

Key Equipment: ENHANCED SERVICES FOR ANDRITZ DD-WASHERS

The last issue of SPECTRUM included an article about the evolution of the DD-Washer from the 1980s to today. With installations in 24 countries, the DD-Washer is clearly preferred for fiberline washing applications. To support this installed base, ANDRITZ has developed a full range of monitoring, diagnostic, and support services to reduce lifecycle costs and keep availability high.

Virtually all the DD-Washer systems ever delivered are still in operation. Many of the advances made over the five generations of washers are available as retrofits or upgrades to these installed systems.

RETROFITS AND UPGRADES TO INCREASE PERFORMANCE AND EXTEND SHUTDOWN INTERVALS

An almost universal trend in mills today is to extend the period between planned shutdowns for maintenance. There is always a trade-off: intervals too short may subtract from maximum production; intervals too long may lead to degraded performance or even a catastrophic component failure.

Improvements in materials of construction in the DD-Washer have been steadily adopted over the years. Intensive R&D for sealing and other critical components is done in three pilot machines running 24/7. Chances are that any component in an older DD-Washer will benefit from these improvements in wear when replaced. For parts of the machine that are not designed for replacement, there are services for on-site coating and cladding with replaceable wear surfaces.

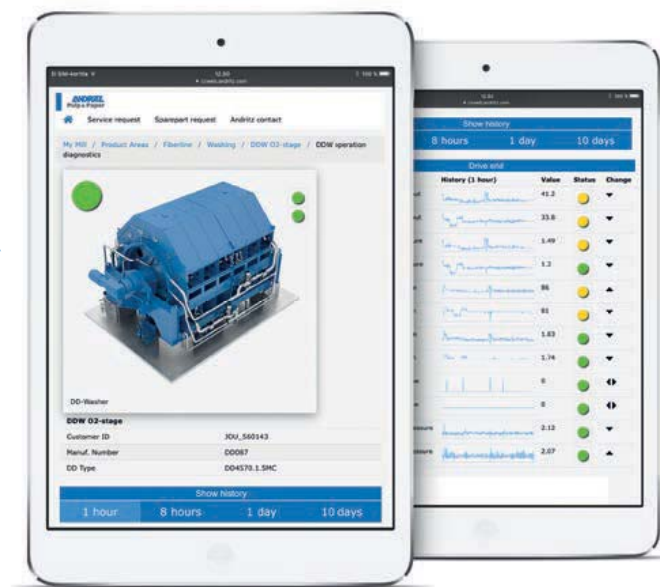
Washing efficiency is a key parameter for cost-effective pulp production. If a mill has continually increased production over the years without upgrading

or reevaluating operational setpoints for the washer, it is possible that the operation is no longer optimized. However, there are rather simple retrofits, such as upgrading the wash water distribution system, to keep washing efficiency high or even improve it by as much as 20%, even at the higher loadings. Efficiency can also be improved by readjusting wash water and filtrate flows between washing stages. In addition, adding a high-pressure oscillating shower to the screen plate will often eliminate losses in throughput or efficiency if plugging is an issue. A retrofit to optimize the cake height is also possible for older generation drums.

IIoT SERVICE TOOLS

In addition to equipment upgrades, the ANDRITZ Service division has developed modern tools to monitor, enhance, and extend the life of DD-Washers. These services are available on a contract basis.

These service tools take advantage of recent advances in the Industrial Internet of Things (IIoT), including smart sensors and data analytics. Sensors can be installed in the washer system to continually measure sealing water pressure and flow, sealing air pressure and flow, the rotation speed of the drum, drum positioning, the running life of the end seal, etc. This gives insight into the condition of the end seal, which is one of the critical consumable parts of the washer. The user interface to this information is a simple DD-Washer Dashboard using traffic light indicators (red, yellow, green). The information is displayed on a handheld tablet for maintenance teams and optionally a DCS screen for operators and is available via a Metris app at any time and anywhere.



In addition, there are new monitoring tools for early detection of drum leaks, for detecting scaling on the perforated screen plate, and for monitoring the thickness of the end seal to predict when it should be replaced.

By interfacing these tools with the ANDRITZ Metris platform – our brand for digital IIoT solutions – mills are able to benefit from mobile functionality, remote maintenance solutions, real-time data, and mill optimization using OPP (Optimization of Process Performance) software. Decision support capabilities from the Metris platform could include creating indexes for

each DD-Washer with regards for scaling, washing consistency, washing efficiency, and rotational torque to predict the behavior of the equipment and the washing process.

ANDRITZ's combination of operational, shutdown, and lifecycle services ensures safe and optimal performance of the DD-Washer – no matter when or where installed.

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"Our service concept, combining mill audits, shutdown services, and effective IIoT service tools, is a powerful way to let the mills focus on production while we ensure the runnability of the DD-Washers."



For more information about the evolution of ANDRITZ DD-Washers, view the SPECTRUM – Issue 36 on your smartphone.

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