



- (51) **International Patent Classification:**
F28D 5/00 (2006.01) *F24D 3/12* (2006.01)
- (21) **International Application Number:**
PCT/CN2011/002042
- (22) **International Filing Date:**
7 December 2011 (07.12.2011)
- (25) **Filing Language:** English
- (26) **Publication Language:** English
- (72) **Inventors; and**
- (71) **Applicants :** LEE, Yiu Wah [CN/CN]; B2, Lavender Garden, 9 Hilltop Road, Tsuen Wan, Hong Kong (CN). NGAN, Hoi Miu [CN/CN]; Flat B, 10th Floor, Elegant Court, Pictorial Garden, Phase 2, 23 On King Street, Shatin, New Territories, Hong Kong (CN).
- (74) **Agent:** BEIJING ARETE INTELLECTUAL PROPERTY AGENCY; Suite 1201, Building 3, Zhubang 2000 Business Center, No.98, Ba Li Zhuang Xi Li, Chaoyang District, Beijing 100025 (CN).
- (81) **Designated States** (unless otherwise indicated, for every kind of national protection available): AE, AG, AL, AM,

AO, AT, AU, AZ, BA, BB, BG, BH, BR, BW, BY, BZ, CA, CH, CL, CN, CO, CR, CU, CZ, DE, DK, DM, DO, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, GT, HN, HR, HU, ID, IL, IN, IS, JP, KE, KG, KM, KN, KP, KR, KZ, LA, LC, LK, LR, LS, LT, LU, LY, MA, MD, ME, MG, MK, MN, MW, MX, MY, MZ, NA, NG, NI, NO, NZ, OM, PE, PG, PH, PL, PT, QA, RO, RS, RU, RW, SC, SD, SE, SG, SK, SL, SM, ST, SV, SY, TH, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, ZA, ZM, ZW.

- (84) **Designated States** (unless otherwise indicated, for every kind of regional protection available): ARIPO (BW, GH, GM, KE, LR, LS, MW, MZ, NA, RW, SD, SL, SZ, TZ, UG, ZM, ZW), Eurasian (AM, AZ, BY, KG, KZ, MD, RU, TJ, TM), European (AL, AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HR, HU, IE, IS, IT, LT, LU, LV, MC, MK, MT, NL, NO, PL, PT, RO, RS, SE, SI, SK, SM, TR), OAPI (BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG).

Published:

— with international search report (Art. 21(3))

(54) **Title:** TEMPERATURE REGULATING MODULE

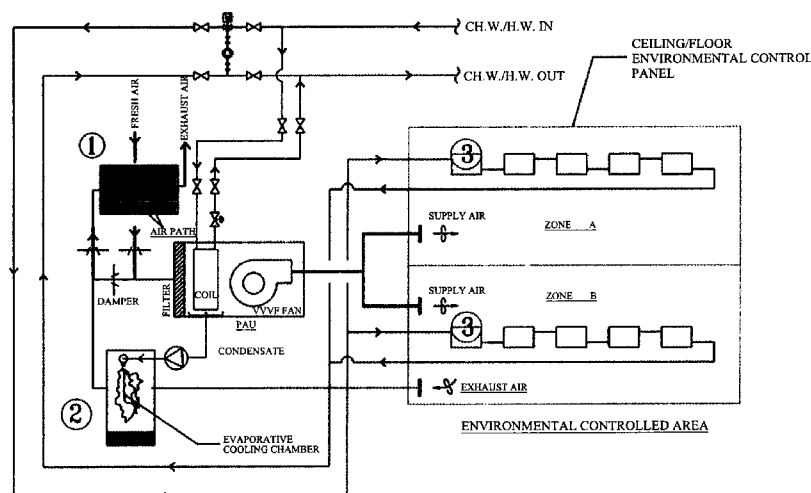


Figure 1

(57) **Abstract:** A temperature regulating module comprises a multilayer heat exchange panel, a primary air handling unit, a compressor, a condenser coil and an evaporator coil. The multilayer heat exchange panel comprises a heat conductive outer layer having an external surface and an inner surface, a heat conductive conduit (101) positioned adjacent to the inner surface of the outer layer and running continuously, and at least one layer of heat conductive metal fin (201) with void or apertures in each layer through which holding the conduit (101). The edge on one side of each layer of the metal fin (201) contacts the outer layer. The conduit is fashioned in a parallel arrangement or a serpentine arrangement with an inlet (111) and an outlet (121) to channel a temperature-regulated flowable medium. The multilayer heat exchange panel can achieve heat equilibrium and avoid creation of hot or cool spots.