

Accurate defect information even before handover at Australian Paper Maryvale



The ABB success story at Australian Paper Maryvale M5 was recently enhanced further with the installation of an ULMA NT*i* Web Inspection System with CrystalView Technology. The ULMA NT*i* System not only detects and reports defects, but with CrystalView Technology it displays photographic grey scale images of the actual defect. The grey scale images have proven to be a powerful diagnostic tool in finding the root causes of paper imperfections.

The ULMA NT*i* System was installed in February 2000 on Paper Machine 5. “The newly installed system proved immediately useful even though it had not been fully commissioned and tuning of the detection levels had not begun” states Mr. **George Karkaletsis**, Operations Manager for PM5 at Australian Paper. One edge defect was immediately noted and documented.

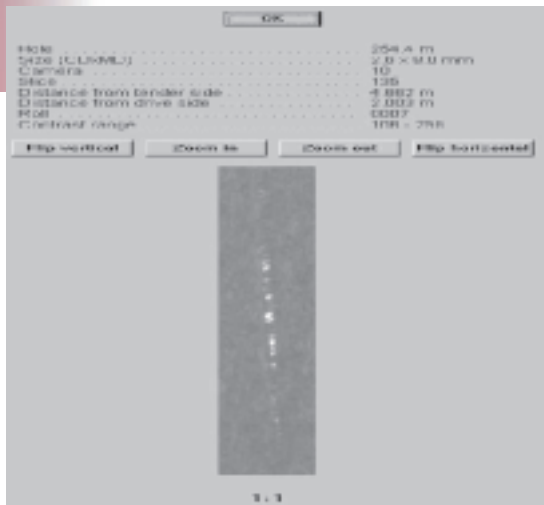
The winder operator stated that this was exactly the type of information required to improve the operation of the winder. The information from the ULMA NT*i* System shows the dimensions and the location of the edge defect. The operators then choose the best strategy, which may be to run at full speed, slow down or stop and remove the defect. Providing accurate information to the operators via the ULMA NT*i* gained immediate acceptance even before the handover or training was complete.



ULMA NTi System has a repeating defect feature that allows the dimensions of two hundred machine parts such as roll diameters and felt lengths to be stored in the system database. Using this data the system automatically advises which machine part is the probable cause of a repeating defect.

Machine part data had not yet been entered into the system when a cyclic defect was reported by the system during a training session. The system reported a cyclic defect every 35.6 meters.

The operators then sourced a machine part



The grey scale image of the cyclic defect captured during the training session.

list and found that the bottom wire matched the 35-meter cyclic defect. The next step was to check and verify the cyclic defect on the machine. Using information from the ULMA NTi the operator was able to quickly locate the defect on the paper sheet and verify that the ULMA NTi System data was correct.

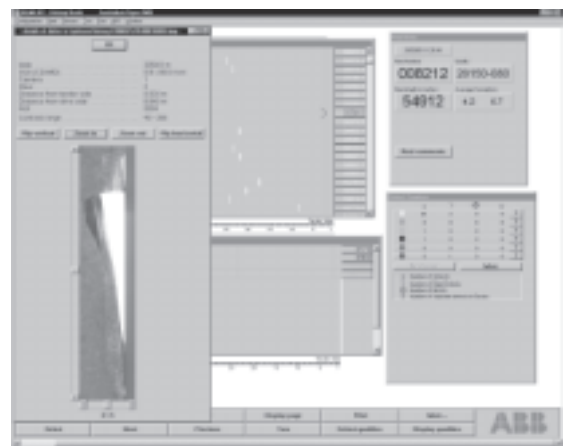
Within minutes the decision was made to shut down the paper machine. A visual inspection of the bottom wire was performed. By using information from the system the defect in the bottom wire was quickly found. This exactly matched the grey scale image of the cyclic defect. Production personnel stated that “It was a perfect match” and the super-

intendent stated that the “ULMA NTi system is an excellent tool for providing real-time paper making information. We could have run for some time before finding the defects caused by the damage to the bottom wire”. The paper machine operator stated that “This defect would have eventually been detected on the winder but all of the rolls containing the defects would have had to be rejected”.

Thanks to the ULMA NTi System a quality problem was detected before the paper reached the winder. The bottom wire was replaced, allowing the paper machine to continue manufacturing high quality paper.

With the ULMA NTi Web Inspection System operators are able to differentiate between various categories and sizes of defects. Larger defects are marked with colour and removed at the winder. Red is used for the edge defects while blue is used for the other categories. The system can also be configured for up to 12 multiple defect types.

In conclusion, the installation and commissioning of the ULMA NTi System was an outstanding success. The systems’ accuracy and reliability has added to the successful acceptance. The ability to view grey scale images of the actual defect has proven to be a very powerful diagnostic tool for production.



An example of the control desk that the ULMA NTi has to offer.

