Suppliers' Tips

I have frequent material changeovers in my size reduction operation. What type of milling equipment would be best?

For processes that require frequent changeovers, machines with a wide range of process control and operating flexibility are the answer. Whether the materials are friable or not will affect the type of equipment that's optimal. In addition to material type, the starting and final size of the milled material drives the mill selection process.

As an example, cage mills (for friable materials) and hammermills (for nonfriable materials) both present good changeover adaptability. Why? Here are three reasons why these two mill types are suitable for frequent material changeovers:

1. Both are easily and quickly opened and closed for inspection, maintenance, and cleaning.
2. Speed of the rotating parts can be easily adjusted with variable-frequency drives to make the final milled material's particle size finer or coarser.
3. Internal machine configurations can be easily changed to adjust the milling operation's output.

Before purchasing any size reduction equipment, the best companies will have:

1. Several size reduction product lines to choose from.
2. Test facilities to provide milling results on your material.
3. A full-service company that can support your purchase with post-sale service, parts, and system design advice.

Chris Nawalaniec, vice president of sales and marketing, Stedman Machine, 812-926-0038

Selecting milling equipment designed with easy-access doors or covers will allow quick and trouble-free changes of your internal particle-retention components, such as screens, grids, or cutter plates. Selecting a mill with a fixed hammer design will allow a variable-frequency drive to change your operating speed, which will change your mill's particle sizeing capabilities and possibly minimize the number of required changeovers.

Gary Stolhanske, president, Process Equipment Specialists, 763-432-6475

When milling different materials and the need to changeover is frequent, having internal accessibility and minimal crevices in the grinding area is key. For example, a spice company that runs many different materials in a mill must prevent cross-contamination and carryover from one spice to another. To minimize this problem, the company uses a mill with a sanitary fixed-blade rotor that's fully welded and free of areas where material can build up. In addition to the specially constructed rotor, the mill opens up on both sides for maximum access to the internals for ease of washdown. These two features together have cut down the company's mill changeover time by 75 percent.

In addition, milling equipment can include: easy-access rail systems on lump breakers and full access for quick cleanout and maintenance on hammermills and fine grinders. Another helpful mill feature is a fully welded sanitary design, which mitigates material buildup for ease of washdown and material changeover.

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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).