Buckman™
Chemistry, connected.

With more complexity than ever, how can you stabilize your papermaking process?

Your Challenge:

Chasing variability limits improvement possibilities

Digital capabilities could help pulp and paper companies get more out of their equipment while reducing costs.

Because the papermaking process is an ecosystem of chemicals, technologies, and human interventions, variations are inevitable.

While your team can handle most complexity, the demands they face—increased production, more grades, pressure to reduce operating costs—don't make it easy.

With so many suspects, your team must cycle through time-consuming "trial and error" experiments, hoping to find a fix. "Does this piece of equipment need maintenance? Do we increase defoamer dosing here?" The list goes on…

Some mills have connected monitoring equipment to their DCS or tasked engineers with problem-solving. But these efforts are often too manual, inaccurate, or infrequent to create clarity around what's causing instability. They negatively impact time, manpower, and total cost of operations.

But if you can't get ahead of variability today, you won't evolve your process to meet tomorrow's demands either. And when the variability you're forced to live with finds its way into your end-product, you risk customer complaints, quality issues, and damage to your brand.

Your Solution:

Stabilize Your Process

When you're caught in a never-ending cycle of chasing variables, you have limited opportunity for continuous improvement.

Working with Buckman, you'll use sonar-based technology to connect real-time entrained air levels to targeted measures of efficiency and quality. And with closed-loop control capabilities, you'll automate defoamer application, keeping entrained air within defined performance parameters for every grade you produce—with no operator intervention required.

When you knock air out at its source, you not only eliminate it as a variable, but also make step-change process improvements possible everywhere you're monitoring. This means you could be better able to exceed standard operating capacities, while still delivering the high-quality packaging that your customers demand.

Here's how you'll go about that.

Connect real-time entrained air levels to efficiency and quality measures

Of all the variables in your process, entrained air is the one that often masks many other issues.

But because typical sampling methods are disruptive, infrequent, and inaccurate, air's negative influence often remains hidden.

When you partner with Buckman, you will connect real-time entrained air levels to targeted measures of efficiency and quality. Ackumen™ ECHOWISE® Pro works non-invasively, using sonar- based technology to take continuous entrained air measurements every 1.5 seconds—feeding this data directly to your DCS or dashboards. With this kind of clarity, you can correlate air levels with other process variables, such as deculator performance, machine speed, and sewer losses.

As a result, you can better identify the source of entrained air—adjusting defoamer application and knocking it out before it causes issues. In addition, you can use these correlations to develop best-practice Standard Operating Procedures for every grade—creating a more efficient process.

Using **Buckman's Ackumen™ ECHOWISE® Pro, continuous entrained air measurement**, you can capture direct, consistently accurate, real-time readings of entrained air.

Automate defoamer application to maintain centerlines

With stock quality and grade requirements changing multiple times per shift, your operators are adjusting defoamer based on instincts and experience.

The problem is, every operator is unique, and your variables shift constantly, which leads to more inconsistency.

Buckman's Ackumen™ ECHOWISE® Pro can trigger a continuous control response, standardizing defoamer dosing to keep entrained air levels within defined performance parameters.

By taking advantage of closed-loop control, you'll eliminate entrained air as a variable, so you can address other process questions: Should you adjust other chemistries, such as drainage aid, strength, or sizing? Or maybe you should investigate the furnish or equipment like the headbox, deculator, or fan pump? Because you've lowered the need for human intervention in process control, you'll have more time for closer investigations.

And as you eliminate variables beyond entrained air, you can make step-change improvements in stability—enabling you to exceed standard operating capacities, while still producing the high-quality packaging your customers require.

With **closed-loop control**, you can apply precise, automated dosing of defoamer for keeping entrained air levels within acceptable parameters.

Stabilize Your Process

By working with Buckman to stabilize your process at scale, you can meet target production at the right cost and quality level, reduce your costs and environmental footprint, and incorporate standard processes and digitization that enable your mill of the future.

Specifically, you'll be able to:

Connect real-time entrained air levels to efficiency and quality measures

Automate defoamer application to maintain centerlines

After installing Ackumen™ ECHOWISE® Pro and putting the program into closed-loop control, a mill reduced its defoamer usage by 43% and lowered air variability, while increasing drainage and achieving an extra 2,800 T/year in incremental production.[1]

[1] Varkhaus Concise Case History – Contact our defoamer team for more details.

Join other leading mills in optimizing your paper machine defoamer process to meet tomorrow's standards, needs, and customers.

For more information, visit our website.

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