

June 2016, MM424 Graduation Project

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MM424 MECHANICAL ENGINEERING APPLICATIONS II PROJECTS

DESIGN, PROTOTYPE PRODUCTION AND EXPERIMENTAL INVESTIGATION OF THE HEAT PERFORMANCE FROM FLOOR TYPE CONVECTORS

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Heating, ventilation and air conditioning systems that are used commonly in the market cannot ensure adequate conditions for the people who are affected easily by the warm and cold air currents, especially created by blast air conditioning systems and high humidity rates. Besides, even though the thermal comfort conditions are provided in average that are expected in the building rooms with curtain wall, unwanted results occur in front of windows resulting from radiation. This situation is the same for the luxury buildings in which large glasses are used. The idea of the project is emerged from the purpose of finding solutions for such kind of problems.

Within the project, theoric designs and prototype productions of floor type convectors will be executed. Likewise, heating capacities under various ambient and water intake temperatures will be determined experimentally. Floor type convectors with several sizes will also be tested. Thus, floor type convectors that can create environments with accepted levels of humidity and low air speed through natural compulsory heat transfer will be ready for the mass production in the way their capacity specifications are determined besides completing their theoretical designs.



