

HOLMEN

Higher performance, less noise

Little noise pollution despite an annual capacity of 1 million m³

At the sawmill site in Iggesund in central Sweden, the past few years have been characterized by massive investments. In addition to new continuous kilns, Swedish Holmen group built a new planing hall and is currently adapting the existing saw line. Besides the main type of wood, pine, Holmen processes an increasing proportion of spruce logs. The investments bring the site's processing capacity to a total of 500,000m³ of softwood lumber a year. In order to be able to cope with the additional capacities in terms of the log wood as well, the company ordered a new high-performance log sorting line from Springer Maschinenfabrik, Friesach.

✍ Jakob Wassermann 📷 Springer (1), Jakob Wassermann

Springer replaced the sorting line installed around 30 years ago with a high-performance system with a peak output of 33 logs per minute. This means that each year, up to 1 million m³ can pass through the line, which is designed for logs with lengths of 2.7 to 6.3m and diameters from 12 to 75 cm.

"We need a lot of bins, especially for sorting the pine logs. Now that we are processing another type of wood in Iggesund, we had to increase the number of sorting boxes accordingly," plant manager Magnus Malmström says, explaining the need for the investment. In total, the new 350m long sorting line has 96 sorting bins and thus 18 bins more than the original one.

Installation during ongoing operation

In addition to the demanding performance requirements specified by Holmen, the installation during ongoing operation put the project managers of the two companies to the test. "We didn't want an asymmetrical log yard, so the existing location was the only option," Victor Holmquist, operational mana-

ger of Holmen's sawmill division, tells us.

"The new sorting line has only one infeed deck compared to the two that the old line had. In order to keep the plant downtime as short as possible, we built it on the opposite side of the existing log infeed. This way, we could partially use the existing foundation and carry out a large part of the work already during ongoing operations," Holmen project manager Mattias Forslund adds.

After the start of assembly in the summer of 2023, the first logs ran over the sorting line in November – despite the ambitious schedule, and the early onset of winter.

Defying nordic winters

"One of the biggest challenges in terms of control technology was to adjust it to the Nordic winter conditions and to optimize the line in a way that it works perfectly regardless of the snow conditions and does not have any loss of performance," Stefan Renner, PLC programmer at Springer, explains.

In order to avoid disruptions when there is a lot of snow, the Carinthian machine man-

ufacturer installed cameras instead of sensors in the entire infeed area. The cameras detect the logs from above and pass the information on to the system control, which guarantees an optimal material flow.

Seven robustly designed screw feeders, which enable small gaps between logs in high-performance lines, separate the logs and transfer them to a cycle conveyor, which then feeds the logs to the sorting line.

For detecting possible defects on the inside of the logs as well as for quality sorting, a Logeye scanner with X-Ray and Color modules from South Tyrolean manufacturer Microtec, Brixen, was installed behind the infeed.

More time for assessments

"Thanks to the extended cycle conveyor, the plant operators have more time to assess each log despite the higher throughput. Originally, we had two operators per shift. Thanks to the new technology, one operator per shift can now handle the entire workload," Malmström tells us.



In addition to the special technical features for the support of its employees, Holmen attached great importance to the comfort of the control center. A small but important detail, for example, is the operator's chair, which allows a quick and uncomplicated change between a sitting and standing position.

Higher performance with a lower noise level

"Our goal was to increase the output of the line by 50%, from 800 to 1,200 logs per hour, and Springer was able to meet these requirements," Holmquist says and adds: "Another reason in favor of the Springer line was that the new log sorting line is significantly quieter than the old one. Since we are in the immediate vicinity of a residential area, the noise level was a key criterion in our decision."

Compared to the old line, the gaps between logs could also be significantly reduced. "We used to have a log gap of 6m at a feed speed of 100m/min. With the new line, we manage to have a gap of only 1.5m at twice as high a speed. The precision of the plant is really impressive," Malmström tells us.

Previously, Holmen worked in three shifts at the log yard. Since the new line went into operation, the required output is achieved in two-shift operation. "We're currently still in a sort of training phase where we are working at a feed speed of 180 m/min. Our plant operators and our forklift drivers at the log yard, too, have yet to get used to the increased performance," Malmström explains. Springer estimates the maximum feed speed to be 210 m/min.

A clear decision

"Of course, we also looked elsewhere, but it quickly became clear that Springer had worked out the best solution for us," Holmquist emphasizes. "The project team consisted of about ten people and we agreed relatively quickly that we would award the contract to Springer. Ultimately, we chose Springer because of the great combination of technology, capacity and noise level. We also really appreciate the 24/7 customer support and the quick availability of spare parts," Malmström adds.

- 1 The extended cycle conveyor gives the operators more time to assess the logs
- 2 Springer programmer Stefan Renner, Holmen project manager Mattias Forslund and Springer fitter Karl-Heinz Planegger (from left) described the collaboration as highly constructive
- 3 A total of 96 sorting bins are available on the 350 m long sorting line
- 4 The screw feeders ensure the optimal separation of logs and the efficient removal of residual wood, while being low-noise
- 5 The gaps between logs were reduced from 6 to 1.5 m – even though the feed speed was doubled



SCAN THE QR CODE FOR THE VIDEO of the Holzkurier visiting the Holmen site in Sweden

