

Leak Repair at Blowdown Elbow at power plant

ID: 9781

Industry:	Power	Customer Location:	Toronto
Application:	VPF-Valves, Pipes and Fittings	Application Date:	January 2025
Substrate:	Carbon steel		
Products:	Belzona 1983 (SuperWrap II), Belzona SuperWrap II, Belzona 9111 (Cleaner Degreaser), Belzona 9411 (Release Agent)		

Problem

A high-pressure steam leak was identified at the blowdown elbow of an industrial piping system. The leak posed a significant risk to operational efficiency, safety, and environmental compliance. The challenge was to execute a durable, long-term repair without requiring hot work or extended downtime. Traditionally, they used 3D modeling and epoxy injection, which was costly for them. So, they were in search of an economical solution.



Leak arrested by Belzona 9611 and wrapped by torquiquet

Repair consolidated by Belzona Superwrap II (Belzona 1983 (resin) + Belzona 9381 (Carbon fiber) + Belzona 9382

Application Situation

Belzona Solution:

After isolating the affected area. To provide a reliable and lasting repair, a combination of Belzona composite repair systems was applied, utilizing:

Belzona 9611 (Emergency Leak Sealing) - To arrest dripping from the pipe section after shutting down steam flow.

Belzona SuperWrap 1983 - For high-performance composite reinforcement.

Belzona 9381 & 9382 - As part of the SuperWrap system for structural strengthening (consolidation) and long-term integrity.

Application Method

Surface Preparation:

The affected area was thoroughly cleaned to remove contaminants, rust, and debris. Mechanical abrasion was performed to enhance adhesion.

The area was degreased using Belzona 9111 cleaner to ensure a dry and contaminant-free surface.

Leak Sealing with Belzona 9611:

Since the steam flow was shut down but dripping persisted, Belzona 9611 was applied to arrest the leak effectively.

Reinforcement & Strengthening with Belzona SuperWrap 1983, 9381, and 9382:

The area was wrapped using the Belzona SuperWrap 1983 system, incorporating Belzona 9381 and 9382 for enhanced structural

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ISO 9001:2015

FS 695214

ISO 14001:2015

EMS 695213

Belzona products are manufactured under an ISO 9000 Registered Quality Management System.

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Repair • Protect • Improve

reinforcement.

Curing & Inspection:

The repaired area was allowed to cure as per the recommended time.

A thorough inspection was conducted to ensure a leak-free and structurally sound repair.

Belzona Facts

Belzona Solution:

To provide a reliable, economical and lasting repair, a combination of Belzona composite repair systems was applied, utilizing:

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Results & Benefits

☑ Leak Sealed Effectively: Belzona 9611 successfully stopped the dripping.☑ Durable & Long-Lasting Repair: Belzona SuperWrap 1983, 9381, and 9382 provided structural reinforcement.☑ No Hot Work Required: Eliminated safety risks associated with welding.☑ Minimal Downtime: The repair was completed efficiently, restoring operations quickly.☑ Enhanced Protection: The Belzona SuperWrap system ensured resistance against corrosion and harsh conditions.

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