



PROBLEM SOLVED™ PAPER

SOLUTION: Martin® MultiPort and Hurricane Air Cannon

INDUSTRY: Cement

LOCATION: Morocco

TITLE: Martin® MultiPort & Hurricane Air Cannons Improved Preheater Reliability



The preheater tower at the cement plant was experiencing severe material build-up and concretion.



29 Martin® Hurricane Air Cannons were installed in strategic locations.



The plant reported an immediate increase in production

PROBLEM

A large cement production facility in Morocco, producing approximately 1.6 million tonnes per year, began experiencing significant operational challenges in its preheater tower. As one of the organization's newest plants in the country, it operates a single production line from the preheater tower to the clinker cooler, making system reliability critical to safe and stable operation. Increased use of alternative Carbonized Solid Recovered (CSR) fuels led to severe material build-up and concretion inside the preheater tower, restricting material flow and gas circulation. This resulted in frequent blockages and unplanned shutdowns. The build-up also increased safety risks due to manual cleaning in high-temperature areas and caused ongoing productivity losses.

SOLUTION

Martin Engineering France proposed a targeted flow-aid solution designed specifically for the harsh conditions of the preheater tower. The recommended system consisted of a combination of Martin® MultiPorts and Hurricane® Air Cannons, selected for their proven performance in cement and high-temperature process environments. In total, two MultiPorts and thirty Hurricane Air Cannons were installed at strategic locations along the preheater tower where material build-up was most severe. The robust construction of the Hurricane Air Cannon makes it particularly well suited to the extreme conditions found in cement preheaters, including high temperatures, abrasive dust, and continuous operation.

RESULT

Within a few months of installation, the combined solution delivered clear and measurable improvements. Material build-up inside the preheater tower was significantly reduced, and blockages that previously caused unplanned shutdowns were eliminated. Maintenance interventions decreased, reducing personnel exposure to hazardous environments and lowering overall operational risk. The customer confirmed that the Martin Engineering solution completely resolved the problem and expressed high satisfaction with both the product performance and the technical support provided.