

The Mechanics of Winding

The Mechanics of Winding, Vol. 25 #2, September 1998

by David R. Roisum, TAPPI Press (1994)

Almost all film and sheet production processes involve at least one web winding step. Unfortunately, the science of winding typically receives too little attention from processors - both in absolute terms and in relation to other process steps such as extrusion. Here is an indispensable primer and manual for the practitioner, whether novice or advanced. D. Roisum covers all the significant issues, including roll quality measurements (a whole chapter on roll density alone), winding models, wound roll design, nips, analysis of roll defects, vibration, and all machine elements. Note, however, that the subject matter is limited to winding alone, as announced by the title, and does not cover all aspects of web handling.

The book is rich in qualitative, practical, discussion, but does not, in any way, neglect the engineering fundamentals and quantitative calculations. There is plenty of how-to information and common sense advice.

Finally, Dr. Roisum's style is informal and humorous and, as technical treatises go, a delight to read. Highly recommended.

- Moris Amon, Mobil Chemical Co.