

Tuesday 8 December 2009

Site Investigation for Design of Geothermal Energy - Ground Source Heating and Cooling Systems

Dr Yalcin Irfan, Cundall

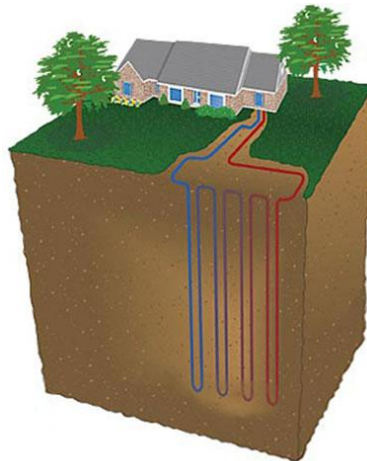


Image courtesy of ClimateMaster

Geothermal (ground) energy has been utilized by man for many centuries, generally in a small scale (e.g. Roman and Turkish Baths), and more recently for heating/cooling residential properties and small to medium size industrial /commercial developments in some European and North American countries. The UK is a latecomer in the use of geothermal energy and ground source heating and cooling systems (GSHC) but its use has been increasing exponentially since about 2002.

There is a significant role to be played by geo-engineers and geoscientists in this country in the field of geothermal energy. In this presentation, Dr Yalcin Irfan will be briefly describing various geothermal energy sources before concentrating on the design of ground source heating and cooling systems (including aquifer based systems). The emphasis of the talk is on the site investigation methodology and ground investigation techniques used. A few select case histories based on his own experience will be described where ground conditions significantly affected the design of GSHC systems.

Yalcin has a BSc in Geology from University College London and PhD in Engineering Geology from Newcastle University. He started his working life as a young engineering geologist for MTA in Turkey before accepting a lectureship at the Middle East Technical University in Ankara in 1978. He then worked for the Geotechnical Engineering Office (GEO) of Hong Kong Government for 15 years and returned to the UK in the summer of 1997. Since returning to the UK he worked as an associate director for WSP Environmental and as a technical director for Babbie Group/Jacobs.

Yalcin joined Cundall in May 2005 as a partner to set up and develop the firm's geotechnical department which provides an advisory and design service in all aspects of geotechnical and geoenvironmental engineering.

**6.15 pm (tea from 5.45 pm)
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