Emirates Marina Hotel & Residences, Dubai, UAE

Wind Engineering Study

Completed Tower

Pressure Model

Client Khatib & Alami Consolidated Engineering Company	*Structural Engineer* Khatib and Alami Consolidated Engineering Company	*Owner* Emirates Group
Height 227 meters	*Year Tested* 2002	*Model Scale* 1:400

The Project

The tower is part of the Dubai Marina zone. It has 59 floors that rise to a height of 227 meters above the ground. The top of the structure has an ornamental dome and antennae that rise approximately 29 meters above the top parapet.

The Wind Tunnel Studies

The wind engineering studies for the tower included a local cladding pressure study and the wind-induced structural loads, pedestrian level winds and overall structural loads and responses.

The study of wind-induced cladding pressures was carried out for 680 measurement locations. Two tests were carried out to examine existing and proposed future development around the site.

The overall structural loads and responses for the tower were obtained by using the loads from pressures technique.

The pedestrian level wind study examined 25 locations around the tower including on top of the low-rise podium.

The Boundary Layer Wind Tunnel Laboratory

Western

The Boundary Layer Wind Tunnel Laboratory
The University of Western Ontario
Faculty of Engineering, London, Ontario
Canada, N6A 5B9 Tel: (519) 661-3338 Fax: (519) 661-3339
Internet: www.blwtl.uwo.ca E-mail: info@blwtl.uwo.ca

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