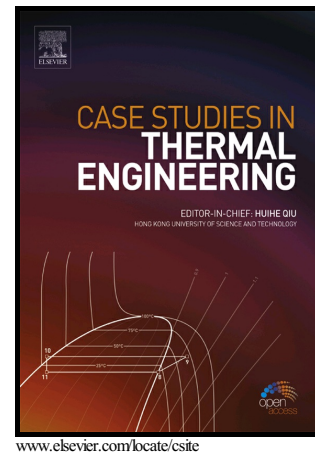


# Author's Accepted Manuscript

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## Some particular design considerations for optimum utilization of under floor heating systems

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### Abstract

This paper aims at studying the thermal behavior of an under floor heating system via CFD calculations. The results have discussed some important parameters that need to be controlled for an appropriate operation of the system. These parameters include the velocity inside the pipes, inlet temperatures and the patterns of the tubing form. A new parameter to measure the floor thermal homogeneity has been introduced and evaluated. It is found that, generally, the modulated spiral configuration is the best configuration allowing less pressure losses and better thermal homogenization.

**Keywords:** Under-floor heating; design; temperature distribution; thermal homogenization; configuration

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