

## Sound technique in tight races

Through our platform News Update we keep you updated on current activities and developments around the fteu® Group. On a quarterly basis, we report about four topics to give insights and an impulse for further thoughts, ideas, and discussions with you.

Over the past year we were able to increase our intake of new customer projects by a considerable amount. This was possible by getting in touch with new markets with a demand for metal mesh function. At the same time, we set up a process infrastructure that allowed us to merge customer demand, product design and manufacturing expertise effectively. Every project is a race – without shortcuts. Every race adds experience, shows potentials, and requires analysis. When done properly, it brings more attention to detail, it makes you faster. For us that is sustainable development and training that allows us to fully use and advance our abilities in finding the solution for our customers in every project.

With this year's Innovation Week we look to bring our racing to the next level. In this News Update we also introduce new partners to the fteu® Group and we introduce a more market oriented approach to get closer to our customers and their actual demands. Lastly, we give an inside scoop on how we go wire-to-wire for product quality.

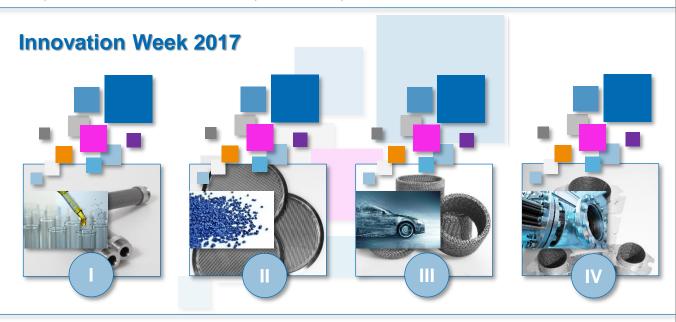
### **News Update**

### Hot topics around filtertechnik. Europe III/2017



### Product technology: 2nd edition of fteu® Innovation Week

The Innovation Week serves as platform for giving impulses for our activities in product development. While in last year's first edition the access to innovation for us as a company was at the forefront of our motivation, we took the next step this year: With four current product development projects (see picture below) we focused on the execution of innovative concepts to generate qualified products for a market that offer superior technology to existing products in the market. Within these projects the products had already been tested and its feasibility was verified under series conditions for specific customers. In contrast to our established practice of customer-specific product optimization, the four projects all focus on product development of a new technology that create an improved solution for different customer markets. With that, design and the qualification process had to be more robust as a broader range of existing regulations and potential application conditions had to be accounted for than would be the case in customer-specific optimization. Within the Innovation Week we formed four teams that covered the process chain from the customer through sales, development, all the way to production and logistics. For these products we were able to complete the product development with regard to design, production, and pricing. We were able to take a next step in our developmental activities and took advantage of the Innovation Week to create comprehensive results a create our blueprint for future product finalization.



New technology for oil, polymer and gas processing as well as for fibre-free sound absorption

Sound Absorption Heat Absorption

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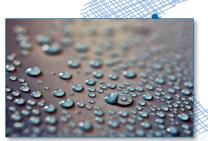


### Partners: agent for Turkey and development cooperation

We have added to our capability in sales, development and customer service. For the market in polymer processing we are happy to welcome Movimento as our agent to the fteu® Group. The very focus of Movimento is spare parts and equipment services for polymer fibre processing companies in Turkey. As such Movimento can draw from years of experience in that market. We see a growing economy in Turkey that bears significant potential for future development. Spare parts for polymer processing and production machinery is one of our core markets. Consequently, we are now able to offer established products like round screens and dispersion elements as well as our premium technology of spinneret filters and air rectifiers (see News Update II/2017 for info on our premium technology).

In our acoustical endeavors we have intensified our collaboration with institutions to test and verify the capabilities of our MASH® and sound absorbers that are equipped with the material. As part of that we are working with Exhaust Engineering to investigate a scientific approach to calculating the capabilities of MASH® in tube sound absorbers. At the same time, we are working with the technical university in Vienna (TU Wien) in testing MASH® as fibre-free absorber material in different environments and under normed conditions. We look forward to the cooperation and are excited for this opportunity to grow the reach of our metal mesh solutions.









Local service for metal mesh elements for polymer filtration and dispersion in Turkey

Research and engineering on sound absorption

Movimento focuses on polymer filtration and dispersion; we develop sound absorption further

Fluid Precision Sound Heat Absorption Absorption

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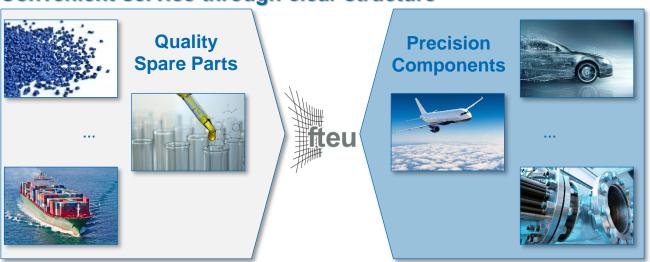


### Market structure: every customers gets what he really wants

Since last year we are transparently promoting and defining the five different functions that we offer in our metal mesh solutions. In our efforts to get closer to our customers we are now adding the customer application to our first-line market interaction. The interplay of the customer application and the required functions represents the core of our products. That core is the basis to directly and specifically define develop, offer and create a solution that meets the customer demands of a metal mesh component.

For all users of machinery, we offer spare parts that are usually consumed or worn out in production and serve the purpose of ensuring efficient production processes of our customers. Spare parts represent established products that achieve consistent results. Precision components are on the other hand products that we develop and offer for specific customer machinery as original equipment. For those customers our products are functional elements for the products they sell. In spare parts the customer application reach from polymer processing (i.e. foils, fibres, recycling), over fuel processing to chemical processing. In precision components applications encompass automotive, household or medical equipment. The application of our customers is often tied to their demand of engineering, service, logistics, and speed from our side. We are incorporating the customer application into our processes to make sure, that every customer receives the service he actually wants.

# Convenient service through clear structure



Our improved market structure directly incorporate the customer industry and application

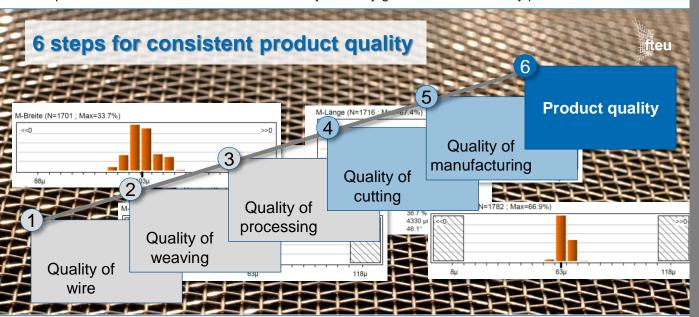
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## Insight fteu®: consistent quality chain from start to finish

Quality in our products is our mission. As metal mesh weaving grew in China, we initiated our operations in China originally as part of our pursuit for quality excellence. The exhibition of quality in a product is the result of a consistent quality chain along the entire value creation of a product. A process that starts for us with a wire. Wires make up the structure of metal mesh and defining factors for its characteristics. The quality of the wire is the first of 6 quality steps that create the quality of our products. The quality of weaving defines the metal mesh structure and its tolerances. The quality of processing defines the conditions the metal mesh is before the converting to a metal mesh component begins. The quality of the first three steps we have clearly defined and created norms for encompassing the entirety of metal mesh specifications that we offer (for details see our metal mesh handbook; download on www.fteu.de). Even though the manufacturing processes be conducted at suppliers it is always our own staff that ensures the quality – at our weaving partners in Asia we employ our staff that oversees, measures and ensures the quality. The quality of cutting, the quality of manufacturing are the final steps that ultimately create the quality of the product. The adherence to a quality standard thereby requires specific productions parameters for each different material specification. The controlling along all quality steps documents a quality chain that finally results in meeting our target: quality in our products. In order to achieve that consistently we really go wire-to-wire for every product.



Overview of our quality chain that is applied to every product that we offer



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#### **Outlook**

2017 is in its final quarter and the end of the calendar year is approaching fast. Internally we are implementing the introduced market structure and lessons-learned from the Innovation Week into our processes and routines. The market structure will also be applied to our activities in the Asian market and therewith a uniform standard as we bring function in metal mesh to the global marketplace. After the quality certification of our Chinese company, BDFE, passed its annual reconfirmation in September, filtertechnik. Europe in Heinsberg will be audited in October.

Through our market structure we are currently investigating applications to targeting with our product development. With the Innovation Week finished we are now in the starting blocks for our next developmental cycle that will be detailed in our Roadmap for the upcoming year.

We look forward to continuing to future races and wish you a successful home stretch to the year.

Best regards from Heinsberg,

Dr. Nicolas Komorek



