

# High Temperature Abrasion Protection with Belzona

ID: 8072

Industry: Steel & Metal Processing  
Application: MPT-Mechanical Power Transmission

Customer Location: Spain  
Application Date: February 2018

Substrate: Carbon Steel  
Products: \* Belzona 1511 (Super HT-Metal),  
\* Belzona 9811 ,  
\* Belzona 1813 ,  
\* Belzona 1391T ,

## Problem

Solid alumina particles flow through the pipeline at a temperature of 150C causing heavy abrasion to the steel. Without adequate protection the pipeline will erode leading to unexpected maintenance and potential shut down. The system is required to last for 2 years, whereas the previous system was only able to last for 6 months.



## Photograph Descriptions

- \* 1. The newly fabricated pipe section ,
- \* 2. Internal surface prepared ,
- \* 3. Belzona 1511 and Belzona 9811 tiles applied ,
- \* 4. Belzona 1813 applied and Belzona 1391T top coat ,

## Application Situation

Newly installed pipeline on the digestive system of an Aluminium production facility required abrasion protection at elevated temperatures.

## Application Method

The application was carried out in accordance with a modified version of Belzona Know-How System Leaflet SHM-7. The surface was prepared using grit blasting to the required cleanliness and profile as detailed in the Belzona Instructions for use. Belzona 1511 was applied to the surface and the Belzona 9811 alumina tiles bonded into the material. Belzona 1813 was used to grout between the tiles. A top coat of Belzona 1391T was then applied, to encapsulate the system and give a smooth finish.

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

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## Belzona Facts

The alternative was to apply wear plates, however due to the geometry of the pipeline, the wear plates would have to be custom made, adding cost and lead time. The Belzona 9811 tiles can fit around the geometry easily, giving the same level of protection without the need to custom make any parts. This saved the customer time, allowing them to operate the equipment at an earlier date.

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