



VORTEX LOADING SPOUT HANDLING FRAC SAND

Customer: Sand Production Facility

Material: Frac Sand

Application: Loading sand into rail cars to transport to drilling sites within the US and Canada

Challenge: Find a loading spout that offers better service than the ones previously used

Equipment: Vortex Retractable Spouts VES-25-10



Results:

The petroleum industry in the US and Canada rely heavily on this US-based sand production facility as a supplier of quality sand for hydraulic fracturing. The company recently made the decision to expand their operation to include covered rail car loading. This decision allows them to supply more product and ship it during any type of weather condition.

Not wanting to be plagued with the equipment servicing issues they had experienced in the past when using spouts for truck loading, the Vortex Loading Spout was specified. Spouts manufactured by two previous suppliers contained three lifting cables and could not be retracted when one of the cables broke.

The 3-cable spouts were in a continual state of “fix and repair” when cables unraveled off the main pulleys, or frayed and broke from wear created by the sharp edges of the pulleys. These problems would be amplified when using multiple spouts during a rail loading operation.

The covered load out area was constructed to accommodate five rail cars – loaded from five stationary spouts. Each spout was at the bottom of a product bin and each bin contained a different grade of sand from 20 to 100 mesh. The company initially ordered the internal spout cones made out of AR235 steel plate for abrasion resistance. Due to the increased output of the rail car operation, the cones were later replaced by a more resistant AR450 metal. Replacement was not a major issue, and heavier duty cones are available if later required.

Between 50 to 60 cars are being loaded each day, 7 days a week. Loading crews have been amazed by the fact that they have yet to replace any frayed or broken cables.