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the materials bulk handling specialist

Motorised Brush Belt Cleaner on a TOMRA Optical Sorter in an MRF

The Problem

Many of our clients using optical sorters at MRFs, such as TOMRA, need help to maintain accuracy when separating valuable material for recycling.

Because the TOMRA is an automatic plastic sorting machine, keeping the conveyor belt clean and black in colour is important to maintain its sorting accuracy and efficiency.

Plants experience a reduction in per-tonne price through contamination and mixed material; the root cause is dirty belts with large volumes of sticky organic material stuck to the belt.

This results in the belts losing their natural clean black colour which causes the optical sorting machine to struggle to separate material correctly as it works to identify the plastic colours against the dirty belts.

Stoppages

Dirty belts cause carry-back and spillage requiring manual resources to clean belts and material on facilities floor. This results in numerous stoppages and unplanned downtime to allow cleaning teams to operate safely around the equipment.

Damage Caused by Belt Tracking Issues

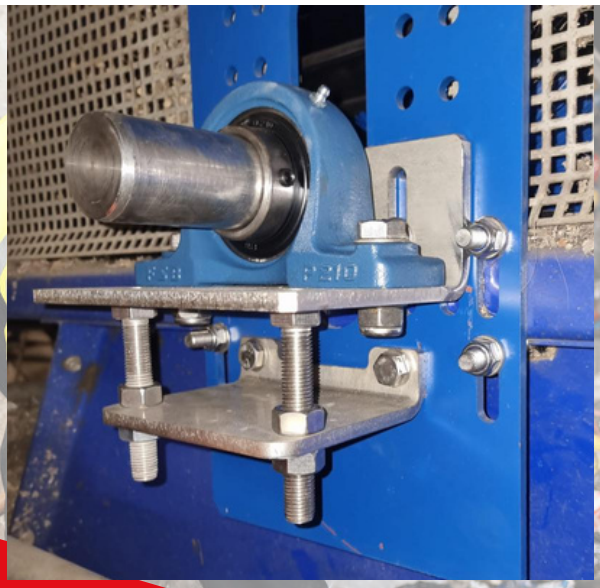
The sticky organic material being carried back on the return belt causes a significant material build-up on the return rollers. This resulted in belt tracking issues causing damage and premature belt wear.

Health & Safety Hazards

The issues caused spillage on the facility floor and in gangways causing a health and safety hazard and requiring frequent additional clean-up and resources.

The main problems the customer experienced:

- Blockages were causing stoppages
- Belly pans were full of material that caused belt stoppages
- The return rollers became wrapped in material & damaged
- Drive drum motors are overloaded
- Premature belt wear & damage
- The issues caused spillage on the facility floor and gangways, causing a Health & Safety hazard, and requiring frequent cleaning resources.



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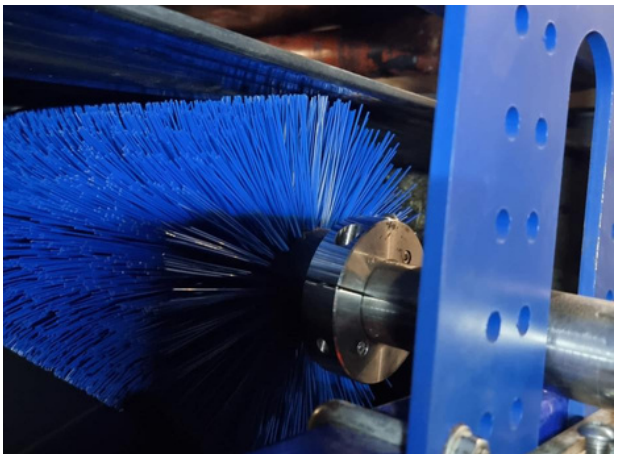
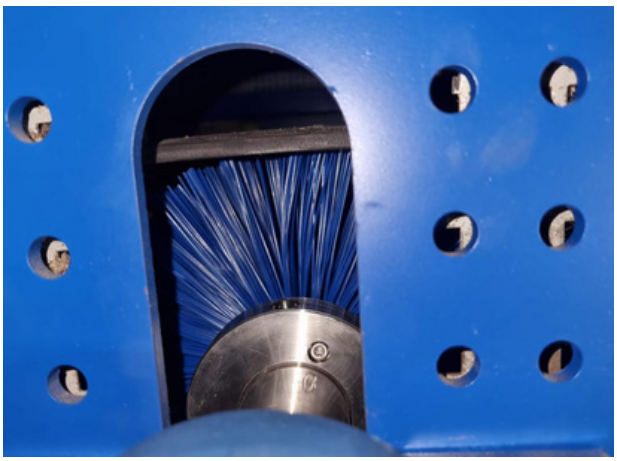
The Hoverdale Solution





The Hoverdale Motorised Brush System is the ideal solution to tackle these optical sorting challenges.

The Motorised Brush specification includes;

- A stainless-steel construction that auto-adjusts as the brush wears to always maintain effective cleaning contact with the belt.
- IP67-rated motors and gearboxes designed for harsh environments
- Solid stainless-steel key-way shaft for the longevity of service
- Available from 300mm to 4000mm wide belt widths
- A range of cleaning brush diameters from 200mm O/D to 600mm O/D means that cleated belts up to 150mm in height can still be cleaned effectively
- Segmental brush segments for quick and easy changes with hard-wearing compositions unique to Hoverdale
- Very low maintenance between brush changes.

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The Results and Benefits

- Belts were kept clean and black to ensure optimum sorting accuracy and maintain high yields for recovered materials
- Carryback was eliminated, and the system avoided blockages
- The return belt and rollers are kept clean and free of material
- No cleaning resource is required to remove material from the facility
- Reduced stoppages and increased uptime
- The clients are able to better maintain stable production
- Reduced premature wear of conveyor belts and rollers, lowering ongoing costs
- Minimal maintenance is required
- Very quick ROI.

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"The Hoverdale Motorised Brush Systems fitted to our plant have made a huge impact on the operational performance, especially on our TOMRA optical sorters, where we are seeing tangible improvements in accuracy and consistency in our material recovery.

A big thank you to the Hoverdale team, who provided a flawless project from quotation to implementation."

Keep materials flowing out and money flowing in.

Hoverdale is a world-class provider of hard metals and wear-resistant products, conveyor belt products and equipment. We keep waste recycling, biofuel, power generation, wastewater treatment, sea aggregates, vinyl, food, mining, tunnelling and glass plants moving, maximising the total cost of ownership of any bulk handling environment.

By reducing spillage and carryback, we typically reduce customers' cleaning costs by 80-90% - What would that equate to for you?

Book a site visit now! The savings will more than pay for your time or your money back.

Matt Beverley
Managing Director

Direct: 07979 879 998
Office: 02475 099 836