Focus tissue rewinders – Innovative solutions and proven technology for best result

Massimiliano Corsini, VP Valmet Pescia
Why do you need a rewinder?

- Reel preparation for downstream converting operations
- Elimination of macro defects
- Implementation of additional characteristics to the paper
Improved process efficiency

- Finished reels of appropriate quality
- Size and diameter fit for the converting equipment
- Maintained main original properties
- Reduced downtime
  - no need of further reel handling before loading the converting unwinders
- Waste reduction
- Overall improved converting efficiency
An efficient tissue rewinder does not correct the defects of the paper, it enables elimination of the portions of the parent reel.

Elimination of:

- Visible defects (holes, wrinkles)
- Breaks
- Paper out of characteristics

- Better product
- More sellable paper
Increase added value

Improve the product quality by adding different modules to the rewinding systems for:

- Printing
- Embossing
- Ply bonding
- Gluing
- Lotioning
Innovative rewinder technology
REELITE ENS – Electromechanical NoStress

• Retain original bulk of the processed tissue
• High flexibility
  – handles a variety of products in the most efficient and effective way
• Reliable and productive
ENS Technology
New generation of high quality tissue rewinders

Based on Electromechanical actuation of the chucks and rider roll motion

- Provides high precision control of the relieving action and of the nip pressure on the carrying drums
- Remarkably accurate roll build-up
- Completely automated removal and downloading of the finished reel set with No Stress for the rewound product
E = Electromechanical
ENS Technology

- Unique, revolutionary electromechanical actuation, by ball circulation screws
- Characteristics enabling a perfect bulk control in a closed loop, with feedback measure by load cells (Active Caliper Control)
  - Robustness
  - Stability
  - Precision
  - Rapid response

not consistently achievable with the conventional hydraulic actuation.
NS = NoStress
ENS Technology

The downloading sequence of the finished reel set is also actuated with electromechanical jacks that:

- Lift the reel over the front carrying drum (no hydraulic kicker)
- Gently pull the reel onto the downloading shuttle (no bouncing)
- Perfectly align the reel with the shaft puller (no need of mechanical adjustment)

The whole operation is performed without any shock to the finished reel set
Besides ENS – Total care of the product!

**Tension Nip Torque**

The control of 3 “VIP” Winding Parameters

- **Tension**
  - Winding Tension is obtained by our motion control on drive system
  - Position Control approach

- **Nip**
  - Constant Winding Nip is the target to easily manage very low bulk reduction and density control
  - Active Caliper Control

- **Torque**
  - The control system can easily manage load sharing settings in order to optimize the winding torque according to input selection and to control the wound in tensions (WIT)
  - The regulations run independently in order to permit different settings if needed. Recipes managing is available

**RIGHT BALANCE IS THE GOAL!**
### Tissue Rewinders

**ELECTROMECHANICAL NO STRESS - ENS**

<table>
<thead>
<tr>
<th></th>
<th>REELITE 15</th>
<th>REELITE 20</th>
<th>REELITE 25</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Basis weight</strong></td>
<td>12:40 gsm</td>
<td>12:40 gsm</td>
<td>12:40 gsm</td>
</tr>
<tr>
<td><strong>Speed up to</strong></td>
<td>1.800 m/min</td>
<td>1.900 m/min</td>
<td>2.000 m/min</td>
</tr>
<tr>
<td><strong>Finished reel up to</strong></td>
<td>2.200 mm</td>
<td>2.500 mm</td>
<td>2.600 mm</td>
</tr>
<tr>
<td><strong>Trim width up to</strong></td>
<td>3.800 mm</td>
<td>5.600 mm</td>
<td>7.000 mm</td>
</tr>
<tr>
<td><strong>Carrying drums diameter</strong></td>
<td>600 mm</td>
<td>750 mm</td>
<td>900 mm</td>
</tr>
</tbody>
</table>
Tissue Rewinder orders
2005-2015

- 2005: 11 Hydraulic, 21 Electromechanical
- 2006: 20 Hydraulic, 20 Electromechanical
- Total: 31 Hydraulic, 41 Electromechanical

Legend:
- Hydraulic
- Electromechanical
Global market
Focus Rewinder installations

[World map with red markers indicating installation locations]
Join us to become
Best in Tissue