

5. Heating Ventilation Air Conditioning Systems Using Ground Source Heat

Satoshi Shimizu, Hidetaka Funaki, Masafumi Moteki

A focus was placed on soil heat as a renewable energy source, and an HVAC system using soil heat was installed on the first floor of a management building at the Technical Research Institute and verification tests were conducted. Tests were conducted during the system operation for cooling and heating using the operating condition as a parameter. Based on such measurements as power consumption, system efficiency and earth temperature, results were obtained that would help improve the methods of designing and operating the HVAC system using soil heat.

Keywords: ground source heat, boreholes, heat pumps, renewable energy