

Assignment

Kraatz was contracted by the Namibian Port authority Namport to refurbish the 2000 ton lifting capacity Syncro lift. The Syncro lift has been in operation from 1972 with no major maintenance to the structure’s or corrosion protection system. A new corrosion protection system was specified with a 15year life expectancy. The scope of work included the steel structure, deck wood and all mechanical components such as gearboxes, winches and sheaves. The total weight of the structure is 400 ton.

Risk and challenges

The following risks and challenges had to be considered:

- Economic dependence of various stakeholders such as the local fishing industry, offshore support vessel managers and other engineering services on the operational availability of the facility within the shortest possible time.
- Selecting the best practical corrosion protection system and application method given the harsh environment of Walvis Bay and 15 year expected life from the selected system.
- Identifying crane positions on the quay side to accommodate heavier than normal, tandem crane lifts that is within the quay loading capacity with the heaviest lift at 54 tons.
- Delivering the project within the specified schedule whilst the actual condition of the structure was unknown.



Figure 1 – Removal of platform sections

Getting the job done

A high build epoxy corrosion protection system was selected as the most practical solution given the challenges of a harsh environment, application conditions, limited down time and



Figure 2 - Fully refurbished section installed

cost. Rigging plans were developed identifying specific point loads on the quay structure. All calculations were submitted to the port engineer for approval. Temporary climate controlled habitats were constructed for painting of structure. After the structural steel sections were cleaned and grid blasted it was found that the original welds and plate edges did not comply with the specified surface preparation standards. Kraatz immediately mobilized a team to repair defects working around the clock to meet the tight deadline. 19 Sections weighing between 20 and 55 tons



Figure 3 - Corrosion protection in dehumidified enclosures

were removed, inspected, repaired, blasted, painted and re-installed. Total surface area of 5200 m² was treated with a high build epoxy system. 22 gearboxes and 132 sheave wheels were inspected and overhauled with identified components replaced. Over 40 tons of steel was replaced and 90 m³ of deck wood was dismantled and re-installed in a new and improved configuration.

Key learning’s

With proper planning, consultation of industry experts and involving all key stakeholders, tough assignments can be delivered within tight deadlines, with no injuries to personnel and or damage to equipment.