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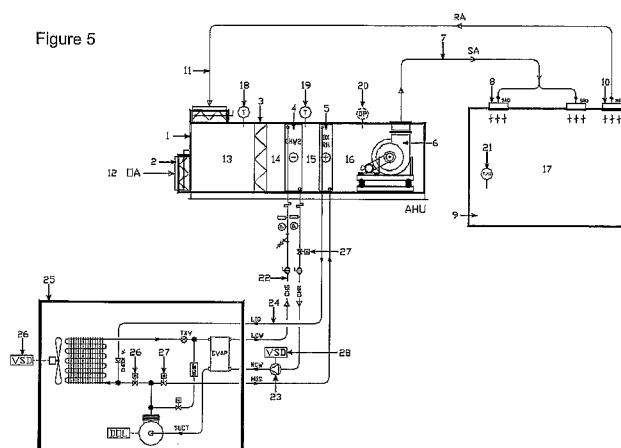
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(54) Title: CONDENSATION TYPE DEHUMIDIFIER



(57) Abstract: A condensation type dehumidifier in an Air Handling Unit (AHU) of an air conditioning system is disclosed which is capable of supplying air at low dew point temperature. Its principle components comprised a chilled water cooling coil (4) which obtains chilled water from a chiller (25) and a hot gas reheat coil set (5) that obtains the heat from a discharge refrigerant gas of a compressor with a discharge hot gas volume control valve. The chiller includes a compressor, a heat coil, a refrigerant control valve and an evaporator which cooperate to cool air down to the dew point. It also supply chilled water to a chilled water cooling coil by pumping the chilled water (23) to the evaporator through a chilled water duct (22) and chilled water cooling coil (4) to dehumidify air at dew point temperature of 2 C without any freezing problems at the cooling coil. The chilled water temperature and humidity are regulated within a room in accordance to wherein said chiller comprises a control valve that controls volume of refrigerant flowing there through. The refrigerant flow includes flowing through the refrigerant duct and to a hot gas reheat coil by high end pressure of the compressor, next to a condenser in the chiller to turn into liquid and then flowing to a pressure regulator thereafter.