

Passive fire protection: When only the best will do

At Kuhn in Erndtebrück you find pressure-sensitive material of a different kind. Rather than foams or honeycomb panels, the company saws plasterboard and fibre panels (sodium silicate panels) — for a very specific product: Rolf Kuhn GmbH produces the material that makes up the inside of fire doors.

The fact that the company now works in fire protection can be attributed to the good instincts of its founder, Rolf Kuhn, who laid the foundations for today's company group when he established a commercial agency back in 1957. At the time, Kuhn was on a quest for specialist items to be used, for example, in fire doors by one of his customers. He struck gold and in the sixties had the requested products manufactured under licence according to his own designs.

With the customer base growing constantly, it was not long before supply could no longer keep up with demand. As a result, Rolf Kuhn GmbH was founded in 1976 as an independent company specialising in fire protection. Then as now, the focus of the ROKU® product range lay on an extensive and well-rounded selection of accessories for the manufacturing sector in the field of preventive structural fire protection.

In recent years, Rolf Kuhn GmbH has developed a second ROKU® product line: solutions that meet the difficult requirements of the building services sector. This includes sealing and insulation technology, primarily pipe seals.

The production site in Erndtebrück was opened in 1988. On a production and storage area covering some 5500 square metres, Rolf Kuhn GmbH manufactures the material that makes up the inside of fire doors, as well as many other

products.

Managing Director Jürgen Wied is in charge of the "passive fire protection" division in Erndtebrück. The majority of his discerning customers are in the German-speaking market. "What makes Kuhn special is that we work together with our customers right from the start of development. This consultancy service is very important as there are very few competitors in our industry. You have to deliver good work, otherwise you will soon be out of the market." A further bonus, according to Wied, is the speed of delivery. The normal lead time before the delivery goes out to customers is just three days, with five being the maximum.

The machine park in Erndtebrück is characterised by customised production facilities, some of which comprise special machines developed by the company itself. These include a water-jet system, belt grinders and a CNC processing centre.

Kuhn uses two HOLZMA saws for all its cutting needs. "We purchased the first HOLZMA panel-sizing saw back in 1990," says Wied. "Prior to that, we used plate shears but the cut is far better with the saw." This saw is still in use today. In at least one shift per day, it cuts mainly difficult, particularly hard materials in small batches measuring up to three metres in length.

A brand new HOLZMA panel-sizing saw was installed at Kuhn about a year ago. "In the meantime, we had used a panel saw from a competitor," says Jürgen Wied, "but then opted for a HOLZMA saw again on account of the service and the quick response times."

The new HOLZMA HPL 510 profiLine has a saw blade projection of 125 mm and a cutting length of 3200 mm. It is in continuous operation for two shifts per day. "This saw is extremely efficient thanks to its modern technology and the automatic feed via the lift table," says Wied. "This has allowed us to save an

entire shift."

Rolf Kuhn GmbH has made further savings using the HOLZMA Cut Rite optimisation software. All orders are collected and optimised in the Erndtebrück manufacturing plant. The finished cutting patterns are then transmitted digitally from the work preparation department to the saw. "We introduced this software with the new saw and now produce much less waste," states Wied. The additional labelling feature ensures that the panels are processed correctly in the subsequent work steps.

The main materials cut by the company are fibre panels (sodium silicate, approx. 30% of the total volume) and plasterboard (approx. 70%). Rolf Kuhn GmbH regards itself as a specialist amongst specialists: As Jürgen Wied explains: "Fire protection elements with the T30 standard (representing 30 minutes resistance) make up 90% of the market volume whereas T90 category elements account for just 10%. However, 90% of our production volume is made up of T90 materials." Kuhn has even developed a specific plasterboard called "Roku V2" to meet these particularly high protection standards.

The new saw is equipped with a special "plasterboard package". "The problem with cutting plasterboard is the fine dusts it produces," explains Jürgen Wied. The plasterboard package therefore comprises a considerably stronger blower, a wear-resistant chip channel, a much stronger extraction system, a stirrup-shaped cleaning device, special seals and a cleanable light sensor. In addition, the panels are fed by vacuum suction cups to avoid the damage caused by push-feeding.

The fibre panels also present special challenges for the saw. Jürgen Wied: "These panels are extremely sensitive to pressure; the HPL 510 has therefore been equipped with the new Soft Touch package." This package ensures that the panels are transported and held gently but securely by the clamps and the

pressure beam. Using the machine control unit, the individual pressure for each type of material can be saved in a database and then selected at the touch of a button.

Jürgen Wied is very happy with the machine's cutting performance: "Thanks to the HOLZMA HPL 510 saw and all its accessories, we no longer encounter any problems. And we also save money into the bargain as we have been able to save on material and personnel."

Photos



Photo 1:
Jürgen Wied in front of a stack of the special "RokuVZ" plasterboard



Photo 2:
The saw is fed with a stack of panels via the lift table. Panels are then transported through the saw fully automatically.



Photo 3:
A single panel is moved from the lift table to the rear machine table using vacuum suction cups.



Photo 4:
Quality control

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