

Elevator Buckets coated to save product build up

ID: 9868

Industry: Mining & Quarrying
Application: SHM-Solids Handling Machinery

Customer Location: Stamford
Application Date: July 2023

Substrate: Carbon steel
Products: Belzona 1321 (Ceramic S-Metal), Belzona 1341 (Supermetalglide), Belzona 9111 (Cleaner Degreaser)

Problem

The customer was experiencing large volumes of product retention and build-up within the base of the elevator buckets. The buckets were not releasing all of the media they were carrying and, over a short time, the bucket's capacity was lessened, leading to a loss of efficiency and less product being moved than was calculated. This puts the buckets into a situation where they need to work for longer periods to move the expected amount of media, leading to overtime and added labour/operator costs



Buckets after removal from the Elevator shaft casings



Showing blasted bucket with 1st coat of Belzona 1341 Supermetalglide



Showing 2nd coat of Belzona 1341 Supermetalglide



Showing completed system, including leading edge protected by Belzona 1321 Ceramic S-Metal

Application Situation

Very few alternatives were offered to the engineer at the quarry. The Belzona Area Sales Engineer offered this solution based on the low drag and low friction properties of the Belzona 1341.

New buckets, purchased as a regular replacement of the old kit, were transported to Hawarden and the Belzona applications team carried out the blasting and coating works in-house

Application Method

Grit blasting to SA2.5 and 70 microns, in-house in Belzona's own state-of-the-art blast booths

Cleaned and degreased with Belzona 9111

1st coat as, per spec, applied of Belzona 1341

2nd coat, as spec, applied of Belzona 1341

Leading edges coated with 2 x coats of Belzona 1321

Belzona Facts

The applied Belzona coating helped return the medium capacity back to what was expected and the Elevators were delivering much closer to the expected volumes. Also, the protection element against erosion will help prevent unnecessary downtime in the future and help save labour costs in exchanging and repairing the buckets

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ISO 9001:2015

FS 695214

ISO 14001:2015

EMS 695213

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