

Radiation Heat Exchanging Air Conditioning System and Radiation Heat-exchanging Ceiling thereof

Abstract

A radiation heat exchanging air conditioning system and a radiation heat
5 exchanging ceiling thereof are disclosed. The air conditioning system
includes a heat pump system (7) and a water circulation system (8), and
water circulation system (8) includes a heat exchanging device (11) for
water, a pump (9), a heat exchanging device (10) for air, a radiation heat
exchanging ceiling (20) and air outlets (15). The heat is exchanged between
10 the heat exchanging device (11) for water and the heat pump system (7). The
radiation heat exchanging ceiling (20) includes a metal ceiling panel (1) and
a heat exchanging coil (2), said heat exchanging coil (2) is installed on the
poor thermal-conductivity coil brackets (4) mounted on the upper surface of
the metal ceiling panel (1), thus leading to the short distance and no direct
15 contact between the heat exchanging coil (2) and the metal ceiling panel (1).
A metal foil (5), a heat insulating material layer (3) and a seal layer (6) are
provided above the heat exchanging coil (2).

(Fig. 3)