

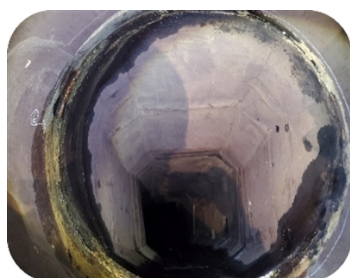
Belzona System Restores Pipeline Header

ID: 10269

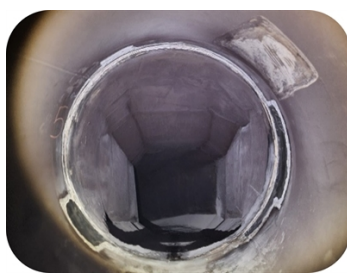
Industry:	Power	Customer Location:	Ulsan, Gyeongsangbuk-do
Application:	VPP-Valves, Pipes and Fittings	Application Date:	January 2026
Substrate:	Carbon steel		
Products:	Belzona 1111 (Super Metal), Belzona 4131 (Magma-Screed), Belzona 4911 (Magma TX Conditioner), Belzona 5811 (Immersion Grade), Belzona 5831 (ST-Barrier)		

Problem

The existing coating inside the Unit 2 cold sump forebay manhole in a nuclear power plant had deteriorated over time due to continuous exposure to seawater, moisture, and accumulated foreign materials. The harsh operating environment caused the coating to crack, blister, and delaminate from the surface, reducing its ability to protect the underlying concrete and structural components from further corrosion and degradation.



Common header pipe damage on the internal surface



Surface preparation completed by power tools



Damaged surface was rebuilt with Belzona 1111 (Super Metal) and Belzona 4131 (Magma-Screed)



Final coating using a two-coat system of Belzona 5811 (Immersion Grade)

Application Situation

The application was carried out in-situ using power tools for surface preparation.

Belzona 1111 (Super Metal) was used to rebuild damaged areas, while Belzona 4131 (Magma-Screed) strengthened the repair against mechanical and chemical damage. Final protection was achieved with Belzona 5811 (Immersion Grade) and Belzona 5831 (ST-Barrier) in standing water areas.

Application Method

1. Power tools were used to prepare the surface and remove rust, loose coating, and contaminants from the affected areas.
2. Damaged sections were repaired and rebuilt using Belzona 1111 (Super Metal) and Belzona 4131 (Magma-Screed) to restore the surface profile and structural integrity.
3. After surface repairs were completed, two coats of Belzona 5811 (Immersion Grade) were applied to protect the areas in immersed conditions. In areas exposed to standing water, Belzona 5831 (ST-Barrier) was used to enhance moisture protection and improve coating durability under immersion conditions.

Belzona Facts

The use of the Belzona repair and coating system allowed the client to restore and protect the affected area without component replacement, helping to reduce maintenance costs and downtime. The selected materials provided resistance against seawater

For more examples of Belzona Know - How In Action, please visit <https://khia.belzona.com>

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

Belzona products are
manufactured under an ISO
9000 Registered Quality
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Repair • Protect • Improve

exposure, standing water, and foreign matter, ensuring long-term protection under the operating conditions of the nuclear power plant.

The combination of repair composites and protective coatings offered a practical alternative to replacement by extending asset service life and improving reliability in a corrosive environment.

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