

Case History 1008

SLOVNAFT Polymers, Bratislava, Slovakia – Mobile DeDuster™

Formerly a Nationalized Manufacturing Plant, the fall of the Berlin Wall and Russian Communism resulted in the privatization of many large Corporations behind the iron curtain.

Highly skilled and trained people formed the basis for the successful conversion to the world of capitalism, and it's aggressive competition. Although their process technology was world class, the new concept of capital investment was difficult to grasp.

Soon it became apparent that the competition was more difficult to contend with. Striving for new Customers in the huge western markets was made more difficult by the many complaints of poor quality. Specifically, their resins contained too many fines and streamers. In fact the levels were many times worse than other competition from the western markets. Lowering the price was an undesirable necessity, particularly when the western competition also lowered their prices. Sadly they observed that nearly 30% of their shipments were rejected.

They had purchased dust removal systems from the west, but they were installed at in-process systems and did not always improve the finished product. They began their search for fines and streamer removal systems, and found PELLETRON CORPORATION. Samples of the worst case pellets were sent to PELLETRON in the USA for testing, to see if this was an answer to their problem. They were surprised when the samples were returned, and in fact one of the Engineers remarked that it was too clean, and everyone would expect all their resins to be at that level.

In 1998 they purchased and installed two DeDuster™ systems. A P400, (15 TPH) system was retro fitted into their (1) ton big bag loading station for cleaning LDPE above the bag filling surge Hopper.

The existing receiving cyclone and airlock were raised to install the P400. Air quality standards are very high in the Slovakian Republic, so it was necessary to use high performance dust removal equipment for treating the DeDuster™ wash and exhaust air. The pellets were discharged by gravity from the cyclone into the airlock, and then the P400 DeDuster™.

The P400 DeDuster™ discharged into the bag filling surge hopper equipped with a level switch to prevent overfilling.



The dusty air from the P400 was drawn to a high performance cyclone receiver, where the dust was removed and the cleaned air drawn to an exhaust blower equipped with a HEPA filter at its discharge.

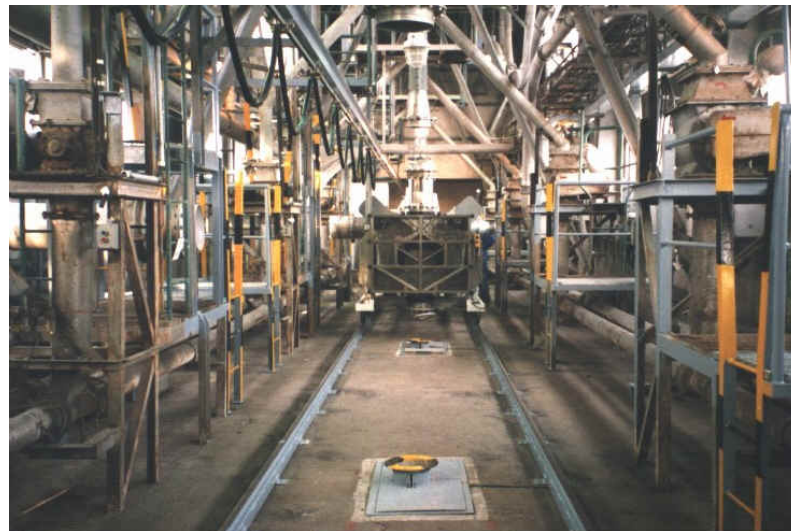
To insure that the wash air was clean, the wash air was drawn through a HEPA intake filter, before the P400 wash decks.

Start up was accomplished in a (1) day period, including the air quality evaluations. The DeDuster™ performance is excellent, virtually eliminating Customer complaints. In fact, the system is easy to clean; so special products are occasionally cleaned in this system for Customers that are particularly demanding of extra clean pellets.

It is estimated that the return on investment was completed in the first three months of operation



P800 SYSTEM on rails

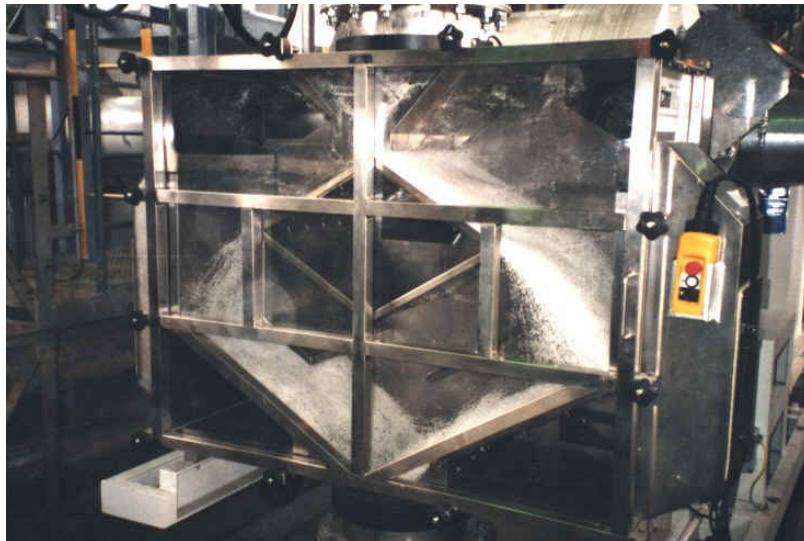


The same problem was suffered in their railroad car loading area. Six silos fed LDPE through mezzanine openings, gravity filling railroad cars through their top filling hatches. A P800 (35 TPH) rail mounted DeDuster™ system was selected in order to meet the high capacity filling requirement. Being rail mounted, the P800 could be located below each of the six silos, rather than the expense of six P800 DeDuster™ units.

The wash air blower and its intake HEPA filter were mounted with the DeDuster™ on the rail platform. Originally, the designer incorporated a motor drive system for accurate positioning of the platform. The system moved with very little effort, so the positioning system was discarded.

When the DeDuster™ was positioned above each mezzanine floor opening, a flexible boot was attached to the floor connection. The exhaust air outlet was connected by a flexible boot to the dusty air manifold for transport to the cyclone cluster for removing the dust from the air stream. As with the P400 DeDuster™ system, the exhaust air from the Cyclone cluster was drawn to an exhaust blower that discharged the air to atmosphere through a HEPA outlet filter system.

Positioning the unit was completed in (15) to (20) minutes between stations. The silo outlets included multipositioning flow control slide gates below butterfly style shutoff valves. The start up procedure calibrated the flow control slide gate position for (35) TPH.



The start up was complete within a day of operation. The Customer was amazed by the amount of streamers and fines that were removed. The success was confirmed by the elimination of Complaints by their Customers.

The improved quality gained a further benefit when the Sales Department reported that many Customers preferred their product, and admitted that they would be willing to pay a premium if necessary