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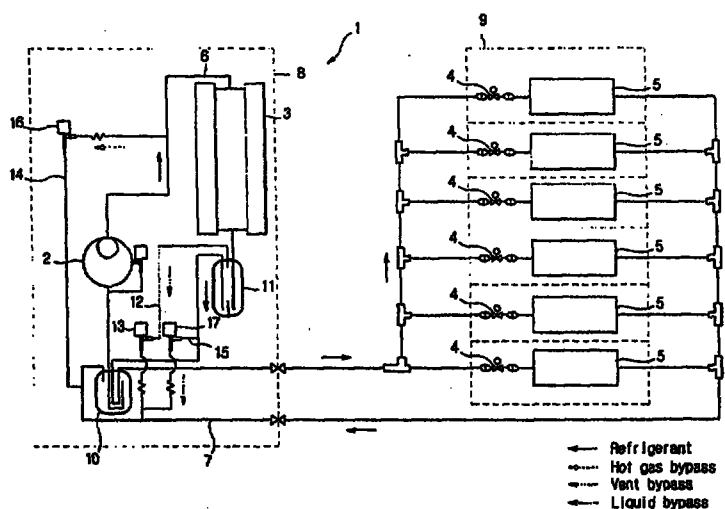
Gangdong-Gu, Seoul 134-070 (KR). KIM, Young, Man [KR/KR]; #20-1209 Hyundai Apt., 1436-1, Seocho-1-Dong, Seocho-Gu, Seoul 137-071 (KR). LEE, Jung, Min [KR/KR]; 416, Maetan-3-Dong, Paldal-Gu, Suwon-City, Kyungki-Do 442-373 (KR). MOON, Jae, Myoung [KR/KR]; #519 Joogong 5th Apt., 408, Maetan-Dong, Paldal-Gu, Suwon-City, Kyungki-Do 442-370 (KR). KIM, Jong, Youb [KR/KR]; 414-7, Homae-sil-Dong, Kwonseon-Gu, Suwon-City, Kyungki-Do 441-450 (KR). CHO, Il, Yong [KR/KR]; #Na-301, Shinhwa-Villa, 985-9, Shinjeong-4-Dong, Yangcheon-Gu, Seoul 441-450 (KR).

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(54) Title: AIR CONDITIONER CONTROL SYSTEM AND CONTROL METHOD THEREOF



(57) Abstract: An air conditioner control system comprises an outdoor unit having a compressor controlled by pulse-width modulation, and a plurality of indoor units. Each of the plurality indoor units has an indoor control unit to calculate a respective required individual cooling capacity, and an indoor communication circuit unit through which the required individual cooling capacity calculated is transmitted. The outdoor unit has an outdoor control unit producing a duty cycle control signal in response to the required individual cooling capacity transmitted from the indoor units to control the capacity of the compressor, and an outdoor communication circuit unit to communicate the indoor communication circuit unit of respective ones of the plurality of indoor units. Each of the plurality of indoor units calculates the required individual cooling capacity based on at least one of an available cooling capacity of the respective one of the plurality of indoor units itself and the difference between a detected indoor air temperature and a preset temperature.

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