

# International Paper and Pesimal A PARTNERSHIP BUILT ON COOPERATION

On a crisp April morning in Kauhajoki, northern Finland, **Stan Merrill** from International Paper and Pesimal's **Kaj Fahllund** are thrashing out the details of implementing IP's latest roll packing line project. Over the past few years, International Paper has entrusted Pesimal with around €20 million in packing system deliveries. NewsFlow caught up with them during a break in the talks in order to find out why Pesimal keeps winning their trust.

International Paper has been operating for over a century. Headquartered in Memphis, Tennessee, it is the largest papermaker in the world, with over 55,000 employees in 24 countries. It produces a wide variety of containerboard, paperboard, paper, and pulp at over 40 mills globally. Pulp and paper mills are enormous capital investments. These investments obviously need to make a return, so there is pressure to continuously work on improving productivity. Even a 1% improvement in production output every year for 20 years means that, sooner or later, the packing part of the line becomes a bottleneck. IP seldom builds new mills, so it focuses on incremental improvements to the operations and efficiency of its existing mills.

Recent years have seen a seismic strategic shift in the industry, too. The rise of the internet has led to changes in how people get their information, and especially in how they consume news. The shift to online news has led to a collapse in the newsprint market. There has been a less dramatic, but still significant, change in the printing paper market too, so papermakers have had to adapt and change their production output. International Paper was one of the first companies to recognize these changes and shift its production towards board and pulp. This change in production means that the packing requirements at IP's mills have changed as well.

The combination of the change in production and the improved machine efficiency means that many of the existing packaging solutions are no longer up to the task. And these

packing systems are not minor investments, either. A single packing system can cost millions, and in just the last three years, International Paper has ordered systems like this from Pesimal for six mills in three different countries.

## Packing systems – from kraft to stretch film

Traditionally, packing systems used laminated kraft paper to wrap paper and pulp rolls. "Kraft wrapping was a synonym for packaging in the paper industry," Fahllund explains. "Stretch film wrapping was something peculiar and strange. But the thinking has changed, and stretch film has started to spread." International Paper used to use kraft paper, too, but it is migrating to stretch film for most of its new systems.

"From a capital point of view, stretch wrapping systems are lower cost, equipment-wise," says Merrill. "From a maintenance point of view, you have fewer machine parts. It's less maintenance cost, it's less energy cost. It's just fewer things to maintain." As IP can't afford to shut down its mills to install new systems, it has to fit the new system into the existing mill while everything is still running, so the size of the system is a vital consideration. The footprint of stretch film wrapping systems is much smaller than for kraft wrapping systems.

Customers, especially European ones, also want to have less waste to deal with, and plastic also recycles well. Kraft wrappers are laminated with a layer of plastic for moisture protection, which makes them harder to recycle. With a >>



Stan Merrill and Jessica Oates from IP conducting a full acceptance test at the Pesimal workshop.



The quality of the pulp or paper defines the packing materials needed.

"As you evolve the process, you also increase your expectations."

well-designed system, the right equipment and the right materials, stretch packaging can also offer more appropriate packing quality. "That's been learned the hard way," says Merrill. "You have to have equipment that's designed specifically to wrap rolls." The equipment and the films themselves have evolved a lot over the years.

To an observer, there wouldn't be much visible difference between the stretch film systems at IP's mills, but the types of package that the different systems create are quite different. "If you walked into any of the mills, you'd see a machine doing one thing, and a robot doing another thing, and the rolls going out the end, and it would look almost the same," Merrill says. "The difference is that white paper, board, newsprint, and so on prioritize mechanical protection, but the cellulose fiber packages have both an environmental layer and a mechanical layer."

As the cellulose is used for hygiene products and medical supplies, the environmental packaging requirements are stringent. The mechanical layer protects against physical impacts, while the environmental layer keeps the content pure and protects it from odor contamination, dirt, and bugs, for example.

### Choosing suppliers on merit

International Paper begins projects like this by drawing up the specifications and then inviting vendors to bid for them. IP sends the specifications to a number of suppliers who have the capability and experience to provide complete systems. The vendors selected have either already proved that they are capable, or have presented strong evidence of this. This is a fairly select group of suppliers, as IP have stringent design requirements. "We're willing to pay for all that, that's

not a problem," says Merrill, "but we have to have a supplier that's willing to do it."

These suppliers are invited to present their solutions. Following the presentation stage, IP whittles the group down to a shortlist of about three suppliers. The final choice is made based on the suitability of the solution and, of course, the price. Merrill is keen to point out that price is not the only consideration, though – the suitability of the solution is the most important factor. Of course, previous positive experience with a supplier plays a part in whether they are invited to present their solution, but contracts are awarded based on the merits of the solution in every instance.

Stan Merrill happily admits that International Paper is a demanding customer. "From IP's perspective, the better that suppliers understand International Paper, the better it is for everybody," he says. From start to finish, the process of implementing a packing system takes about two years, and it follows a very clear and detailed process.

### An involved process

Fahllund explains how it works: "All IP investment projects follow the same model. It's a meticulous process, with wallcharts and everything. The process can be a bit muddier with some customers, but everybody at IP knows how it goes and what comes next. There's a checklist, with five main stages and maybe 50 items to check off at each stage."

"There's three steps until we reach the capital implementation stage," says Merrill. "First is basic design and concept, then basic engineering and estimating, and then detailed engineering and estimating. The fourth step is the implementation stage, and the last step is a post-implementation

evaluation." At the end of every step, there is a pause to confirm that everything is proceeding according to plan before the next step commences. It's a process that requires a great deal of cooperation between the supplier and IP.

The design and engineering phases normally take about six months and involve a number of very detailed meetings: kickoff meeting, general engineering review, mechanical design review, and electrical design review. "Then we'll have a full acceptance test at the factory," Merrill explains. "You put everything together, you hook it all up, and you actually run it."

Assuming everything has gone well to this point, the process proceeds to the construction phase, which involves yet more close collaboration: planning the installation and commissioning, analyzing potential problems, and in those projects where installation and commissioning will take place during the regular maintenance outage of the paper machine, what IP calls an "eye-popper": making sure that they are ready to go when the outage happens and that everything can be done in that relatively brief window of opportunity. In the old days, the installation and commissioning at site could take months, but now we are talking windows of weeks.

Having mill operations in diverse countries can create its own issues as well. There's obviously the language barrier, as working in countries outside the US means that, generally, there are three languages involved: English, the local language, and the lingua franca – "broken English" as Fahllund labels it. This obviously leads to potential for confusion. Even when things go perfectly smoothly, having multiple languages involved slows down the erection and start-up phases, as the local labor force generally doesn't speak English. Even when the local language is English, this doesn't mean communication will be flawless. Merrill describes a project in Australia where the slang that the local workers used was surprisingly difficult to understand.

### Pesmel – a flexible partner

These projects and the systems involved have changed greatly in the past couple of decades. Where weekly maintenance shutdowns used to be the norm, now they happen once every three months. Safety has also been vastly improved, with light curtains and automatic shutdown systems to protect the workers. These developments have meant changes in the design process, too. Lessons are learned during every project as well, and new rules and standards are established. As a result, the requirements change for every project, which requires flexibility and a willingness to adapt from the supplier.

Merrill describes it as IP "evolving" their development with vendors. Pesmel's flexibility and cooperative attitude in this regard is one of the reasons why IP has selected Pesmel to supply so many systems. According to Kaj Fahllund, "At Pesmel, we

have a certain kind of experience and we have been doing these systems for decades. But it's not only the technology, it's also that we understand how they want to do these things."

International Paper is always keen to tell all their suppliers how they can improve, and Pesmel's willingness to learn and better themselves is a good fit for this. "As you evolve the process," says Merrill, "you also increase your expectations." Good previous performance becomes the baseline for the next project. Over a decade of working together, Pesmel and IP have both adapted. Says Merrill: "They learn from it. We learn from it. We put processes in place to check stuff. They put processes in place to check stuff."

Pesmel's solutions are often not the cheapest in price, but they have at various times been the best in terms of total cost of ownership and installation, technological solution, floor plan and construction costs, or timeline. Their modular, pre-built, "plug-and-play" systems simplify construction and start-up on site.

While the time zone differences and amount of travel involved have been minor issues, Merrill says that communication is good – there has been no language barrier, unlike with some other suppliers. Pesmel's understanding of International Paper's processes and the way they like to do things is important, and their willingness to cooperate, their flexibility, and their desire to evolve along with the systems have been major factors, too. It's the combination of all these things that has pleased IP on previous occasions, and it means that Pesmel continues to win their trust – and their contracts. •

In recent years, Pesmel has supplied or is currently supplying packing systems for six International Paper mills:

- Riegelwood, North Carolina, USA – softwood and fluff pulp – 2016 (2 lines)
- Prattville, Alabama, USA – kraft linerboard – 2016
- Kwidzyn, Poland – paper, paperboard, and newsprint – 2016 (2 lines)
- Mogi Guaçu, Brazil – pulp and uncoated paper – 2017 (2 lines)
- Três Lagoas, Brazil – uncoated paper – 2017
- Luiz Antônio, Brazil – pulp and uncoated paper – 2018 (3 lines)