

cuttable • non-corrosive • non-magnetic • non-conductive • high strength • light weight

Burj al Arab Hotel, Dubai, UAE

Reinforcement of 1,500 SHED concrete armor units protecting the iconic Burj al Arab hotel.

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

The Burj al Arab hotel was completed in 1999, and is undergoing a scheduled routine maintenance and upgrade process.

In the 20 years since the Burj al Arab Island was constructed, advances in corrosion resistant construction materials, such as Pultron Composites mateenbar™ GFRP rebar, have become available.

The Burj al Arab Island is protected by an existing layer of wave energy dissipating SHED units. Design studies found there would be benefit in using mateenbar™ in 1,500 SHED units in the 3 layers of the tidal zone to ensure the long term durability and corresponding aesthetic quality of the main island are retained.

Alternative proposals were considered by the design consultant Atkins, but rejected as unsuitable. These included black steel reinforcement (limited durability), epoxy coated (reliability issues), galvanized (reliability and environmental issues) and stainless steel reinforcement (increased cost).

To achieve the service life requirement, Atkins recommended the use of mateenbar™ to reinforce the 1.5m high SHED cubes. The project required design life is 50 years. mateenbar™ has given Jumeriah Group the opportunity to extend the structure design life and realize long term capital and operational cost savings.

mateenbar™ is a rust-free, salt resistant reinforcement rod, and is an ideal application for marine environments.

mateenbar™ is manufactured of high performance composite materials including vinyl-ester resin and ECR glass fibers.



Client: Jumeirah Group
Consultant: CH2MHill
Precast Units: Dubai Precast
Designer: Atkins
Year: 2015
Location: Dubai, UAE