PROBLEM SOLVED™ PAPER

SOLUTION: SQC2S™ Secondary Belt Cleaner with Orion Blades

INDUSTRY: Aggregates processing - crushed rock (greywacke)

LOCATION: Hartsteinwerke Sooneck GmbH, Bingen am Rhein, Germany

TITLE: Secondary belt cleaning solves decades-long carryback challenge

Material carryback led to repeated problematic build-ups beneath the primary crusher conveyor.

Martin's SQC2S™ secondary cleaner has individually adjustable tungsten carbide Orion blades.

The SQC2S™with Orion blades has virtually eliminated the plant's long-term carryback problems.

PROBLEM

One of Germany's leading aggregate producers, Hartsteinwerke Sooneck GmbH, part of the DEBEIJER Group, operates a large hard rock quarry producing up to 4,000 tonnes per day The plant processes highly abrasive greywacke road stone that becomes extremely sticky during wet conditions and very dusty in dry weather. A long-standing carryback issue affected the crucial first conveyor after the primary crusher (Band 1) a 1,200mm-wide belt running at approximately 1.5 m/s. For decades, material build-up beneath the belt return caused health and safety concerns, excessive manual clean-up effort and operational inefficiencies, making it a major, unresolved problem for the site.

SOLUTION

The site team had previously tried a competitor's belt cleaner without success. So Hartsteinwerke Sooneck engaged Martin Engineering to assess the issue through a Walk The Belt™ inspection. For Band 1, Martin recommended its SQC2S™ Secondary Belt Cleaner with Orion Blades – the first installation in Europe. The cleaner was selected for its individually adjustable tungsten carbide blades, designed to match the belt surface, and unique flexing blade mount to cushion splice impact while maintaining cleaning pressure. The blade's 'paint scraper' cleaning angle provides maximum removal of stubborn carryback while the blade holder flexes to allow the blade tip to deflect in the direction of belt travel for splice passage.

RESULT

After installation, the SQC2S™ with Orion delivered excellent performance, eliminating carryback and preventing material build-up, even during wet weather conditions and high volume demands. The secondary cleaner continues to operate without issues, resolving the long-term carryback problems. The need for manual cleaning has been virtually eliminated, with fewer safety risks, less downtime and better overall performance. Technical Manager Michel Gard said: "The SQC2S™ Orion does a great job, especially when the material is really sticky, and a very high material throughput is now achieved." Encouraged by these results, the firm is considering the same solution elsewhere.

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