CASE STUDY LCBCSH2020

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Bark Blower Feeder

LaserBond® Composite Tungsten Carbide Cladding

Proven up to 4 – 10 times longer productive life than your standard OEM Bark Blower Feeder.

LaserBond® re-engineers and fully manufactures a range of Bark Blower Feeders. LaserBond Bark Blower Feeders are manufactured and surface engineered, with a Composite Tungsten Carbide to the customers exact specifications with significantly enhanced surface wear characteristics, compared to the OEM equivalents.

THE PROBLEM

LaserBond were approached by a Company operating the largest and most powerful fleet of Blower Trucks in Australia to improve their business efficiency. The Company incurred significant, frequent and recurring Bark Blower Feeder rebuild costs as the units wore. This was being exaggerated by increasing demand to move heavier and more abrasive materials, such as sand and stones. Delivering these materials through the OEM Feeders was severely curtailing the productive lives of the Feeders as they suffered premature surface wear, primarily on the contact components, compromising the integrity of the Feeder. When the reliability of the surface was lost, cavities or gaps formed between the components parts of the Feeder which only served to exacerbate wear further due to the ingress and retention of abrasive material. As surface wear was incurred the Feeder lost pressure resulting in falling productivity, higher labour operating cost and eventually rending the unit operationally redundant and needing an expensive rebuild or total replacement.

The Company looked for LaserBond to provide a surface engineering solution to the Feeder to resist abrasion and impact. LaserBond commencing an extensive investigation on the internal geometries, materials processed properties and surface strengths of the metals making up the OEM Feeders.

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PRODUCTIVITY | INNOVATION | CONSERVATION

AFTER BENEFITS AND FEEDBACK

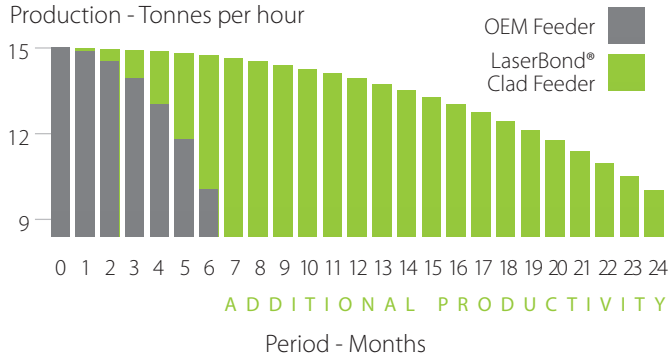
The Solution

LaserBond's solution was to increase the abrasion resistance of contact surfaces through LaserBond's® proprietary Laser Cladding deposition process. This process enables the deposition of a metallic or metal matrix composite overlays with a full metallurgical bond over the base material. The utilisation of an accurately focussed and infinitely controllable high power laser beam results in minimal heat affects to both the overlay and base substrate.

LaserBond Laser Clad the surface wear areas of the rotor and housings of the Bark Blower Feeders with a Composite Tungsten Carbide providing much greater abrasion and impact resistance meaning that the surface wear, and therefore productivity, losses were greatly delayed.

The Company enjoyed significantly lowered operating costs and environmental footprint and continued to commercially develop new product markets.

Typical Bark Blower Feeder Productivity - Mixed Materials



Key Benefits

- **Longer operating life (4-10 times) and therefore lower total operating cost**
- **Greater productivity over an extended period improving business economics**
- **A reduced carbon footprint due to not having to replace the Bark Blower Feeder as frequently**
- **An ability to move more abrasive and heavier materials, opening new markets**

Feedback

Customer written endorsement;

LaserBond…. has been rebuilding our Feeders for about 10 years using the LaserBond process. We have found using a LaserBond Feeder delivering aggregates we get up to 4 times the life compared to a non-treated Feeder.'

About LaserBond

We are a specialist surface engineering company, founded in 1992, that focuses on the development and application of materials, technologies and methodologies to increase operating performance and wear life of capital intensive machinery components. Our surface engineering technology has applications across many industries, such as resources and energy, agriculture, advanced manufacturing, defence and infrastructure construction.

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