

Powder • Solids Mixing • Tideflex® Diffuser Valves

Tideflex® Diffuser Check Valves from Tideflex® Technologies are the aeration solution for a powder manufacturer.

After a slurry is made from the powder, it is shipped in rail cars to food plants, pulp and paper mills, and chemical plants.

The rail cars often sit at the receiving location for weeks before being used, resulting in settling of the slurry. This can make discharging of the slurry a time consuming and difficult process.

To maintain a good slurry blend, air must agitate the slurry and keep it in suspension. The traditional solution is to sparge, or inject, air through open nozzles into the tank. Unfortunately, the slurry often clogs the open nozzles.

Replacing the nozzles with Tideflex® Diffuser Check Valves solves the sparging problem. Twelve to 18 Tideflex® Diffuser Check Valves are installed on the air line into each rail car.

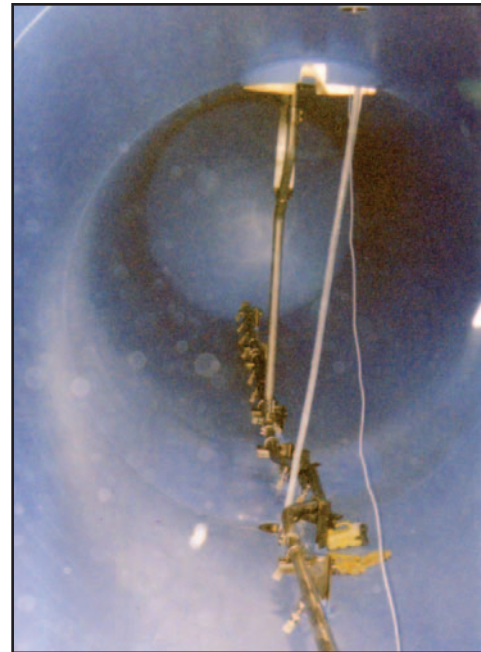
The Diffuser Check Valves assist the aeration process by accelerating the velocity of the injected air. The positive closing action of the Tideflex® Diffuser Check Valves prevent the slurry from entering and clogging the air sparge system.

Tideflex® Check Valves are engineered and custom built to meet each customer's exact flow requirement and specific application.

Principle of Operation



Forward pressure opens the Tideflex® Diffuser Check Valve, reverse pressure seals the valve and prevents slurry backflow into the air sparge system.



The air sparging system with the Tideflex® Diffuser Check Valves is installed in the bottom of the tank car.



When closed, the Tideflex® Diffuser Check Valves keep the slurry from entering the sparge system.