

## Suppliers' Tips

# When handling an abrasive material, what packaging equipment features are important?

An abrasive material can cause specific challenges in bagging and packaging equipment. The following tips will ensure that your equipment remains in good operating condition and help you keep downtime to a minimum:

- Make sure that the material contact surfaces and parts that are prone to aggressive wear because of the abrasive material are easy to inspect, maintain, and replace.
- All material contact surfaces should be built from appropriate or upgraded materials, like abrasion-resistant plating where possible, to increase the equipment's service life. Specialized coatings can work but will wear off whereas upgraded materials will last longer.
- Use replaceable impact and wear liners where possible.
- Use secondary seals or air purging on bearings for rotating and sliding components in your packaging equipment.
- Choose equipment that has readily available replacement parts and keep those replacement parts on hand.
- Use hardfacing, which is a process where a harder material is applied to a base metal, on your packaging equipment's augers.
- Specify thick gauge material when designing any hoppers, chutes, and other surfaces that come in contact with abrasive materials upstream of the packaging process.

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# What packaging equipment design innovations do you think will be influential in the next 5 years?

The global economy will continue to drive manufacturing environments to evolve at a rapid pace. Equipment suppliers will be expected to provide innovative designs to meet these challenging demands. A few of the "cross industry" technologies that will support this effort include:

- Modular designs with the ability for rapid retooling to accommodate the ever-changing product mix requirements.
- Collaborative robotics will allow humans to safely work alongside robots in the same work envelope to increase productivity and accuracy.
- Inline testing and inspection will ensure product quality while reducing the time to market.
- Industrial internet of things (IIOT) will connect equipment, people, and processes to the internet to improve equipment functionality and reliability.
- Highly intuitive user interfaces, including speech recognition, will help overcome the growing challenges in employee skill gaps and reduce operator training time.
- Improved and enhanced product traceability will provide consumers with greater trust and confidence in manufacturers.
- Readily available, useful data will be used for plug-and-play integration into enterprise resource planning (ERP) systems, which are used to store all of a company's data in one database, providing some advantages in production efficiency.

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*Equipment suppliers are a valuable source of information about equipment and processes. In light of this, each month we ask suppliers a question of concern to our readers. Answers reflect the suppliers' general expertise and don't promote the suppliers' equipment. If you have a question you'd like suppliers to answer, send it to Kayla Carrigan, Associate Editor, Powder and Bulk Engineering, 1155 Northland Drive, St. Paul, MN 55120; fax 651-287-5650 (kcarrigan@cscpub.com).*