Shanghai Grand Center, Shanghai, China

Wind Engineering Study

Client	Structural Engineer	Architect
Skidmore, Owings & Merrill LLP	Skidmore, Owings & Merrill LLP	Skidmore, Owings & Merrill LLP
Height	**Year Tested**	**Model Scale**
41 storeys, 173.5m	2006	1:400

The Project

The project consists of a 41-storey office tower that is 173.5m tall, resembling a basic rectangular shape with several setbacks and overhangs. The pedestrian level includes a sunken garden and a pearl structure, as well as a crossing bridge over the sunken garden and a long rain canopy over the entrance of the office tower.

The project site is located in Shanghai Pu Dong New District, in a triangular-shaped land bordered by Century Boulevard, Xiang Cheng Road and Fu Shan Road.

The Wind Tunnel Studies

The wind engineering studies for Shanghai Grand Center included a study of the wind-induced structural loads and responses, local cladding pressure loads and pedestrian level wind conditions.

The study of wind-induced cladding pressures was carried out for 528 measurement locations distributed over the project. Pedestrian level wind speeds were determined at 22 locations around the project site.

Information on the overall structural loads and responses was determined for the office tower from detailed simultaneous pressure measurements.

The Boundary Layer Wind Tunnel Laboratory

Western

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