

A reincarnation in Russian packaging

The SFT Group and ANDRITZ have completed a remarkable project together. They took on a major challenge of dismantling a graphic paper machine in Finland, transporting it, and reincarnating it as a packaging machine in Russia.

▲ The SFT Group produces 460,000 t/a of paper and board and 460 million m² of corrugated packaging. It is vertically integrated from recovered paper collection to converting.

As soon as you enter the gates of the SFT Group's Kamenskaya paper mill midway between Moscow and St. Petersburg, you come to the realization that this is no ordinary manufacturing site. This mill has been through a huge amount of change. The signs and relics around the mill speak of a very colorful past. The mill started in 1799 as a writing paper plant and has been bought and sold a number of times. Once it was lost as part of a gamble. It was even completely dismantled, moved, and re-erected in the Ural Mountains.

Stability arrived when the SFT Group bought the mill in 2003. The Group currently produces 460,000 t/a of paper and board, and 460 million m² of corrugated packaging. Stepan Khomyakov, CEO of the SFT Group, says: "Our Group is focused on the packaging business – vertically integrated with wastepaper collection, mills, and converting facilities. It is a challenging business, but a good business. Russia is becoming more and more a country of



"We needed more capacity, but a brand new machine was out of the question due to the capital required."

Roman Steinberg
Director for Investments
SFT Group

consumers, and more consumption means more packaging."

To meet this growing need, the SFT Group's products are used for packaging everything from food to televisions. Because the Russian recovered paper market is underdeveloped – with a collection rate of only 5% per household and a high ratio of virgin

fibers used in containerboard production – the quality of the raw material is excellent.

Stability doesn't mean standing still
The SFT Group has high ambitions: to produce some 700,000 tonnes of paper and board and 800 million m² of corrugated packaging annually by 2018, which will make it number one in Russia.



▲ PM originally came from Finland, where it produced machine-glazed kraft paper. ANDRITZ integrated parts of the old machine, including sections that required refurbishing and upgrading, with its own paper machine technology to deliver a state-of-the-art packaging machine.

Working towards this goal, Roman Steinberg, Director for Investments for the SFT Group, explains the latest project. "We needed more capacity, but a brand new machine was out of the question due to the capital required," he says. "So we kept a close eye on the secondhand market, and eventually a shuttered graphic paper machine in Finland came to our attention."

The machine came from UPM's Kymi mill, where it produced machine-glazed kraft paper. With a trim width of 4.6 m and speed of 1,050 m/min, the machine seemed to be the perfect choice for the SFT Group's expansion requirements. The decision was made to purchase what was to become PM7 at Kamenskaya.

ANDRITZ was chosen as the company that would be instrumental in handling the complex project. Says Steinberg, "We chose ANDRITZ because we had a successful association with the company, and they were capable of taking the whole project



◀ Left to right: Raisa Zaikova, Kamenskaya Paper Mill; Karl Eickhoff and Klemens Unger, ANDRITZ; and Roman Steinberg, SFT Group; check the formation of the finished product.

from dismantling in Finland to erection and optimizing in Russia, and everything in between."

"We needed a master plan"

ANDRITZ received the order in June 2011 and soon afterwards dismantling of the machine began. But, this was no ordinary dismantling, according to Klemens Unger, Lead Project Manager for ANDRITZ. "Not only did the thousands of parts from this 1970's machine have to be painstakingly catalogued and marked for re-assembly," Unger explains, "but all the parts needed to be checked and overhauled quickly to keep the very tight time schedule."

Karl Eickhoff, Senior Vice President, Second Hand Solutions, and a key player in the project explains: "For a complex project like this, we developed an overall master plan document where we basically broke the machine down into functional sections, and then analyzed each part to make sure we could salvage as much as possible from the old machine. The goal was to save the SFT Group as much money and time as possible, while still getting the parts ready in time for installation."

Overhaul of the old machine began in August 2011 in Finland. "In the case of this machine," says Eickhoff, "since it had been



"We were told by a consultant that this project would take a minimum of three years. Together with ANDRITZ, we completed it in 23 months."

Raisa Zaikova
Executive Director
Kamenskaya Paper Mill

shut down for five years, there were quite a few parts that needed rework."

The transportation of the machine to its new home in Russia took place in November and December of 2011. The logistics required 280 containers and 20 specially adapted trucks for the two-day journey. After the civil work, which included the dismantling of two old paper machines, installation of PM7 started in May 2012.

Turbo-boosting and future-proofing

To help establish the Kamenskaya mill as a world class packaging producer, ANDRITZ added its own technology to turbo-boost the production line. The machine was built up to state-of-the-art by integrating cur-

rent technology from ANDRITZ with refurbished and upgraded sections from the old machine. "It was not just a matter of putting old and new together," Eickhoff explains.

"The UPM machine contained equipment from Metso, Voith, Honeywell, and others," explains Unger. "It was our challenge to integrate parts from these various suppliers with our own ANDRITZ paper machine technology. But the result speaks for itself."

In the press section, a PrimePress X shoe press was installed to obtain maximum dryness and improve sheet properties. More improvement in drying comes with an extension of the original dryer section, adding new and refurbished dryers, and installing a PrimeRun web stabilization system. ANDRITZ also upgraded the winding diameter up to 2.7 m and automated the roll transportation and reel spool return.

There was also some future-proofing incorporated into the wire section of the machine. Since the SFT Group's plan is to produce a two-ply liner, ANDRITZ lengthened the dewatering area of the wire to allow for the addition of a top layer forming unit in the future.

The end result, according to Eickhoff, is a state-of-the-art system. "Not only the packaging paper machine itself, but the entire line," he says. As part of the project,



"Russia is becoming more and more a country of consumers, and more consumption means more packaging."

Stepan Khomyakov
CEO
SFT Group



▲ Left to right: Sergey Semyonov, Kamenskaya Paper Mill Technical Maintenance Manager; Mikhail Kozlov, Kamenskaya Paper Mill Production Manager; Roman Steinberg, SFT Group Director for Investments; Raisa Zaikova, Kamenskaya Paper Mill Executive Director; Karl Eickhoff, ANDRITZ; and Klemens Unger, ANDRITZ, in front of PM7.

ANDRITZ delivered a new recycled fiber processing line with a capacity of 800 t/d of 20% mixed waste and 80% OCC. ANDRITZ also installed a new machine approach system, including three-stage headbox screening, a save-all disc filter, and under-machine pulpers.

Commissioning of the machine began in March of this year, and the first paper was on the reel June 11, 2013.

"We are already influencing the Russian market"

Raisa Zaikova, Executive Director of the Kamenskaya Paper Mill, says: "This was a very big project for us, but it was one of the biggest of its kind for ANDRITZ as well. In terms of the timeline, we are completely delighted. We were told by a Finnish consultant that this project would take a minimum of three years. Together with ANDRITZ, we completed it in 23 months. We are delighted with the quality, and so are our customers. We are not yet up to the design speed 1,050 m/min, but we know that ANDRITZ will help us achieve that in the near future."

"ANDRITZ Automation's control systems have contributed to our quality improvement," says Steinberg. "We can control the quality more easily. This is not only noticeable to our customers, but to our competitors as well. We are seeing signs that they want to follow us down this route, and already they are offering special deals. This project shows that the SFT Group is having a major influence on the market."

Working together – we create the future

Before this project, the Kamenskaya mill was rarely visited by others from around the world, and English was mostly unrecognized. Steinberg explains, "With ANDRITZ involved, the many meetings about the project were a new arrangement for us. ANDRITZ was patient with us, sharing their knowledge. We reached a common understanding. I can't say that the team speaks English now, but they can communicate well with the assistance of Google Translator!"

"This was not just an equipment supply deal," Unger remarks. "A true spirit of partnership was a common goal. Yes, it was full



▲ ANDRITZ also delivered a new recycled fiber processing line and machine approach system with a capacity of 800 t/d to bring high-quality stock to PM7's new headbox.



▲ It was a challenge to integrate parts from various suppliers with ANDRITZ paper machine technology.



▲ ANDRITZ Automation integrated existing and new features into its DCS and QCS systems.

of challenges but both teams were committed and both shared a common vision."

It seems the project can be summed up with the SFT Group's own mission statement: "Working together – we create the future."

CONTACT
Paper and Board Machines
paperboard@andritz.com