

ROLL TESTING FACILITY (RTF)

Web breaks, bagginess, misregistration, corrugations, wrinkles, and other roll structure defects can turn into serious problems for papermakers. They may occur only at the customer's site, so it becomes difficult to track the problems back at the mill level. However, when relevant information is obtained on problematic and well running rolls, it makes it possible to resolve these issues. The Roll Testing Facility (RTF) offers a complete inspection of both web and roll, through the measurement and analysis of numerous data related to web uniformity and roll structure.

The distinctive feature of the RTF is the high resolution quantification of web bagginess profile in cross direction. Paper properties (moisture, BW, caliper) complement the web uniformity analysis. The other useful attribute of the RTF is the capability to generate the wound-out-tension (WIT-WOT) curve of a roll. Combined with the highly precise measurement of several more roll structure data, we can obtain a clear indication of roll performance on press or converting equipment. With over 2000 rolls tested, we have gained much expertise on common or otherwise more specific web, roll and winding issues.

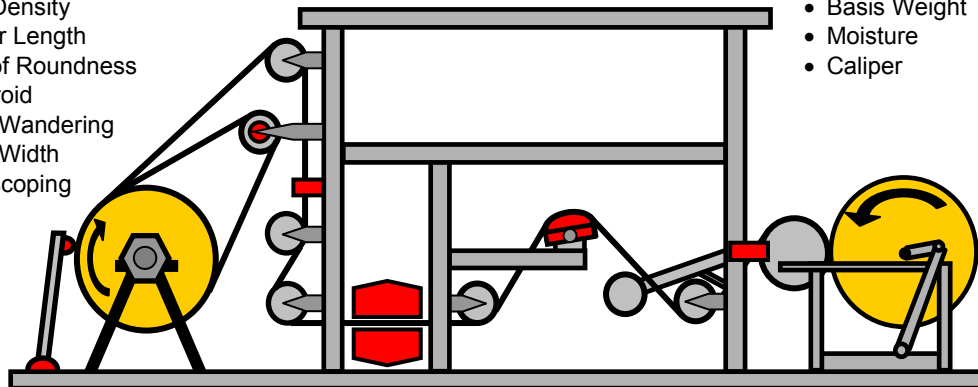


ROLL STRUCTURE DATA

- WIT-WOT Curve
- Roll Density
- Paper Length
- Out-of Roundness
- Centroid
- Web Wandering
- Web Width
- Telescoping

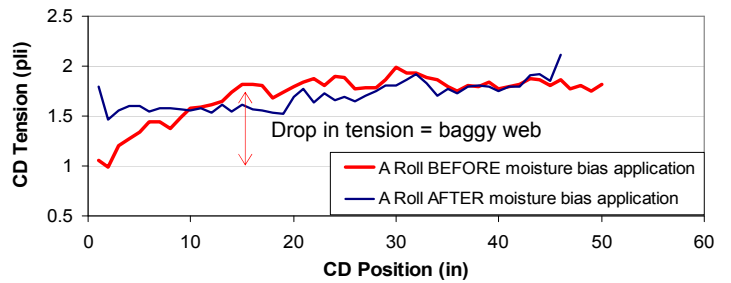
WEB UNIFORMITY DATA

- Bagginess Quantification
- Basis Weight
- Moisture
- Caliper



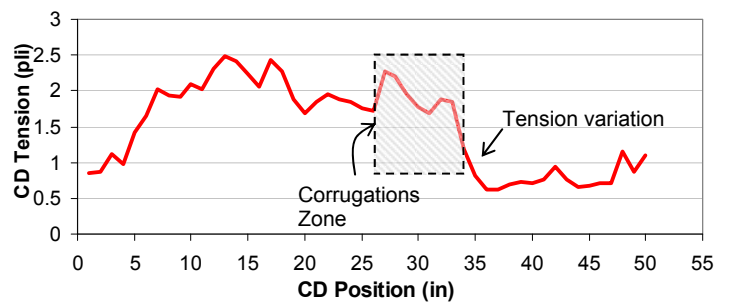
CASE STUDY 1: BAGGY EDGE & MISREGISTRATION

- A pressroom reports misregistration with the A rolls.
- As measured with the RTF, the web shows a tension drop at the paper machine front edge.
- Following one of our recommendations, a moisture bias is applied.
- The CD Tension profile is corrected and the pressroom no longer show signs of misregistration.



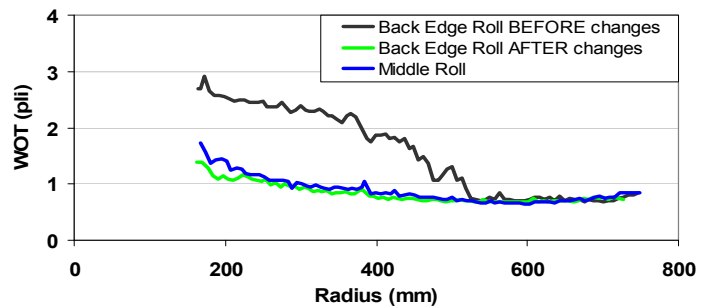
CASE STUDY 2: CORRUGATIONS

- Corrugations are generated during printing on liner-board paper.
- A variation in CD tension next to the corrugations area is likely the cause.
- Based on the RTF data measured, several recommendations are made to produce a more uniform web.



CASE STUDY 3: WIT-WOT

- A paper mill finds out that the back edge rolls are not properly wound at the winder.
- As measured with the RTF, the back edge roll shows a very dissimilar WOT curve compared to the middle roll.
- The adjustments made to the rider roll and to the CD profile uniformity corrects the imperfect winding curve.



CASE STUDY 4: LENGTH MEASUREMENT

- Fewer copies per roll is reported by a pressroom.
- With the RTF, paper length is measured. The roll's length is indeed shorter.
- The paper mill is able to adjust the way roll length is determined at the winder.
- Ultimately, the roll specifications conveyed to the pressrooms are accurate.

	Paper Mill	RTF	Difference
Roll Length meters	12 472	12 437	-35