



## **FLEX-KLEEN PULSE-JET DUST COLLECTOR SYSTEMS AND SERVICE**



**PROJECT SUCCESS  
MISSISSIPPI LIME PROJECT**

**CECO**  
**Flex-Kleen**

# THE PROBLEM

CECO Flex-Kleen was contacted by Mississippi Lime who was requesting a quote on replacing a dust collector that had been damaged in an explosion.

The collector, inlet & outlet manifolds, screw conveyor and some support steel were damaged by a shock wave from a kiln explosion that traveled through the duct work and into the collector.

Mississippi Lime was interested in a rapid quote turnaround and compressed fabrication time to get their production of food grade lime back on-line as quickly as possible.



The original dust collector included 300 filters, featured panelized construction, and was fabricated in Austria and assembled on site with hopper heat tracing and insulation.

To further complicate matters, access to the collector for maintenance was from the inside of a penthouse built on top of the collector and all dimensions were metric.



# OUR SOLUTION



Based on our rapid response to the initial request and demonstration of product knowledge as well as competitive pricing, Flex-Kleen received a purchase order from Mississippi Lime to replace the existing dust collector and custom inlet & outlet manifolds.

The scope of the project included hopper heat tracing, full shop insulation (incorporating a new and improved insulation method) and a screw conveyor. The timetable was very aggressive with a one week deadline for approval drawings and four weeks for fabrication. Engineering also included modifying the dust collector to accept the existing penthouse which was to be re-used with our unit.

Due to the complexity of the project and the need for the new unit to be a designed to fit

in an existing area, Flex-Kleen staff were sent to inspect the job site and discuss the scope of work with Mississippi Lime personnel.

Based on the site review, Flex-Kleen proposed that a walk-in clean air plenum with an additional access platform would be a preferable alternative to re-using the existing penthouse primarily due to potential safety & structural issues and for improved maintenance. Mississippi Lime agreed with these recommendations and made the decision to use a walk-in plenum.

# OUR FLEXIBILITY

Because of these changes, several modifications to the original project scope had to be included. Access doors and platforms were redesigned to match the height of the existing walkways.

Flex-Kleen increased the height of the walk-in plenum by one foot, installed ladders inside the two access doors which went down to the tube sheet and extended the pulse cleaning system piping in order to raise the level of the air headers, solenoid and diaphragm valves to a point easily accessible to workers using the new access platforms.



In addition, Mississippi Lime asked that the platform be 9" wider than Flex-Kleen standard and a wrap around the back of the walk-in plenum to mate to an existing ladder.

As promised, approval drawings were submitted less than one week after receipt of order and included the changes that were decided on earlier that week. Flex-Kleen was able to meet an expedited fabrication and delivery schedule even with some unforeseen customer delays.

# THE FINAL SCOPE

The dust collector, inlet and outlet manifolds and platform were fabricated, including heat tracing and insulation, and were ready for shipment by the promised date and the collector was loaded and shipped with the balance of the order. All components including bags, cages and screw conveyor were delivered on time minimizing downtime for the customer.

## 9' tall walk-in

clean air plenum designed for split cage with outlet manifold, 2 access doors with ladders and extended piping on reverse pulsejet cleaning system.

## 300 Aramid & PTFE membrane

top removal filter bags  
cleaning system.

## Dirty air plenum

to accommodate (300) 176 ½" long filter bags w/ inlet manifold.

## 300 2-piece cages

epoxy coated

## Hopper

with heat tracing system installed

## 20 vertical wires

with epoxy coated venturis

## Screw conveyor

## Entire collector

including inlet and outlet manifold was shop insulated with 4" thick insulation, covered with galvanized steel panels

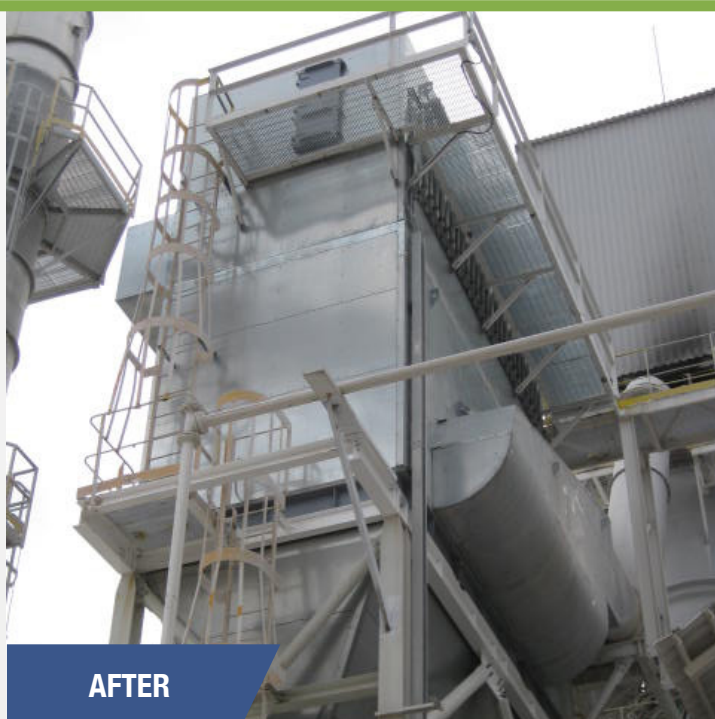


# SUMMARY

## PROJECT SUCCESS MISSISSIPPI LIME PROJECT



BEFORE



AFTER

The dust collector was installed around the clock with on-site Flex-Kleen support and the assistance of a local Flex-Kleen rep.

All pieces of the dust collector fit together well and mated up to the existing structure, including inlet and outlet ducting, with no problems. The installation time line was met and the lime kiln system was up and running smoothly on time.

Mississippi Lime commented that this was the highest quality dust collector they had ever seen.