

FPAutoSpeck™

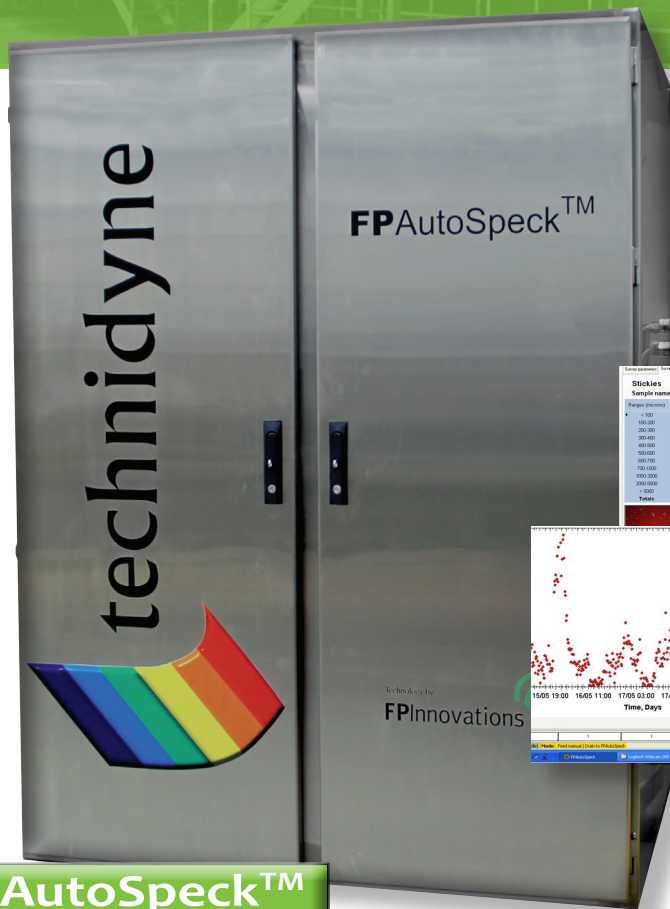
Online Stickies Measurement

FPAutoSpeck™ - Controlling stickies before they control you.
From the pulper to the paper machine, the FPAutoSpeck™ provides the analysis to help your process control system manage stickies. Providing data to Evaluate, Control and Optimize your processes and keeping stickies from getting to your paper machine.

Evaluate

Control

Optimize



FPAutoSpeck™
Finding Stickies
before they find
you



FPInnovations and Technidyne - Technology Partners...



for good measure

Evaluate

Finding Stickies before they find you

It all starts with a good measurement...

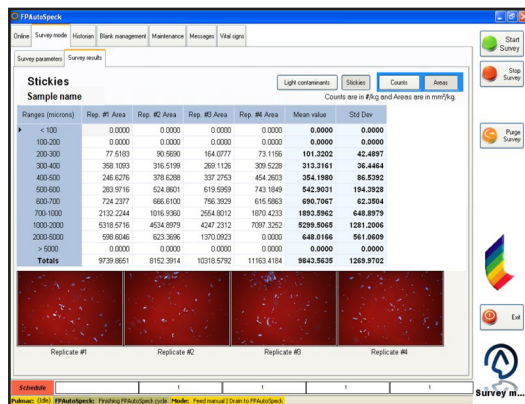
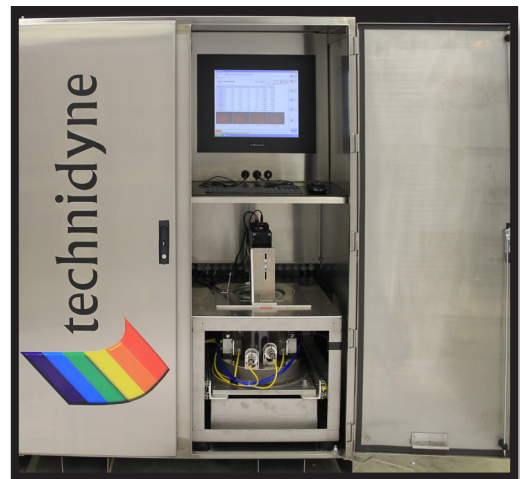
If the goal is to find the stickies before they find you, then a process tool for measuring the presence of stickies is needed. The FPAutoSpeck™ is that tool.

The FPAutoSpeck™ brings to your process:

- Built-in screening capabilities to separate macrocontaminants (>150 microns)
- Advanced image analysis software for thorough analysis of stickies and dirt in your pulp stream
- Robust on-line pulp handling technology for hands-free operation
- DCS (Distributed Control System) compatibility
- Repeatable and reproducible data that provides operators and/or mill process control system the information for confident decisions and quick responses

Testing continuously with a new sample every 15 minutes the FPAutoSpeck™ collects the sample, sorts the stickies from all other material, separates the light (low density) stickies from the heavy (high density) stickies, captures the image and processes the data. Once the testing is completed then the data is sent to the mill system for analysis and decision making.

Hands-free operation, requiring no human intervention, the FPAutoSpeck™ can provide not only an analytical understanding of your operations, but a significant tool to make decisions on saving chemical cost, energy cost, process time, manpower and improving product quality and customer satisfaction.



Find stickies
with the
FPAutoSpeck™

Control

Controlling Stickies before they control you

...and continues with good analysis...

Once the FPAutoSpeck™ transmits the data to the mill DCS, the analysis begins.

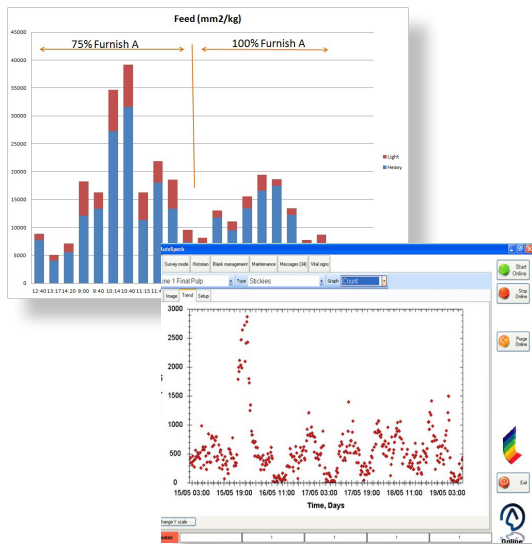
Managing the data is a critical step in the process. The FPAutoSpeck™ provides a thorough analysis of core unit processes, such as:

- Pulp Screening
- Flotation Cells
- Washers
- Dispergers
- Headbox
- Primary Fine Screens
- others



As the database is built for each process, critical parameters are established for process goals and tolerances. Each process is unique and the FPAutoSpeck™ provides the detail to gain a comprehensive understanding of the distinct characteristics of these unit processes.

With proper management of the data, the mill can begin to optimize the operations of each unit process. As this happens, this data will provide the insight so that the DCS can make changes to processes to accommodate a “stickies storm” or better yet, produce a higher quality pulp.



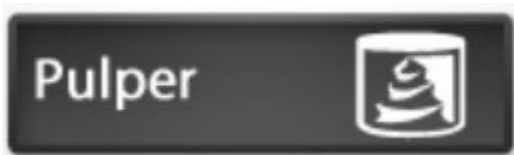
The FPAutoSpeck™ provides good measurements. The value of “good measurements” can be found in how well the data is used. Effective data management will reinforce unit operations with comprehensive analysis for optimum control of your operations.

**Control stickies
with the
FPAutoSpeck™**

Optimize

...to provide optimized operations.

Point of entry:



As the entry point for the recycled fiber, establishing a quality baseline of incoming pulp is critical. Knowing what you have and understanding what needs to be done to get it ready for the papermachine is critical to operations. Each day and each supplier brings in new challenges. Getting data from the start, helps build the foundation for good decisions downstream. Never miss this point of analysis, as it is a picture of your future. Without this data, optimization of your process becomes much more difficult.



Often times the flotation cells are thought of as only ink removers, but they are also very useful at removing stickies, especially low density or light stickies. Low density stickies will float out with the ink, attached to air bubbles. Monitoring the efficiency of this removal can give a clear picture of how well the flotation cells are working. In addition, low density stickies will have a negative impact on ink removal by taking up space on the bubbles. Optimization of air content, chemistry and stickies level in your flotation cells will provide a great opportunity to save big on energy, chemistry and process/dwell time.



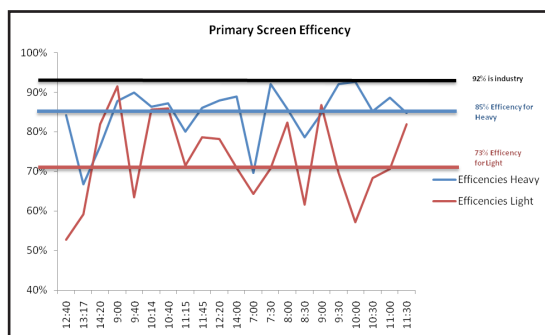
While measuring at the headbox may not be an option, somewhere close to it will give an overall health report of your process. Measuring at the pulper and then at the headbox will provide an overview of the stickies removal of your entire system. Secondly, it is the last check prior to the pulp reaching the papermachine. On occasion as whitewater is used to dilute the pulp stream, stickies find their way back in to the stream via contaminated whitewater. A last check here can ensure that nothing unexpected reaches the paper machine. Optimizing the entire deinking process is made possible with the effective use of the FPAutoSpeck™.

Unit process optimization.

Processes that have an exit flow of accepts and rejects can effectively be evaluated with the FPAutoSpeck™ to improve their optimization. Analyzing the incoming pulp and then capturing the results on the accepts line will provide the data to determine how effective a particular process is at removing stickies.



The screening technology used in most mills is the workhorse of contaminant removal. Most units should work at the 90% efficiency or higher range. Inefficient screens can reduce fiber retention, increase energy cost, push trash into your paper stream and this is just the beginning. Measuring at the feed and accepts of the screens is a great place to evaluate the health and efficiency of these critical tools in the stickies removal process.



No matter what screens or centrifugal cleaners are being evaluated, optimum efficiency is necessary for good operations. Most of these units are best at removing high density stickies. Optimizing these unit processes will save time, money and headaches downstream.

Optimization -

As each mill is unique in its operations and challenges, the FPAutoSpeck™ can be used to build an understanding of those challenges and provide the data to optimize your operations. Whether evaluating whitewater or recycled pulp, the FPAutoSpeck™ will meet your process and optimization needs. The FPAutoSpeck™ begins with a good measurement, giving you the knowledge to make a good decision on how to best optimize your processes.

Applications

Whitewater Contamination

Evaluate—Control—Optimize

One of the best sources of water for mill processes is the water coming off the papermachine. This water is already claimed by the operation and if it can be reused then money and energy are saved, along with a smaller environmental impact. These savings can be tremendous and the opportunity to maximize this water retention in the process is increasing. With this comes the potential for issues in the process. Those issues often stem from “build-ups” in this process stream. These build-ups can come in many different forms, but one of the more destructive are those of stickies.

Stickies, also known as Macrocontaminants, are made up of a number of different carbon based material. Think of things like binder glues, post-it-notes, varnishes. Anything that when it gets in to the process can stick to process components, paper machine hardware, printing presses. As they adhere and build-up they can cause tears in the paper, breaks on the paper machine, printing issues and dark spots on the paper substrate.

If stickies make it on to the paper machine and don't adhere to the fiber, wire or machine, they instead wash through the forming table and enter the whitewater. This is the situation at Newsprint Mill A.

Newprint Mill A

This mill was experiencing a significant number of machine breaks each day. Upon investigation it was determined that one of the main culprits in this happening, were stickies. Technidyne and the FPAutoSpeck™ were called in to help determine what and where these stickies were coming from and what active steps could be taken to minimize/eliminate the problem.

Interesting scenario. Newsprint Mill A was using their whitewater as the dilution water for many of the processes in the deinking line, with it's highest amount going in at the Primary Fine Screens (PFS). As the Technidyne team and the FPAutoSpeck did a thorough assessment of the potential contaminant locations, they quickly discovered that the mill whitewater was highly contaminated with stickies, even to the point that the PFS feed values for stickies were lower than the accepts coming out of the Primary Fine Screens. Normally these PFS units should be running at an efficiency of 90% contaminant removal. Instead these were running in the negative percentage or somehow the system was putting in contaminants at the PFS. Whitewater contaminants at their worst should only be at a trace level. At Newsprint Mill A they were in the 10,000 range. When this whitewater was used for dilution, the mill was re-introducing stickies in to their process.

Whitewater Recirculation

Resolution

Along with several other points, the mill began running hourly evaluations of the whitewater chest. If numbers started to climb and they detected a potential contaminant issue, the mill process system would divert the whitewater and exhaust it. Simultaneously, they would bring fresh water in to their process.



Outcome

Newsprint Mill A has reduced their number of machine breaks due to whitewater contamination completely, that's 100%, by monitoring and managing the stickies in their whitewater. The savings are in machine up time, higher capacity, lower energy consumption, employee morale and most importantly they improved their bottom-line.

Each mill has a unique set of circumstances. Some have whitewater issues, others have power issues, or old process equipment. You never know where and how stickies will impact your process from day to day. Having the right tools in place to capture those daily upsets makes the difference between paper machine runnability and downtime or profitability and loss.



FPAutoSpeck™

Evaluate
Control
Optimize

FP AutoSpeck™

If it starts with “good measurements” it has to end with good savings. Our ECO+ design concept helps us make sure our products are designed and implemented in such a way that they will generate the savings you need. Savings will be both **ECO**nomical and **ECO**logical. Often times we find that achieving these goals are mutually exclusive, but not so with the FPAutoSpeck™.

The FPAutoSpeck™ will provide the mill excellent opportunities to save money in a number of different ways. Effectively managing basket life in a screen basket, flotation cell efficiencies, proper chemical dosing, vendor evaluations, uptime on the papermachine.

Beyond the economics is the value of the ecological benefits of less energy use, better water management, effective chemical control. We all want a smaller footprint, but not at the sacrifice of production. The FPAutoSpeck™ gives you the tool to marry the economical and ecological benefits of technology to improve your operations while finding savings.

Today’s recycled fiber market is demanding and supply is erratic, leaving a recycled fiber stream that varies day to day. With demand for recycled fiber so high, contaminants are equally high. This means more demands on unit processes, higher energy consumption, more chemical usage and less fiber retention.

The FPAutoSpeck™ is the tool to **Evaluate** - **Control** - **Optimize** your operations, **Plus** it improves your economical and ecological position in the market.

Specifications:

Dimension: 52”(w) x 43”(d) x 72”(h)

Weight: 675 kg

Power: 90 - 130 or 190-250 volts (specify at order) -
50-60hz single phase

Instrument Air: 80 psi -15 cfm

Water: clean fresh water

Water Pressure: 40 psi - 13 liters/ min

Environment: 10- 40 deg C (laboratory or machine
floor)



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