

LEAD PAINT MANAGEMENT SHIP LOADER

This project involved the refurbishment of a 1920's steel structure that had corrosion and lead based paints trapped under 7 different coating layers.

Clients request:

To remove lead based paint, treat corrosion & apply a new protective coatings system.

Reasoning

To protect the structure from corrosion

Risks

- Lead containing paint.
- Damage to the Environment (Port of Melbourne waterway).
- Working at heights (Difficult geometry vs ergonomics).
- Interruption to shipping schedules.

Requests

Upon going through the Project Appraisal Stage the client determined the originally estimated budget was not suitable i.e. \$450k

Solution

We revisited the Project Appraisal steps above. It was decided to perform a detailed coating survey to determine the extent of lead containing paint & also the extent of defective coatings to help tailor a solution. This involved; Low pressure water cleaning to remove organic material as well as overburden from previous ship loading activities.

Once the coatings were cleaned and exposed properly the coating survey found that the failure in the coating adhesion was not at the lead containing paint layer and therefore basic surface preparation could be performed throughout 90% of the structure.

This coupled with aluminium pigmented epoxy mastic provided suitable protection for the next 5+ years before further evaluation.

Outcome

The main objectives were to treat corrosion and remove lead; however this was limited to 10% of the structure. In order to meet the reduced budget these areas were catalogued and indexed for a future maintenance program however for the short term they were coated to encapsulate the lead & corrosion.

This solution some might argue – has not treated the corrosion but in making their investment decision the asset owner has been able to

1. Contain the corrosion to 10% of the structure.
2. Effectively manage the lead containing paint.
3. Have a maintenance plan moving forward that will slowly treat the corrosion.

