Market for recyclate will grow

- New digital platform achieves transparency in the market for recyclate
- PCR use enables material savings
- Education in the correct handling of plastics is important

Düsseldorf, 20 October 2019 – The circular economy for plastics works well wherever there is enough recyclate. In some areas, such as window profiles, the circle has already been closed. Overall, however, the quantity of available recyclate is still relatively low. In order to increase availability, KraussMaffei Group has developed Polymore, a digital marketplace where suppliers and buyers can meet. "The idea for Polymore arose from the idea of how we could provide the market with our knowledge of recyclate processing and recyclate production", said CEO Frank Stieler on Sunday in the VDMA pavilion at the K. On the fifth day of the fair, the discussions and presentations there focused primarily on products in which recyclate is already being processed. The new B2B online marketplace creates transparency that has not existed in the market up to now - also because there is a confusingly large number of small companies on the supplier side, whose range of products and services must be requested bilaterally in each case. Those who need recyclate in the future send their inquiry to Polymore. The platform then forwards them to the relevant suppliers. They can then make offers from which the inquirer can choose one. "If we want to close the loop, we have to connect the individual participants," explained Stieler. In Stieler's view, the platform's high level of transparency will also help to establish standards, which in turn should increase the acceptance of using recyclate.
Saving material and weight with post-consumer recyclate (PCR)
Integration of recyclate into new products has set off a wave of motion in new research and development on the mechanical engineering side. Kautex Maschinenbau, for example, presents at K a machine for a three-layer plastic bottle with an inner and outer skin made of bio-based plastic. The central layer consists of foamed post-consumer recyclate (PCR). "This bottle has the same mechanical properties as one made entirely from virgin fossil materials", said Christian Kirchbaumer, Head of Marketing Communications at a presentation in the VDMA pavilion. The time taken to form the bottle is also the same as for conventional material. At the same time, 18 percent material is saved and CO2 emissions are reduced.

Kautex receives the bio-based material from the Brazilian plastics producer Braskem. The company, which has numerous international locations, with Germany among them, offers fossil-based plastics as well as a whole range of non-fossil materials. "For example, Kautex uses a sugar cane-based polyethylene from us," said Tim Wagler, Commercial Director Renewable Chemicals Europe & Asia. He was basically positive about the future of chemical recycling. “It is possible, but at the moment we can't do it in large quantities", he said. Braskem not only develops new, bio-based plastics. The company is also committed to educating people about handling plastics. It has started projects on this in Brazil, Mexico and many other countries. “The topic of recycling is very important, but education is just as necessary. After all, it's not the plastic that's bad, but the way it's sometimes used and disposed of," Wagler said.

Bio-based material is hardly inferior to fossil-based ones
Bio-based plastics have already proven a multiple ability to substitute fossil materials. The company Herrmann Ultraschall has now proven that this material can also be easily bonded by using the ultrasonic welding method. Using the example of two small octagons connected by a short cylinder, it was found that the strength of different bio-based plastics comes very close to that of fossil materials. “In more than 90 percent of all requirements where strength is important, bio-based materials have proved to be suitable,” said CEO Thomas Herrmann. But whether bio-based plastics have a future depends to a large extent on the consumer. For the acceptance of such products, it is important to develop a good label.

Thinking about the circular economy right from the start
“It is important to consider the principle of the circular economy already in the design phase and in the development of the business model in order to close the circle and design circular products”. This was the conclusion of a workshop organized by two representatives of the Fraunhofer-UMSICHT Institute in the
VDMA pavilion. They demonstrated to the audience that this is not always easy, using an example of a child car seat consisting of more than 100 parts, including more than 20 different types of plastic alone.

Daily programme, video clips and more: https://plastics.vdma.org

In our world, plastics are indispensable. The downside is the littering. Carelessly discarded plastics products condense to form thick carpets, not just on rivers and seas, but also on land. A complete circular economy could prevent this evil and put the focus back on the benefits of plastics. In order for this to be a success, we all need to work together: processors, raw material manufacturers, mechanical engineers and recyclers, but also brand owners, end consumers and politicians.

VDMA will shine the spotlight on circular economy at the leading K 2019 trade fair in Düsseldorf in October and show how closed loops can work effectively. Throughout the process, stakeholders will be having their say in the association’s daily programme during this international industry event.

Contact: Ina Vettkötter, VDMA Plastics and Rubber Machinery
Phone: +49 69 6603 1844, e-mail: ina.vettkoetter@vdma.org

About VDMA Plastics and Rubber Machinery

More than 230 companies are members of the association, covering more than 90 percent of the industry’s production activities in Germany. Ten percent of our member companies come from Austria, Switzerland and France. The German member companies represent sales of EUR 7 billion in core machinery and EUR 10 billion including peripheral technology. Every fourth plastics machine produced in the world comes from Germany; the export rate is 70 percent. Ulrich Reifenhäuser, Member of the Management Board of the Reifenhäuser Group, is the chairman of the association.