

PROJECT NAME: LUSAIL TOWERS



Photo: Lusail Plaza site showing the podiums with UHPC cladding (courtesy of Foster + Partners)

Location: Lusail City, Doha, Qatar
Client: Doha Extraco & Gulf GRC
Product: ceEntek ce200PF-W™

Product Volume: 6,000 tons
Panel Dimension: Various
Completion Date: July 2022

PROJECT SITE



Photo: Lusail Podium Facades with rainscreen cladding

Lusail Plaza Towers is a Landmark Project designed by Foster + Partners for the 2022 World Cup Championships in Qatar. The development consists of two towers at 70 stories and two at 50 stories totaling a GFA of 660,000 m² (excluding landscape area). Lusail The project is located in 4 separate adjacent plots. Each plot accommodates a super tall tower and podium area with 3 to 4 low rise buildings on each podium. Lusail Towers will be the tallest development in the Qatar state and will be featured in the opening & closing ceremonies of the 2022 World Cup.

PROJECT PROFILE

PROJECT DESCRIPTION

Lusail towers will host the headquarters for the Qatar National Bank, Qatar Central Bank, and Qatar Investment Authority alongside several other global organizations. Environmental design was a key driver in the project's design. Targeting 4 stars in the regional Global Sustainability Assessment System (GSAS), the design includes centralized thermal storage using innovative phase change materials, high-pressure hydronic systems, demand-controlled ventilation, and efficient LED lighting. The molded white UHPC panels give the buildings a high thermal mass, with minimal punched windows that reduce the amount of solar heat to the interior space.



Photo: Internal view of Lusail Podium Facades cladding

PROJECT EXECUTION

The manufacturing of the UHPC façade elements was awarded to Doha Extraco, a subcontractor to Midmac-MIC Construct JV, and to GULF GRC, a subcontractor to Hyundai Engineering and Construction Company. ceEntek was approached by both companies to deliver 6,000 tons of white UHPC material within Q4 of 2021 and Q1 of 2022. ceEntek's UHPC was supplied via sea freight in 20' containers and consisted of one ton jumbo bags and 200L drums with the mixing admixture. The clients batched the materials in 1m³ pan mixers and casted the panels at their precast facilities located within 25km radius of the project site. ceEntek's UHPC material developed compressive strength of 140MPa in 28 days and the panels were demoulded within 12 hrs of casting.



Photos: Precast UHPC Panels (L); Assembly of UHPC Panels for Podiums (R)