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Debra Schug, *Features Editor*

Tea importer achieves blend consistency with new mixer

Variations in tea quality and characteristics require a gentler, more thorough mixing process.

After passing through a vibrating screen, tea is conveyed to the Munson 140-cu.-ft. rotary batch mixer. Source: Munson.

Henry P. Thomson, Inc., or HPT, is one of the largest tea importers in the US, selling primarily to tea packagers that distribute to restaurants, food chains and supermarkets in the Southern states. Founded in 1912, the company had outsourced its blending and packaging to a company in New Orleans for a number of years until Hurricane Katrina devastated the area in 2005. The blending, packaging and distribution services are now performed in Augusta, GA.

"Approximately 85 percent of HPT blends are used for iced tea," says John Smith, HPT vice president and managing director. He notes tea is increasingly becoming the beverage of choice for Americans who want an alternative to sugary, carbonated drinks. "Iced tea is consumed in restaurants, made at home and bought in the refrigerated sections of grocery stores and convenience stores."

One key to HPT's 100-year success is its ability to maintain tea blend consistency, a difficult task due to variations in imported tea. "From sack to sack, the tea may be lighter or darker in color or vary in quality due to seasonal variations," explains Smith. "Yet, the customer expects blends with no variation in quality from batch to batch."

HPT tried a few options to achieve the consistency it needs. First, a ribbon blender was employed, but Smith says the heavy action and high-shear rotation of the agitator "destroyed the tea." HPT also used a custom-built mixer, but it did not perform as expected. At last, the company turned to the Munson 140-cu.-ft. capacity rotary batch mixer.

While the previous mixer had to be tilted upward to promote evacuation from the discharge port and had a topside shaft that bore a large amount of weight, the Munson machine remains level and discharges fully, reducing wasted product and allowing faster cleaning. Plus, it is supported by two external trunnion rings that ride on heavy-duty roller assemblies, eliminating the need for an internal shaft with bearings and seals that could contaminate material and prevent thorough cleaning.

According to Eugene Amici, president of HPT, the Munson unit offers other benefits. "The mixer occupies half the amount of space required by the previous mixer, is more efficient and can mix larger batches." The prior mixer processed a maximum of 1,800 pounds per batch; the Munson mixer blends between 1,600 to 2,600 pounds per batch.

"The Munson machine can comfortably mix our daily output of 40,000 pounds per day and push to 50,000 pounds per day, if needed," adds Smith.

Most blends consist of four to six teas, processed using one of two methods. The first is a rolling process, which twists and breaks the leaves into sizes from 0.25 to 0.125 inches and down to a fine powder. The other is a cut-tear-curl approach that produces smaller, more uniform particles that yield more intense flavor and color.

Suppliers deliver the tea in 90- to 140-pound sacks that are opened by dropping them onto serrated teeth positioned above a vibrating screen, which removes oversized objects. A conveyor, outfitted with magnets to remove any metallic particles, transports the tea into the mixer.

The stainless steel rotary batch mixer uses a gravity-driven mixing process in which internal mixing flights and lifters create a gentle four-way mixing

The Munson rotary batch mixer blends 1,600- to 2,600-pound batches and runs all day, seven days per week. Source: Munson.

action—tumble, turn, cut and fold—to produce a uniform batch in one to three minutes while imparting minimal energy to the material. The unit mixes continuously during loading through its stationary inlet as well as during discharging through its stationary outlet.

Internal flights lift and direct blended product to the discharge gate, evacuating the rotating mixing drum. Then, the blended tea is conveyed to a packaging station where a storage vessel holds one batch. While that batch is being filled into 900-to 2,300-pound bulk bags or 105-pound sacks, the next batch is being mixed.

"Everyone in the tea industry says Munson is the mixer of choice for its gentle mixing and other features," states Amici. He adds the equipment has helped HPT maintain its blending quality. ❖

For more information:
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SPIN LOADER

Designed to load storage bins and hoppers without particle separation, the Metalfab spin loader can be mounted to the top of a bin or attached to a flexible loading spout and placed inside or over the bin. The entering material flows through a tube to a motorized, spinning disc that directs it to the outer walls of the bin. The loader can handle up to 200,000 lb./hr. of material.

Metalfab, Inc.; 800-764-2999; www.metalfabinc.com