Pesmel is proud to be involved in the fully recyclable consumer board revolution taking place at Kotkamills. With new Finnish owners and visionary technology, Kotkamills turned to Pesmel for a packing solution that meets its needs.

When Kotkamills initiated major investments and adopted pioneering production technology under a new owner in 2015, it quickly discovered that it was going to need a new roll packing system. Pesmel was able to design a layout to fit the challenging facilities seamlessly, and construction soon began on the conveyor systems and packing line to serve both the new board machine as well as the existing lamination paper machine.

A revolutionary product range

Kotkamills is a paper and board mill with a long history. Originally a sawmill, it branched out into pulp and later to kraft paper production, always preferring local raw materials and looking at future trends to steer operations. The sawmill remained part of mill operations to this day, with sawdust used in the production of pulp for lamiinating papers, and chips used for consumer board products.

Kotkamills now operates one paper machine and one board machine in Kotka. PM1 produces Absorbex® base kraft paper for laminates, which can be further converted into Imprres® core stock and surface films. The other machine, BM2, is the pride of the mill: a modern board machine able to produce recyclable, repulpable and renewable folding boxboard and barrier board. The key to its extended recyclability is the dispersion technology, which replaces traditional plastic barriers to hold in liquids and fats.

The products from PM1 still constitute an important part of the mill’s sales. BM2 is, however, expected to become the real flagship of the mill when its best features are put to good use in the production of plastic-free barrier board to meet the global need for sustainable and ecological packaging.

The fully automated roll packing system usually only requires attention when wrapping materials need to be refilled. An operator monitors the system from the winder control room upstairs and only goes downstairs to the packing area when necessary. The operator also has time for other duties besides managing the packing operations.

Automation ensures hygienic food packaging

The packing method must always meet the particular requirements of the mill and its customers. For the food packaging grades that Kotkamills produces, good hygiene is essential. An automated handling and packing system ensures that rolls are processed without the operator's manual touch. Odor or bacteria must not be able to enter the rolls, which need to be in pristine condition when they arrive at the packing machine to receive their watertight and weatherproof kraft paper layer, ready for shipment to the customer.

In food packaging, customer audits are a normal part of the process. In addition to the actual production process of the board machine, auditors also inspect the packing system to ensure that the entire process meets the required standards.

The work continues

The extreme speed with which the project was implemented posed major challenges for the design of the conveyor and packing system. As every mill is different, the systems always need to be tailored specifically for each case. It usually takes years to optimize and complete the layout before implementation; in this case, the process was carried out within a few months.

Ongoing development of board production technologies also requires further work on the packing system to ensure optimal operation. The roll size from the new board machine has proven to be smaller than was anticipated, which means that instead of packing large rolls at a slightly slower speed, the system must manage smaller rolls at a faster speed.

Pesmel and Kotkamills will continue to work together in good co-operation to fine-tune the system when the product range of the mill changes. In the paper and board markets of a changing world, there is no such thing as a final production concept.