

All good things come in threes

Pooling resources and profiting from synergies makes sense – JHT, NST and Nordson show how this can be done with a new laboratory coater that has been designed and built by the three companies.

A few months ago a well known chemical company from Switzerland asked Jakobs-Houben Technologie to build a laboratory coater to provide the highest possible flexibility for a number of coating solutions. "To bring this project to fruition we



The three partners (from left to right) are Udo Thönnißen of NST, Alexander Houben of JHT and Jörg Weidauer of Nordson

brought some very experienced partners on board and we combined our abilities," Alexander Houben told C2 recently.

Companies with very different experiences and capabilities were gathered for this project: JHT from Geilenkirchen, Germany, is an experienced machine and components maker with applicators, laminating stations, nipping stations and winders at its core.

Neo System Tec from Hückelhoven offered specialist knowledge in the drive, measuring and control, automation and visualisation technologies, while Nordson Engineering from Lüneburg, Germany, provided the know-how when it came to adhesives and dispensing.

"Every company was responsible for important parts of the laboratory

coater," says Houben. "Through this network our customer not only benefits from many technological advantages but also from economic and ecological benefits. Nevertheless, according to our 'one face to the customer' strategy we provide a one-stop shop."

It is not hard to guess that an intensive, close and trustful relationship between the three companies was needed – and the happy faces of Alexander Houben, Udo Thönnißen and Jörg Weidauer give us an idea of how well the co-operation worked in practice.

Machine concept

Following the wish of the Swiss customer the laboratory coater has a modular design and can be adjusted to

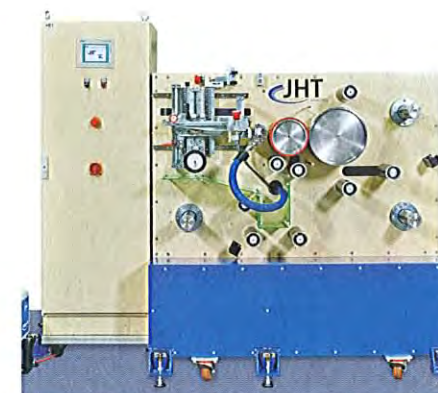
meet changing needs and 'grow' with its applications. Possible extensions are web guiding systems, pre-treatment systems, slitting and cross cutting equipment and a cutter-stacker. The winding heads can be adjusted to different sleeve diameters through quick connections. "By using smooth running, precise rollers we are able to ensure that the material is brought through the machine in a safe and careful way," explains Houben. "High performance chill rolls on the other hand build the foundations for perfect laminating."

"For the mount of the dies we chose a flexible universal mount that is able to hold all of the dies, roller bars and spraying systems of our Nordson partners. Furthermore, it can be modified very quickly and easily," reports Houben.

Adhesive application

"As our customer really wanted to have a flexible application technology we used a melter with slot die and spray applicator," adds Jörg Weidauer. "The AltaBlue TT4 melter is the ideal product for laboratory applications with its maximum filling volume of 4kg and integrated gear pump.

Through its flexible equipment and different application heads the laboratory coater is able to apply closed adhesive films just as well as spray applications that have open pores and are breathable. The TrueCoat slot die can be adapted



JHT's laboratory coater was built in co-operation with Neo System Tec and Nordson

for new coating widths or for applying strips by changing its application head. Of course roller bars can also be fitted."

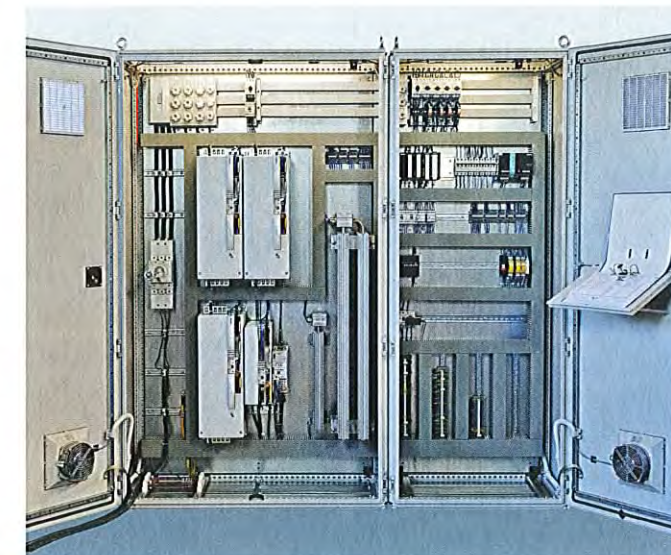
The coater's Universal applicator is also able to work with up to six die designs, including summit and signature nozzle, and to apply different types of coating by using various types of adhesives. If spray applications are not desired, a simple bead placement can be achieved by shutting off the atomised air and using the suitable dies.

Drives and controls

The last piece to fit JHT's laboratory coater puzzle was provided by drives and controls technology from NST. "In order to meet its demands of being a flexible and easy to handle laboratory coater the technology we used has extremely low maintenance and is fault free thanks to its modular concept that reaches from the servo inverters to its SPS," explains Udo Thönnißen.

If problems occur they can be analysed quickly and easily by using an intelligent visualisation and monitoring concept. The customer is further supported by a remote maintenance system offered by NST's experts for the drives, controls and visualisation.

"To be state of the art in the area of energy efficiency as well, we are using energy saving front end modules for web guidance that offer really good capability characteristics. We can also include alternative energy sources," says Thönnißen. "That way the coater is very well prepared for future applications." ■



The drives and controls were supplied by Neo System Tec

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