

Influences of High Rise Buildings on Local Air Flow Characteristics on External Surfaces of Neighboring Buildings

Authors : Meral Yucel, Vildan Ok

Abstract : This study indicates the wind effects of 49-storey height four towers on a high-density urban area-consisting of 10-12 storey height buildings called Goztepe in Istanbul, Turkey. For this purpose, four towers and close environments are modeled in 1/500 scale for wind tunnel test. Three neighboring buildings are chosen to find out the pressure coefficient changes on the surfaces of the buildings according to the construction order of these four towers and wind directions. Results were compared with the 'TS 498 Wind Standard of Tall Buildings in Istanbul' which is prepared by Istanbul Metropolitan Municipality in 2009.

Keywords : high rise buildings, pressure coefficients, wind tunnel experiments, wind standard of tall buildings

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