



AW-LAKE
PROCESS FLOW MEASUREMENT



APPLICATION SPOTLIGHT

Coriolis Mass Flow Meters Used In Liquid Ballast Production for Tractor Tires



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APPLICATION:

Rim Guard has revolutionized the use of liquid ballast in tractor tires, perfecting a formula that stands as the industry benchmark. This exclusive formula boasts numerous advantages: it's non-toxic, non-corrosive, remains fluid even at frigid temperatures down to -35°F, and boasts an impressive density of 10.7 lbs per gallon. These attributes collectively make it the preferred weight system for a wide range of users.

Remarkably, this innovative product is a byproduct of the Midwest sugar industry, where sugar beets are processed to extract their sugar content. Rim Guard takes this fibrous slurry, further processes it, and distributes the resulting product through a small fleet of tanker trucks to Agricultural Supply Centers nationwide.

PRODUCT SUPPLIED:

- AW-Lake's TRICOR TCM-65K Coriolis mass flow meters.

CHALLENGE:

AW-Lake encountered two primary challenges in their collaboration with Rim Guard. The first challenge involved automating the precise mixing of water with raw beet juice to achieve the desired product characteristics. The second challenge revolved around the custody transfer and distribution of Rim Guard's final product to their network of dealers. It was essential for Rim Guard to have a streamlined operation that allowed them to track both incoming and outgoing product quantities accurately.



Truck-mounted TCM-65K Coriolis meter



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SOLUTION:

AW-Lake's TRICOR Coriolis meters serve as a key component in automating the processing of Rim Guard's product. These meters provided crucial data such as flow rate, flow totals, and specific gravity information to the control system (PLC) as the product was pumped into a substantial holding tank to be processed. Once the raw material is offloaded from the truck, valves are opened and closed, directing the finished product from a second tank into the now empty tanker truck.

Each tanker truck is equipped with its own TCM-65K meter, ensuring the precise measurement of the fill cycle and halting the transfer when the tanker reaches its full capacity. Additionally, these onboard meters verified the total product volume when offloaded at end-users' sites, facilitating accurate billing processes. This solution brought efficiency and precision to Rim Guard's operations, enhancing both the production process and the distribution network.

RESULTS:

Per Bob Fenton, Rim Guard's President, "I couldn't be more satisfied with the outcome of this two-phase project. AW-Lake worked with us to appropriately size the meter and offered their assistance at system startup. The meters provide real-time feedback on the quality of the finished product to maintain the crucial 10.7 lbs/gal weight we need. Looking forward, we plan to outfit three more delivery trucks over the slower winter months."



TCM-65K Coriolis meter measuring raw product arriving via tanker trucks and finished product loading onto tanker trucks for delivery to distribution sites.