



Get real-time natural coating data so you can make proactive Yankee coating adjustments.

Monitor and manage with the Tissue Pulse™ Natural Coating Analyzer.

All those soluble and colloidal substances that end up precipitating on your dryer are what is referred to as natural coating, and it varies constantly. Measuring it manually in the lab takes hours. But now there's a better way—the Tissue Pulse Natural Coating Analyzer from Buckman. It's smart technology that gives your operators real-time online natural coating measurements, so they can predict when Yankee coating adjustments should be made to significantly improve runnability, reduce rejects, improve quality and save blade life.

Protect productivity and equipment like never before.

The Tissue Pulse™ NCA gives you all the data you need, when and where you need it.

It's fast. Advanced capabilities can provide natural coating data points every second, if you wish, which gives you and your Buckman representative the ability to proactively troubleshoot with a considerable amount of baseline data.

It's comprehensive. By accurately measuring natural coating, the Tissue Pulse NCA helps you to:

- Identify how changes in fiber quality or type are affecting your Yankee coating.
- Track the impact of refining on natural coating levels.
- See and eventually predict the impact of any wet end chemical additions such as wet strength resins, dry strength resins, CMC and much more.

It's easy. Once the baseline control limits are established, proactive alarm warnings will notify the operators or your Buckman representative when coating adjustments may be necessary. The system can send data to Buckman OnSite®, a DCS, a remote computer or a smart phone.

It's accurate. After the Tissue Pulse NCA is calibrated with manual tests, accuracy within a tenth of a milligram per square meter can be achieved, giving you all the accuracy you need to determine proper coating and release feed rates for the Yankee dryer.

It's automated. The skid is equipped with an automated flush valve, alarms that can report problems, and an intuitive interface that allows users to easily trigger flushes or reset alarms. When the NCA detects that the paper machine is down, it will turn itself off but leave water in the line so the pH probe doesn't dry out. When the machine comes back up, the skid will go through a flush cycle and begin calculating natural coating without human intervention.



Frequently Asked Questions:

Is a shutdown required to install NCA capabilities? No.

What is the installation time required? Once the mill has hooked up flush water, power, DCS connections, and process air, one full day of work is required to calibrate the instruments and begin gathering data. There is some pre-work to do that involves manual sampling.

Are there people dedicated to the long-term accuracy and reliability of the skid? Yes. Sales reps will routinely check on the unit, and dedicated support is available from SMG if required. The skid can also be remotely accessed, if allowed by the mill.

Does the Tissue Pulse NCA take control? No. We can send alarms that the feed rates are outside of recommended limits, but due to some of the unmeasurable factors that determine proper coating feed rates, the ONC system only advises for now.

Ask for a free trial. Although ongoing natural coating measurement and monitoring requires the installation of proprietary hardware, we can run a trial using a portable smart box. That way, you can see the value of our Tissue Pulse NCA technology before committing to a permanent installation.

To get your trial started or to learn more about how real-time natural coating measurement and monitoring can revolutionize your Yankee coating management, contact your Buckman representative or visit buckman.com.

Success Stories:

Setting New Trends

Challenge: A tissue mill using Buckman's TAD+[®] coating package wanted to improve sheet quality and increase production efficiency even further.

Solution: Buckman installed the Tissue Pulse[™] Natural Coating Analyzer on the mill's tissue machine to support its TAD+ program. The data from the NCA made it possible to see trends in process variation resulting from changes in grade, furnish and water quality. These trends helped operators predict when

adjustments in coating adhesive and modifier addition rates should be made.

Results: The mill was able to troubleshoot runnability issues and, through proactive coating adjustments, boost Yankee efficiency and productivity to a ROI of \$400,000 annually in increased sheet moisture, fewer blade changes and less downtime for fabric cleaning.

Turning Data into Dollars

Challenge: A tissue mill wanted to increase operator and trainee understanding of Yankee coating performance, grade to grade, so coating adjustments could be optimized.

Solution: Buckman installed the Tissue Pulse Natural Coating Analyzer at the inlet line feeding into the head box. It supplied real-time natural coating data online, so operators could monitor and adjust machine centerlines based on trends,

minimize the effects of grade changes and improve sheet quality.

Results: 5-10% improvement in:

- Blade life and wear per hour rate
- Grade change efficiency
- Broke waste/culled parent rolls
- Sheet quality variations

ROI: \$500,000 – \$1,000,000 annually

Gaining an Edge on Blade Life

Challenge: A mill wanted to improve chemical coating stability and accurately measure coating hardness in order to extend blade life.

Solution: Buckman installed an NCA skid and connected the analyzer to the mill's DCS. Operators were able to collect and document chemical coating changes based on natural coating values and impacts. The Natural Coating Analyzer in conjunction with Buckman's Vibration Analyzer gave them the data they needed to optimize the

chemical coating package to better protect the Yankee and, especially, the blade. In addition, operators could make proactive adjustments or purge the silo with clean water in the event of influent water upsets to reduce breaks.

Results:

- 5-10% improvement in blade life and reduced downtime for blade changes.
- 5-10% reduction in breaks/broke

ROI: \$500,000-\$750,000 annually

This is not an offer for sale. The product shown in this literature may not be available for sale and/or available in all geographies where Buckman is represented. The claims made may not have been approved for use in all countries. Buckman assumes no obligation or liability for the information. Please contact your Buckman sales representative for more information.

Seller warrants that this product conforms to its chemical description and is reasonably fit for the purpose referred to in the directions for use when used in accordance with the directions under normal conditions. Buyer assumes the risk of any use contrary to such directions. Seller makes no other warranty or representation of any kind, express or implied, concerning the product, including **NO IMPLIED WARRANTY OF MERCHANTABILITY OR FITNESS OF THE GOODS FOR ANY OTHER PARTICULAR PURPOSE**. No such warranties shall be implied by law and no agent of seller is authorized to alter this warranty in any way except in writing with a specific reference to this warranty. A1114H (10/18)

Argentina +54 11 4701-6415; Australia +61 (2) 6923 5888; Belgium +32 9 257 92 11; Brasil +55 (19) 3864-5000; Chile +56-2) 2946-1000; China +86-21) 6921-0188; India +91) 44-2648 0220
Indonesia +(62) 21-2988 8288; Japan +(81) 3 6202 1515; Korea +(82) 31-416 8991; Mexico +52 (777) 329 3740; Singapore +(65) 6891 9200; South Africa +27 (31) 736 8800; United States +1 (901) 278-0330

Global Headquarters at 1256 N. McLean Blvd., Memphis, TN 38108, USA