Case Study

Client:	Shipmanagement Company	Industry:	Marine
Vessel:	Chemical/Oil Carrier	Date:	September 2013
Location:	Antwerp Ship Repair Yard	Products:	Epo- chem™ RE 500P & RW 500

Overview

The chemical/oil carrier, built in 2011 and operated by a large shipmanagement company, had a requirement for a cargo tank refurbishment of 1200m² after the original coating (from new) had suffered failure.

Challenge

To remove all the previous coating to a sound substrate and provide a protective lining that would withstand a wide range of aggressive chemicals at high temperatures. Due to the clients budget and time constraints, a cost-effective alternative surface preparation method to grit blasting had to be considered.

Chemco offered to utilise a revolutionary method of water blasting and use of a **solvent-free** coating system for the first time in this industry. The refurbishment process had to be completed within 10 days.

Solution

To achieve this challenge, water blasting was chosen as the alternative surface preparation method.

Chemco's unique Epo-chem™ RE 500P and RW 500 were specified as the preferred coating system. Epo-chem™ RE 500P is a solvent-free, surface (rust) tolerant epoxy Novolac primer and RW 500 is a solvent-free epoxy Novolac glassflake topcoat. The original coating was removed by high pressure water jetting to achieve a WJ-2 standard.

The following specification was applied:

- One stripe coat:
- RE 500P @ 100µ DFT - One full coat: RE 500P @ 100µ DFT.
- One stripe coat:
- Two topcoats:
- RW 500 @ 250µ DFT. RW 500 @ 250µ DFT each.

Total DFT = 600µ

Continued overleaf







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Photographs:

- Nos. 1-2
- No. 3
- Original Failed Condition of Existing Lining Stripe Coat of Epo-chem ™ RE 500P on the Rusty Surface

<u>Outcome</u>

The work programme was successfully completed by **Chemco's** approved contractor, MSTC Global, in 10 days (including 3 days for post-curing).

Substantial time and cost savings were achieved by post-curing to 35°C instead of the industrial procedure of 70°C. The system will increase the vessel cargo tank life-expectancy by another 5 - 10 years as requested by the owner. All the cargo tanks were completed to class standard and certified accordingly to the satisfaction of all concerned.

Benefits

With the **Chemco** system being applied to a water-jetted surface, it enabled the job to be completed ahead of schedule in 10 days, instead of 21 days as originally quoted by other contractors. Full refurbishment of cargo tanks utilising the procedure of water-jetting is a revolutionary breakthrough for the marine industry which has the following benefits:

• Solvent-free

- Excellent chemical and high temperature resistance
- No grit blasting
- Fast-curing and quick recoating (faster application)
- Reduced contract duration and downtime
- No major delays
- Ease of decontamination (no cargo contamination).
- High gloss finish
- Chemco systems will protect the substrate for a minimum of 5 years









Photographs:

- No. 4 Stripe Coat of Epo-chem™ RW 500 on Primed Surface of Epo-chem™ RE 500P
- No. 5 Contrast Between Finished Application of **Epo-chem™ RW 500** and Original Surface
- No. 6 COT 2 Starboard After Carrying Ethanol for 14 days
- No. 7 COT 5 Port After Carrying Ethanol for 14 days

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