

PORT CRANES – OFFICE TOGOLAIS DES PHOSPHATES (PHOSPHATE MINE OFFSHORE) – TOGO

The phosphate mine belonging to the “**Office Togolais des Phosphates**” has 2 offshore cranes at 1.6 km in the sea. These cranes are linked to the inland stock department by means of a conveyor. These cranes are very mobile and weigh 325 tons each.

The **OFFICE TOGOLAIS DES PHOSPHATES** produces 3,300,000 tons of phosphates per year. An average of 5 ships per month are being charged at this offshore port.



In 1994 the cranes were repaired by the French company **AFRICAIN DE MONTAGE** (Group Baudin-Châteauneuf). A permanent service and maintenance was compulsory during the repair of the cranes. After grit-blasting, the structures needed to be repaired by welding.

These two cranes and the conveyors were heavily corroded and it has been decided that they had to be protected by an anti-corrosion system providing cathodic protection: **ZINGA** was chosen.

The application was done from 1995 to 1996 under the supervision of the French controlling organism **SOCOTEC**.



System:
Surface Preparation: Grit blasting
ZINGA 2 x 60 µm DFT

10 years later, in 2006, an inspection was done because an overall maintenance program was planned to extend the lifetime of the structure.



Evaluation inspection 2006 after 10 years!

- At first sight: bad condition because of a lot of dirt.
- At close look: phosphate dust & other deposits!
- Adhesion test: excellent result
- Overall good condition of **ZINGA**
- Some local formation of blisters

Phosphate dust

Only some local minor repairs had to be done to remove blisters (due to solvent retention) and rust spots (due to mechanical abrasion and local bad surface preparation).
The main contractor was Sogea Satom (VINCI Group).

- A very nice reference of **ZINGA** used as unique system
- In an extremely aggressive offshore environment
- Easy to evaluate and monitor the condition and the layer thickness of **ZINGA**
- It is possible to set up an ongoing maintenance program for these cranes and the conveyor
- Important: the lifetime of these structures can be extended for a very long time
- Customer highly satisfied

In 2014, the loading arm and pylons of the cranes were damaged and needed to be replaced. For this replacement structure, **ZINGA** was also specified. In the same refurbishment project, and a rail transport bridge was also protected with **ZINGA**.

