M.M. S.R.L.
Fiberglass Reinforced Polymer gratings and structures

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ESCAPE ROUTES ON CHEMICAL TANKERS

LOCATION

Major Mediterranean shipyard where oil tankers, cargo ships, container ships and sometimes also passenger ships such as ferry boats and yachts are built. The yard has around 3250 employees. The history of the shipyard and the harbour is strictly linked to the historic and political events of the town.

CLIENT

Big shipyard on the Croatian Adriatic coast. Public company in the process of becoming a privately held company.

LOCATION	RIJEKA (CROATIA)
USE	WALKING SURFACES
PRODUCT	COMPODECK - SCH 38/38_CFR

OBJECTIVE

A ship is one of the environments which are most subject to corrosion and decline in the intrinsic properties of materials and, as such, it continuously generates maintenance costs. The ship owner wished to use composite materials for the flooring in order to minimize costs and reduce the ship weight without altering the ship technical properties. Specific requests: to meet fire safety requirements in compliance with the ASTM E84 Standard Test Method. Since the ship is used for transport of chemicals and gases, conductive materials were to be used. Moreover, different materials were to be used for escape routes and pedestrian coverings and - in compliance with existing rules - indoor and outdoor floorings needed to have different characteristics.

SOLUTION

M.M. supported shipyard technicians and recommended specific products. The different ship areas were identified according to the indications provided in the main ship registers and the most appropriate product types were identified. For the main escape routes, which were directly linked to the FIRE FIGHTING systems, the innovative COMPODECK grating was suggested and later installed. COMPODECK is a special decking system made of mixed GRP and steel composite material, ranked Level 1 according to the PFM 2-98 U.S. Coast Guard file memorandum. For the other specific areas, the M.M. grating, type SCH 38/38 was used. As the ship is designed to transport chemicals, a formula containing conductive polyester resin (CFR) was selected, with the aim of reducing electrostatic discharge to a minimum. The gratings were classified as excellent conductive materials according to the relevant standards (EN 61340-2.3 Par. 8.1 and 8.2 – IEC 61340-4.1 Par. 5.1.2 ref. ISO 1957 – IEC 61340-4.5 - ASTM D149-97a). All walking surfaces feature a slip resistant coating (R13 V10 Level) in compliance with the DIN 51130 standard. For all anchoring systems 316 L stainless steel was used.