

Belzona Provides Abrasion Resistance to Chutes in Recycling Plant

ID: 8595

Industry:

Application: SHM-Solids Handling Machinery

Customer Location: Aluminium Ingot Plant, UK

Application Date: August 2021

Substrate: Steel

Products: * Belzona 1321 (Ceramic S-Metal) ,
* Belzona 9811 ,
* Belzona 1812 (Ceramic Carbide FP) ,

Problem

The problem production had is the steel chutes had become rough due to sliding dry abrasion and this was holding up the cans, restricting the flow. Consequently, they had to open up the doors of the chute to allow the stuck cans to fall out and free up the flow to the conveyor.



Photograph Descriptions

* 1. Newly fabricated chutes grit blasted and lined with Belzona 1321 2. Belzona 9811 Alumina tiles adhered to the Belzona 1321 3. Belzona 9811 Alumina tiles bonded in place using Belzona 1321 4. Newly fabricated abrasion-resistant chutes ready for delivery to the customer ,

Application Situation

A large plant which recycles used beverage cans had issues with two side chutes where crushed cans enter a hopper (pre-melting), fall down the chute onto a conveyor belt system and are sent to the melting area.

Application Method

New steel chutes were fabricated and delivered to Belzona Wrexham workshop. The chutes were then grit blasted, cleaned and deoiled in preparation for the Belzona application. A single coat of Belzona 1321 (Ceramic S-Metal) was then applied. A sheet of Belzona 9811 (Alumina Tiles) was then tenaciously bonded into the Belzona 1321 which is used as an adhesive. Once cured, Belzona

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ISO 9001:2015

FS 695214

ISO 14001:2015

EMS 695213

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1812 (Ceramic Carbide FP) was used as a grout making the surface in between the hexagonal tiles as smooth as possible. This material ensures excellent adhesion between the tiles and on the edges / terminations. This also ensured there were no pick-up areas for the cans to get stuck on. The Belzona products were applied in accordance with the Belzona System Leaflet SHM_07. Once completed, the new chutes were returned to the client to be put into service.

Belzona Facts

The completed works are not as visually attractive as pre-grouting however, functionality is the most important here to ensure crushed aluminium cans slide down the chutes onto the conveyancing belts.

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