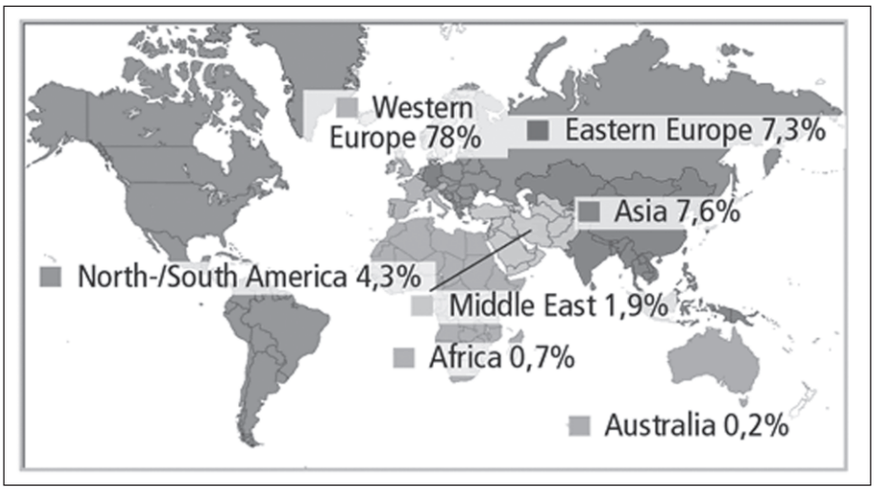
Filtech 2016
Strong signals for further growth

At the Filtech 2016 exhibition and conference held in Cologne, Germany, from October 11-13, had 355 exhibitors and around 12,000 oparticipants over 3 days. Filtech 2016 clearly exceeded all expectations and set a strong signal for further growth of the world-wide filtration and separatioon sector. A substantial increase was also registered in the number of trade visitors from Italy, Poland, France, Turkey, China, Japan, Korea and India. At Filtech 2016 more than 57% of the trade visitors came from outside Germany. Experts came from 76 nations, 35% of all international guests came from overseas countries making it an multicultural experience and a unique platform for exhibitors to generate new businesses.

Some of the many developments in a nutshell were :

Nanofibres, for example, are all about creating much more surface over a given area, but in filter industry terms, it's so that many more holes can be accommodated, to trap more and ever smaller particles. The addition of nanofibre layers was a key theme at Filtech 2016, as evidenced by the latest products from nonwovens companies such as Ahlstrom, Donaldson, Hollingsworth and Vose, JX Nippon, Mann and Hummel, Neenah, Nxtgen, Porex etc.



International participation at Filtech 2016

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Similarly, pleating is again about creating more surface space over a given area, in which to make more and increasingly smaller holes. An interesting product here is the the Solaft StarBag promoted by Italy's Testori, which can considerably reduce costs and solve bag house capacity problems. The filter's pleated design doubles the available filter area in the same space as a traditional cylindrical or oval bag. The pleats are gathered at the top snap band so that the filter can fit in the same cell plate hole as a standard bag and horizontal bands sewn into the needlefelt, in combination with the frame, ensure it retains its pleats for its entire service life.

The pleating machinery business is becoming very competitive. Joining established players in this technology field such as Swiss-headquartered JCEM and India's A2Z in Cologne this year, was Roth Composite Machinery, headquartered in Steffenberg, Germany, formed from the merger of two well-known companies, EHA and Schlesinger. As part of Roth Industries with 1,100 employees, this new company can draw on the know-how and expertise from other business areas in filament winding and prepreg equipment for composites, as well as production machines for brushes and

brooms, and involves 30 in-house design engineers in its projects.

Haver and Boecker, based in Oelde, Germany, is a manufacturer of woven wire fabrics and has developed a way of getting twice the number of pores into a square metre than is available from traditional weaves. The company has now adapted its in-house traditional weaving looms in order to do this at industrial production scale.

Haver and Boecker's vice-president of sales, Friedrich Edelmeier, explained that the company's RPD Hiflo-S woven mesh material can achieve twice the throughput volume flow for a given pore size than traditionally woven materials, as a result of its 3D structure. 'We have been able to optimise a 3D structure by separating the weft wires from one another so that the number of pores is doubled over a given surface area, but the pore size remains the same,' he said.

The company developed this technique with the assistance of the Math2Market GeoDict simulation system.

'The traditional way of designing and testing filter prototypes is costly and time consuming,' said Andreas Wiegman, CEO of Math2Market, which is based in Kaiserslauten, Germany. 'This is due to the complex interplay of the material properties of the filter media, the arrangement of fibres in the medium, the physical and chemical properties of the fluid being filtered and the characteristics of the particles in the fluid. GeoDict is a modular package developed for the simulation of filtration processes and its modules help gain insights into the behaviour of existing filters, and beyond that, to develop new filter media.'

That may sound like a little more than just considering holes, but even keynote speaker Professor Gerhard Kasper, of the Karlsruhe Institute of Technology delivered a highly technical speech that in essence boiled down to either maximizing them, or sealing them. Better filter media are not the only answer to an efficient filtration plant, he explained, talking specifically about the process of gas cleaning with pulse-jet filters.

Unwanted holes are just as critical, it seems, as those specifically engineered into filter fabrics.

'PTFE-coated membranes are very sensitive and prone to leakage, but it is not just in the fabrics,' Professor Kasper explained. 'Leaks from filter bags are transient, but those from elsewhere are continuous. In a well-maintained unit, fifty per cent of leaks are down to the hardware of filter systems - the gaskets and welds and seams - and in old plants much more than that. It is where the majority of leaks are coming from.'

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This year, the conference comprised 174 papers presented by speakers coming from 23 countries and attracted around 40 new companies to swell exhibitors to a new record of 355.

The next Filtech 2018 will be held in March 13-15, 2018 and expected to have more than 400 exhibitors, and with innovative and industry-specific International Conference. For more details, *www.filtech.de* ATJ