

Industry:
Building
Plant:
Wet Mixer Hopper
Lining System:
K-PLAS/K-ALOX

K-PLAS/K-ALOX LINED WET MIXER HOPPER

Key Benefits:

- ✓ Improved wear resistance
- ✓ Increased operational uptime
- ✓ Reduce material build-up
- ✓ Lining system can be replaced
- ✓ Safer working environment



Problem: A customer who manufactures concrete pavers was experiencing production problems due to material discharge and excessive wear experienced within the internal substrate of the wet mix hopper. This was causing many issues such as an inefficient discharge of mixed product (sand, cement & aggregates) from the planetary mixers above, thus reducing volume throughput, the necessity to attach mechanical aids on the outside of the structure which helped but didn't solve the problem and the intervention of works labour in having to impact the sides of the hopper with sledge hammers causing structural fatigue and damage through continual 'hammer-rash' and occasionally have to enter the hopper internally to physically remove product build up by hand, thus creating a significant H&S risk.

Solution: In order to eliminate these problems Kingfisher undertook a full overhaul package of re-designing the hopper as the existing structure was beyond repair. In order to enhance the design we fabricated the new hoppers and incorporating radius corner gullies which would prevent material build up within the corners and lined the flat sections of the internal substrate with our 10mm thick K-PLAS low friction liners being fixed to the substrate mechanically and then lined the corner gullies with our 10mm thick K-ALOX ceramic liners which would offer greater degree of wear resistance as we expected the mixed material to flow through uninterrupted which would obviously cause more abrasion due to the mass flow that would be achieved. Finally, as we manufactured a new hopper we had to visit site and remove the existing fabrication and re-install the new assembly in place working over a 24 hour period to execute all of the works required to the satisfaction of the site engineers.

Benefits: Since the newly designed hopper has been installed in 2013, we are pleased to say that to date (2016), the feedback we have received from the plant engineers is positive based on the success of the system delivering total volume throughput of mixed material from the planetary mixer through to the block press. They no longer have to expedite works labour to hammer the sides of the hopper to enhance material flow and likewise the need for individuals to work within a confined space is eliminated as the lining system is in good working order and is expected to continue performing for the foreseeable future.

Protecting Industry Worldwide

Cradley Business Park
Overend Road
Cradley Heath
West Midlands
United Kingdom
B64 7DW

T +44 (0)1384 410777
F +44 (0)1384 410877
E enquiries@kingfisher-industrial.com
www.kingfisher-industrial.com

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