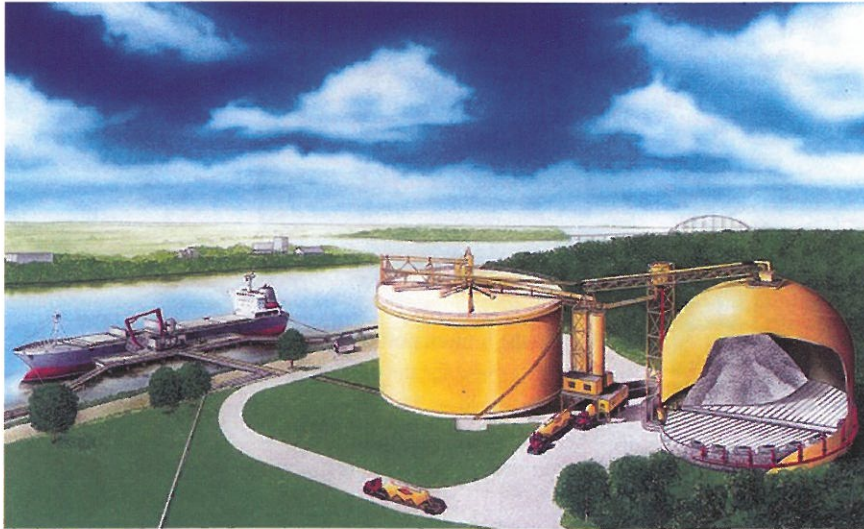


Pneumatic Reclaiming From Storage Utilizing A Van Aalst Bulk Handling 100% Fluidized Floor Design



With such great success of the pneumatic reclaim system for dome storages, Van Aalst Bulk Handling BV has evaluated the design and will apply it in systems for other applications.

The Van Aalst Bulk Handling BV 100% fluidized floor reclaim systems at Riverside Construction have proven their reliability for over 2 years now. Moreover, not only for its day to day reliability, but also the maintenance cost has been nonexistent. The design for this complete automatic operation has reduced the number of operators to one. This operator loads the trucks while the other tasks (like the aeration pattern cycles and refilling of the load out silos) are automatically handled by the reclaim system.

Located next to this newer dome storage of 36.000 tons with the Van Aalst Bulk Handling BV system, Riverside Construction has changed an older steel storage tank that had a reclaim system which left dead inventory inside into the Van Aalst Bulk Handling BV 100% fluidized floor design. The old reclaim system in the steel storage tank was also pneumatic, but consisted of aeration pads which covered 68% of the floor. Between these aeration pads cement would pile up and pack. Any lumps that were in the silo would gather and restrict the flow of material from the outlet and cause a real nightmare during loading trucks and causing maintenance costs. When the steel storage tank was emptied, manpower and equipment had to go into the tank to remove the dead inventory consisting of lumps and packed material. This proved to be a time and money consuming operation.

With the Van Aalst Bulk Handling BV 100% fluidized floor design now installed in the steel storage tank, the lumpy-packed dead inventory, the task of manually removing it, the low or no flow of material, and the long line of waiting empty trucks, is only a distant memory.

Steel Silo Concept



At the end of 2002 Van Aalst Bulk Handling BV delivered and installed a 5000 ton storage silo for cement. The silo has a diameter of 13 meters and a height of 32 meters.

The silo must supply material to a day bin for a packing machine and for bulk truck loadout. Van Aalst Bulk Handling BV delivered a full 100% fluidized floor reclaim system for the silo as it was the most economical and reliable equipment for this application.

In the old design the bulk trucks were loaded from the same existing day bin which fed the packing machine. The first plan was to raise the new storage silo so that bulk trucks could be loaded from underneath. The price for this extra height (material and extra piling) proved to be much higher than a Van Aalst Bulk Handling BV 100% fluidized floor and by having the silo bottom surface area directly on the grade level concrete support slab, the piling could be reduced as well.

The total price of the silo, foundation, and 100% fluidized floor design

turned out to be the least expensive solution and best solution. The silo was delivered (see picture) with a side outlet for loading the bulk



trucks and the bottom portion of the silo was dedicated for the day bin of the packing machine. The existing packing machine day bin can also deliver the material to the bulk trucks.

With the extra side outlet on the silo it is possible to load 85% of the stored cement at two positions into bulk trucks (side outlet and day bin). Double capacity!

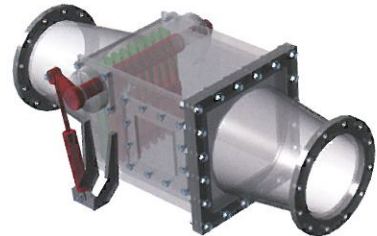
Lump catcher/crusher

Lump crushers were delivered and installed between the outlet and loading bellows to eliminate the plugging problems for the bulk truck operators.

Two bulktruck loading positions, two lump crushers.

The new Van Aalst Bulk Handling BV lump catcher/crusher can replace the two crushers and prevent that foreign objects enter the silo. Installed at the outlet of the shipunloader lumps are caught and at set intervals crushed. If a foreign object is caught which can not be crushed, an alarm signal is annunciated. Foreign objects can be removed via an inspection lid at the side of the catcher/crusher.

The silo is filled by a Van Aalst Bulk Handling BV 300 tons per hour pneumatic ship unloader. The ship unloading, the silo reclaim system, the



filling of the bulk trucks and supply of the packing machine is now an all pneumatic and dust free operation.

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