APPLICATION SPOTLIGHT

ARO®

Removing Byproducts From The Liquid Smoking Process

HEAVY DUTY SOLUTION

Project Overview

Red Arrow requires the ability to separate byproducts from their liquid smoking process in order to achieve the desired flavors in their smoke. Because their process is 100% natural and completely chemical-free, the solution needed to be one that maintained this model. Being food grade while having the capacity to filter unwanted byproducts and not contaminate the natural process, ARO was proud to partner with them for their solution.

About Red Arrow

Based in Manitowoc, Wisconsin, Red Arrow develops the flavors that help develop signature foods, from Condensed Natural Smokes™ and Cooking Method Flavors™ to custom flavor development. Their technical capabilities and state-of-the-art manufacturing expertise deliver natural, healthy solutions customized to their customers' application and process.

Solution

Red Arrow's Condensed Natural Smoke™ also known as "liquid smoke", is a refined smoke condensate created from a 100% natural, proprietary process using wood, heat, water, and filtration. Signature custom profiles can be created in the smoke using different types of wood such as hickory, maple, oak, apple, cherry, and other wood types, delivering increased consistency of smoke color and flavor as well as higher cork yields and product throughput.

The liquid smoke process consists of burning sawdust, a byproduct from the lumber industry, in custom designed Red Arrow smoke generators. The key components of smoke that are responsible for flavoring and browning are captured in the purified water, while the non-desirable components, such as tar and creosote which are not water soluble, are removed from the condensed smoke.

ARO's Heavy Duty (HD) Process Pump allows Red Arrow to pump the tar and creosote byproducts out of the liquid smoking process and into receptor tanks. For Red Arrow's specific application, the HD pump was customized to be of stainless steel construction with hot clearance impellers and food grade pure PTFE packing. The viscous byproducts are removed with ease due the HD's circumferential piston design which includes a long radial sealing arc on the pump's impellers.

By pumping the byproducts out of the process, Red Arrow is able to provide only the key components for flavoring the purified water and keeping the finished product uncontaminated.

HD Model: HD120SA1PE0A0CA00A

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