Trends in adhesives

225 participants, the who's who of the adhesives industry, from no less than 20 countries met at last year's Munich Adhesives and Finishing Symposium to learn about, discuss and network to the tune of hot melts, hot melt adhesives, and melts. In more than one presentation, the urgency and relevance of sustainable hot melt future solutions, especially concerning the ongoing discussions and legislative procedures around the circular economy with the buzzwords reduce, reuse, repair, refurbish and recycle,

Organizer Stephan Hinterwaldner

formed the driving force for developments. In his opening speech, Stephan Hinterwaldner emphasized the importance of debonding in addition to bonding of adhesive joints of all types and materials and encouraged all parties involved to exhibit more courage for creativity in the bonding technology. The conference centre of the Sheraton München Arabellapark Hotel was abuzz with 32 lectures sparking lively discussions among the attending international product and machine manufacturers, process engineers, formulators and users of the adhesives, printing and converting industries, who met there from 28 to 30 October 2019.

Organizer Stephan Hinterwaldner had invited Ansgar van Halteren from the German Adhesives Industry Association to open the conference with his remarks on the «EU Circular Economy Strategy - Significance, Challenges and Opportunities for the Adhesives Industry and Adhesives Bonding Technology». Together with the contributions of Dr Jürgen Wegner, Chemquest Europe and Franky Dauw, ExxonMobil Chemical Europe, the experts gained a comprehensive picture of the current hotmelt adhesive trends and a corresponding situation analysis.

«There are substances without which our industry today is unimaginable. These certainly include adhesives. Adhesives usually work in secrecy. On a small or large scale, in the micro range as well as on surfaces,» says Michael Hausdorf, H&H Maschinenbau / HH Klebetechnologie; DE-Porta Westfalica. They, in turn, are used to manufacture products impossible to make without modern application and converting technology. The range of application technology is correspondingly broad. Mr Hausman showed how the roller technology can apply very thin adhesive layers in the µ area just as safely as thicker layers and explained the advantages of using roller application systems and the differences to other options, such as curtain coating, dosing roller systems and wide slot nozzles as well as providing a look to how future innovations might be applied. An overview of application options and when which application might best be used was provided by Wolfram Szczepaniak, Kroenert; DE-Hamburg. The role the engraving technology plays in hot melt applications was shown by Holger Nenstiel from Zecher. Using adhesive tapes with two layers of adhesives as an example, Michael Brune; SM-Klebetechnik; DE-Heinsberg delves deeper into the subject, explaining the ins and outs of economic production of such tapes. Further is-

sues visited include drying technology (Prof. Czech from the West Pomeranian University of Technology Szezcin, Poland), and the interaction of HMA and paper during the gluing process (Prof. Dr Dirk Burth, University of Applied Sciences in Munich, Germany) to mention only a few.
Other highlights from the interesting programme feature the reduction of the amount of hotmelt adhesive through advanced, future-proof raw materials - e.g.

- Evonik Resource Efficiency, in their paper on «Amorphous Poly-Alpha-Olefins (APAOs) in New Hot Melt Applications»,
- Sasol, in their paper on «The Entry of FT Wax as a Performance Additive in new Generation Non-Woven Hygiene Adhesives»,
- Lanxess, in their paper on «Advancements in Low Free Isocyanate Prepolymer Design for Reactive Adhesive Systems» and
- Dow Europe, in their paper on «Creating Innovation: Polar and Non-Polar Olefin Copolymers for the Hot Melt Adhesives Industry».

Improved technologies in mechanical and plant engineering were discussed e.g. in the joint lecture of TU Braunschweig and Adtracon with «Fused Deposition Modeling of Reactive Hot Melts» and the presentation of the «Planetary Roller Extruder in Adhesive Processing Applications» by Entex Rust & Mischke. Moreover, Malvern Panalytical also presented the «Determination of Viscoelastic Properties of Hot Melts by Rotational and Oscillatory Rheometry - How to Interpret the Measured Data? Further developments in (layer) materials were also discussed, as was the recycling of hot melt adhesives in packaging and other applications. Onusseit Consulting reported on this in the paper on «Recyclable Bonding with Hot Melt Adhesives» and the Fraunhofer Institute IVV in their paper on «Concepts of Design for Packaging Recycling».

Once again, the popular TableTops offered the ten exhibitors (Evonik, JRS, Keyser&Mackay, Kraton, Malvern Panalytical, Nordmann, Nynas, Rocholl, SM Klebetechnik, Ter Chemicals) a good opportunity to engage in relaxed discussions with experts and establish new relationships.

In 2020, the 45th Munich Adhesives and Finishing Symposium will take place from 26 to 28 October 2020 - focused around the topics of Gluing – Converting – Printing. And it covers all adhesive systems and technologies, raw materials, applications and process technologies, mainly for paper, plastics, film, self-adhesive materials, tape and labels, packaging, coating and lamination as well as non-woven applications. The corresponding Call for Papers is already running. Last but not least, the attractive trust rate is also available for delegates registering for 2020.

MKVS GbR, D-85614 Kirchseeon, www.mkvs.de