



PROBLEM SOLVED™ PAPER

SOLUTION: Hurricane Air Cannons

INDUSTRY: Car Battery Chemicals

LOCATION: Finland

TITLE: Clearing blockages and buildups in silos



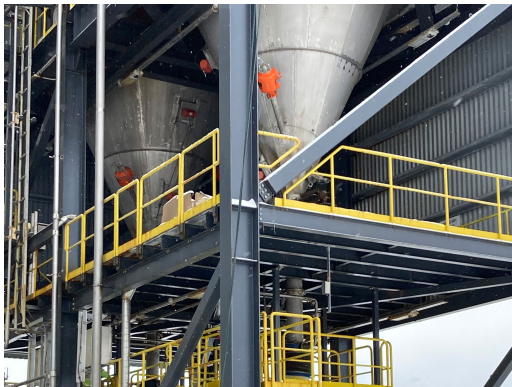
Ammonium Sulphate

PROBLEM

A European battery chemicals manufacturer (with the annual nickel sulphate production capacity of 170,000 tonnes) is currently expanding and constructing one of the largest production lines of its kind. The company was experiencing material flow issues when loading out trucks, which meant workers had to go up to the silo and bash the cone with a hammer to loosen material. The material was moist and sticky, and it would consolidate and stick to the silo walls. This problem was slowing down productivity, causing equipment damage and was posing a potential safety hazards as well as impacting productivity. The company tried using electric vibrators to resolve the problem, but with no effective improvement in performance.

SOLUTION

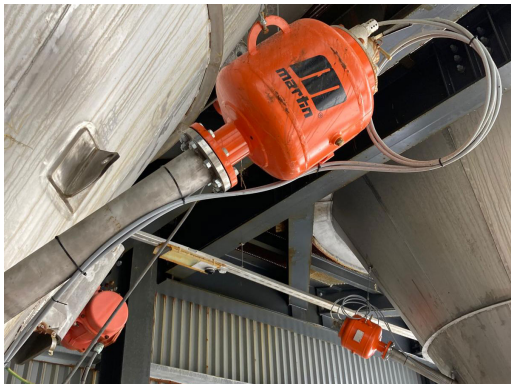
Martin Engineering's experts visited the site and recommended highly efficient Martin® Hurricane Air Cannons to improve the flow of materials and prevent blockages and buildups. The Hurricane features a new valve concept that provides more force, uses less air and simplifies installation and maintenance. The complete valve assembly can be removed in one easy step, working from one side of the tank, and it can be replaced within minutes to keep the process running. The positive-acting valve also allows the control solenoid to be positioned as far as 200 feet (60 m) from the tank, keeping them away from operational areas where servicing can be difficult. In total, 10 Martin® Hurricane Air Cannons with 35 litre tanks were installed.



Martin® Hurricane Air Cannons improving flow of the material in silos

RESULT

As a result of this installation, the problem of build-ups on the inside of silo walls was resolved and the material flow has been significantly improved. There is improved productivity without the need for workers to climb up and hammer on the outside of the silos. Moreover, maintenance time and the associated risks of access inside the silos has been reduced.



Martin® Hurricane Air Cannons installed on a silos