

October  
2017

# Customer Story

In-situ Ceramic Lining at  
Cement plant





**80%**  
Installed ceramic  
thickness available  
for use after 4  
years of rigorous  
usage

## SITUATION

Advent of cement and its widespread applications have transformed our lives in unimaginable ways. But have you ever given thought to who facilitates running these plants without breakdown to ensure a steady production?

The mother process at a Cement plant involves raw material (RM) i.e. limestone sintering in a coal/fuel fired furnace. The process prior to sintering is size reduction of RM and transporting the crushed RM and fuel to the furnace. Both limestone and coal exhibit highly abrasive behaviour during transportation.

One of our biggest customer in Qatar was facing a situation where every year they had to undergo a patch up and repair work for their transport mediums which were getting eroded due to abrasive material transportation. These transport mediums were made up of steel without any preventive lining on the inner surfaces.

## CHALLENGE

It was a **5000 Tonnes per day** capacity plant with a single unit which clearly meant that there was no margin for error and delay. The whole operation of ceramic lining covering a total area of **900 square meters** had to be done just within **15 days** during a maintenance shutdown. There were umpteen intricate shapes at abstruse locations which involved in-situ lining at several regions.

## SOLUTION

It was a total turnkey project where wear phenomenon and wear characteristics were studied at the site, complete wear resistant solution involving different wear resistances for different regions was designed, and finally, onsite installation was completed. Our customised wear resistant product, **CUMITUFF 92 High alumina** ceramic liners of **6mm thickness** was used for lining.

## RESULTS

The ceramic lining application resulted in a progressive shift for our customer from breakdown maintenance to preventive maintenance. The **reliability factor** signifying the equipment life increased **from 83% to 96%** which in turn was also reflected by significant improvement in the yield levels. The ceramic lining application was done in 2013 and more than **80%** of the original ceramic thickness is still available for use. This is in sheer contrast to the earlier situation with bare steel which was getting eroded every year and thus leaking materials and ultimately leaking profits.

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## WHY CHOOSE US?

### MAKING

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