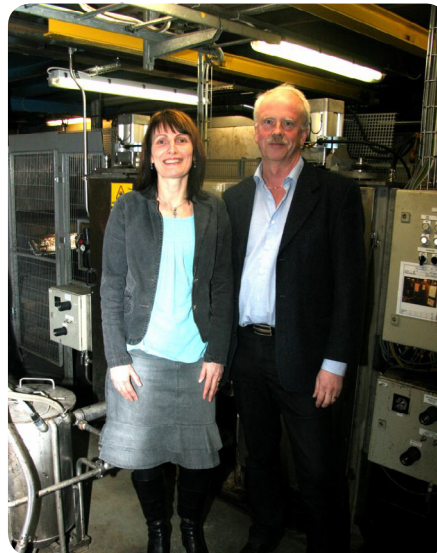


THAT'S WHAT PLANNJA GAINED BY IMPLEMENTING THE RELITOR TREATMENT SYSTEM ON ITS STRIP COATING LINE

When Plannja in Luleå switched to Relitor's system for NoRinse on its strip coating line, several advantages were gained. Chromium discharges and chemical consumption diminished. The volume of fluid that had to be contained/treated was dramatically reduced, as was energy consumption.

"That the system also saves us about 1.4 million kronor annually is also a plus," says Alf Nilsson, project manager.



Ewa Arvidsson and Alf Nilsson

Here at Plannja's strip coating plant, more than 15 million square metres of sheet is processed annually. After surface treatment, the sheet is stamped, pressed, bent and shaped into roofing profiles, roofing tiles, roof safety components, insulated wall elements, wall cassettes and more. Demands on the quality of surface finishing are very high.

"Pre-treatment is very important for achieving good adhesion and corrosion resistance," says Alf Nilsson. "The coating must be able to withstand subsequent treatment and last for many years. Roofing sheet, for example, is extremely exposed to the elements.

The former pre-treatment line consisted of about ten process stages, where the sheet was washed, brushed and rinsed several times between treatments," explains Alf Nilsson. "This is an expensive, time-consuming and not particularly environmentally friendly process."

Above all, it demands huge amounts of chemicals and produces enormous volumes of contaminated rinse water.

"The old system used about three cubic metres of rinse water an hour. That meant we had to treat about 10,000 tonnes of water a year."

When Plannja installed RTS – Relitor Treatment System – in early-2005, the number of process steps on the pre-treatment line was reduced from 10 to 6. Use of rinse water and chemicals fell from three cubic metres an hour to about 240 litres.

"And the system is completely closed, so nothing goes down the drain."

Naturally, Environment and Quality Manger Ewa Arvidsson is pleased that Plannja has been able to significantly lower its environmental impact relatively easily and inexpensively.

"Handling of hexavalent chromium – which is carcinogenic and allergenic – has been dramatically reduced. With the RTS system, we are also able to run a completely chromium-free pre-treatment process," Ewa adds.

But lower environmental impact is far from the only benefit Plannja has gained from using Relitor's system. Costs are also

lower; not least since hazardous chemicals are expensive, both to purchase and to handle.

"Formerly, production required more than 100 tonnes of treatment chemicals per year. With RTS, the chemical input is a third of what it was," says Alf Nilsson. "There alone, we save half a million kronor per year."

Plannja has also reduced its demand for labour by one full-time operator, since the new system is easier to operate and requires less maintenance than the old one.

"RTS also has double roller pairs and application rollers. This means we can now change rollers without having to stop the line. Of course, production stoppages are also costly."

Before, roller changes took several hours. Today, this task takes about 15 minutes.

In addition, savings are made in the form of lower energy costs due to lower heating demand, fewer process pumps and lower maintenance costs, since the number of rollers and pumps has been reduced.

"According to our analysis, we save 1.4 million kronor per year with the RTS system," notes Alf Nilsson. "This is better than we expected when we started the project, and it has meant that the investment has paid for itself in less than two years."

Another benefit is that more consistent quality on the finished product has been achieved.

"I'm not saying the quality is better than it was, because the quality of our products has always been high. But today, maintaining high, consistent quality is simpler and requires less work. Quite simply, the minimum level has been raised," concludes Alf Nilsson.

Formerly, the pre-treatment stage of the strip coating line consisted of:

- Degreasing station 1
- Brushing machine
- Degreasing station 2
- Rinse station 1
- Rinse station 2
- Activating station 1
- Activating station 2
- Activating station 3
- Rinse station 3
- Rinse station 4
- Passivation station 1
- Passivation station 2
- Strip dryer

The new RTS pre-treatment line consists of:

- Degreasing station 1 (as before)
- Brushing machine (as before)
- Degreasing station 2 (as before)
- Rinse station 1 (as before)
- Rinse station 2 (as before)
- Rinse station 3 with pre-heated water
- Roller application equipment for NoRinse chemical compound
- Strip dryer (as before)



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