

Single asset success

When Singleton Birch Ltd, the UK's leading independent lime supplier, saw downtime at one of its conveyors increase to unacceptable levels, it decided to call in Robson Site Services to address the issue and improve plant efficiency.

■ by **Robson Site Services, UK**

The conveyor at Singleton Birch's Melton Ross quarry in Lincolnshire, UK, runs from the quarry side of a main road through a tunnel and transitions to an incline conveyor that delivers stone to a screen house building. When the lime producer began experiencing a number of issues with this conveyor, it called in Robson Site Services to help reduce the costly downtime being caused, as well as increase efficiency at the quarry site by improving plant equipment.

Identifying the cause

The Robson team attended the site and provided a full investigation into this historically problematic conveyor. Issues identified included:

- overspill of material, leading to a reduced load reaching the conveyor
- poor tracking of the belt, which was uncontrollable in certain sections
- conveyor components were missing, badly worn or damaged.

Scope of services

To address these issues, Robson Site Services carried out several measures, including:

- levelled and aligned roller sets and trough sections
- raised and levelled trough roller frames to support the belt through the transition section from horizontal to inclined section
- replacing return rollers and trough rollers, including fabrication and replacement of rotten roller brackets
- re-route of the return belt in the transition section
- overhauled and replaced gravity take-up unit (GTU) bearings and scrappers
- fabricated and installed new cable brackets and structural side framework steel supports
- installed and monitored new tracked belt.

In terms of implementation of this scope



Singleton Birch Ltd saw improved performance of its tunnel-to-screen conveyor at its quarry following an upgrade by Robson Site Services

of services, a systematic work order was followed. After completion of the work, Robson Site Services also replaced the belt, bringing the conveyor back to its original design tonnage capacity.

Project implementation

To ensure minimal disruption to the workings of the quarry, Robson carried out the work during night shifts, from Monday to Thursday. Working hand in hand with the plant's operations team gave the materials-handling specialist a 10-12h window of opportunity. As a result, the work was completed in 11 weeks.

Improved operation

Following the work carried out on the tunnel-to-screen conveyor, downtime was reduced by 85.6 per cent.

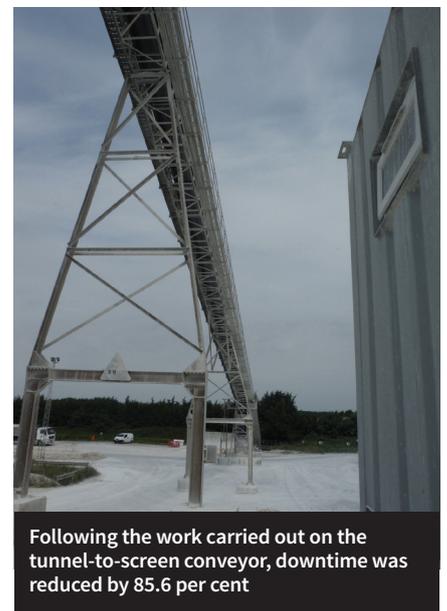
Oliver Whelpton, process optimisation manager of Singleton Birch, said: "The cost of downtime to us is substantial on any asset, therefore, the results that Robson Site Services are helping us to achieve through their continuing works are of a great benefit to Singleton Birch. Annual savings on this one conveyor alone are more than GBP15,000."

Neil Piper, managing director of Robson Site Services, commented: "A happy customer, with expectations being exceeded is a fantastic result. With a significant annual saving now going back

into their business, credit must go to our multi-skilled team, who benefit from decades of industry expertise."

Further projects

The tunnel-to-screen conveyor project was one of Singleton Birch's first conveyors to benefit from Robson Site Services' expertise. The positive outcome has since resulted in additional conveyor upgrades for the lime producer, as well as turnkey project work in conjunction with Robson Handling Technology, the sister company of Robson Site Services. ■



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