



PROBLEM SOLVED™ PAPER

SOLUTION: Martin® Air Cannon with Martin® Tornado Exhaust Valve

INDUSTRY: Cement

LOCATION: Lafarge Bresil S.A.
Matozinhos, Mines Gerias, Brazil



The Lafarge Bresil S.A. plant in Matozinhos, Brazil produces 660,000 tons (600,000 metric tons) of cement per year.



Installed at the Matozinhos plant, the Martin® XHV Air Cannons with Martin® Tornado Exhaust Valves provide more output force to improve material flow.

The Martin® Air Cannon shown in this photo is painted blue to match the standard for this plant.

PROBLEM

The Lafarge Bresil S.A. plant in Matozinhos, Brazil is one of Brazil's leading cement production facilities. Opened in 1959, the plant produces 660,000 tons (600,000 metric tons) of clinker per year.

The need to improve efficiency and maintain production without outages led company officials to consider ways to improve flow through the plant's pre-heater tower.

SOLUTION

Martin® Air Cannons with Martin® Tornado Exhaust Valves were installed by service technicians from Martin Engineering's business unit in Campinas, Brazil.

RESULTS

The Martin® Air Cannon with the Martin® Tornado Exhaust Valve provides a faster and more powerful discharge than previous Martin® Air Cannon Systems.

At the Lafarge Bresil plant, the air cannons with the Martin® Tornado Valves were installed roughly 40 feet (12 meters) from the solenoid valve panel without loss of charge or line pressure. The system uses 3/8-inch (9.5-mm) diameter air lines.

Unlike conventional air cannons, the patent-pending Martin® Tornado Exhaust Valve fires in response to a positive surge of air pressure sent by a solenoid valve. This positive action allows a faster discharge, which amplifies the output to produce up to 20 percent more force than a standard Martin® Air Cannon. In addition, the improved air path of the new valve fills the reservoir three to four times faster than standard designs.

Martin Engineering Brazil reports that Lafarge Bresil is very satisfied with the performance of the Martin® Air Cannon with the Martin® Tornado Valves.

Martin® XHV Air Cannon Valve is protected by U.S. Patent No. 5,853,160.

Martin Engineering • One Martin Place • Neponset, IL 61345-9766 USA
Ph. 800-544-2947 • Fx. 800-814-1553 • info@martin-eng.com • www.martin-eng.com

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