GOING LIVE

Videowall technology for pulp mills

Monitoring woodyard and fiberline operations at pulp mills just got a lot smarter with ANDRITZ Decision Support Walls.

In all aspects of our lives, we are becoming much more used to information being delivered on demand and with as much choice of visual effects and data display as possible. Information is King, and the clearer, more concise, and effectively illustrated, the better, as it all goes to helping us manage our time more efficiently.

The ANDRITZ Decision Support Wall (DSW) brings the latest in Industrial Internet of Things (IIoT) and smart technology right into the heart of the pulp mill control room for monitoring woodyard and fiberline operations. The DSW comprises a bank of screens delivering high definition (HD) quality live videos from processes and equipment, which can also provide live data recording and reporting facilities together with advanced alarm triggering, instantly highlighting any problems or potential problems.

THE TRAFFIC LIGHT SYSTEM

Along with the DSW, ANDRITZ is introducing a process diagnostics display with key performance indicator (KPI) values where process status is illustrated with colors and values that are controlled by the Metris tool rule base. The Traffic Light system is a new addition to help monitor and maintain the efficient running of the woodyard. When a green light is being displayed on the system, all is running well; when a yellow light appears, it means the operator needs to do something: for example, when monitoring the condition of knives in the chipper.

Essentially, the Traffic Light system alerts an operator to a problem before it becomes a major issue and therefore gives the opportunity for early action and is an excellent tool to assist in preventative maintenance.

For the woodyard there are detailed, HD video displays for ANDRITZ chipper and crusher equipment as they are running, along with Smart Woodyard products like ChipperEKG and CrusherEKG online process monitoring combined with advanced diagnostics. There are interactive tools for operations and maintenance, which can also include video transmitted from a helmet camera or smart glasses. Real-time information being fed back includes KPI calculations for availability, production, quality, and energy consumption.

The system can also "publish" data from any operator interfaces that includes information supporting operators in their daily job, like ANDRITZ WoodScan, BarkScan and ChipScanLT in the woodyard, as well as DD-Washers and K4000 chip level measurement in the fiberline.

The DSW can be used for a variety of different purposes; for instance, selecting the "Morning Meeting" will enable all operators in the control room to have instant KPIs displayed, along with alarm statistics and a shift logbook allowing a view of any vital information at the click of a mouse or touch of a screen.

There can also be an instant internet connection with the experts at ANDRITZ where any information can be shared and viewed for process optimization or problem solving purposes.

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SCENARIOS OF THE DECISION SUPPORT WALL IN ACTION:

1. SOLVING PROBLEMS

- While conducting a field tour of the fiberline, a service technician has been alerted to vibration issues on a pump. On returning to the control room, the service technician, together with two control room operatives gather at the DSW.
- The explosion view of the equipment under review is opened from the material library to allow closer inspection.
- The group examines the detailed material, along with the vibration data and a plan is put into place to solve the problem.

2. REMOTE TROUBLESHOOTING WITH ANDRITZ EXPERTS

- A bearing is repeatedly overheating and the operators decide to contact ANDRITZ to help solve the reoccurring problem.
- They share the recorded DCS views, recorded equipment data, and video clips.
- ANDRITZ experts access exactly the same information the mill control room has. With the same technology, we also have Decision Support Walls in our remote control rooms (so called Customer Support Centers).
- Together the two groups solve the problem utilizing the DSW via real-time collaboration with access to all history and data.
- The operators add a "start monitoring" command on the bearing to make sure the problem is solved.

3. COMMUNICATING WHILE IN THE MILL

- A service technician goes into the mill for a routine equipment inspection and wants to check something with the control room.
- Using a helmet camera, a live video stream is sent to the control room operators.
- The stream automatically appears on the DSW, allowing the operators to view exactly what the field technician is enquiring about.
- The service technician communicates via radio phone and receives immediate answers from the control room.