

Wind Interference Effect on Tall Building

Authors : Atul K. Desai, Jigar K. Sevalia, Sandip A. Vasanwala

Abstract : When a building is located in an urban area, it is exposed to a wind of different characteristics than wind over an open terrain. This is development of turbulent wake region behind an upstream building. The interaction with upstream building can produce significant changes in the response of the tall building. Here, in this paper, an attempt has been made to study wind induced interference effects on tall building. In order to study wind induced interference effect (IF) on Tall Building, initially a tall building (which is termed as Principal Building now on wards) with square plan shape has been considered with different Height to Width Ratio and total drag force is obtained considering different terrain conditions as well as different incident wind direction. Then total drag force on Principal Building is obtained by considering adjacent building which is termed as Interfering Building now on wards with different terrain conditions and incident wind angle. To execute study, Computational Fluid Dynamics (CFD) Code namely Fluent and Gambit have been used.

Keywords : computational fluid dynamics, tall building, turbulent, wake region, wind

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