

Belzona Provides an Innovative Solution to Transformer Leak Repairs

Belzona Polymerics Limited, providing solutions to industry for over 59 years through the design and manufacturer of polymer repair composites and industrial protective coatings has demonstrated a solution to repair transformer leaks.

Authorised contractor of Belzona, C & D Environmental Co. Ltd was recently looking for a reliable leak repair solution for a Power Station in the UK. One of the Power Stations major transformers on an aluminum smelter plant had an oil leak. The transformer was critical to the overall smelter plant and should it unexpectedly fail, the production area would come to a standstill resulting in lost production and downtime.

On further inspection it was found that the base of the transformer was heavily corroded in one corner. Before determining the best solution, there were some major obstacles to overcome, firstly due to time constraints the oil could not be drained from the transformer during the application. Secondly conventional methods of surface preparation could not be used as the walls of the transformer were thin having suffered considerable corrosion.

Taking this into consideration, Belzona's engineers decided the best solution would be to fabricate a tray that could be bonded to the corroded area on the underside of the transformer creating total encapsulation of the fins preventing future corrosion. The internal surfaces and edges of the tray were prepared using an MBX Bristle Blaster. The pin hole leak on the corroded transformer base was plugged to stem the leak using Belzona 1291(ES-Metal) a rapid curing, emergency live leak sealing putty stick. The bottom vertical edges and base of the transformer were thoroughly cleaned and degreased using Belzona 9111 (Cleaner/Degreaser).

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The tray and transformer edges were then wetted out using Belzona 1831 (Super UW Metal), a surface tolerant product which can be applied to wet and oily surfaces. The product was mixed and a 30mm fillet was applied around the internal 90 degree edge of the tray. The tray was offered up to the base of the transformer and held into position using ratcheted straps allowing the fillet of Belzona 1831 (Super UW Metal) to seal the base. The top lip of the bonding plate and top edge of the transformer base was then finished off with Belzona 1831(Super UW Metal).

Finally a corrosion resistant coating, Belzona 5831 (ST Barrier) was applied to both the underside of the tray, the edges and transformer lip to protect repair from environmental damage and further degradation.

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Notes to Editor-

- Belzona was first established in 1952 in Elland, West Yorkshire before moving to its current Head Office in Harrogate in 1992.
- Belzona is a world leader in the design and manufacture of polymer repair composites and industrial protective coatings for the repair, protection and improvement of machinery, equipment, buildings and structures.
- Belzona is not just a product but a complete service with a global distribution network of over 140 Distributors operating in 120 countries.
- Belzona operates from five corporate offices in Harrogate, UK, Miami, USA, Chonburi, Thailand, Hong Kong and Ontario, Canada.
- At Harrogate, the full Belzona product range is manufactured to stringent quality and environmental control guidelines complying with the requirements of ISO 9001:2008 and ISO 14001:2004.

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