

Case Study: Improved Spray Dryer Cleaning

How Gamajet's impingement cleaning reduced cleaning downtime and improved results for a major dairy plant

In Early 2009 a major dairy cooperative was struggling with two challenges, first how to clean a spray dryer transfer duct in a more thorough manner and do so in less time. The plant had a high level of sanitation required especially for one of its main products, baby formula. The sanitation requirements were under increased scrutiny after the previous Fall's massive product recalls for infant formula. At the same time, the industry was dealing with lower prices for its products. Savings and efficiencies were needed.

The main spray dryer had been designed with a rotary impingement head to clean the main chamber and the system worked well (see attached article for a spray dryer case). The transfer ducts to the cyclone had retracting CIP spray heads and sani-midget rotary spray heads installed to clean the ducts. The spray balls relied on a rinsing action for cleaning and therefore required a significant amount of water and time to clean the ducts. The spray balls did not have sufficient force to remove powder build up requiring manual scraping.

Cooperative's plant manager and consulting engineers, Platts Drievap Eng. Ltd, contacted a Gamajet distributor, HD Process NZ Ltd, to see if the rotary impingement cleaning could be used in the transfer ducts. Working as a team the plant staff, consulting engineers, distributor and Gamajet developed a solution.

