Dalum Papirfabrik relies on ULMA NT in its web inspection of recycled fiber based fine

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Even though the venue of these events is Odense, the hometown of H. C. Andersen, the world famous Danish writer, this is not a fairy tale. Instead it is a success story.

Dalum Papirfabrik at Odense, in the heart of Denmark, was founded over a hundred years ago. Its first paper machine was started up in 1874. Today, the mill produces 125,000 tpy of fine paper from recycled fiber with its two machines, PM 6 and PM 7. The largest markets for Dalum's paper are Germany and Denmark. The mill employs 420 persons.

The main paper grades of the Dalum mill are Cyclus, CyclusPrint and RePrint. Cyclus (uncoated) and CyclusPrint (coated) are made of 100 % recycled fiber. RePrint, in turn, has 50 % recycled and 50 % virgin fiber with a 20-30 g/m^2 coating.
The 3.15 m wide PM 6, which produces Cyclus, was built in 1948 and rebuilt in 1988. PM 7 producing CyclusPrint and RePrint was initially started up in 1971. During a modernization in 1993 the machine was equipped with a new coating station and a headbox. The machine web width is 4.8 m.
In 1997, the Dalum mill acquired two ULMA NT systems, which were among the very first ULMA NT installations.

Automatic problem detection at an early stage

Dalum needs the web inspection system to maintain a high, uniform quality. Because the raw material is recycled, the machine can easily have problems with stickies, which attach to rolls, wires and felts. This causes holes or thin spots on the sheet, first small and then increasing in size.

"With the ULMA NT system we can automatically detect these problems at an early stage and thus avoid sheet breaks and rejects", says **Jørn Kristensen**, Superintendent of PM 6.

ULMA NT has a built-in repeating defect feature in which up to 200 machine part names can be fed into the system. The system automatically advises which machine part is the probable cause of a repeating defect. Furthermore, the operators can differentiate between various sized defects. Severe defects are marked with color and are removed before the paper reaches the end customer. The ULMA system can be configured up to 12 defect categories and can be equipped with a color maker which has 1-3 colors for marking the defects.

Major benefits, minor maintenance

At Dalum, the ULMA NT system has so far had a close to 100 % availability. Besides being easy to use, all necessary information for the operators is available on a single display. It is also easy to modify the sensitivity of the system when required.

"We also did the final tuning of the system by ourselves." says **Vagn Kudsk** and **Finn Jensen**.

"The project management of ABB worked very well. From the purchase order to the start-up of the system it was easy to communicate with ABB. Since we knew that this was one of the first installations of ULMA NT we were prepared for some start-up problems.

However, we were wrong as there were only some minor teething troubles but they were quickly solved. In general, we have been very impressed by the system and the benefits it is giving us", says **Vagn Kudsk**, System Technical Engineer.

According to the mill personnel, the system requires very little maintenance. "Two of our mill engineers had maintenance training in Helsinki, but they have not been able to use their skills since the system has not failed once", Mr Kudsk continues.

The stability of the system is good, and the system does not require any verification.

3BFI 53100 R0001