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Sonic Air's Hot Air Blower System Enhances Pellet Production from Peanut Hulls and Shells



Overview

A US-based pellet company specializes in converting peanut hulls and shells into biofuel pellets for various energy conversion processes. With a focus on direct combustion, gasification, and pyrolysis, the company required an effective solution to reduce the moisture content of the mulched peanut hulls and shells using Sonic’s exclusive forced hot air pumped into the pellet mill conditioner during manufacturing. Sonic Air Systems stepped in to address their challenge and boost the production rate of pellets through its pellet drying solution.

Solution

Sonic supplied the pellet company with a single 25HP Sonic heaterless Industrial Hot Air Dryer designed to simultaneously deliver hot air into two conditioners/mixers. Using Sonic's patented centrifugal blower technology, the system produced an outlet air temperature of 225°F (107.2°C) without any secondary heating source. The hot air was piped into a vent pipe at one end of the rotary conditioner/mixer, effectively reducing the moisture content of the mulched material. Sonic Air’s pellet drying solution offered exceptional drying efficiency, meeting the customer's production and quality objectives.

Result

Sonic Air System's Hot Air Blower System proved highly effective in enhancing the production of pellets from peanut hulls and shells. The customer achieved their desired moisture reduction levels, improving pellet quality and increasing production rate. Moreover, Sonic’s industrial pellet mill conditioner dryers provided additional benefits of energy cost savings compared to alternative technologies. The successful recycling effort reduced waste and contributed to the company's sustainable practices by eliminating millions of pounds of peanut hulls and shells per month being sent to a landfill. The transport cost avoidance benefit was exceeded only by the positive effects at the local waste management company. The customer's satisfaction with the results led them to refer a local lumber mill to Sonic, which subsequently purchased a Sonic Hot Air Blower System for their own pellet production from sawmill waste.

KEY TAKEAWAYS

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CONTACT US

1050 Beacon Street
Brea, CA 92821, USA

800-82-SONIC
714-255-0124

asksonic@sonicairsystems.com

Mon to Fri, 7:30 AM to 4:00 PM PST

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