



LOTUS MEGA YACHT

INSTALLING FLOORING IN A SHIP IS A CHALLENGE THAT REQUIRES RELIABLE, DURABLE SOLUTIONS

Exposure to heat, direct sunlight, saltwater and foot traffic: this is what the internal and external floors have to withstand on the Lotus Mega Yacht, a grandiose luxury yacht launched a short while ago in Dubai after being commissioned by Epic Luxury Yachts UAE, a company that rents out yachts, which had decided to build a yacht with luxurious and prestigious finishing touches.

The Lotus Mega Yacht has been built to host important events such as corporate conventions and wedding parties, with enough room in its large spaces to accommodate hundreds of people.

The yacht – 67 metres long and around 15 metres wide – has 11 large cabins, a 1,200 m² suite with a retractable roof and a glass-fronted balcony with panoramic views, a night

club, a restaurant and kitchen to cater for up to 500 people, ball rooms for up to 1,000 guests, passenger lifts, automatic doors and a 70-seat cinema with a large screen.

The main bridge has a large, temperature-controlled swimming pool, while on the other three bridges there is a hydro-massage pool for up to 10 people and 5 smaller Jacuzzis, a Spa centre with a sauna, steam-room and changing rooms and, to round it all off, a garage with a number of jet-skis.

THE PROBLEM OF INSTALLING EXTERNAL FLOORS

Well known for their adhesives, sealants and chemical products for the building industry and highly appreciated for their on-site technical support, Mapei was contacted to provide products to smooth and level the internal and external metal

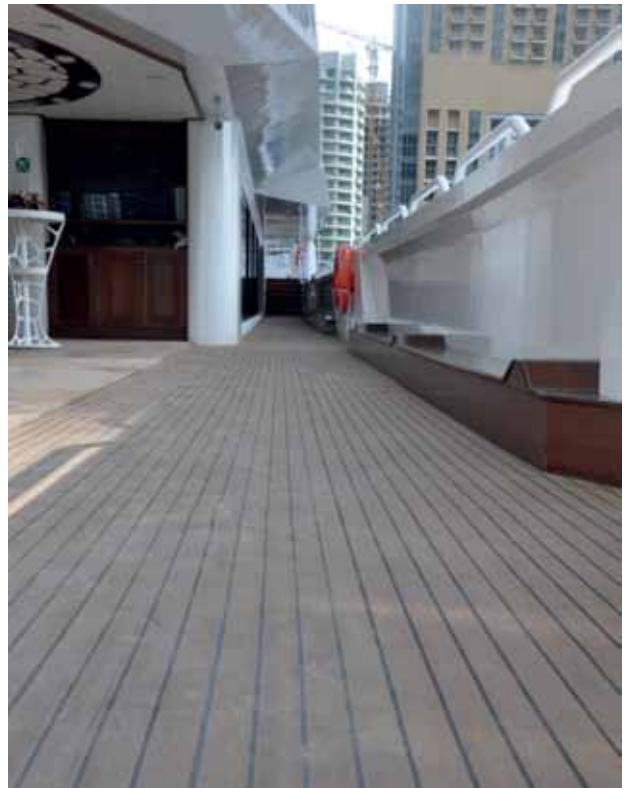


substrates and install the flooring. The solutions proposed by the competitors had proven to be inefficient for what was the major challenge: the water-tightness of the materials installed after being exposed to direct sunlight and the corrosive actions of seawater for long periods of time. The key to overcoming these problems successfully was the correct preparation of the metal installation surfaces using the right products.

Mapei Technical Services were on site for the entire duration of the work so that the client and contractor could be sure the proposed products and solutions were applied correctly. Mapei products were used to install the decking and the rubber flooring on the external bridges, tiles in the swimming pool on the main bridge, the kitchen coverings and the bathrooms for the cabins. The total surface area installed amounted to around 2,000 m².

As far as the external areas were concerned, the metal surfaces were treated with PRIMER MF two-component, epoxy resin-based, low viscosity primer. This product is solvent-free and non-flammable. The surface of the primer was broadcast with QUARTZ 1.2 ME to guarantee perfect adhesion of the smoothing and levelling compound. Then, in order to form a perfectly flat surface, the substrates were levelled with ULTRAPLAN FIBER KIT ultra rapid-hardening, self-levelling smoothing compound (manufactured and distributed exclusively in the UAE), which had been recommended to the client

ABOVE. A view of the Lotus Mega Yacht
BELOW. Before installing the flooring, the surfaces of the bridges were treated with PRIMER MF and smoothed over with ULTRAPLAN FIBER KIT.





ABOVE. The ceramic tiles and marble for the swimming pool were bonded with ADESILEX P10+ISOLASTIC and grouted with KERAPOXY.
BELOW. The various types of flooring on the 4 bridges were installed with KERALASTIC and ULTRACOLOR PLUS.



ON THE RIGHT. KERAFLEX MAXI S1 was used to bond the flooring in the internal areas and bathrooms.

for its high level of resistance to foot traffic.

Once the surfaces had been levelled off, a coat of KERALASTIC two-component, solvent and water-free polyurethane adhesive was applied on the surface to make it more elastic and waterproof.

At this point the decking flooring was bonded in place with KERALASTIC T two-component polyurethane adhesive while for the rubber coating ADESILEX G19 epoxy-polyurethane adhesive has been chosen. The grout lines were filled with ULTRACOLOR PLUS high-performance, anti-efflorescence, rapid-setting and drying polymer-modified mortar with water-repellent DropEffect® and anti-mould BioBlock® technology.

Mapei products were also chosen to install ceramic and marble in the swimming pool on the main bridge. White ADESILEX P10 non-slip, improved cementitious adhesive was used to bond the tiles. This product is particularly suitable for bonding glass mosaics, ceramic and marble. To improve its performance characteristics and deformability to the requirements of class S1 (deformable adhesive) according to EN 12004 standards, 50% of the mixing water for the ADESILEX P10 adhesive was replaced with ISOLASTIC elasticising latex.

The grout lines were filled with KERAPOXY and the separation joints were sealed with MAPESIL AC pure acetic solvent-free, silicone sealant. The wide range of 34 colours available for this particular sealant met the requirements of the client, enabling a finish to be obtained which was well up to the standards required for the yacht.

PRESTIGIOUS FINISHES FOR THE INTERNAL SURFACES

The internal floors in the kitchen and the bathrooms for the cabins were prepared using the same method as for the external surfaces, by applying PRIMER MF, QUARTZ 1.2 ME and ULTRAPLAN FIBER KIT in the same order. The tiles on these surfaces, on the other hand, were bonded with KERAFLEX MAXI S1, a non-slip adhesive with a good degree of deformability which, thanks to the use of innovative Low Dust technology, considerably reduces the amount of dust given off when mixing the product. ULTRACOLOR PLUS was used to grout the joints. KERAFLEX MAXI S1 was also used to bond the tiles in the bathrooms and, in this case, KERAPOXY anti-acid epoxy mortar was the preferred choice to fill the grout lines.



IN THE SPOTLIGHT

KERAFLEX MAXI S1

It is a deformable (S1), improved (2) slip resistant (T) cementitious adhesive (C) with extended open time (E) classified as C2TE S1 according to EN 12004. It is used for interior and exterior bonding, up to 15 mm thick, on floor or ceramic tiles of every type and size on uneven substrates and renders; for interior and exterior bonding of stone materials; for spot bonding of insulating material in interiors. It can contribute up to **3 points** to obtain the **LEED** certification for eco-sustainable buildings.



TECHNICAL DATA

Lotus Mega Yacht, Dubai (UAE)

Period of Construction: 2014-2016

Period of Intervention: 2015-2016

Intervention by Mapei: supplying products for substrate preparation and for the installation and grouting of manifold surfaces

Project: Lotus Mega Yacht

Client: Dutch Oriental/Epic Luxury Yachts

Contractor: Lotus Mega Yacht

Installer Company: Epic Luxury Yachts

Mapei Coordinator: Shoeb Ali Khan (Mapei Construction Chemicals LLC)

MAPEI PRODUCTS

Substrate preparation: Primer MF, Quartz 1.2 ME, Ultraplan Fiber Kit*

Installation of decking and of rubber flooring: Keralastic T, Adesilex G19

Installation and grouting of ceramics and marble: Keralastic, Ultracolor Plus, Keraflex Maxi S1, Kerapoxy, Adesilex P10, Isolastic

*This product is distributed on the United Arab Emirates by Mapei Construction Chemicals LLC

For further information on products see www.mapei.com and www.mapei.com.au