



PROBLEM SOLVED™ PAPER

SOLUTION: Martin® Hurricane Air Cannons

INDUSTRY: Port Terminal

LOCATION: KZN, South Africa

TITLE: Air Cannon System Upgrade and Maintenance Training Deliver Lasting Results



Old Air Cannon has been removed and damaged due to lack of maintenance



Hurricane® Air Cannon upgrade supported by practical maintenance training to improve reliability and safety.



Martin® Hurricane Air Cannon improve the flow of bulk materials

PROBLEM

One of South Africa's largest export ports, was experiencing ongoing issues with unreliable air cannons and faulty control panels. Poor maintenance practices, limited operator knowledge, and moisture contamination in the compressed air system resulted in equipment deterioration and reduced air cannon performance. The problem also created a significant safety risk. Air cannons operate under high pressure and require specific maintenance procedures. Without proper training, personnel servicing or opening pressurised units could have been exposed to serious injury risks, while incorrect maintenance practices could have led to further equipment damage.

SOLUTION

The solution included the installation of 12 Martin® Hurricane 35L Air Cannons and 2 new control panels across the affected tippler systems. In addition to the equipment upgrade, Martin Engineering provided practical maintenance training for the customer's artisans and operators. The training focused on correct inspection procedures, preventative maintenance practices and troubleshooting techniques. This combination of equipment replacement and knowledge transfer ensured that the customer received both an immediate operational improvement and a sustainable long-term solution.

RESULT

A key outcome of the project was the successful training of the customer's maintenance personnel. The artisans now have the knowledge and skills required to safely inspect, maintain, and troubleshoot the air cannon system, reducing safety risks associated with servicing pressurised equipment. By combining equipment upgrades with practical maintenance training, Martin Engineering delivered a sustainable solution that improved reliability, enhanced safety, and equipped the customer to maintain optimal system performance. The customer expressed satisfaction with both the solution and the service provided, and is confident in the long-term reliability and performance of the upgraded air cannon system.