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Investigating and Comparing the Performance of Baseboard and Panel Radiators by Calculating the Thermal Comfort Coefficient

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Abstract : In this study, to evaluate the performance of Baseboard and Panel radiators with thermal comfort coefficient, A room with specific dimensions was modeled with Ansys fluent and DesignBuilder, then calculated the speed and temperature parameters in different parts of the room in two modes of using Panel and Baseboard radiators and it turned out that use of Baseboard radiators has a more uniform temperature and speed distribution, but in a Panel radiator, the room is warmer. Then, by calculating the thermal comfort indices, It was shown that using a Panel radiator is a more favorable environment and using a Baseboard radiator is a more uniform environment in terms of thermal comfort.

Keywords : Radiator, Baseboard, optimal, comfort coefficient, heat
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