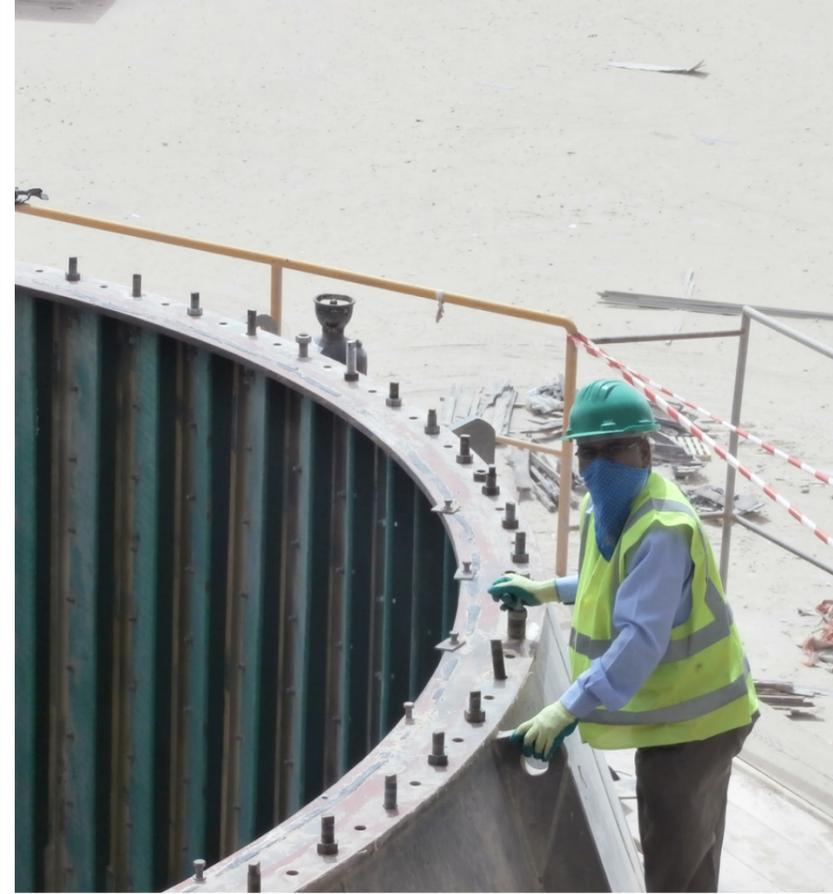


August
2013

Customer Story

Solutions for mineral
beneficiation industry





07
times higher
lifespan with
ceramic tiles lining

SITUATION

In the mineral industry, beneficiation is a process that improves the economic value of the ore by removing the gangue minerals. Tata Steel Joda is an iron ore beneficiation plant in Odisha which is responsible for beneficiation of mined iron ore from Joda-east Iron mine that is the jewel in the crown for the Tata Steel Mines Division. Cyclones, an integral component of beneficiation process, have to be lined so as to protect the metal from wear and prevent contamination of product. The conventional lining material, PU (polyurethane), had a life span of **22 days** resulting in frequent shutdowns and replacements. Consequently there was a considerable loss in productivity, safety hazards of PU and increase in maintenance time & costs. Other drawbacks of PU were loss of raw material by spillage, improper whirlpool formation due to wear of the liner.

CHALLENGE

There was a lack of awareness in the industry about engineering properties of ceramics and its applications. Customer was reluctant to experiment with a new material in place of OEM specified material and thus it was difficult to convince him that ceramics actually have a much better overall lifetime value proposition over PU. There were other challenges in terms of design and installation. Fixing tiles onto the cyclone body required a new ceramic material formulation for fabrication similar to PU and abstruse contours of cyclone challenged our installation skills.

SOLUTION

Cumituff 92, our excellent wear resistant high alumina ceramic formulation, was used to produce precise wear resistive tiles to form the lining of cyclone. The cyclone body was also designed and fabricated with the necessary housing for easy installation. Our installation experts assisted Tata Joda team throughout the installation process and observed the outcomes as well to analyse and further improve our offerings for other customers.

RESULTS

The ceramic liner gave a life span of **seven times** the life provided by PU. The problems such as improper whirlpool formation and spillage were also successfully addressed by ceramic application. The ceramic lining application resulted in a progressive shift for our customer **from breakdown maintenance to preventive maintenance**. The direct cost of cyclone lining was reduced to **25%** of cost of PU liners. Furthermore, our customer also benefited from the time savings and maintenance cost reduction.

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metallized cylinder manufacturer

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ISO 14001
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WHY CHOOSE US?

MAKING

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& customer delight always.

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