

Bulk Bag Fillers Help Recycle 36,000 Tons of Sulfur on Alaska's Northern Slope



Thousands of Filled Bulk Bags Await Delivery to the Port of Homer in Alaska



Bulk Bag Fillers Underneath the Feed Hopper

Customer Requirements

AIMM Technologies is a Texas-based oil industry service company with 15 years of recycling experience. They got the go-ahead to recover 36,000 tons of sulfur and concluded that the best way to process the by-product was to use bulk bags, but they needed a way to fill them.

1. In 2007 the price of sulfur had recovered from its price slump by 5 times.
2. It was now profitable for petroleum refineries such as Kenai, on the North Slope of Alaska.
3. "Alaska is a logistical nightmare to recycle petroleum by-products such as sulfur," confirms Brooks Bradford, President of AIMM Technologies.
4. "We had to bag the sulfur, move it to a storage site, then move it by truck to a port and load it onto an ocean vessel for delivery to market."
5. "One stipulation was that the bagging facility had to be mobile and easy to dismantle for use at another sulfur recovery site once recovery at this site was complete," Bradford confirmed.
6. It must meet the tight delivery requirements of four weeks.
7. Installation and start up must only take two weeks.

"Spiroflow was the only supplier who could meet our tight deadline as most suppliers wanted a 12-week delivery time or more," said Bradford.

Spiroflow Solution

Spiroflow recommended:

- Two Model C1-2 Bulk Bag Fillers were specially designed for pallet-loaded Bulk Bags.
- The power supply had to be modified to US Class 1, Division 2 since an electric spark could ignite the sulfur.
- The Model C1-2 is ideal for filling bulk bags with a 2,000 - 4,000lb / 1-2 tonne capacity on a pallet.
- The bulk bags at Kenai each held 3,300 lb/ 1500kg of material, were 3.0' / 1m in diameter and made of conductive polyester for safer handling of sulfur.

Bulk Bag Fillers Help Recycle 36,000 Tons of Sulfur on Alaska's Northern Slope



A Load of Sulfur about to depart the site



*General view of the Bulk Bag Filling Station
Showing the Sulfur Stockpile in the Back*

Spiroflow Solution Continued

- Model C1-2 Bulk Bag Fillers incorporate an NTEP approved weigh platform and integral powered rollers for fast and easy removal of filled bags.
- Once filled, the bulk bags were powered off the fillers onto gravity roller accumulating conveyors where they awaited removal by a forklift truck.
- Once manufactured, the Bulk Bag Fillers were placed on a skid and delivered by truck within a five-day delivery time to the Kenai site.
- A start-up technician was also sent to the site for two weeks to help with additional customization of the equipment and training during start-up.

"We appreciated the extra effort by Spiroflow since we were not familiar with bulk bag fillers," Bradford noted. "We needed training too."

The Results

According to Jeff Deese, Vice President of the Alaska Division for AIMM Technologies, the facility was in operation for 14 weeks from the end of March to mid-July in 2008. The Kenai facility had 10 people working 8-hour shifts, four of whom were at the bagging station.

- The facility averaged 300 filled bags per shift, reaching a high of 404 bags on one of the shifts.
- Three hundred bags per shift is an average of 19 bags per hour per filling machine.
- In total 36,000 tons of sulfur was recovered in 27,000 bulk bags.

Deese said that customer support from Spiroflow was phenomenal:

"Not only did they send a service technician on-site for two weeks to install and start-up the system as well as to train us how to use it, the system was delivered on time." Deese added. "Company engineers were easy to work with and available 24 hours a day - an important feature due to the time difference in Alaska. We couldn't have done this without Spiroflow's help and availability."

- Bags were taken from the storage facility in one of four trucks that moved bags continuously to the Port of Homer.
- The sulfur was sold at Homer to a third party who shipped it to an inland river port in China where it is being used mainly as fertilizer.
- Upon completion of the contract at Kenai, the bulk bag filling facility was dismantled and reassembled at another sulfur recovery site in Canada.
- It was converted to handle 4,000lb/ 1800kg bags instead of the 3,300 lb/ 1500kg bags.

How Can Spiroflow Help Your Business?

Contact us today to discuss your specific applications and needs.