

Emergency Seawater Butterfly Valves Application Using Belzona SuperWrap II

II

ID: 9274

Industry:	Power	Customer Location:	Tunisia
Application:	VPF-Valves, Pipes and Fittings	Application Date:	November 2022
Substrate:	Stainless-steel		
Products:	Belzona 1161 (Super UW-Metal), Belzona 1982 (SuperWrap II), Belzona 2211 (MP Hi-Build Elastomer), Belzona 2911 (Elastomer QD Conditioner), Belzona 9111 (Cleaner Degreaser)		

Problem

Two 72-inch seawater butterfly valves were severely damaged by cavitation, with one suffering from through wall defects. The seawater flow is 50,000 m³/h, density 1.04 g/cm, salinity 38.9 PSU, and the pipeline's vibration at the power plant STEG measures 10 mm/s for a 78-inch conduit. This issue arose nine months after the plant's start, detected as a leak in a valve. The installer intended to fix it via hot welding, but the client insisted on repairing it with Belzona to address concerns.



A wider view of the power plant



The location of the butterfly valve



The completed application



The completed application

Application Situation

The intervention began in November 2022. A follow up with the maintenance head in October 2023 confirmed their high satisfaction with the excellent condition of both repaired valves.

Application Method

The proposed Belzona solution involved surface preparation by sandblasting inside, degreasing with Belzona 9111, repairing holes using Belzona 1161 and Belzona 9341, in addition to metal patches.

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Surface treatment included applying Belzona 2911 conditioner (8 boxes) and a layer of Belzona 2211 (45 boxes) over a 60x150 cm area. For the exterior, Belzona 1161 and Belzona 9341 covered the prepared surface (60x150 cm), followed by a patch using Belzona Superwrap II. The total Belzona used included Belzona 9111 (12 boxes), 1161 (107 kg), 9341 (40 m), 9341 (42 m), and Belzona 1982 (9 litres). Application involved 2 wraps and took 12 days with a team of 3.

Belzona Facts

The total cost for the entire operation amounted to 25,000 €, of which 20,000 € was product costs. This was an urgent and exceptional application due to being part of a new installation after nine months. Recent confirmation from the maintenance head, known since 2003, verified the outstanding condition of both repairs. Photos sent in October 2023 supported this positive assessment.

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