



AmeriChem Systems Inc.

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Revolutionizing Bottling and Packaging: The Enpro High-Speed RFID System

Summary

- This white paper introduces our groundbreaking high-speed RFID system designed to revolutionize the bottling and packaging of carbonated drinks. With a read speed of up to 3,000 RFID tags per minute, our system embeds RFIDs in traditional bottle filling vent tubes and can filling ball cages, offering superior quality and performance. This innovation enables non-contact, high-speed monitoring in harsh environments, providing unparalleled efficiency and reliability for beverage manufacturers.

Outline

Introduction to RFID Technology

- **Overview of RFID Technology**
 - Basics of RFID (Radio-Frequency Identification) technology
 - How RFID enables non-contact data collection and monitoring
 - Advantages of RFID in industrial applications

Engineering Marvel: The High-Speed RFID System

- **Key Features**
 - Max read speed of 3,000 RFID tags per minute
 - Embedding RFIDs in vent tubes and ball cages
 - Superior manufacturing quality of vent tubes and ball cages
- **System Components**
 - Stand-alone system including antenna and control box
 - Integration capabilities with beverage filling machines
 - Integration capabilities with supervisory control and monitoring systems

Competitive Advantage

- **Speed and Efficiency**
 - Five times faster than other RFID systems in the marketplace
- **Operational Benefits**
 - Elimination of production stops for manual checks



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- Validated quality logs for supervisors
- Increased production output
- Reduction in product waste and holds

Implementation and Success Stories

• Case Studies

- Successful implementation in over 50 locations across North America
- Real-world examples of improved efficiency and cost savings

• Customer Testimonials

- Feedback from beverage manufacturers who have adopted the system

Benefits for Beverage Manufacturers

• Operational Efficiency

- Continuous monitoring without line stoppages
- Improved quality control and assurance

• Cost Savings

- Reduced manual labor for visual checks
- Decreased product waste and fewer production holds

• Enhanced Production Output

- Higher throughput and consistent quality
- Ability to meet increasing market demand

Conclusion

This high-speed RFID system represents a significant advancement in the bottling and packaging industry for carbonated drinks. By integrating this technology, beverage manufacturers can achieve unprecedented levels of efficiency, quality, and profitability. Join us in embracing this engineering marvel and drive your production to new heights.

Contact Information

For more information, please contact us at www.MissingVentTube.com.



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Executive Summary

Our high-speed RFID system is engineered to meet the demanding requirements of the bottling and packaging industry. With a remarkable read speed of 3,000 RFID tags per minute, it provides a seamless, non-contact solution for monitoring vent tubes and ball cages in carbonated drink production lines. This white paper explores the technology, benefits, and real-world applications of our system, demonstrating how it outperforms traditional methods and other RFID systems in the market.

Introduction to RFID Technology

RFID technology uses electromagnetic fields to automatically identify and track tags attached to objects. These tags contain electronically stored information that can be read from a distance, making RFID an ideal solution for monitoring in harsh and high-speed environments. Our high-speed RFID system leverages this technology to provide real-time data, ensuring optimal performance and quality control in beverage manufacturing. No longer will beverage manufacturers need to manually check for vent tubes or ball cages as this technology enables a continuous monitoring and immediate stop of the machine if one tag is missing.

Engineering Marvel: The High-Speed RFID System

Our system sets new standards with its ability to read up to 3,000 RFID tags per minute, embedded seamlessly within vent tubes and ball cages. Manufactured with the highest quality, food-safe contact materials, FDA-approved materials, and medical-grade construction, our vent tubes and ball cages ensure durability and reliability. They are designed to withstand Clean-in-Place (CIP) cycles and the harsh environments of food processing. The stand-alone system, complete with an antenna and control box, can be easily integrated into existing beverage filling machines and supervisory control systems, providing a robust and scalable solution.

Competitive Advantage

Compared to traditional RFID systems, our high-speed system offers a fivefold increase in read speed, significantly enhancing operational efficiency. Beverage manufacturers benefit from continuous production without the need for manual visual checks, resulting in higher output and reduced downtime. Validated quality logs provide supervisors with reliable data, ensuring consistent product quality and compliance with industry standards.

Operational Benefits

Our high-speed RFID system offers numerous operational benefits that revolutionize the bottling and packaging process for carbonated drinks. By leveraging advanced RFID technology, beverage manufacturers can achieve greater efficiency, accuracy, and reliability, ultimately driving productivity and profitability.

Traditional bottling and packaging processes often require manual checks to ensure the proper functioning of vent tubes and ball cages. These checks can lead to frequent production stops, disrupting the workflow and reducing overall efficiency. With our high-speed RFID system, these manual checks are no longer necessary. The system provides continuous, non-contact monitoring of vent tubes and ball cages, ensuring they are functioning correctly without the need for human intervention. This continuous monitoring eliminates unnecessary production stops, maintaining a smooth and uninterrupted workflow, and significantly increasing production efficiency.



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Quality control is paramount in the beverage manufacturing industry. Supervisors need accurate and reliable data to ensure that production standards are consistently met. Our high-speed RFID system generates validated quality logs, providing supervisors with detailed and accurate records of the production process. These logs offer real-time insights into the performance and status of vent tubes and ball cages, enabling supervisors to make informed decisions quickly. The system ensures that any deviations from quality standards are promptly detected and addressed, maintaining high product quality and compliance with industry regulations.

Product waste and production holds are costly for beverage manufacturers. Manual checks and quality control issues often lead to product waste, as defective products must be discarded. Production holds due to equipment malfunctions or quality concerns further exacerbate this problem. Our high-speed RFID system minimizes product waste and holds by providing continuous, real-time monitoring of the production process. The system detects and alerts operators to any issues with vent tubes and ball cages immediately, allowing for swift corrective action. This proactive approach reduces the likelihood of producing defective products, minimizes waste, and prevents costly production holds, ensuring a more efficient and sustainable production process.

Implementation and Success Stories

Successfully implemented in over 50 locations across North America, our high-speed RFID system installations demonstrate significant improvements in production efficiency, cost savings, and product quality. Real-world case studies highlight the transformative impact of our technology, with customers reporting substantial reductions in manual labor, production stoppages, and product waste. Numerous customer testimonials and continuous operating systems counting tens of thousands of operational hours is testament to the success of the system.

Benefits for Beverage Manufacturers

By adopting our high-speed RFID system, beverage manufacturers can achieve numerous benefits, including:

- **Operational Efficiency:** Continuous, non-contact monitoring eliminates the need for production stops, ensuring smooth and uninterrupted operations.
- **Cost Savings:** Reduced manual labor and fewer production holds translate to lower operational costs and higher profitability.
- **Enhanced Production Output:** The ability to monitor and manage production lines in real-time results in higher throughput and consistent product quality, meeting increasing market demand.

Conclusion

This high-speed RFID system is a game-changer for the bottling and packaging industry. Its superior speed, quality, and integration capabilities make it an indispensable tool for beverage manufacturers looking to enhance efficiency, quality, and profitability. Embrace this innovative technology and take your production to the next level.

Contact Information

For more information about our high-speed RFID system and how it can benefit your operations, please contact us at www.MissingVentTube.com.



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