UPTIME SOLUTION FOR RUBBER MIXING OPERATIONS

Tyre, retread, and rubber product manufacturers understand the critical nature of keeping their mixing operations up and running on a continuous basis:

- Stock must be closely managed to fit time-sensitivity and storage constraints.
- When mixing stops for machine repair, it quickly and adversely affects all subsequent downstream processing.

While the need for uptime is clear, it can be difficult to provide timely maintenance repairs when downtime occurs. The location, sheer size, and complexity of equipment can complicate and add anxious hours to the job of restoring mixing operations.

For example, slab cutter knife blades require an occasional adjustment to compensate for wear, and must be replaced when they reach a point when at which the adjustments no longer achieve a repeatable cut.

Replacement, in particular, can be an arduous task that requires up to eight hours of downtime. So it is a task that is often avoided due to production interruption, but a task, left undone, that can lead to uneven blade wear, damage to the anvil roll surface, and excessive fatigue of the machine's framework – all of which reduce the life and effectiveness of the machine.

Next Generation Slab Cutter

Poling Group company Akron Steel Fabricators listened closely to their rubber-producing customers who wanted to reduce blade change-out time for slab cutters – and in the process also found ways to keep the best of the traditional design while improving the machine to meet current and future customer needs.

The best of old and new is embodied and now available in ASF's brand new rotary slab cutter, the Next Generation (NG) 1270.

One reason ASF focused particular efforts on updating the rotary slab cutter is because it can service multiple machines in the mixing room:

- Rubber Mixer Weigh Charge System The two- or four-blade cutter configuration pulls stacks of wig-wagged cold rubber stock off of a skid and cuts the width of the stock into pieces that drop onto a weigh conveyor. To reduce labor costs and provide for more accurate weighing, ASF varies the inlet speed of this feeder to automatically control and reduce piece size as the process approaches and then achieves the target weight.
- Zig Zag Mill Feed for Calenders and Cold Feed Extruders This two-blade configuration pulls one slab rubber sheet off of wig-wagged stock layered on a skid. In this case, the blade only cuts partially through the width to provide the bite of the mill and the inlet or feed speed is more constant to continuously feed the breakdown mill.

Customer-Centric Design

In its redesign of the NG 1270, Akron Steel Fabricators retained essential traits and qualities that made its previous, traditional rotary slab cutter robust, reliable, and successful while at the same time improving performance and making the machine more maintenance-friendly and adaptable to future customer requirements.

Key elements of the new machine include:

- Uniform and controlled interference between the hardened face anvil roll and blade tips.
- Angular contact between the blade edge and the anvil roll.
- Slight surface speed differential between knife blade edge and the anvil roll.
- Easily adjusted to compensate for blade wear.

New features include:

- Modular Composition By separating the cutter portion of the machine from the conveyor, the material handling can remain in place and online at the service area. And just as important, the production downtime for slab cutter box replacement has been reduced to less than 30 minutes with the use of an optional maintenance stand with a single spare cutter box assembly.
- More Flexible/Adaptable Now the basic design can be easily customized to meet the needs of a specific application and updated to adapt to future material handling concepts.
- Standardization Interchangeable components were designed for reuse among different NG machines, reducing parts maintenance and storage requirements.
- Improved Maintainability cutter box maintenance can be done at floor level or ergonomic elevation.

Visit ASF to Learn More

If you plan to attend Tire Tech 2014 in Cologne, Germany from February 11-13, visit us at Booth 3001 to discover how the NG 1270 can provide more uptime for your mixing operations.

Can't attend the show? Go to www.PolingGroup.com to learn about our solutions for modernizing your mixing department—and much, much more.