

CHARACTERIZATION OF LINTING PROPENSITY OF PAPER USING AUTOMATED LINTVIEW AUTO PLUS 900 APPARATUS

Linting results from the removal of particles and fibers from the surface of the paper during printing. The phenomenon occurs mostly in offset lithography but not exclusively. In general, these particles will collect on the blankets.

SCOPE

This method is used to characterize the linting propensity of paper. Among other things, it allows measurements at the mill to assess the linting propensity in real time. The measurement helps to prevent shipment of highly-linting paper to lint-sensitive customers, and enables actions to be taken during fabrication to correct the linting tendency of the paper.

APPARATUS

1. **LintView Auto PLUS Apparatus**
2. **Backing sheet supplied with the LintView tester.**
3. **NWS-400 Certified LintView Adhesive Tape roll supplied by Labtech.**
4. **Dedicated PC with LintView Auto PLUS Software.**

SAMPLING

Obtain and prepare three sheets (8.5 x 11 inch) from the reel of paper to be tested, indicating the top and bottom sides by marking the sheets (avoid marking the area that will end up in the captured images during the tests).

PROCEDURE

The test has not shown sensitivity with respect to the level of relative humidity or temperature.

1. Place first sheet on backing. Position it on the guide and pass it through the LintView machine.
(see figure 1).
2. Once complete, turn the sheet 180° in the horizontal plane and pass it through again (see figure 2).

This will give two readings for each side of the paper (machine direction and anti-machine direction).

Complete all three samples (6 results) for the top side first. The LintView will then average the results to give you the Lint numbers. Save or clear the results from the computer screen as per instructions supplied with the instrument.

3. Turn the sheet over and repeat steps 1 and 2 for the bottom side of the sheet.

DISCUSSION

LintView testing is sensitive to the machine/anti-machine feeding direction of the sheet into the nip.
Ref : ACI Technical Progress Report, Sept. 3, 2004.

For a specific grade of paper, the «MD versus anti-MD» ratio tends to be consistent. Thus, taking the average of both directions does not impair the quality of the test. This method also has the advantage of eliminating any doubt as to which direction was used. In most of the cases where samples don't come directly from the machine, it is impossible to determine the machine-running direction (example : paper coming from a pressroom).

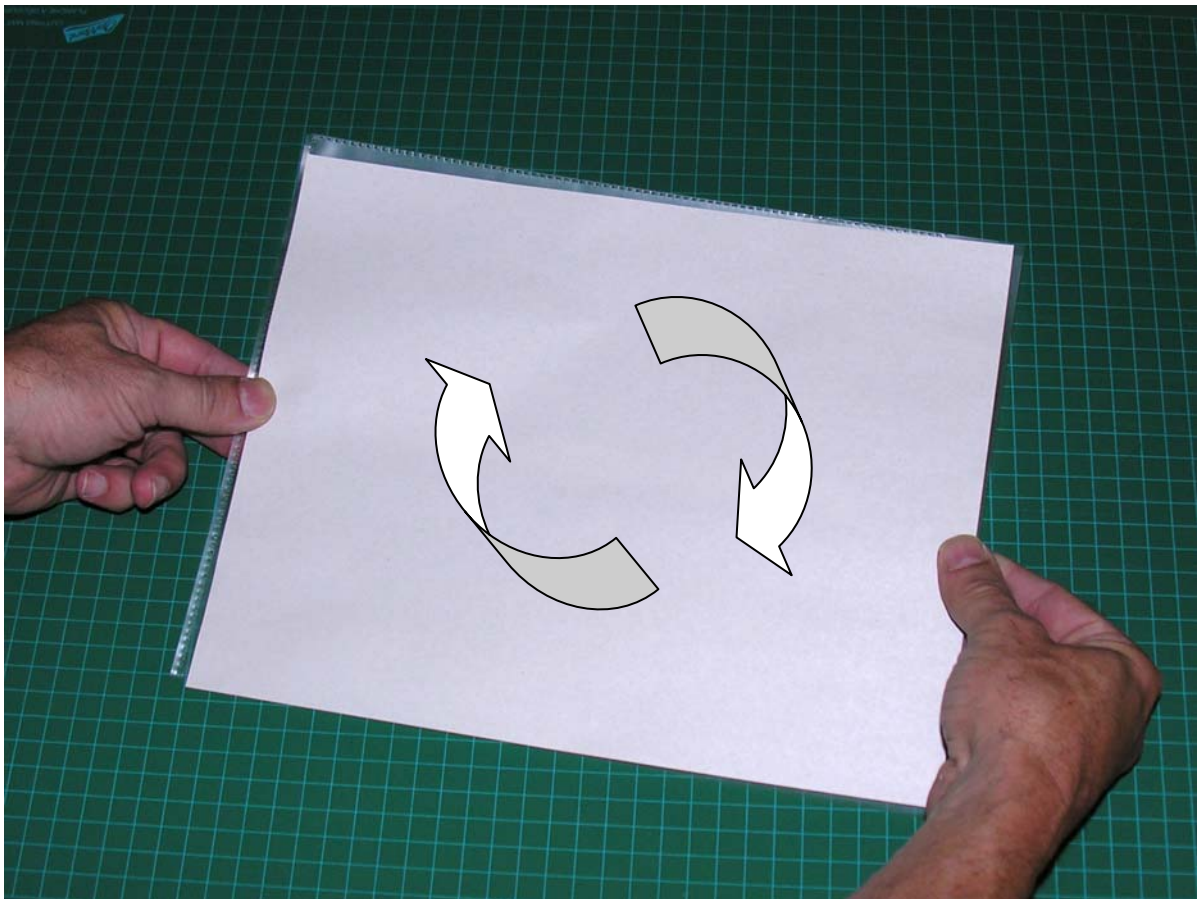


Figure 2