SPECIAL:
K 2022 – Markets and Companies

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Statement of the K 2022 Exhibitor Advisory Board

Setting the Course for the Coming Decades

The main topics at the K 2022 will be the circular economy, climate protection, and digitalization. All the while, the companies of the plastics industry are faced with current problems posed by Corona, the supply chain, and/or exorbitant prices for raw materials. A timely overview of the market and economy.

Once again, the 22nd Edition of the K in 2022 will present the latest technological developments in materials, machines, processing, as well as molds and dies, plus a multitude of applications for plastics and rubbers, all in comprehensive breadth and depth at the Düsseldorf Exhibition Center, Germany, which, as always, is fully booked.

As it did last time, digitalization will play a leading role in all of this. Adjustments in the vital automotive customer market continue to act as a technology driver. The issues surrounding the circular economy permeate all stages of the value chain. Once again, the K will clearly influence and leave its stamp on the roadmap to future development and its limitations.

The Success of Plastics Is Based on their Variety of Application

Packaging for food and convenience goods, as well as the various containers for storage and transport continue to expand. Depending on the region and stage of development, they account for up to half of all applications. Without plastic packaging, it would be logistically impossible to supply the world population of almost eight billion. Plastics are used by structural and civil engineering for the expansion of the infrastructure to supply water, electricity, and gas. They find applications in insulation materials, window frames, and many other areas.

Whereas mobility – from auto production, heavy traffic and rail vehicles to aerospace – accounts for just over 10 % at the bottom line in terms of bulk consumption – clearly lower than for plastics and rubbers – its special demands make it a very essential technology driver. This is also the case, for example, in fields such as electro and electronics, as well as in medicine for sophisticated devices and for applications to the human body. Moreover, very many consumer goods, household items, furniture, toys, or sports and leisure activities of all kinds, can only be realized with polymer materials.

One of the Most Important Branches of the European Economy

In 2020, the plastics industry (production and processing) in the EU27 employed 1.47 million people in almost 51,700 mostly small and mid-sized companies and achieved sales of more than EUR 328 billion – as calculated from Eurostat information by the producers' association PlasticsEurope. Its value chain makes it the seventh largest branch of European industry – on a par with chemistry and pharmacy. The industry contributed a total of EUR 15.8 billion to the EU's trade surplus.

According to PlasticsEurope, the packaging branch accounted for 40.5 %, or the greatest share of all plastics materials. The building industry came in second with a share of 20.4 %, the automotive industry was third with 8.8 %, followed by the electrical and electronics industry with 6.2 %, consumer goods, household goods, and sporting goods with 4.3 %, and agriculture with 3.2 %. The share of consumption by all remaining customers including the furniture sector, industry, medicine, and the manufacturers of household appliances, totaled 16.7 %.

Corona: Global Declines in Production und Machine Making

In 2020, nearly all areas of life were affected by the shock of the Corona pandemic. The numerous measures, especially the longer lockdowns in several nations and world regions showed their effect in broad areas of the plastics industry. Many important applications collapsed across the board. Thus, it was no wonder that, for the first time since the worldwide financial crisis of 2008/9, 2020 again saw losses in the consumption and production of plastics and rubbers, as well as in the related machine industry.

The producers' association PlasticsEurope estimates global plastics production (excluding fibers) for 2020 at 367 million t compared to 368 million t in the previous year and 359 million t in 2018.

China Takes the Lead in World Production and Export

After 20 years of steady growth, the focus of production has clearly shifted to Asia. Today, more than 50 % of all plastics are produced there. China alone, by far the leading country, increased its share last year to 32 % or more than 110 million t. On the other hand, Europe's share of the market fell again slightly from 17.2 % in 2018 and 15.7 % in 2019 to only around 15 %, or just over 55 million t (2019: 57.9 million t, 2018: 61.8 million t). In 2008, Europe's share of world production still stood at 25 %. Meanwhile, the NAFTA region held on to its standing with a slight increase to 18.8 % or 69 million t.

The cuts caused by the Corona crisis are also clearly noticeable in the figures for mechanical engineering for plastics and rubber. According to VDMA surveys, the value of global production reached its all-time high of around EUR 36.8 billion in 2018. Due to uncertainties in the automotive industry, it receded slightly to EUR 36 billion in 2019. During the first phase of the Corona pandemic with lockdowns in 2020, the global production value dropped 4.5 % to EUR 34.3 billion.

In 2021, however, production jumped back with a vengeance by over 11 %. Despite renewed lockdowns and the ubiquitous supply chain problems, production reached a new record value of EUR 38.6 million.

Chinese manufacturers are spearheading the development. Following years of unbroken growth, they increased their share of world production to 35 % in 2021 (2020: 34.4 %). That is almost 5 percentage points higher than in 2017. Despite their technological leadership, the share of German machine builders fell to 19.6 %, for the first time in a long time below 20 %. Nevertheless, after a sharp decline in 2020, significant increases were also recorded here.

After a significant slump in 2020, the world market for plastics machines – international trade across the borders of the manufacturer countries – also made a strong comeback in the following year. At EUR 23.7 billion, it almost equaled the top value from 2017. Here it is noteworthy, that German machine engineering had to surrender its long-standing top position to the Chinese manufacturers. After their steady climb over the last ten years, this was of course to be expected. With a 23.9 % share, China now takes first place in exports for the first time. Germany is followed by Japan with 9.1 %, Italy with 8.6 %, and the USA with 4.5 %. With a total of 46.6 % of world exports and a 40 % production share, Europe (EU27+UK) continues to show its traditionally disproportionate regional strength.

During the Corona crisis, those companies naturally held up better whose products are more closely oriented to people's daily needs. Sub-segments, such as manufacturers of hygiene packaging and medical devices, even experienced a short-term boom. To be sure, most branches had to suffer setbacks. The second and third quarters were downright catastrophic for many manufacturers of technical parts, especially in the automotive supply sector.

Supply Chain Issues Hamper Processing in Europe

According to the German Association of the Plastics Converters (GKV), Europe's leading plastics processing industry reported a 5.6 % drop in sales to EUR 61.5 billion at the end of the year. The inglorious frontrunners were the manufacturers of technical parts, who suffered 12 % losses. Among plastics for consumer goods, they were less severe at 9 %.

The amount processed fell less sharply by 2.8 % to 14.2 million t. This is due to the volume-intensive applications in packaging and building construction, which mostly use simple and thus inexpensive materials. Despite the diverse instruments for crisis manage- »

ment for the personnel situation, the number of employees fell at the same time by 4.1 % to 322,000 people.

For the following year 2021, however, the GKV reported a rather strong increase in sales, or a 12.6 % increase to EUR 69.4 billion. However, consumption increased at a lower rate than this, by 5.6 % to 15 million t. A large part of the increased turnover is due to sharp price increases for raw materials. Manufacturers of technical parts in particular continue to face enormous pressure for results. After rebounding in the first nine months of the year, the situation deteriorated again in the fourth quarter due to the next wave of the Corona pandemic. Above and beyond this, the Russian Federation's war of aggression against Ukraine further destabilized the situation in early 2022.

Info

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The second part in this series will be about technology und trends – and appear in Kunststoffe international 7/2022.

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In addition, the global supply chains – coming mostly from Asia and distributed to other continents – more or less collapsed because main components such as semiconductors were not sufficiently available. To make matters worse, logistics systems were falling apart at the seams, and many European plastics production plants failed simultaneously when restarted after the Corona shutdowns. Consequently, large segments of European processing in particular were faced with empty materials depots, while the prices for plastics exploded to unknown heights. Since important customer industries, such as automotive manufacturing, had to reduce production due to supply chain failures, sales fell on the other side. Since February 2022, the war in Ukraine has further exacerbated these challenges.

In this, for some, dramatic crisis, however, the companies in the industry have proven extremely robust. The financial crash of 2008/2009 and the raw material scarcity of 2015 have apparently led a number of companies to develop appropriate defense mechanisms which are proving their worth. The equity ratios have been improved, the costs are "breathable", and government is also helping in key areas, especially with personnel costs (short-time work).

Great Challenges Are Being Met

Everyone hopes that the Corona pandemic will have run its course in 2022. The global problems of raw materials availability, supply chains, and logistics will be solved step by step – the laws of the market will see to that. Then the plastics world will again concentrate on its own issues in Düsseldorf, Germany, this Autumn. Worldwide representation will perhaps not be quite so complete as it was at previous K fairs, but it will certainly be highly focused.

The circular economy was justifiably the main motto of the last edition of the K in 2019. Thanks to legal requirements and widely varied efforts and initiatives, the recovery rate in Europe (the former EU28 plus Switzerland and Norway) continued its climb. The most important recovery rates in 2018 were energetic use at 42 % and materials recycling with 33 %, whereas some 25 % of plastics wastes went to landfill. Ten years before (2008), 30 % were still being used energetically, and 21 % were recycled, and 49 % went to landfill.

Now, where the packaging recovery (energy recovery and recycling) is involved, all European countries now achieve rates of over 30 %, 17 countries at least 70 %, ten more over 98 % and some even achieve 100 %. In 2018, more plastic packaging material (42.4 %) was recycled than used energetically (38.5 %). Less than ever (19.1 %) still went to landfill.

This topic will thus be treated intensively, but the realization of comprehensive reuse is still in its proverbial infancy. The K 2022 will point out what progress has been made to date and will initiate the course changes necessary for the coming years and decades. Numerous approaches to solutions have been formulated and worked out in detail. ■