

Design of Residential Geothermal Cooling System in Kuwait

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Abstract : Article spotlights the heat transfer process based beneath the earth's surface. The process starts by exchanging the heat found in the building as fluid in the pipes absorbs it, then transports it down the soil consuming cool temperature exchange, recirculating, and rebounding to deliver cool air. This system is a renewable energy that is reliable and sustainable. The analysis showed the disposal of fossil fuels, energy preservation, 400% efficiency, long lifespan, and lower maintenance. Investigation displays the system's types of design, whether open or closed loop and piping layout. Finally, the geothermal cooling study presents the challenges of creating a prototype in Kuwait, as constraints are applicable due to geography.

Keywords : cooling system, engineering, geothermal cooling, natural ventilation, renewable energy

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