



Holz-Handwerk and Xylexpo: Digitalisation continues to gain ground

In the even years, the Holz-Handwerk fair in Nuremberg (Germany) and the Xylexpo fair in Milan (Italy) always take place in Europe – in alternation with Ligna, the German machinery trade fair, and interzum, the supplier trade fair. Both events are counted among the most important trade fairs for the sector. This year it was that time again: Holz-Handwerk started in March, and in May it was Xylexpo's turn.

Holz-Handwerk is a European trade fair for machine technology and production supplies for craftsmen which process and work with wood. The complete range for the wood-working trade is presented there, including materials, surfaces, fittings and (woodworking) machines and tools. It takes place at the same time as the Fensterbau Frontale trade fair and is especially directed at the carpentry trade.

Xylexpo is a trade fair for the wood processing industry with producers and visitors from all over the world.



It is a meeting place for the industry, but also for designers, product developers and architects. Over the course of 5 days, professional visitors can directly experience wood processing technologies, materials and components for the production of furniture.

111,000 visitors

At this year's Holz-Handwerk, which took place in conjunction with the Fensterbau Frontale, there were once again about 111,000 trade visitors from 123 countries. In the halls at Holz-Handwerk, not only the machines were buzzing: business was humming as well. On an area of 33,000 square metres, a total of 515 exhibitors (2016: 494) from 19 countries – and thus significantly more than originally expected – presented machine technology and production supplies for woodworking and wood processing. Together with the Fensterbau Frontale, there were even 1,329 exhibitors from 42 countries. According to the organiser, the trade fair was actually already booked up half a year in advance. This year's Xylexpo, which took

Robots played an important role at the Biesse stand – and not only there.

place in Milan from 8th – 12th May, was able to continue on its course of recovery. About 426 exhibitors, 117 of which came from outside Italy, presented their products for the fair's 50 year anniversary on an area of 35,000 m². So the 26th edition of the trade fair was bigger in area than the previous edition, but the number of exhibitors was somewhat lower. As far as the number of visitors is concerned, the results of the event were comparable to those of 2016: a total of 17,781 visitors came to the technology show, about 2 per cent more than to the previous event. Foreign interest, with 5,032 visitors from outside the country, was the same as in 2016, but more visitors from Italy could be counted this time, according to the organiser.

117 foreign participants

This year, for the first time, the show was spread out over four halls, so some companies were able to increase the size of their stands, including Biesse (Italy) and Weinig (Germany). Internationally, the machine show made a good impression, since just about a third of the exhibitors came from outside Italy. Nearly all of the leading German woodworking machine producers were included among the 117 foreign trade fair participants. Since all of the big Italian providers had already appeared at the Holz-Handwerk fair in Nuremberg with lots of new developments, only a

Software trumped machine technology at SCM and Homag, among other companies.

Photos: SCM, Homag

Barberan creates haptic effects with the aid of its "Jetmaster TXT" digital printing system.

Photos: Barth

few new products were left to be shown in Milan. But the Milan event was able to score points with more interest from South America as well as the Arab countries this year. And fewer of the Italian customers travelled to Nuremberg – instead, with a share of about 72 per cent, they were the largest visitor group at the Xylexpo.

At both trade fairs, the main points of focus were the megatrends Industry 4.0, automation, batch-size 1 production and cloud solutions: the dominant topics there were digitalisation, paperless production, the Internet of Things (IoT) and automation and linked production.

Cloud-based IoT

Almost all of the big producers presented software solutions with which machines can be connected by means of the "cloud." Weinig (Germany), for example, showed the cloud-based IoT operating system "MindSphere," which ensures the connection of machines and applications from the same producer or different producers with secure data communication. Biesse (Italy) presented the "Sophia" digital support system again, SCM (Italy) showed "Maestro Connect" and Homag (Germany) displayed "tapio," the technology platform that is supposed to be an "open eco-system for the entire wood industry with well thought-out, digital services and solutions for customers of any size." All providers of IoT systems



want to offer their members digital services and solutions. For example, apps are supposed to be developed that provide more transparency in production, that offer improvements in services for customers and that optimise the interplay of tools and materials.

Autonomous production cell

Homag also showed its "autonomous cell," the first workshop concept that works autonomously. The workshop consisted of two cells that were each already fully automated and linked. They were connected by a driverless transport vehicle that took over the complete lo-

gistics for parts between the cells. A 6-axis robot was responsible for the automated part handling on a vertical CNC machining centre.

New storage system

Ima Schelling (Austria) also presented its new "area storage vs" in Nuremberg. The gantry trolley with patented scissor lift allows store-rooms to be operated that are located a floor above the cutting system the full use of storage areas with widths of 4 to 20 metres and lengths of up to 120 metres.

A significantly larger area was taken up by the surface segment in Milan. It was there that the new products





Monitoring optimal laser edging with the help of a thermal imaging camera at Ima.



Homag demonstrated its "autonomous cell" with a driverless vehicle that provides material to a robot that then puts the goods on the machining centre and takes them off again.

could be seen that had not been shown at the previous technology events. For the first time, Superfici (Italy) and Giardina companies (Italy) appeared with excimers in order to take part in the booming market for super-matt furniture surfaces with an anti-fingerprint effect.

Focus on spraying machines

There was also special focus on spraying machines: Bürkle (Germany) and Homag are new to that market and brought such systems with them. Both had found partners to help in the development of their systems: Homag cooperates with Makor (Italy) and Bürkle with CML Finishing (Italy). In addition to simple spraying machines, sophisticated spraying robots such as the "iBotic" system by Cefla (Italy) could also be seen at the trade fair. With it, any three-dimensional object up to a height of 180 mm can be coated, because the measurements and forms of the workpiece are automatically registered.

Digital printing on panel materials was demonstrated by several companies at the Xylexpo fair, and this time the emphasis was on haptics. Hymmen (Germany) showed the results of its "Digital Lacquer Embossing" (DLE) process. In that process, a transparent medium is pressed into the not completely dry lacquer by inkjet, so physical and chemical reactions create a synchronous negative structure for the printed décor. A similar process could be seen at Cefla, called "My Texture".

The Giardina and Superfici companies presented excimers for creating super-matt surfaces with an anti-fingerprint effect.

High-gloss was another point of focus. Various processes were on display: Barberan (Spain) presented the creation of high-quality mirror finish with the help of "Inert Coating". At Hymmen, the process is called "Calander Coating Inert". At both, the coating is smoothed and hardened without oxygen with the help of a transparent foil and UV light and, at the end of the process, the foil is rolled up again.

Infrared camera

At Ima, the use of an infrared camera to monitor the laser edging process was demonstrated for the first time. The system monitors the positioning of the laser beam and records the edging process. The recorded pictures show the distribution of warmth and thus the activation process that takes place on the edge.

More robots with a great variety of functions were seen than in previous years. Biesse alone showed four robots in use. For example, on the "Viet Opera R2" sanding system, two robots work in parallel and destack the panels. The machine itself has two sanding robots inside that work independently; with their arms, they can either work on workpieces in parallel or work together on a big piece and double productivity in that way.

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