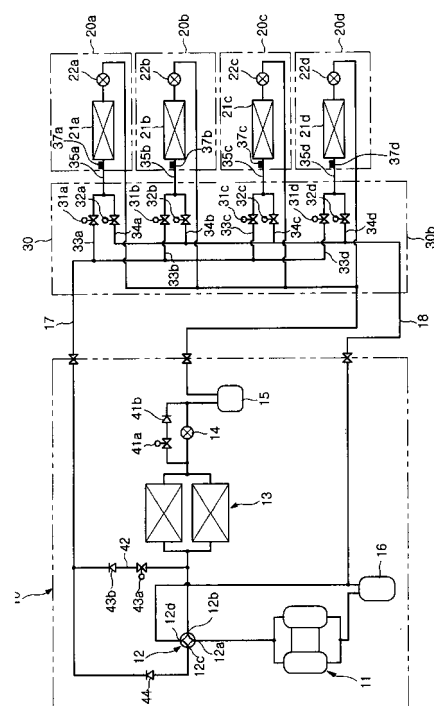
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(54) **Checking Air Conditioning System Installation**

(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

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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	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	F24F F25B
The present search report has been drawn up for all claims			
Place of search Munich		Date of completion of the search 15 November 2010	Examiner González-Granda, 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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**ANNEX TO THE EUROPEAN SEARCH REPORT
ON EUROPEAN PATENT APPLICATION NO.**

EP 05 10 0920

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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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	
