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Nanchang Waves Community Centre built from glass fibre reinforced concrete

SLITHERING THROUGH THE WETLANDS

The Nordic Office of Architecture in Oslo, Norway, designed a recently completed multifunctional complex in the city of Nanchang in the province of Jiangxi, China. The design of Nanchang Waves was inspired by the surrounding wetlands. Located on the border of the Elephant Lake Wetlands Park, the 5,844 m² complex offers an astonishing spatial experience, as the shapes of the building and the surrounding landscape flow nearly seamlessly into one another. A double helix-shaped tower is the design's most distinctive feature and offers visitors a 360-degree view along the meandering building's length.



The concept for Nanchang Waves is derived from the surrounding marshy landscape. The complex could even be mistaken for a large water park when viewed from a distance. Twisty paths evoke a winding river and the architecture's 'rippled' appearance reflects the contours of the adjacent lake.

CONSTRUCTION WITH CHALLENGING SHAPES

The peripheral steel support structure has a unique shape and consists of a series of bent and twisted steel elements. The outer curtain wall was created from a number of randomly curved GFRB panels (Glass Fibre Reinforced Concrete). BeiLiDa New Material System Engineering made the GFRB panels for this project and over the past few years, also developed and implemented a number of innovative and patented GFRB products and mounting systems in similarly geometrically complex projects. This prefab concrete manufacturer devised solutions that are capable of overcoming any challenge and complying with all requirements. . For the hyperbolic,

GFRB cladding, they developed a construction technique that produces a highly precise, fully secure and specially shaped GFRB cladding system which can be modified and/or removed as desired. Use of BIM technology made it possible to share design, production, installation and maintenance data with the other parties involved.

THE POWER OF WHITE CEMENT

The white cement used to create the GFRB products for this project is Aalborg White 52.5 cement, manufactured at the Cementir plant in the city of Anqing. As this white cement offers exceptional purity and stability, GFRB manufacturers love to use it in their end products. The high levels of purity and stability make it an ideal choice for any coloured concrete product. Even with architectural products that are based on grey cement, white cement is employed to achieve an even surface colour. The chemical stability of the white cement determines the end product's quality.

'The white cement's high levels of purity and stability make it an ideal choice for any coloured concrete product.'

CONSTRUCTION INFO

ARCHITECT

Architecture Nordic Office of Architecture, Oslo, Norway

BUILDER

Rambøll Gruppe A/S, Copenhagen, Denmark

GLASS FIBRE REINFORCED CONCRETE

BeiLiDa New Material System Engineering co. Ltd., Nanjing, China

AALBORG WHITE® CEMENT

Aalborg Portland Co., Ltd., Anqing, China