

Repair of Concrete Support For Effluent Vessel

ID: 7890

Industry: Oil & Gas

Customer Location: Kuwait

Application:

Application Date: February 2018

Substrate: Concrete

Products: * Belzona 4911 ,
* Belzona 4141 – 120 units of 8 Kg ,
* Belzona 5811 – 10 units of 4 litre ,

Problem

Damaged Concrete Supports of effluent water vessel: Water ingress and weathering had caused corrosion of the reinforcement bar leading to cracking and spalling of the concrete supports.



Photograph Descriptions

- * 1. Before application ,
- * 2. damaged and loose concrete was removed. ,
- * 3. Finished application ,

Application Situation

Time frame to complete application along with curing was 7 days (including surface preparation). Temporary supports of I beam were provided to vessel as safety measures. There was danger of complete buckling of support during chipping of loose concrete.

Application Method

Damaged and loose concrete was removed with hand tools chisel and hammer. No power tools were allowed. Then the surface was abraded using mechanical tools to clean and roughen the surface, as well as remove corrosion from the reinforcement bar. Compressed air was used to remove dust. The surface was primed with Belzona 4911, and Belzona 4141 was used to rebuild the surface to the original dimensions. For additional protection from weathering and potential spillage from the vessel, 2 coats of Belzona 5811 were added to protect the vessel support.

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ISO 9001:2015
FS 695214
ISO 14001:2015
EMS 695213

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Belzona Facts

The client was considering conventional concrete to repair the supports. This would have required a long time frame and the construction of formers to hold the concrete in place during the curing period. As well as this, the resulting repair would also have suffered from the same problems as the original concrete supports. Due to superior adhesion with high strength and protective qualities of Belzona 4141, along with easy application and fast curing time, this was preferred solution over the conventional concrete repair. The client was very satisfied. Also the ease of application and new look of support made them smile. This supports carries not only the vessel, but also pumping equipment which has vibrating affect on newly repaired concrete supports. Eight months have passed since the application but no signs of any failure.

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