

Belzona solution for damaged fly ash elbow.

ID: 10143

Industry: Power
Application: VPF-Valves, Pipes and Fittings
Substrate: Carbon steel
Products: Belzona 1813, Belzona 1983 (SuperWrap II)

Customer Location: NW Arkansas
Application Date: December 2025

Problem

This elbow was replaced only a few months prior and had already developed a hole on the outside of the elbow.



Fly ash elbow with temporary patch.



Removing the paint and prepping the surface.



Belzona 1813 applied to the elbow.



Belzona SuperWrap II applied over the Belzona 1813 and the elbow.

Application Situation

The elbow was only a couple months old and had developed a hole from the fly ash falling through it. Replacing the elbow would have involved a shutdown and cutting the pipe and welding a new one in place. Should the new elbow fail in the same timeframe, this shutdown and replace option would have to happen several times per year, and there are four of these elbows in this process.

Application Method

Due to location, hand tool prep was the only allowable option. A grinder was used to remove the paint and to roughen the application area. The area was then washed with solvent, and Belzona 1813 was applied to the elbow in an area greater than the worn hole to address future wear as well. Once the Belzona 1813 had reached its overcoat window (based on the IFU), three layers of Belzona SuperWrap II were applied using Belzona 1983 resin and Belzona 9381 carbon fiber. The application was completed with the Belzona 9382 condensing wrap and allowed to cure. Belzona 1813 and Belzona 1983 resins were chosen due to the elevated operating temperature

Belzona Facts

This application was carried out while the power plant was in operation with no need for any kind of a shutdown. The application only took a couple hours to complete. This application served as a training for the in-house maintenance personnel and the other three elbows will have the same application carried out when it fits into their schedule before they fail.

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FS 695214
ISO 14001:2015
EMS 695213

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