Modeling Under Floor Heating

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ABSTRACT

The report consists of introduction to the under floor heating system which provides a better understanding on the heating system. The mechanical engineering part of the project calculates and simulates the heat distribution of the system. Heat transfer theory is also introduced to give a perceptive on how heat transfer affects the efficiency of the heating system.

The electrical engineering part of this project provides a thermal control system to manage the temperature of the heating system. A circuit that can provide an energy saving control system and can maintain the temperature of the room is designed and constructed. Thus, a simple thermostat was built to control the heating system.

Lastly, the civil engineering section studies the selection of materials in order to maximize the efficiency of the under floor heating system.

In this project, the group conducted research on the electric under floor heating system and the temperature control system. Research was also conducted on the heat distribution and materials to ameliorate the efficiency of the system.