

Principles of Winding and Slitting

About the Seminar:

Principles of Winding & Slitting is designed to give you the process knowledge you need to tackle any winding, unwinding or slitting challenge. This seminar will help you understand your existing winding and slitting processes so you can optimize them and reduce the problems – both real and potential by immediately applying proven best practices. Major areas of focus include web handling principles, understanding the structure of a wound roll, equipment used in winding from simple to complex and the many type of winders on the market and where and how they are used, all the ways winding can go wrong and how to avoid them and solutions if you can't, and the three conventional slitting methods (razor, crush, and shear) and slitter operations efficiency. These topics will be addresses at many levels, providing rules of thumb and the theory behind them.

Who Should Attend:

Anyone working with supervising operators or managing operation of web machinery will benefit from this unique course. This includes product/process designers, process engineers, quality personnel, sales/service, maintenance and lead operators. Understanding winding and slitting is also vital to anyone working with webs and web processes, including material suppliers and equipment and component suppliers.

Benefits of Attending

- ▶ Understand what center and surface winding is and their best use
- ▶ Understand five benefits of gapped and nipped winding
- ▶ Understand the importance of how air enters a wound roll and problems with too little or too much
- ▶ Understand rewind slip clutches and learn how to wind multiple rolls on one shaft and when differential winding is needed
- ▶ Understand what causes the most common wound roll defects and how to remedy them
- ▶ Understand how winding contributes to web bagginess and how to minimize it
- ▶ Understand what is the best setup and application of all slitting methods and why

Concepts Covered

- ▶ The Equipment of Winding
- ▶ Slitting
- ▶ The Process of Winding
- ▶ The Solutions of Winding



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Course Syllabus

DAY 1

The Process of Winding

- The goals of winding
- Winding and winder definitions
- Building a roll structure
- Center and surface winding
- Gap and nipped winding
- Roll dynamics

The Equipment of Winding

- Center and surface winders
- Gap and nipped winders
- Differential winding
- Roll transfers
- Unwinders
- Specialty winding

DAY 2

The Solutions of Winding

- Wrinkling during winding
- Too tight or too loose
- Scratching & debris
- Roll slippage
- Shifted layers
- Buckling within a roll
- Deformations
- Gauge variation defects
- Baggy webs

Slitting

- Fracture Mechanics
- Razor Slitting
- Crush Slitting
- Rotary Slitting
- Shear Slitting
- Slitting in Registration (Stripe Slitting)
- Alternate Slitting Methods
- Slitting Operational Efficiency