

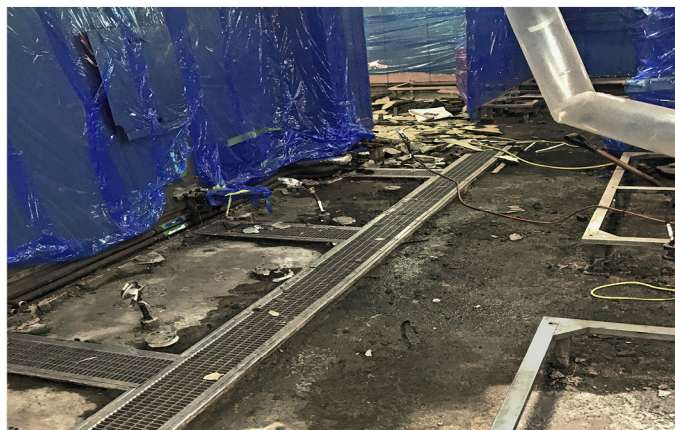
### CASE STUDY: CORROSION PROTECTION

#### Requirements

A Canberra Class Royal Australian Navy ship needed urgent replacement of its galley floor. Concrete underlayment and ceramic tiles failed, leaving cracked screed and broken tiles. Improper sloping resulted in standing water that penetrated the concrete underlayment, corroding the steel deck. A solution was needed during the next refit period to waterproof from the deck up and prevent future corrosion, while providing proper sloping to galley scuppers and drains.



Canberra Class Royal Australian Navy Ship



Removal of the galley's failed cement based decking and ceramic tiles, uncovering major water ingress.

#### Results

- **Waterproof** – Seamless, full resin system prevents oxidation to protect steel deck structural integrity
- **Sloping Underlayment** – Trowel applied for proper sloping to scuppers and drains
- **Flexible Adhesion** – Full resin system has improved flexibility and reduces the risk of cracks and future delamination
- **Lightweight** – System reduced weight on vessel by 35,300LB/16,000KG at similar thicknesses

#### Considerations

- Water penetration resulted in extensive corrosion on steel deck and the potential for future structural integrity failures
- Poor runs to drains and scuppers allowed for standing water and created maintenance and safety issues
- Cracks in the underlayment resulted in coating delamination and produced maintenance and safety issues
- Removal of 50,700LB/23,000KG of failed concrete underlayment

#### Solution Overview

A SynDeck Ultra Lightweight Underlayment with Anti-Slip full resin system was installed. This provides a waterproof, lightweight interior decking solution that drains properly to improve cleaning and maintenance, while flexing with the ship's movement.



Installed galley floor with SynDeck waterproof, properly sloping, full resin system. Smooth finish under units in wash down areas.





## CASE STUDY: CORROSION PROTECTION



Installed SynDeck waterproof underlayment over galley deck with slopes to drains.

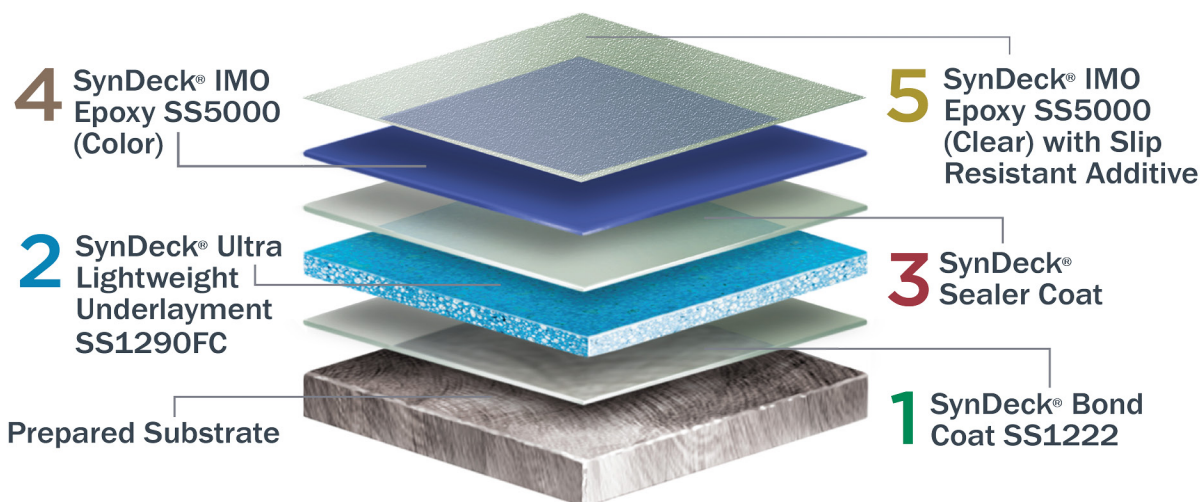


Completed anti-slip, full resin, galley decking system.



Detail of anti-slip finish for safety and smooth finish for easy cleaning.

### System Installed: SynDeck Ultra Lightweight Anti-Slip System



About: SynDeck Marine Underlayments and Deck Coatings are developed and manufactured in the US by EPMAR Corporation. Since 1987, we have custom formulated products suitable for the harsh marine environment. SynDeck products are water resistant, light weight, flexible, durable and deliver fast turnover.

DISCLAIMER: The information contained in this case study is intended for illustrative purposes only and should not be considered as a product or system recommendation. Each installation is unique and any product selection must consider specified requirements along with other factors that may impact product application and performance.

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