

CFD Simulations to Examine Natural Ventilation of a Work Area in a Public Building

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Abstract : Natural ventilation has played an important role for many low energy-building designs. It has been also noticed as a essential subject to persistently bring the fresh cool air from the outside into a building. This study carried out the computational fluid dynamics (CFD)-based simulations to examine the natural ventilation development of a work area in a public building. The simulated results can be useful to better understand the indoor microclimate and the interaction of wind with buildings. Besides, this CFD simulation procedure can serve as an effective analysis tool to characterize the airing performance, and thereby optimize the building ventilation for strengthening the architects, planners and other decision makers on improving the natural ventilation design of public buildings.

Keywords : CFD simulations, natural ventilation, microclimate, wind environment

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