



# PROBLEM SOLVED™ PAPER

**SOLUTION:** Martin® Hurricane Air Cannons

**INDUSTRY:** Mining - Lime

**LOCATION:** Lhoist UK (Steetley Dolomite), Whitwell, UK

## PROBLEM

The existing lime kiln at Whitwell, had been upgraded in 2014 with the addition of a pre-heater element to allow the plant to burn waste derived fuels to save on energy costs. The introduction of the pre-heater section with its push rod type design started to give build up issues with the limestone chippings around the main feed section and also in the lower kiln feed chute. Production was now critical with many kiln stops for manual cleaning and rodding. In addition Cardox was now necessary due to the weight of the build up present.



*The pre-heater at Lhoist Whitwell started to develop build up issues with limestone chippings around the main feed section.*

## SOLUTION

Lhoist asked Martin Engineering to look at solutions involving air cannons located around the bull nose push rod area of the material feed section and also the area of the kiln feed chute. The area was of very tight design, so the Martin® Hurricane Air Cannons were chosen due to the compact design. In addition, the area was lined with brick refractory, so cast nozzles of fish tail design would not work well and the plant wanted to install nozzles quickly so Martin suggested the Martin® Hi-Velocity Nozzles for these areas.



*The area was a very tight design, so the Martin® Hurricane Air Cannons were chosen due to the compact design.*

## RESULTS

By mid 2014 the first Martin® Hurricane Air Cannons had been installed and the plant reported an immediate increase in production with less downtime on the material feed areas. Due to the success of this project the plant has since applied for further capital to install more units on the lower kiln feed area to give totally reliable production capacity with the use of Martin® Hurricane Air Cannons.



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