

CONCRETE STITCHING TO DAMAGED GEARBOX PLINTH

ID: 9875



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PROBLEM

Following the stalling of a very large Ball Mill, the kinetic energy was transferred back to the gear box through the drive assembly. One this energy hit the gearbox, the gearbox kicked back and broke the 10" concrete plinth which the gearbox and drive motor were bolted to, some 30' in the air, above the ground floor
Structural engineers were consulted, following the advice from the Belzona Area engineer and it was decided that Concrete stitching would provide the solution

APPLICATION SITUATION

A specialist concrete repair company were engaged by the client
They demanded the highest performance resins from Belzona
Belzona 4151 was specified and all supporting literature was sent to the Structural Engineer and the Contractor, along with the client
Cross-stitching was carried out to spec and the repair was carried out to all Belzona's Instructions for use and specification sheets
The only other way to make the plinth safe would have been to remove the drive motor and gearbox and cast a new plinth. The downtime alone would have closed the facility. Belzona were able to offer a solution in under 2 days

APPLICATION METHOD

Rake out any loose and friable and vacuum.
All target areas to have Belzona 4911 applied as per Belzona 4000 series "Instruction for Use" sheets
Seal the end of the crack with Belzona 4111
Seal the horizontal cracks at distances of 8" to 10", leaving small gaps for the installation of injection ports
Bond the injection ports on to the gaps between the repairs
Using Belzona 4151 in a cartridge, stat at the sealed end of the crack and inject the Belzona 4151 into the first port until it appears at the next port in line
Continue this process until all the crack has been completely filled
Remove the ports and complete the seal over the gaps to complete the injection repair

BELZONA FACTS

Belzona provided durable materials to the client and contractor, enabling rapid repairs and a quick return to operations

INDUSTRY

General Industry

LOCATION

Leicester

APPLICATION DATE

December 2024

PRODUCTS

Belzona 4111 (Magma-Quartz)
Belzona 4151 (Magma-Quartz Resin)
Belzona 4911 (Magma TX Conditioner)

SUBSTRATE

Concrete

PHOTOS

1. Showing crack to plinth
2. Showing crack on opposite side of plinth
3. Cracks from above
4. Part way through repairs and concrete stitching, using experienced contractors and Belzona 4151 resins

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