



CONTINUOUS PRESSURE AND VACUUM FILTRATION TECHNOLOGIES AS ALTERNATIVES TO BATCH FILTRATION OPERATIONS

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This presentation will discuss lab testing, pilot testing and scale-up for converting chemical processes to continuous filtration technologies from batch filtration operations. The overall scheme can be used by process engineers to develop optimum continuous pressure or vacuum filtration solutions for high-solids slurry applications.

In this first process a liquified gas slurry is used to produce a specialty chemical. A liquefied gas is a clean, colorless gas that is easy to liquefy and transport. It is gaseous at normal temperature and pressure, but changes to a liquid when subjected to modest pressure or cooling. The most important point is to keep these gases, under pressure, so they behave as a liquid during filtration, cake washing and drying. The presentation discusses the process testing in the laboratory and in the field to evaluate continuous pressure filtration as an alternative to batch pressure filtration.

In this second pharmaceutical process, the objective is to replace the current batch centrifuge with a technology that would be suitable for conversion to a continuous process. The initial lab tests suggested a vacuum belt filter would achieve cake quality equal to or better than the current centrifuge with a major reduction in processing time. The decision, after the lab testing, was to select a vacuum belt filter for pilot testing.

The presentation includes technology descriptions, discussion of specifications and general guidelines for performance guarantees.