Seawall strengthening for Burj al Arab Hotel, Dubai, UAE

KEY DETAILS

Project:
Seawall Strengthening the iconic Burj Al Arab

Location:
Dubai, United Arab Emirates

Client:
Jumeirah Group

Consultant:
CH2MHill

Designer:
Atkins

Criteria:
- Corrosion resistant
- Salt water resistant
- Life cycle of 50 years

The Burj al Arab is the iconic 7-star hotel located on a man-made island in Dubai.

The reinforcement of 1,500 SHED concrete armor units protecting the Burj al Arab was required, as part of their maintenance programme.

In the 20 years since the Burj al Arab Island was constructed, advances in corrosion resistant construction materials have become available, with **mateenbar™** leading the way.

The Burj al Arab Island is protected by an existing layer of wave energy dissipating SHED units. Design studies found there would be benefits in using **mateenbar** in 1,500 SHED units in the three layers of the tidal zone. They will ensure the long term durability and corresponding aesthetic quality of the main island is retained.

Alternative proposals were considered and deemed unsuitable by the design consultant, Atkins. These included black steel reinforcement (limited durability), epoxy coated (reliability issues), galvanized (reliability and environmental issues) and stainless steel reinforcement (increased cost). **Mateenbar** was the rebar material of choice, due to its proven durability in an active, marine environment. It also offered the best whole-of-life savings.

LESS MAINTENANCE AND A LONGER LIFE CYCLE

To achieve the minimum 50-year service life requirement, Atkins recommended the use of **mateenbar** to reinforce the 1.5m high SHED cubes.

Mateenbar has given Jumeriah Group the opportunity to extend the structural life and realize long term capital and operational cost savings.

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