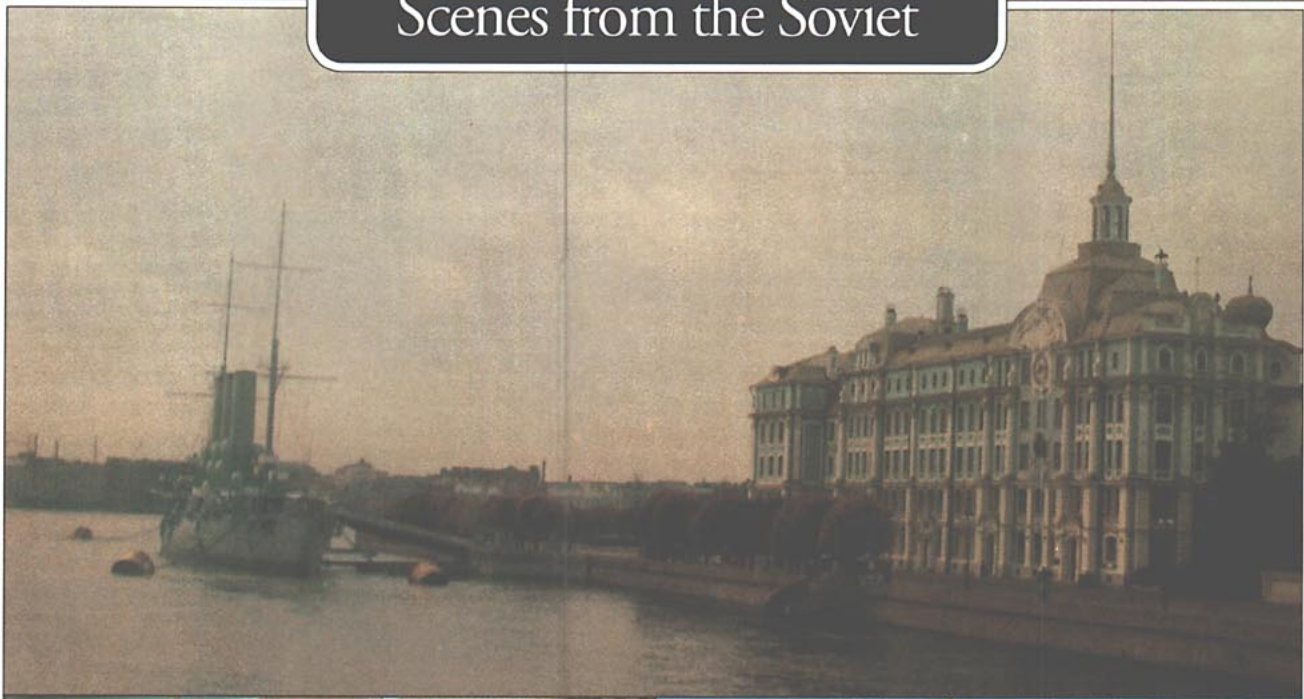


Scenes from the Soviet



Vyborg mill illustrates challenge and potential of Russian paper industry

Donald G. Meadows

This well-equipped mill near the Finnish border is operating far from capacity as the former Soviet Union struggles to convert to a market economy.

The Vyborg pulp and paper complex, located in the portion of Karelia annexed from Finland after the Winter War (1939–1940), was founded in 1926 as a sulfite pulp mill and had a small machine that used paper waste. The mill developed slowly until 1985, when a major investment was made in renovating the facility.

The renovation included construction of a new sulfite mill, installation of a waste water treatment system, and the addition of a Voith paper machine with a top former and Clupak unit. A large converting facility with four modern rotogravure presses was also built.

Although plans called for the complex to use all the pulp it produces, about half is being sold. A second papermaking machine was to be put into production, along with a metalizer and other machinery, but economic changes have altered those plans.

The complex has a potential annual turnover of 150 million rubles (roughly US\$ 4.75 million). However, the mill was operating at about 30% of capacity in the fall of 1991, in part because of a shortage of wood. The shortage stemmed from the changing economic systems and local policies toward the ownership of forests. Although surrounded by forests, the mill had been getting its supply from the Archangelsk region, roughly 1000 km to the north. It uses softwood and some aspen. Located only 32 km from the Finnish border and with access to the Baltic, more profit has been made shipping timber from the Vyborg area to Western markets.

In addition, the complex must compete with two other large pulp and paper mills in the region. Combined, they consume 3.5 million m³ of wood a year. Only 300,000 to 400,000 m³ of wood is harvested locally.

Many Russian mills face a similar shortage of wood, which some blame on the previous system of management. The price of wood had been artificially low, as was the price of paper. In addition, waste wood was not used properly. In fact, about 25% of wood cut was not being used at all—it simply rotted where it fell.

Why?

Because of the government's special plan for cutting wood and special plan for transportation, neither of which was made in tandem.

The Vyborg complex produces about 120,000 tons of yeast and lignosulphonate a year. The technology is analogous to that used in Austria and Switzerland. The yeast production system is the same as that at the Á'á'nekoski mill in Finland. The yeast is sold for animal feed; the lignosulphonate is used in building, metallurgy, and mining.

Pulp capacity is 63,000 tons/year, projected to increase to 90,000 tons/year if the complex were to switch to bisulfite use. The complex has four 500 m³ digesters and stores liquor in two 9000 m³ towers. Bleached pulp is purchased from another mill.

The paper mill uses a standard formation process, with the potential to produce 60,000 tons of paper annually. One of its specialties is wallpaper that is sold to Sweden. Other products include label and wrapping papers.

With the change in government and economic systems, mill managers don't expect any great investment from the state in the near future. They do anticipate a transformation to private ownership, with workers owning stock in the company. The mill has also entered joint ventures with Finnish companies to make packaging materials and to use waste cellulose to make shoe insoles. The mill complex could also provide printing services for other suppliers.

Another problem vexing managers is personnel—the attitude of workers and the need for training. Under the communist system, workers were protected by law. There was no unemployment and there was almost no way to fire someone, so there was little incentive to work any more than necessary. A contract system has since been put in place, but it takes time to reshape worker attitudes.

Theoretically, the mill could operate with 100 people, but it uses 350 for now. About a third of those are on hand to fix equipment.

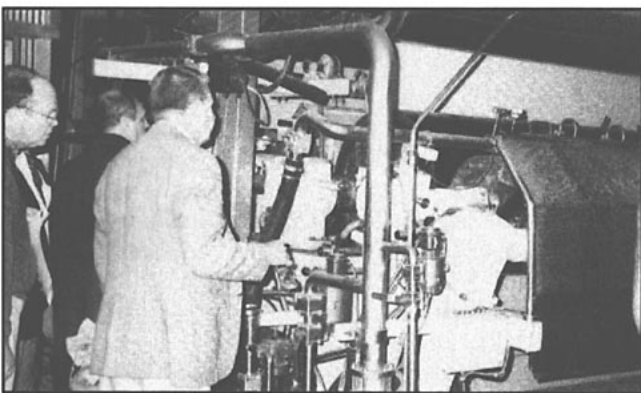
Yet another quirk of the Soviet system is that the mill complex owns the small nearby town, so in effect, it has 2500 employees. With the changes that have taken place in Russia, the complex may be able to sell off those properties.

ВЫБОРГСКИЙ ЦЕЛЛЮЛОЗНО- БУМАЖНЫЙ КОМБИНАТ

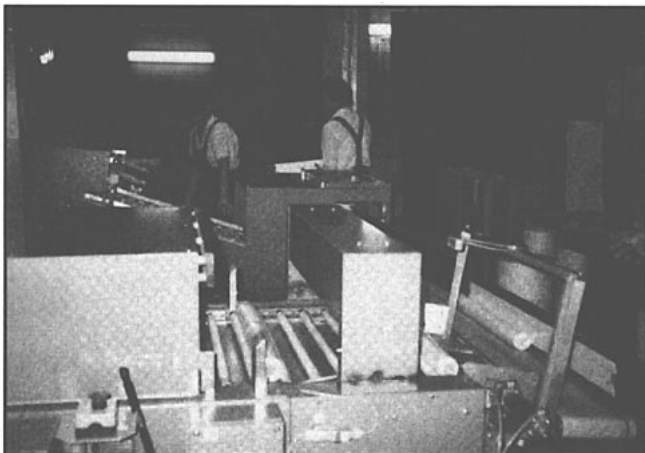
F. Keith Hall checks the forming section of the Vyborg paper machine.



Ronald B. Estridge, Thomas W. Joyce, and Robert A. Olson inspect a section of the Vyborg mill's paper machine.



Wallpaper being packaged at the Vyborg mill complex.



TAPPI study tour members inspect paper sample.



Rotogravure printers being cleaned at the Vyborg complex.

