Advanced Lineas Winding System, Reinventing the rewinder

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Currently academic interest focuses on technical-scientific results. However, before arriving at these results, there is always an idea from which work starts. Thanks to the experience of the engineers and technicians who developed these ideas and their knowledge and contact with the market, innovative solutions are born. The extensive experience and ongoing relationship with machine users has led Comexi Proslit engineers to develop an optimal rewind solution.

COMPARISON AND DEFINITION OF REWINDING (CENTER WINDER & CENTER-SURFACE)

When it comes to rewinding, the center-surface winder provides a higher quality since the rewind point is always the same. In this technique, neither the rewind diameter nor the rewind point has an impact on quality. Thus, the same distance is always guaranteed between the slit and rewind point while maintaining material stability. Furthermore, since the rewinder leans on the rewind lay-on roller there is no flexion in the resulting reel, thus obtaining better results. This system also has a web driver between the slitting station and rewinder to help improve the quality of the final result.

This system has considerable advantages when compared to current central rewinding systems. According to the above, a central drum machine with independent arms and a center-surface rewind system will produce better quality and a better product profile at high speeds. In addition, the machine can reach large rewind diameters, suitable of a conventional duplex or turret slitter.

However, despite the higher rewind quality of this system, the market adopted the central rewind system as the standard due to productivity reasons since a central drum machine has slower changeovers. Furthermore, central rewind machines are more versatile, profitable and easier to use and can provide acceptable quality rolls. It was upon these premises that the DUPLEX machines (double rewind shaft machine for slitting flexible material) and later the TURRET machines (for improved productivity) were designed.

Productivity TURRET vs. DUPLEX:
The main disadvantage of the DUPLEX slitter-rewinders is their low productivity. If we consider stop times for splicing, parent reel changes, knife changes, rewind stops for removing reels and inserting new sleeves (generally in work changes and orders), the total stop time can reach up to 70% with only 30% production time. Even so, this system still remains much more productive than a CENTRAL DRUM machine (considering the mid web sector with diameters no larger than 600-800mm). On the other hand, the turret system reverses the numbers. With the same amount of change jobs as a DUPLEX machine we obtain productivity results of 30% stop time (stops, parent reel changes, jobs, etc.) and 70% production, considering that a turret
machine is always calculated to produce at least 40% more than a double shaft DUPLEX machine.

Example of a comparison between Duplex and Turret:
Let’s take the production of BOPP 50µ, input diameter in unwind Ø800mmx1200mm in width = 15254 linear meters. We want to obtain rewind reels each Ø450mmx200mm in width = 3050 linear meters. Considering that the maximum production speed is 400mts/min.

Innovation in the REWIND LAY-ON ROLLER + TURRET SYSTEM
In order to surmount the various disadvantages of both systems, Comexi Proslit has incorporated into its entire DUPLEX and TURRET ranges the ALTS system (advance lineal track system) which has many rewind advantages, making it possible to combine any material imaginable with other traditional systems.

Proslit is committed to INNOVATION, applying team work, analysis, experience, knowledge and quality to offer its customers an added value: productivity

Proslit launches the new S-TURRET with the ALWS system (advanced linear winding system) in turret:

Aware of the benefits of center-surface rewinding and the market’s need to increase productivity, the ALWS system (advanced linear winding system) has been incorporated into the S-Turret. The system stands out for its innovative characteristics and although the system is not entirely center-surface, it operates as such and has many similarities including:
1. The rewind point is always the same regardless of the rewind diameter, always guaranteeing the same distance between the slit and rewind point.
2. The rewinder leans against the pressure roller, although this system operates with shafts, and the pressure roller is in turn supported at all times by the ends of this shaft. This may improve quality in the CENTER-SURFACE system since its horizontal movement maintains contact in the same quadrant of the reel throughout the entire process, without applying pressure or counter-pressure as observed by the absence of an arch.
3. Final rewind diameter up to 1000mm.

While taking advantage of the productivity of the CENTRAL REWIND system, with experience in modern machines such as:
1. Versatile and profitable
2. Handling and changes
3. Horizontal rewind pressure roller system or LAY-ON ROLLER similar to ALTS Proslit.
4. Revolving system (NON-STOP)

Proslit S-TURRET is most definitely the sum of all the advantages of these systems: CENTER-SURFACE rewinding to guarantee the best quality, NON-STOP TURRET to maximize productivity and finally the Advanced Linear Winding System.
About Comexi Group - [http://www.comexigroup.com](http://www.comexigroup.com)

Comexi Group is a leading company with worldwide presence and more than 400 employees. It has been committed to machinery manufacturing for the flexible packaging industry since 1954. Our mission is to lead the conversion of the converting industry into a clean, emission-free industry that makes the smallest possible impact on the environment. Our commitment is to offer global solutions unique to a world with ever-increasing flexibility and efficiency needs.

Through sustainable innovation we are committed to the research and the technological design aimed at creating products that are efficient, reliable, energy intelligent and environmentally sustainable.

Comexi Group is made up of six trademarks, each one specialized in different converting processes. The Comexi Flexo trademark is specialized in flexo printing, Comexi Offset is specialized in offset printing, Comexi Acom in rotogravure printing, Comexi Nexus in laminating materials, Comexi Proslit in slitting and rewinding and Comexi Enviroxi is specialized in offering the industry logistics and environmental management solutions.

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