

Durban Dry Dock restoration in full swing

The rehabilitation of the inner caisson which divides the Port of Durban's Prince Edward Graving Dock into two compartments is in full swing. The caisson enables two smaller vessels to be docked simultaneously.



The rehabilitation of the Prince Edward Graving Dock's inner caisson includes major structural design improvements on re-built decks and compartments, which are being built in a controlled environment in an off-site engineering workshop.

It is among 11 large-scale projects earmarked for the Durban Dry Dock complex, of which the R48m refurbishment of the dry dock's 35-metre-long, 900-tonne outer caisson which closes off the dry dock from the rest of the harbour, was the first to be completed in 2016.

"The R61,500,700 project to repair the inner caisson and upgrade the drive system has been undertaken to ensure the safety of the dry dock and the sustainability of the ship repair business in Durban," said Dumisani Mkhize, deputy port engineer at the Port of Durban, who is managing the project.

Erwin Skeepers, business unit manager: ship repair and workshops in the Port of Durban, added: "Rehabilitation of the inner caisson will improve the operational efficiency, reinstate the dry dock to its full capacity and improve operational safety. It will equip ship repairers who use our facility to be more competitive, helping to attract more business to South Africa."

The rehabilitation follows extensive technical studies which identified parts of the caisson that had aged and deteriorated and were in need of attention. Various options were explored with professional inputs and ultimately it was decided to repair the inner caisson to the original design.



The Prince Edward Graving Dock's inner caisson had deck A and B removed and cut up for scrap.

Structural design improvements

The rehabilitation includes major structural design improvements on re-built decks and compartments, which are being built in a controlled environment in an off-site engineering workshop. These will be pre-trial fitted before being sent to site, greatly improving fabrication quality and ease of fitment on site. Design and fabrication of the new steel sections has already been completed.

“The caisson has been taken apart at C and D deck levels and the A and B deck steel structures have been cut up for scrap. The next big milestone will be bringing new sections of C and D decks for installation on top of the rehabilitated DE section,” said Mkhize.

The project, which is being carried out by two Durban-based companies, Lodemann (managing contractor) and Channel Construction (design and build) – both of which were appointed in May 2018 – is expected to be completed by November 2019.



Removal of the air chamber (left) and sealing faces (right) on the Prince Edward Graving Dock's inner caisson.

The work schedule is being managed in consultation with the ship repair industry to promote a “win-win” situation where ship repair work in the dock may be reasonably sustained during the project.

The rehabilitation project falls within TNPA's contribution to Operation Phakisa – the government initiative to unlock the oceans economy by investing in infrastructure, skills and capacity building in order to grow the market and in so doing create much needed jobs.

Job creation in the marine sector has a strong multiplier effect, with an estimated five indirect jobs created for every direct job. This particular contract has created direct jobs for 29 skilled employees, including seven youth, and nine semi-skilled jobs, including three youth.

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