06/2018

VM VERLAG
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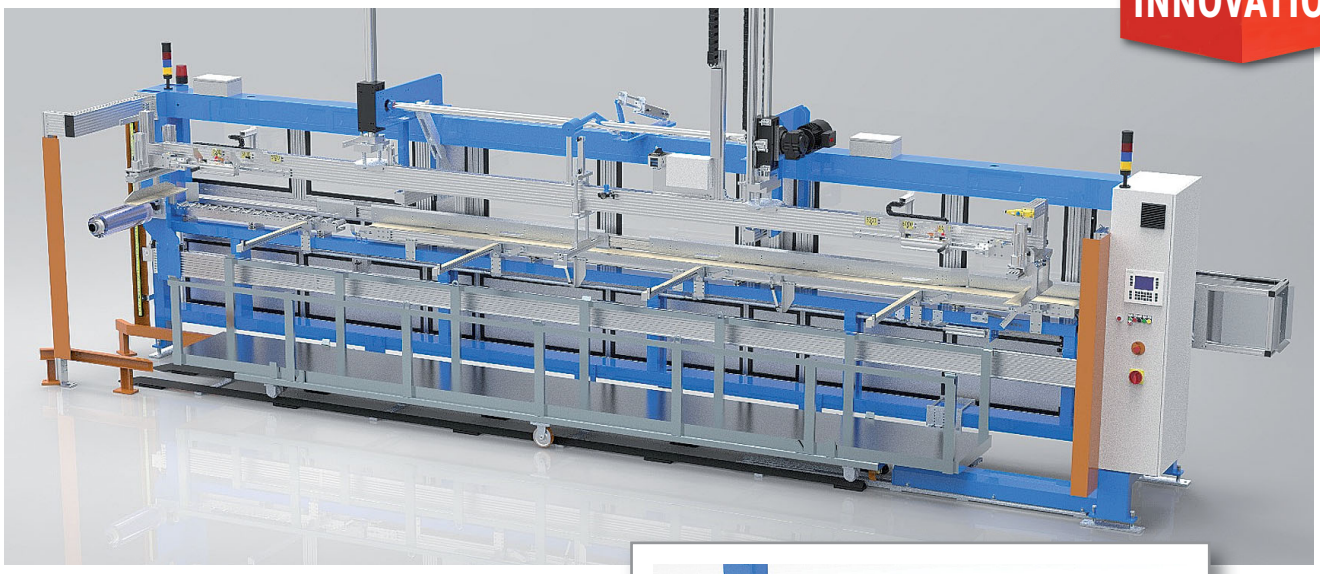
EXTRUSION INTERNATIONAL

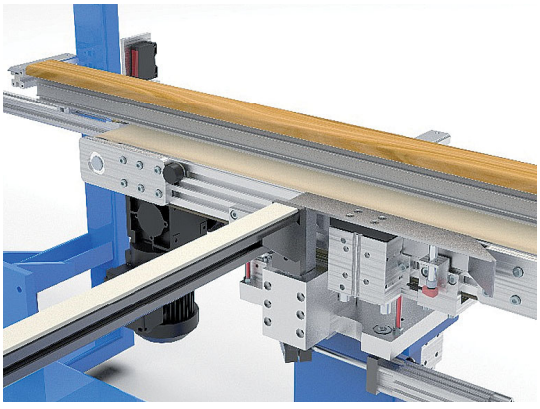
STEIN BLUE-LINE
for a sustainable future

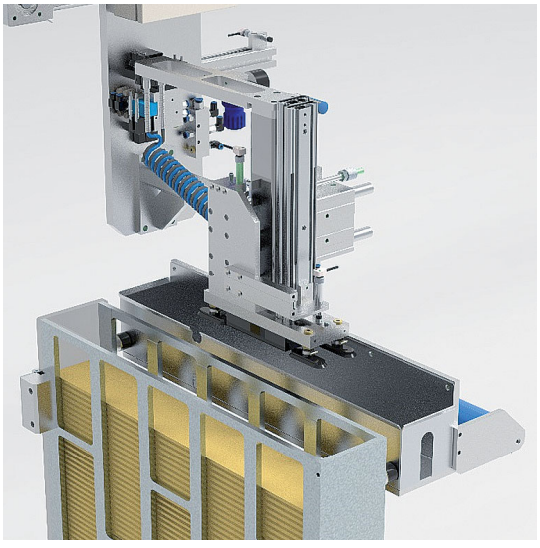
EXPERTS IN DOWNSTREAM

Profile stacking machine PRO

INNOVATION







Profile length measurement during extrusion

Using special sensors the length of individual profiles can be detected before the formation of a profile layer to stack. The measured length can be used for checking and correcting the cutting unit of the extrusion line or for documentation (quality assurance) of the produced profile lengths.

Weight determination during extrusion

Special weighing units can be used to weigh individual profiles before forming a profile layer. The determined weight can be used to optimize the extrusion process.

Paper / Foil or Strip laying

By a paper / foil laying unit the profile stacking machines are capable to provide a paper or foil layer between stacked profile layers.
NEW: Additional to this feature plastic strips for the further stabilization of the profile layers in the transportation cassette can be provided.
The strips are positioned by a special device in defined positions on the profile layer already stacked. The next profile layer will be stacked on these strips then.

Made in Germany

STEIN BLUE-LINE
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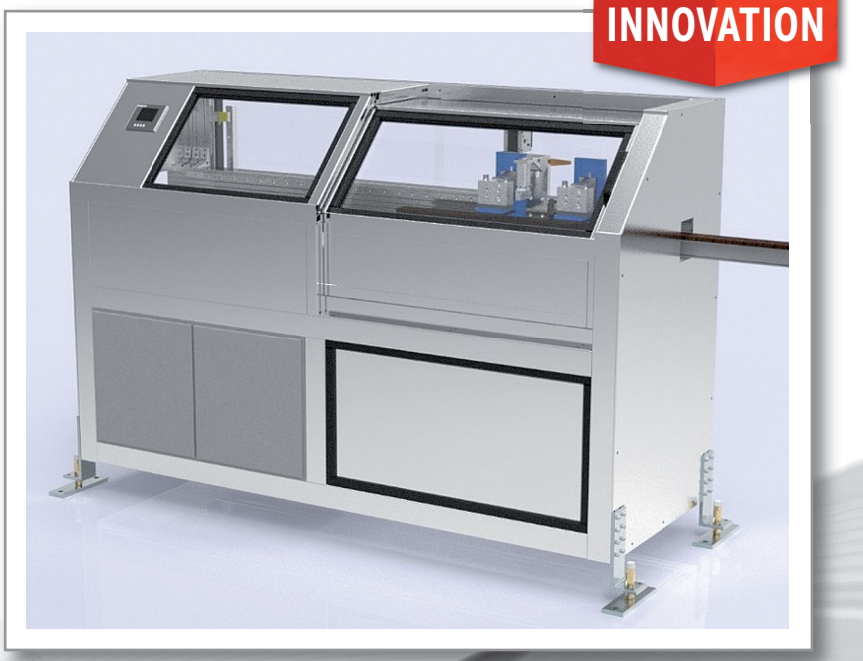
EQUIPMENT FOR EXTRUSION

Laminating foil cutting unit

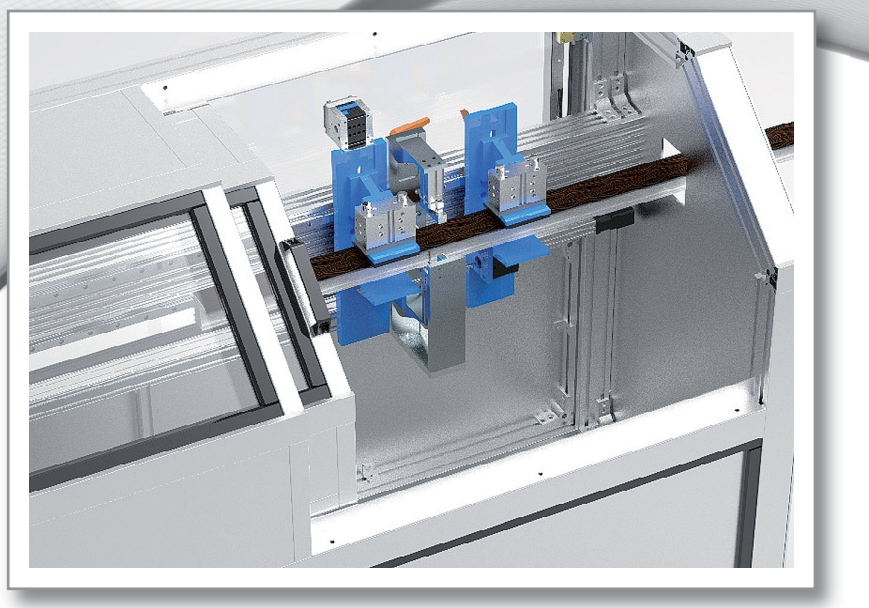


Foil cutting for laminating lines

For the offline lamination of profiles single profile sections are provided to the laminating line **end to end** and are laminated with foil continuously.

After the lamination process the laminating foil has to be cut to separate the profiles again.

The **laminating foil cutting unit** detects the profile ends, makes a gap in between the ends and cuts the laminating foil automatically.



Advantages of the laminating foil cutting unit

- No damage of the profiles when cutting the laminating foil.
- No interference of the cutting process into the laminating process.
- No danger to employees due to manual cutting.

„STEIN BLUE-LINE – for a sustainable future"
stands for sustainable and energy-efficient equipment.

Almost 100% domestic production and the high degree of manufacturing penetration guarantee compliance with even the most stringent of demands.

STEIN

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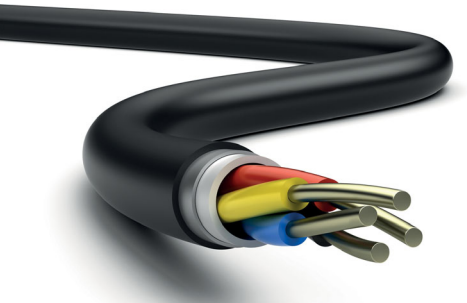

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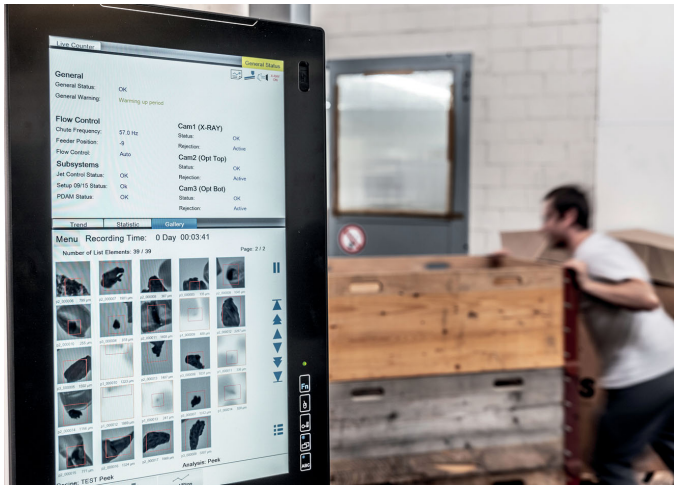
Customized Pump Technology enables Precision Silane Metering in Accordance with national Guidelines. German LEWA GmbH has a customer that faced this very challenge.



Minger counts on SIKORA's inspection and sorting system for the highest material purity during recycling of technical and high-performance polymers.

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German Leistritz Extrusionstechnik GmbH presented for the first time the design study of the ZSE 40 iMAXX twin screw extruder with innovative full cover at the Fakuma 2018.

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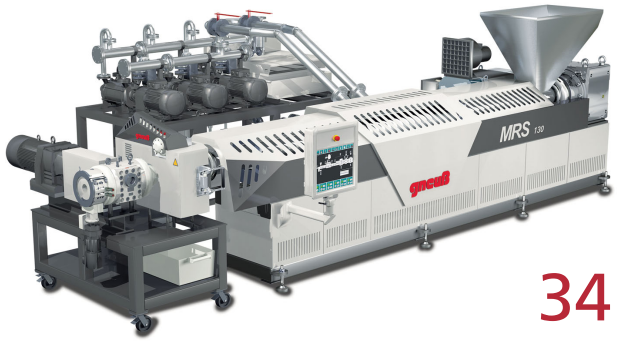

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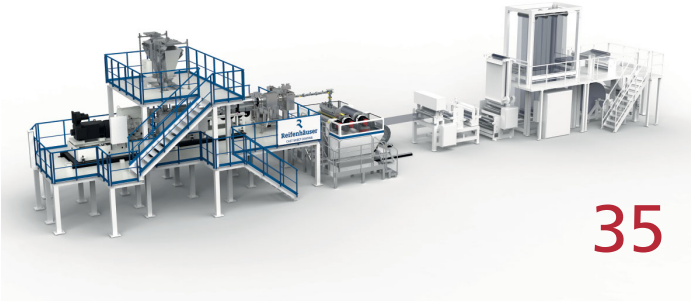
Since the first "Letter of Non Objection" from the American FDA in 2009, the Gneuss recycling process based around the MRS extruder has received a large number of approvals for processing up to 100 % post- consumer and industrial polymer waste to food contact products.



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Following the big success of the 2013-release high-performance extrusion lines for PET thermoforming sheets with the patented mechatronic polishing stacks of the MIREX-MT-V design series, the next generation of this line type was presented this year.

At Fakuma 2018 Cabot Corporation presented its innovative products for plastics industry. An Interview with Sebastian Heitkamp, Global Marketing Manager, Cabot Corporation..

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Interplastica 2019
29. 01. - 01. 02. 2019
Moskow / Russia
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www.interplastica.de

Pumps & Valves 2019
20. - 21. 02. 2019
Dortmund / Germany
Easyfairs Deutschland GmbH
www.pumpsvalves.de

Indiaplast 2019
28. 02. - 04. 03. 2019
Delhi / India
www.indiaplast.org

ICE Europe 2019
12. - 14. 03. 2019
Munich / Germany
Mack Brooks Exhibition
www.ice-x.de

Recycling Expo 2019
01. - 02. 04. 2019
Paris / France
Conference series llc Ltd
https://recyclingcongress.
conferenceseries.com

Tires & Rubber
23. – 26. 04. 2019
Moscow, Russia
www.rubber-expo.ru/en/

CHINAPLAS 2019
21. - 24. 05. 2019
Guangzhou / P.R. China
Adsale Exhibition Services Ltd.
www.ChinaplasOnline.com

K' 2019
16. - 23. 10. 2019
Dusseldorf / Germany
Messe Düsseldorf GmbH
www.k-online.de

Focus on Digitalisation, Individualisation and Sustainability of Products

■ ICE Europe will take place from 12 – 14 March 2019, in Munich, Germany. At the 11th edition, trade visitors from the international converting industry will be able to discover the latest technology trends as well as innovative production and converting processes. The most important trends at the show will be digitalisation, sustainability and individualisation as well as efficient machinery and solutions.
Due to the ongoing trend for recycling and an increasing demand for sustainable products, the converting industry is currently undergoing a change. The use of biomaterials is growing. At the same time, individualised and high-quality products and packaging solutions are becoming ever more important. This requires innovative coating and finishing processes. "It is a challenge to reconcile the diverse demands and ensure the efficient and sustainable use of materials and machinery. At ICE Europe 2019, visitors find concrete production solutions, a wide range of machinery as well as different materials that accommodate these challenges," explains Liljana Goszdziewski, Exhibition Director of ICE Europe, on behalf of the organisers, Mack Brooks Exhibitions.
Digitalisation and associated smart products and packaging remain an important trend in converting. Special films (battery films, biopolymeric films, high barrier films, optical films, weatherable films and other speciality films) offer functions that allow for their application in diverse areas. For the first time, ICE Europe 2019 is presenting a dedicated "Special Film & Extrusion Area" for the growth market sector of special films, where trade visitors will be able to find special films as well as machinery and accessories for extrusion. The area covers extrusion lines for blown films, extrusion lines for flat films and sheets, welding machines and calenders.
So far, some 430 exhibitors from 25 different countries have booked their stand space at ICE Europe 2019 and occupy 11,500 m2 of net floor space. This means that the booked net floor space has grown by 4 % compared to the total floor space at ICE Europe 2017. A great majority of the exhibitors at ICE Europe 2019 come from Germany, Italy, the United Kingdom, Switzerland and the United States with 55% being German companies.

Mack Brooks Exhibitions
www.ice-x.com/europe

remain movable in life, nothing can bring **you** down. Not only in sports and in your job, but **always** and everywhere. It is the only way to be prepared for anything and be **flexible**. Our development department has designed an **extruder series** which did not previously exist in this form. FleXXtrusion - that is the name of the most flexible extruder concept ever which adapts to your output. While the basis of the system remains the same, the processing unit **can** be selected freely according to your individual requirements. You can **simply** upgrade if your output increases. This flexibility can really save you money. You think this is **brilliant**? So do we!

How to get it right: If you always

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WEBER

Window profile extrusion

FLEXX TRUSION PROFILE SERIES

CLASSIC LINE PROFILE SERIES

DS 9.32 FleXXtrusion®

Classic or FleXXtrusion® –
it‘s your choice

How much variability do you need?

You can always remain flexible with our FleXXtrusion®series.

When the output requirements increase, you can replace the processing unit of the extruder with a more powerful one at any time. Drive, gearbox and machine frame remain the same. That saves follow-up costs while also protecting the environment.

Or choose our Classic Line with a pre-defined configuration.

Whichever you decide on – you always make the right choice with WEBER.

Scan code and download data sheets extrudertechnologie.de/en/windowprofile

Advantages

// Modular machine concept offers maximum **flexibility**
// Interchangeable processing units
// Can be optimised to suit the required output in each case
// Processing of different recipes using an adjustable feed diameter
// Choice of optimum and **efficient** processing units for individual requirements
// Low **investment costs** for subsequent upgrades
// Can be combined with the WEBER co-extrusion technology for co-extruders

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WEBER

K 2019: New technology as a motor for innovation – Special show and Science Campus address pioneering key issues of the polymer industry

Innovative materials and technology have been at the heart of all presentations staged at the K trade show in Düsseldorf, the international flagship fair for the plastics and rubber industry. K 2019, which will take place between 16 and 23 October 2019, will also revolve around the key issues of circular economy, resource conservation and digitisation, all of which will be addressed at exhibition stands and by the accompanying programme.

The special show, traditionally hosted alongside K 2019 under the known title of "Plastics shape the Future", will illustrate how plastics can have a sustainable impact on our future, which developments have emerged today and which visions have the potential of becoming reality tomorrow. Centred on several topics, the seven-day event will offer expert discussions, kick-off speeches, entertaining presentations and exciting experiments. Explorations of economic and ecological aspects will also tackle problematic issues and provide solutions for discussion. The special show is a project that was initiated by the German plastics industry under the aegis of PlasticsEurope Deutschland e.V. and Messe Düsseldorf.

The Science Campus K 2019 open platform encourages an active discourse between research and the industry. It also provides exhibitors and visitors with an opportunity to gain a comprehensive overview of recent scientific activities and results that affect the plastics and rubber industry and offers room for the exchange of information between universities and companies.

The Science Campus and special show programmes are carefully aligned. Both platforms address topics that will dominate the global development of the polymer market in the coming years. These key issues were defined by scientists and experts from the innovation circle of K 2019 as follows:

Digitisation/ Plastics Industry 4.0
- Platform economy
- Value-added networks
- Plastics for Sustainable Development
- Water management
- Renewable energies
- Circular economy (alternative raw materials etc.)

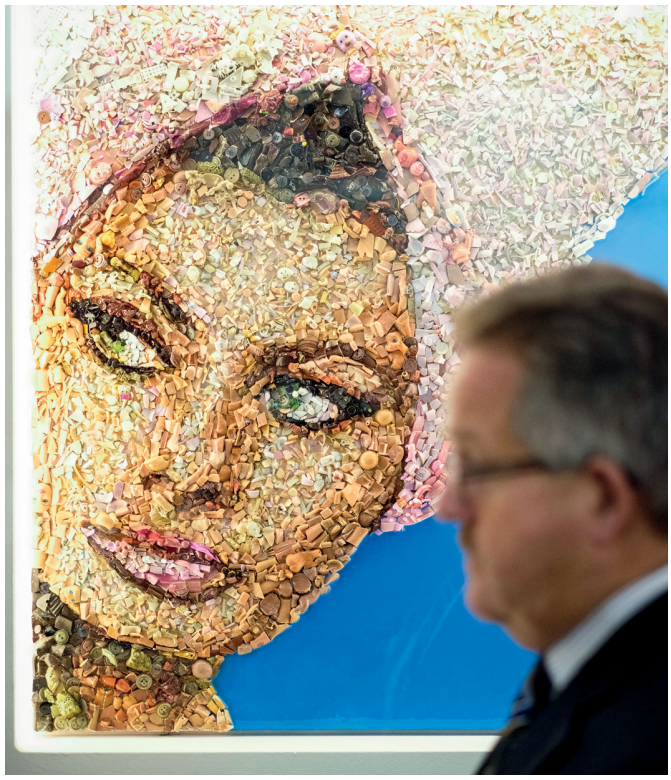


Photo: Messe Düsseldorf, Constanze Tillmann

- System integration: functionality through material, process and design
- New materials and additives
- Additive manufacturing
- Lightweight engineering
- Mobility (e-mobility)
- Bioplastics

We will also address the question of how to recruit new, young professionals for the industry, science and training. The key issues will be prepared by the participating universities, institutes, associations and funding agencies and induced and explored in presentations with the help of select exhibits.

A total of 3,000 international exhibitors are expected to attend K 2019 and show their latest developments from the areas of machinery and equipment for the plastics and rubber industry, raw materials and auxiliaries as well as semi-finished products, technical parts and reinforced plastics products. More than 200,000 visitors from all over the world are expected to flock to the exhibition centre in Düsseldorf.

Messe Düsseldorf GmbH
www.k-online.com

CHINAPLAS 2019 to highlight Circular Economy

An estimated total of more than 3,400 industrial leaders from around the world will be showcasing their products and solutions in an over 250,000 square meters of exhibition space

■ Technological innovation, on one hand, favours the acceleration of modern development as well as changes in various markets, while on the other, is driven by the latter two. CHINAPLAS, being a prominent platform for innovative technology and communication, is highly responsive to the needs and the trends, and always brings in new elements, perpetually providing energy to the plastics and rubber industries.

"Circular Economy" as a megatrend - after "Industry 4.0": To foster circular economy is a global consensus and is a major Chinese economic and social development strategy to achieve sustainable development. As such, great potential and bounteous market opportunities arise with it. Ada Leung, General Manager of Adsale Exhibition Services Ltd., organizer of CHINAPLAS, said, "It's going to be the 33rd edition of CHINAPLAS in 2019. Every time, it responds to the market demand and introduces new moves accordingly. In the past three editions of show, we have boosted the significance of Industry 4.0. After that, circular economy will be the next big trend. We've been aware of circular economy for some time. As early as 2011, we launched the 'Bioplastics Zone', introducing biodegradable plastics and bio-based plastics. We have also set up a 'Recycling Technology Zone' since 2016 in Shanghai. The show lineup continues to grow. In the upcoming CHINAPLAS, circular economy will be promoted to a prime position, leading exhibitors and visitors to explore the enormous potential."

She further added, "We have just participated in the 28th Asia Plastics Forum & 17th Term AFPI Conference (2016 - 2018) held in Bangkok, Thailand this September. Under the theme 'Creating Sustainable Value through Circular Economy', local government, industry associations, raw material suppliers and brand owners shared their ways to treat waste plastics and protect the environment. It demonstrates that circular economy is a big topic among the plastics industry globally. In addition to circular economy, we are also paying attention to new market trends and demands, such as the new business opportunities that the 'Belt and Road Initiative' has spawned in the plastics and rubber industries, as well as changes in the world economic situation, opportunities and challenges for plastics innovations resulting from Sino-US trade debate, etc. Therefore, this year, we are striving to expand overseas markets, and have launched publicity in ASEAN countries and key countries along the 'Belt and Road Initiative', sending staff there to invite local associations and enterprises to visit CHINAPLAS. The aim is to help exhibitors explore new business opportunities so as to increase return on their investment."

Big names adopt Recycled Plastics for appealing benefits: The modeling of big brands has massive influence on the implementation of circular economy, and more and more big names have announced their environmental protection policies of recycling.

The core of circular economy is the efficient use and recycling of resources, and plastic waste recycling is an indispensable part. It is predicted that by 2025, China, one of the world's largest waste plastics recycling countries, will produce urban solid waste amounting to nearly a quarter of the world's total. And we know that by improving the recycling rate of waste plastics, the development of a circular economy can be greatly promoted.

Renewable resource recovery system reforms in light of raw materials shortage

The market is huge, but raw materials are scarce, for first, the "Implementation Plan on Advancing Reform of the Administration System on Import of Solid Wastes through Prohibiting Import of Foreign Rubbish" was launched in 2017. Then, after the ban on the import of household waste plastics at the end of 2017, industrial source waste plastics will also be completely banned by the end of 2018.

According to statistics, waste plastics imported into China amounted to 7.3 million tons in 2016. Being worth 3.7 billion US dollars, it accounted for 56% of the world's total imports of

"Recycling Technology Zone" was set up since 2016 and this topic will be promoted to a prime position at CHINAPLAS 2019

waste plastics. In the past, the waste processing and recycling industry relied heavily on imports, lacking a complete recycling chain, while recycling rate and proportion of large-scale recycling are both low. With the implementation of the ban, it is bound to intensify the shortage of raw materials, and the recycling system of renewable resources is in urgent need of change.

The entire chain of garbage classification, waste collection and treatment, recycling and reuse has yet to be fully established. Supported by the government's policy, as well as "Internet of Things & smart recycling", technologies are being disseminated quickly.

Plastics Recycling, Recovery & Sustainability Conference: In the limelight at this time when the handling of waste plastics is transforming and adjusting rapidly are ways to integrate the recycle environmental protection industry chain, to build and perfect China's renewable resource recycling system, and develop new types of renewable waste plastics, upgrade technology and equipment for the high-efficiency sorting, granulation, waste plastic pyrolysis. The recycling of POM, PTFE, nylon (-6, -66), PVB, in addition to the traditional types of waste plastics such as PET, PC, PS, PP, PE, PVC, ABS, etc., is gradually favoured by enterprises.

In addition to upgrading the Recycling Technology Zone, a Plastics Recycling, Recovery & Sustainability Conference will also be organized at CHINAPLAS 2019, in order to facilitate mastery of advanced technology, promote technological innovation, and help the industry seize new opportunities. The entire industry chain, from policies and regulations, through recycling technologies to back-end innovative applications, will be analyzed and explained in depth and thoroughly by experts in the industry. Industrial trends, opportunities, challenges, and solutions will also be discussed.

An estimated total of more than 3,400 industrial leaders from around the world will be showcasing their products and solutions at CHINAPLAS 2019 in an over 250,000 square meters of exhibition space to at least 180,000 professional visitors from 150 countries and regions.

Adsale Exhibition Services Ltd.
www.ChinaplasOnline.com

After a long and severe illness our dear colleague Dr. Yury Kravets died on October 24, 2018

■ Yury Kravets was born and raised in a small town in Ukraine. After graduating from secondary school with honors he, as many of his peers did, moved to a bigger city to pursue higher education. His first alma mater was the Leningrad State University where he acquired fundamental knowledge of chemistry. Yury continued his education in the Kazan Institute of Chemical Engineering and Technology and made a career from a lab assistant to candidate of science and leading associate professor. With keen interest to progress and innovations he developed new course programs and taught lectures in physical chemistry of polymers, chemistry of composite materials, environmental protection technologies. Being a young associate professor during the period of transition of Russia to market economy with no specialized literature available in the Russian language he elaborated the first ever course in Basic Marketing for engineers and technical specialists. Diverse interests, decisiveness and ability to build solid teams of professionals were his distinctive qualities for years.

Dr. Kravets' expertise was sought abroad, in particular in Germany where he moved in 1998. VM Verlag Publishing House invited him to a science editor position in a new specialized journal EXTRUSION Russian Edition. Dr. Kravets was Editor-in-Chief till 2018. When in 2014 a new journal EXTRUSION International was launched, Dr. Kravets enthusiastically dived into work to later become Editor-in-Chief and hold this position till the end of his days. Work in a publishing house was his new professional experience and life passion. This is where Dr. Kravets' ability to focus on a given task and to notice interesting details and potential in ordinary things were truly revealed. By joint efforts with Ukrainian colleagues he came up with the idea of International Polymer Conference and successfully brought this idea to realization. The First International Polymer Forum took place in Saint Petersburg in 2013 and was followed by 7 more conferences in the next years to become a significant regular event in the Russian polymer industry.

Dr. Kravets' active participation in polymer industry events in Germany, Austria and Russia, high professional expertise and strong work ethics gained recognition and respect among colleagues and partners.

Dr. Kravets had multiple interests, for example, his passion for travel was matched by his other hobby – photography.

Our heartfelt condolences go to Dr. Kravets' family. We will forever keep grateful memories of our dear colleague and friend.

Editorial team, VM Verlag Publishing House

Circular Economy in Action

■ EREMA North America's (ENA) recent Discovery Day generated a great deal of interest. The Technical Center in Ipswich, Massachusetts, became the meeting point for well-known companies spanning all sectors of the plastics industry. The focus of the discussions and demonstrations was on post-consumer recycling.

"Our goal is to take advantage of the growing awareness of the necessity of plastics recycling and drive forward networking within the industry. We managed to achieve this at our Discovery Day on 25 September," says a delighted Martin Baumann, VP Sales of ENA, referring not only to the speakers who were pleased to take part but also the impressive flow of visitors. 130 guests from all areas of the plastics scene accepted EREMA's invitation.

The focal theme was the recycling of post-consumer waste, with the circular economy being a possibly path if raw material producers, processors, brand article manufacturers and recyclers pursue it together. This was also underscored by the external speakers from Envision Plastics, Exxon Mobil and Interseroh Dienstleistungs AG, who presented outstanding projects in their talks. Efforts to improve recyclate quality were at the centre of analysis and discussion.

Attendees were able to experience three recycling systems for different applications in action in the course of the machine demonstrations and see close-up the convincing quality of the recyclates produced. The HDPE bottle recycling System (INTAREMA® RegrindPro with ReFresher and EREMA Laserfilter) presented stands out

Attendees were able to experience three recycling systems for different applications in action (Photo credit: EREMA)

through the thermal-physical odour minimisation of the pellets. Additional technological highlights on show included recycling machines for EPS material (INTAREMA® TVEplus with SW RTF) and for heavily contaminated LLDPE films (INTAREMA® TVEplus with EREMA Laserfilter).

EREMA presented not only current trends and technical highlights to the Discover Day visitors but also the extensive range of services offered by its new business unit "KEYCYCLE". The company has brought together its engineering and services here to capitalise on the know-how available and meet the growing demand for comprehensive concepts for plastics recycling – with support, even in the early planning stage.

EREMA Gruppe
www.erema-group.com, www.erema.com

New Strategy

■ The KraussMaffei Group is repositioning itself. Under the name "Compass", the company has developed a two-pillar strategy. In addition to classic plastics machinery construction this new strategy aims at intensifying and accelerating the development of digital services and products, as well as new business models. To this end, the new Digital Service Solutions business unit was established in July, and is expected to make a substantial contribution to the Group's sales in the future. The new strategy is initially designed for a period of five years until 2023.
The KraussMaffei Group is thus continuing its growth course. The share of digital services and products, as well as new services such as the "Rent It" machine rental model, will be steadily increased in the coming years. "We are positioning KraussMaffei as a company that is consistently focusing on customer needs in the age of digitization. In the coming years, we will significantly expand our business model and add digital excellence to our high level of mechanical expertise. This means that in future we will not only sell our customers high-quality machines as usual, but also create added value around the machine. We want to provide our customers with excellent service around the globe and around the clock – and make them attractive offers," explains Dr. Frank Stieler, CEO of the KraussMaffei Group.
A positive development is anticipated for the current financial year. The number of employees has also increased significantly. Today, the Group employs almost 5,500 people (including apprentices) – a record number. "I am particularly pleased that we are currently qualifying 310 apprentices for their future professional careers - more than ever before," says Dr. Stieler.
The planned listing on the Shanghai Stock Exchange is due to be approved this year. The Chinese authorities are currently reviewing the application from KraussMaffei's parent company China National Chemical Corporation.

Dr. Frank Stieler, CEO of the KraussMaffei Group

KraussMaffei Group GmbH
www.kraussmaffeigroup.com

PLASTIMAGEN® MÉXICO 2019. The most important event of the plastic industry in Latin America

■ The new edition of PLASTIMAGEN® MÉXICO, organized by Tarsus México, will present all the trends and new technologies to the industry worldwide.
PLASTIMAGEN® MÉXICO 2019 presents over 870 companies representing in excess of 1,600 brands from more than 27 countries, 14 International Pavilions, and the ANIPAC Pavilion (the National Association of Plastic Industries in Mexico).
With more than 45,000 m^2 of exhibition space, PLASTIMAGEN® MÉXICO is the most complete and foremost plastics expo in Latin America, an event designed to meet the needs of more than 30,000 visitors who are seeking innovative solutions for their companies.
An extraordinary program of presentations: In its 22nd edition, PLASTIMAGEN® MÉXICO represents Latin America's plastics sector's most important forum for the exchange of ideas, networking, displaying the latest in technology/machinery, and exhibiting products and services that are aimed at ever more industries.
This event will also feature an excellent International Conference Program organized jointly by the National Association of Plastic Industries (ANIPAC, for its acronym in Spanish) and Tarsus México, which will offer visitors an excellent option to train and find solutions to problems that arise in any link in the chain of the plastic industry.
Plastic in numbers: Across the globe, plastic industry generates sales for more than $ 22 billion a year and its market value is $ 33 billion. If we talk about Mexico, the plastics industry is booming. In 2017, production increased by 7.7% and an annual growth of more than 6% is expected by the end of this year.
Mexico imports 20 billion dollars of resins and plastics a year and is among the main countries of export of products along with the United States and Canada.
And this is due to the increase use of plastic as a raw material, that has been achieved to improve the competitiveness of many companies by evaluating the option of replacing parts of traditional manufacture by plastic elements in industries such as: automotive, medical devices, construction, packaging, agricultural and household appliances, among many others.

Tarsus Group Plc, www.tarsus.com
www.plastimagen.com.mx/2019/en

Production Capacity outside Germany expanded

■ ILLIG, the German machinery manufacturer, will build a new production site in Romania. During the next few years ILLIG Maschinenbau SRL will develop into a further production site outside Germany located in Sura Mica industrial park in the Sibiu region. „At the new site ILLIG will be manufacturing thermoforming lines from its product range to ensure increasing market demands can be met", Dr. Heinrich Sielemann, ILLIG managing director, substantiates the expansion. In 2019, the first office buildings and production halls will be constructed in a first construction phase on a surface of 60,000 square meters. On-site personnel recruitment was started with the intent to prepare the new staff members at the Heilbronn central site for their new tasks. Moreover, ILLIG intends to sustainably become involved in the training of qualified staff on site. The existing Romanian dual vocational training system and a cooperation with the Sibiu University are suitable options to achieve this goal.

During the last few years the Sibiu region developed into one of the fastest growing economic centers of Romania. Many German and Austrian companies have settled in Sibiu, the former Hermannstadt. The city has a population of around 150,000 inhabitants and it is optimally linked to the most important long-distance connections by road, railroad and air.

Figure showing assembly department of ILLIG Maschinenbau, Heilbronn, Germany. The Sibiu assembly department will be built in the same way

ILLIG Maschinenbau GmbH & Co. KG
www.illig.de

Market Study: PVC Pipes

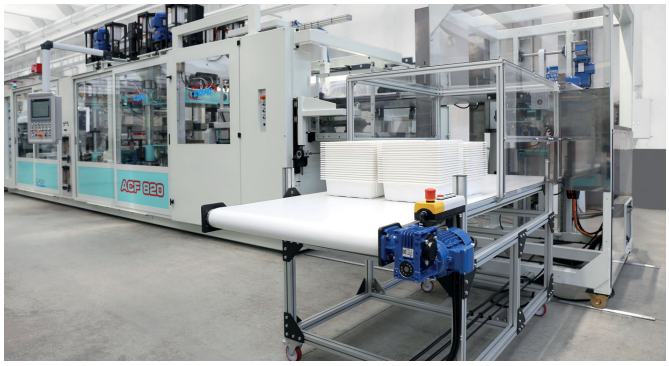
■ Plastic pipes increasingly replace pipelines made of aluminum, concrete, cast iron, copper or steel: Due to their low weight and resistance against corrosion and chemicals, the volume of the plastic pipes market grows almost everywhere. The importance of the individual application areas varies significantly in regard to the different pipe types and materials. The most important PVC pipe applications are sewage disposal, potable water supply, and cable protection. Ceresana has already analyzed the global market for plastic pipes several times. Now, the research analysts present a PVC pipes market report for the first time. Ceresana expects the total production of PVC pipes manufacturers to increase by, on average, 3.7% per year until 2025. The Study in Brief:
Chapter 1 provides a description and analysis of the global market for PVC pipes – including forecasts up to 2025.
Chapter 2 examines the 16 major countries in more detail: Revenues, demand, production, as well as import and export are evaluated. In addition, demand for PVC pipes of each country is split by application areas.
Chapter 3 deals with the application areas of PVC pipes within the individual regions and countries: data on demand development, split by the several world regions. The applications sewage, drinking water, cable protection, agriculture, industry, and other applications are examined.
Chapter 4 provides company profiles of the largest manufacturers of plastic pipes – clearly arranged according to contact details, revenues, profit, product range, production sites, and profile summary.

Ceresana
www.ceresana.com/en/market-studies/industry/pvc-pipes/

Dedicated Accessories for ACF Thermoforming Machines

■ The positive sales reports show that ACF series is the right solution demanded by the market nowadays because it satisfies the various exigencies of thermoformers from all over the world. This consolidates ACF as the top-of-the-range model among AMUT-COMI thermoforming machines. AMUT-COMI continues to invest to upgrade ACF series efficiency and versatility.
New accessories have been specifically conceived to suit ACF model mainly to cover the end-line automation steps: stacking systems, handling and packaging solutions. All of these accessories are in-house designed and manufactured. Their performances and skills are well enhanced by EASY, the smart HMI. The EASY software has been developed in-house by AMUT-COMI engineers to ensure that all parts of the machine harmoniously interact.

Easy lift



The chosen strategy is pursuing a fully tailored approach to offer machines mainly aimed to final items features: from thermoforming process up to packaging systems.

AMUT–COMI stacking systems:
Up Stacker model: max speed of 60 cycles/min (speed depending on material, type of mould and stacking sequence).
Down Stacker – IVB model: for a very quick change of stacking tools and with a max speed of 45 cycles/min.
Pick and place robots – ERX model: max speed around 38 cycles/min and proposed in two versions, one with two axes and one with three axes.
ERX robots perform A-B or A-B-C stacking with or without items rotation. Visual control system of the product quality can be also provided.

EASY LIFT– Automation system for handling thermoformed products:
The conveyor belt receives the items from the thermoforming machine at an adjustable height and down to a level of 800 mm. This facilitates the working conditions of the operator and the integration of automatic packaging systems. EASY LIFT is available in two models: one with 90°-discharge conveyor and one with longitudinal discharge conveyor.

AMUT – COMI SpA
www.amutcomi.it

Seven Slitting Machines ordered

■ The Indian film manufacturer SRF Limited ordered four KAMPF slitting machines for a new 10.6 m BOPET line in Budapest, Hungary. Two Universal 108/12 slitters and two Unislit 630 machines will be delivered in autumn 2019. SRF has decided to buy KAMPF slitting machines to meet the high quality demands of the European market.

SRF will also receive two Universal 108/12 slitters and one Unislit 630 at the end of 2019 for a new production facility in Thailand. A new 10.6 m BOPET line will be installed here. The plant with a production capacity of around 40,000 tons per year will be built at the existing site in Rayong in eastern Thailand and is scheduled for completion in around two years.

Represented by numerous subsidiaries in four countries, SRF offers a wide range of flexible packaging solutions from food to industrial applications. Equipped with state-of-the-art production facilities, SRF is one of the largest manufacturers of standard and special films made of BOPET and BOPP and exports packaging films to more than 90 countries.

From the left: Amir Rezai (Senior Sales Manager KAMPF), Hari K. Singh (Executive Vice President & Head Global Operations), Prashant Mehra (President & CEO, Packaging films Business), Lutz Busch (CEO KAMPF), Jai P. Chauhan (Senior Project Manager SRF), Markus Vollmer (Sales Director KAMPF), Ajay Sharma (General Manager Sales Kampf India) (Image: KAMPF)

Kampf Schneid- und Wickeltechnik GmbH & Co. KG
www.kampf.de

From commissioning to production in record time –

Plastchim-T in Bulgaria successfully commissions new FILMEX II from W&H for CPP film

■ Plastchim-T in Bulgaria successfully commissioned the second cast film line from machine builder Windmöller & Hölscher at the end of 2017. The Bulgarian packaging manufacturer has already been producing mainly bread packaging and laminating film on a FILMEX I since 2012. The FILMEX II was commissioned in only 9 weeks, while the surrounding production hall was still under construction. Only two days after the first run with melt, W&H handed it over to Plastchim for the first night shift. Two days later, the final acceptance by the customer took place with production within the promised parameters. "We are very satisfied with the fast commissioning and smooth handover of FILMEX II by W&H. In addition to the convincing technology of the FILMEX, which we know from our own production, it was precisely this comprehensive service from W&H that convinced us," says CEO A. Faik.
The new FILMEX II is equipped with the latest generation of extrusion technology for excellent melt quality. Its three extruders have a production capacity of up to 1000kg/h, for consistently high-quality 3-layer CPP films. Precise dosing units ensure excellent individual layer accuracy. The chill roll unit with integrated "High Performance Package" sets standards in film quality and process automation. Precise web tension control in conjunction with the FILMATIC TC cast film winder guarantees constant, outstanding roll quality for direct further processing of the film, without having to re-wind it first. The fully integrated automation system for controlling the entire system through the intuitively designed PROCONTROL TS graphical user interface ensures maximum productivity.

Following the successful commissioning, Plastchim, in cooperation with W&H, relocated the first FILMEX I just as smoothly into the same hall. Since January 2018, the two machines of the first and second generation have been producing CPP film side by side. "The feedback from our customers on film quality produced with the FILMEX is excellent. The first FILMEX was used to capacity within a very short time. The FILMEX II expands our capacity to meet the demand for high-quality film," says Faik.
Plastchim-T is the largest manufacturer of biaxially oriented polypropylene film (BOPP film), cast film (CPP) and flexible packaging in Southeast Europe. The company is one of the five largest manufacturers of BOPP films in Europe. With over 50 years of experience, Plastchim-T offers its customers high-quality products throughout the European Union and in other countries outside it.

Windmöller & Hölscher
www.wuh-group.com

EUROMAP interfaces – EUROMAP 84 for extrusion published as Release Candidate

■ The working group EUROMAP 84 deals with the standardization of OPC UA based interfaces for extrusion.
Experts from ten leading European extruders and extrusion lines manufactures are working together with control systems manufacturers and MES suppliers on standardized information models to facilitate an efficient networking of the extrusion line to central computers/MES as well as within the extrusion line itself. As with all EUROMAP recommendations, these are manufacturer-neutral.
In EUROMAP 84, first basic specifications will be made, and the extrusion line will be modelled as a whole. This foremost serves to control the overall production (for example throughput, product quality, energy consumption) and to manage production jobs. Particularly for the latter, a new concept was necessary because the existing job management model of the injection moulding world could not be transferred to extrusion. Next, the various components of an extrusion line will be examined separately to record all important process parameters.

The drafts of the following parts have now been published on www.euromap.org/euromap84 as Release Candidates and are thereby made available to the interested public:
Part 1: General Type Definitions
Part 2: Extrusion lines
Part 3: Extruders
Part 4: Haul-offs
Part 5: Melt pumps
Part 6: Filters
Part 7: Dies
These parts will be validated in test implementations before they are going to be published as final versions.
Additional parts for further components of an extrusion line are in preparation.

EUROMAP
c/o VDMA Plastics and Rubber Machinery
uromap@vdma.org

First Totally Closed-Loop Recycler converts Bales

of Post-Consumer PET into Food-Grade finished Packaging Products

■ rPlanet Earth, a new company dedicated to closed-loop recycling of post-consumer plastics, has started up a large grassroots facility that is the world's first completely vertically integrated plant for converting PET packaging waste into finished rPET products with properties comparable to those made from virgin PET.

The 302,000 sq.ft (28,060 sq.m) facility in Vernon, CA takes in bottles, clamshell containers, and other packaging waste from curbside collection; puts it through an extensive series of sorting and cleaning procedures; grinds it into flake and subjects it to rigorous wash and decontamination; raises the intrinsic viscosity (IV) of the material in accordance with end-use requirements; and processes it into food-grade sheet, thermoformed containers, and injection molded preforms for bottles. The new rPlanet Earth plant has an annual capacity of 80,000,000 lb. (36,290 metric tons).

Among a range of state-of-the-art reclaim and polymer processing systems in place at the Vernon plant are three Welex® sheet lines supplied by Graham Engineering Corporation and equipped with EDI® extrusion dies and BKG® melt delivery components from Nordson Corporation.

After bales entering the rPlanet Earth facility have been broken into a single stream of bottles and thermoforms, the material is subjected to multiple sorting procedures. Magnetized sorters remove foreign matter such as wire; near-infrared scanners identify PET and separate it from other polymers; and another sorting step separates PET materials by color. Next comes a dry system for grinding the material into flake; water is avoided because it is a carrier for inks and adhesives that can negatively affect the quality of the finished rPET. The first encounter with water is in the wash line, where the material is cleaned before it moves to a tank where PET, which is heavier than water, sinks, while labels, adhesives, and other matter are skimmed off. Subsequently the flake enters a Krones MetaPure® reactor where ~200 °C heat and vacuum are used in a final decontamination process; solid state polymerization (SSP) raises the IV of the rPET to various levels, depending on the target application.

rPlanet Earth bypasses the pelletizing step in favor of adding value to flake by using it in its own in-house plastics processing lines.

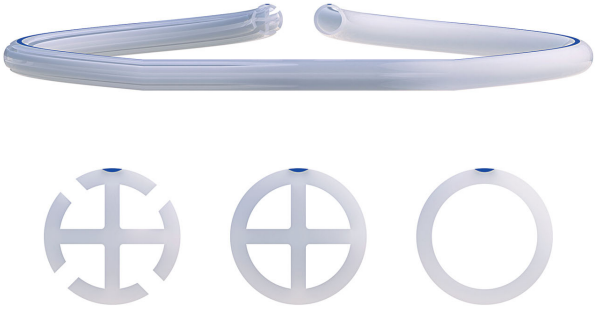
rPlanet Earth Co-CEOs Joseph Ross (left) and Robert Daviduk (right) in the new plant at Vernon, California

rPlanet Earth
www.rplanetearth.com

Reciprocating Head introduced

■ **Automated extrusion process drastically changes the extruded profile**

Guill Tool, a global manufacturer of extrusion tooling, has released its new reciprocating head. The traditional tip and die assembly is replaced with a linear reciprocating assembly that changes the tube's profile within a given length. This process is repeated throughout a single extrusion run without interruptions. Cutting capability, in association with the extrusion speed, cuts the finished product to length.



While cost and value stream activities are reduced, quality is improved. Only one extrusion run is needed to produce a finished product, as opposed to multiple extrusion runs with tooling changes along with a manual assembly operation to connect different tubing shapes. Guill's new reciprocating head eliminates an assembly operation. It also eliminates in-process inventory. Thus, there is no need for storage of various tubing shapes and connectors needed for assembly, fulfillment of orders and replenishment of finished goods.

Furthermore, the reciprocating head eliminates a connecting piece, allows JIT production and products made-to-order. Lastly, it reduces total run time from receiving the order to shipping.

Guill Tool & Engineering
www.guill.com

Winners announced

■ The Society of Plastics Engineers (SPE) Thermoforming Division has announced the winners of its inaugural student radio controlled car race and design competition.

Students from six schools in the U.S. and Germany were charged with designing, manufacturing and decorating the bodies of radio controlled cars furnished by the Division with support from corporate sponsors. The car body had to be formed using clear plastic, such as PET, PETG, acrylic or polycarbonate, and produced using the vacuum/thermoforming process.

Students also participated in a race conducted on a built-to-specification indoor racetrack located on the exhibit hall floor during the Thermoforming Division's annual conference.

Cash prizes were awarded in three different categories: People's Choice, Best Design and the race itself. This year's winners are:

- People's Choice; Best Design; and First Place in the Race: Ryan Fuller and Karina Patricia, both of Georgia Tech.
- Second Place in the Race: Max Schoch, ILLIG Apprentice Program.

"The goal of the competition was to encourage students to consider a career in thermoforming by engaging them in a fun design project," noted Mark Strachan, former SPE Thermoforming Division Chair and organizer of the Student RC Car Race and Competition. "The students' enthusiasm for this project was contagious, and it was especially rewarding to see the students forging those all-important connections with their corporate sponsors. We expect even greater student and corporate participation in future competitions."

Group photo of student participants, with former SPE Thermoforming Division chair Mark Strachan in front of group

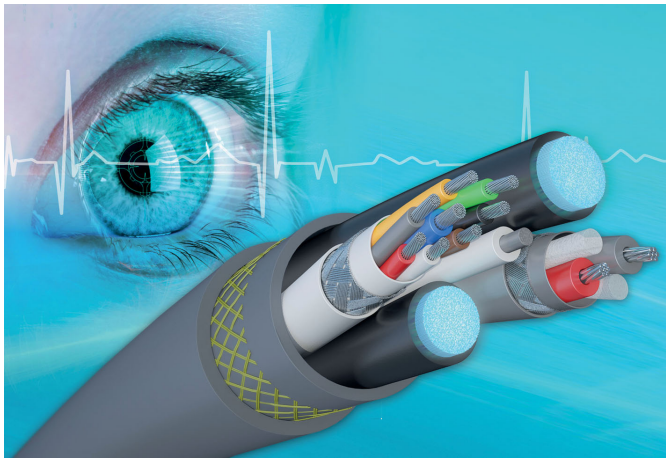
THE SPE THERMOFORMING DIVISION
https://thermoformingdivision.com

Biocompatible HEW-Silindo® Medical Cable without Stick-Slip Effect

■ HEW-KABEL of Wipperfürth/Germany provides its special cables for medical technology with an optional, especially developed HEW-Silindo® jacket. Such cables are used in diagnostics, surgery and patient monitoring. With absolutely no foreign matter in the silicone or on the surface, this permanently minimizes sliding friction. Even after being autoclaved over five hundred times, HEW-Selindo® reliably prevents the stick-slip effect on patients or components of medical systems. The result: outstanding performance properties combined with comfortable haptics. The combination of optimized cable structure, high-performance materials and patented manufacturing techniques ensures excelent mechanical characteristics even with small dimensions. HEW-Silindo® can be sterilized and is biocompatible according to EN ISO 10993-5.

HEW-Silindo® is resistant to conventional sterilization processes including steam sterilization (autoclave), plasma sterilization with hydrogen peroxide gas (STERRAD® NX®), disinfection washing, ultrasonic sterilization, gas sterilization with ethylene oxide, gamma sterilization and wipe disinfection. Thanks to the in-house manufacture, HEW can develop application-specific versions together with customers and supply them within a short period of time and at a consistently high quality level.

HEW-Silindo® medical cables with a non-stick surface offer tailor-made properties for applications such as dentistry, OP robotics, patient monitoring and imaging diagnostics (Image © HEW-KABEL)



HEW-KABEL GmbH
www.hew-kabel.com

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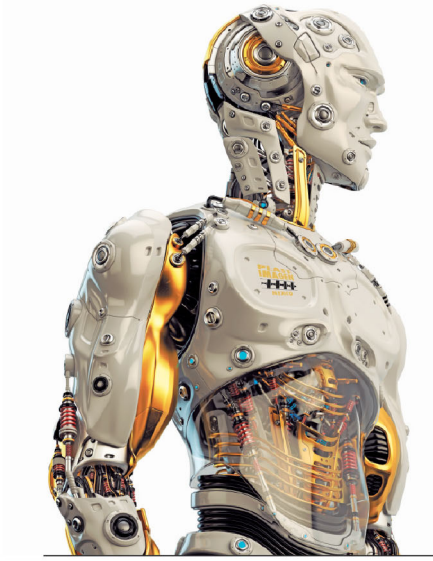
The exhibition floor covers more **45,000 m²** displaying the latest in **Machinery/Equipment, Raw Materials, Transformers, and Various Products/Services for the Plastic Industry.**

The plastics sector has become a key element in human development. Its contribution has helped to strengthen sectors that are now essential across the globe, including automotive, aerospace, consumables, electronics, medical devices, agriculture, civil engineering, and many more.

This is THE PREMIER EVENT if your company is looking for solutions in: Extrusion, Injection Moulding, Blow Moulding, Rotation Moulding, and Thermoforming, among many others.

We look forward to seeing you at PLASTIMAGEN MÉXICO® 2019!



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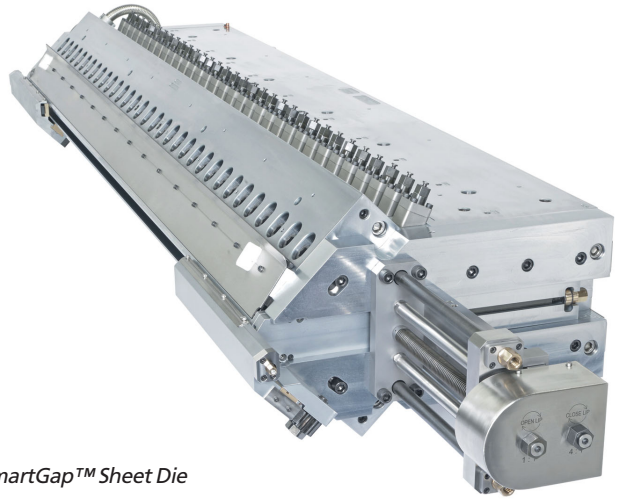
ed.park@ejkrause.com

Online Analytical Tool

■ Nordson Corporation has developed a digital tool for comparing the cost inputs of standard sheet dies with removable lower lips and those of the EDI® SmartGap™ mechanism for rapidly changing sheet thickness. The tool, called the SmartGap Payback Analysis, enables sheet manufacturers to calculate the payback time for switching to SmartGap technology. It can be accessed online at www.nordson.com/en/divisions/polymer-processing-systems/support/calculators



SmartGap™ Sheet Die

SmartGap technology enables manufacturers to make changes in thickness with unprecedented speed, extend the range of thicknesses that they can produce, and achieve these improvements while enhancing sheet quality. The system uses a single-point adjustment mechanism that changes the lip gap while simultaneously modifying the length of the lip land to provide the most appropriate conditions for the newly adjusted thickness as the sheet exits the die. By mechanically linking the adjustment of these two key process variables, the SmartGap system ensures a proper set-up of the die and takes substantial time and guesswork out of the process for achieving desired sheet properties.
Users of the SmartGap Payback Analysis enter two types of information: 1) the one-time costs of equipment investment for a standard sheet die with removable lower lip and for a new SmartGap system; and 2) process data including die length, output rate, number of die gap and die lip changes, number of working days, raw material cost, approximate product selling price, and burden cost of sheet line per hour. Using these inputs, the tool calculates the daily output values of the two systems, including downtime, missed production output, downtime cost, missed product gross profit, and total downtime cost; compares the time required for changing die lips versus that needed for changing the die gap in the SmartGap system; and estimates the how long it would take for a complete return on an investment in the SmartGap system.

Nordson Polymer Processing Systems
www.nordsonpolymerprocessing.com

interplastica 2019 – Course for Success continues

■ interplastica, the 22nd International Trade Fair for Plastics and Rubber, to be held Moscow, Russia, from 29 January to 1 February, continues to develop very positively. After 650 exhibitors from 31 countries presented their ranges at the latest interplastica in January 2018, prospects are also excellent for 2019. There is growing evidence that next year's edition will post similarly good KPIs. The demand in the raw materials segment is as strong as for machinery and equipment.
Registered exhibitors include the major suppliers from the plastics and packaging industries as well as specialised SMEs, longstanding participants and a strikingly high number of new exhibitors. As for the international attendance Germany, Austria, Italy and also China are particularly well represented. Furthermore, numerous companies from Turkey will take part in interplastica 2019.
The ranges displayed by exhibitors will be accompanied by a programme of technical side events. One of the highlights will be the special show 3D fab+print Russia in Hall 2.3, to be held concurrently with interplastica for the third time now. It focuses on the fast growing areas of Additive Manufacturing/3D Printing. Both Russian and international experts will discuss the developments, opportunities and challenges of this young technology while exhibitors will showcase their innovative products and solutions.
Another major attraction for the international expert audience will be the Polymer Plaza in Hall 1. With lectures and discussions on raw materials production, application and processing this lecture forum proves an extremely valuable add-on feature for trade fair visitors. Focal themes will include sustainability along the value chain and environmental issues, to name but two.
Held in parallel with interplastica 2019 again will be upakovka – processing and packaging with more than 250 exhibitors, generating clear synergies.

Messe Düsseldorf GmbH
www.interplastica.de

Fine mesh straining of rubber compound by innovative gear pump technology ...

... ensuring high level of quality improvement and cost–savings

■ Innovative technologies for processing of rubber compound at the INDIA RUBBER EXPO 2019, from 17th – 19th January in Mumbai, Bombay.

At Asia's largest Rubber Exhibition UTH GmbH from Fulda, Germany will be presenting its latest range of products. This includes both roll-ex® fine mesh straining systems and roll-ex® gear pump technology.

With a focus on its unique gear pump technology for rubber extrusion and fine mesh straining technology, UTH GmbH will present its solutions for applications requiring a high level of product quality, cost-efficiency and material-saving. The processing of rubber compounds continously presents the rubber industry with new challenges and tasks. The market demands highly cost-effective products of the highest quality. Accordingly, UTH has focussed on perfecting the manufacturing of rubber and silicone products.

With throughputs up to 10000 kg/h UTH's roll-ex® gear extruder systems have set the benchmark worldwide for fine mesh straining of rubber compounds. Using either the compact two-roll feeder (TRF) or a conical twin screw feeder (DSE), the modular design of the roll-ex® system enables the integration of the strainer in each specific line design. Because of the flexible and compact design a seemless integration into existing lines is also possible.

roll-ex® 220 TRF: Fine mesh staining of rubber compound - throughput of up to 2500 kg/h

Precise and gentle extrusion is another main feature of roll-ex® gear extruders and gear pumps which have high working pressures of up to 800 bar. UTH can supply complete lines as a system solution for the manufacture of rubber-coated wire, yarn or fibre components. Further information on the particular benefits and possible applications of roll-ex® technology is available at Stand No. I-009 in Hall No. II – a common booth with its partner Indus UTH HF Mixing Systems Pvt Ltd.

UTH GmbH
www.UTH-gmbh.com

Global Hub for Extrusion and Fluid Coating Die Business

■ At a ceremony, Nordson Corporation celebrated the groundbreaking for a new world headquarters for its EDI® extrusion and Premier™ fluid coating product lines, one that will include advanced equipment for enhancing die quality and more efficient systems for serving customers.

The 145,000 sq.ft. (13,500 sq.m) facility will be located in an industrial park near three existing Nordson sites in Chippewa Falls, including the current EDI headquarters and extrusion die manufacturing facility; a plant for Premier dies and all aftermarket service; and a technology center for research and development (R&D) and laboratory trials. Relocation of these operations to the new facility will begin in the summer of 2019 and be complete by late 2020.

Groundbreaking Ceremony

Nordson also will enhance production efficiency with new state of the art equipment.

The integration of people and resources will involve all functions – sales and order processing, design and engineering, machining and polishing, technical support, and administration.

Further investment in the Chippewa Falls facility planned by Nordson in the next few years will purchase still more new equipment as well as paying to upgrade existing systems. The building site includes room for expansion of up to 79,200 sq.ft. (7,360 sq.m).

In addition to the Chippewa Falls operation, Nordson builds new extrusion and fluid coating dies in Shanghai and in Saitama, Japan. Remanufacturing or rework services for dies are available at these locations and in Münster, Germany.

Nordson Polymer Processing Systems
www.nordsonpolymerprocessing.com

Forces to develop Sustainable Industrial Solutions jointed

■ Clariant, a world leader in specialty chemicals, has signed an agreement for a new partnership with Neste, the world's leading provider of sustainable renewable diesel and an expert in delivering drop-in renewable chemical solutions. By using Neste's renewable hydrocarbons in its product development, Clariant increases the number of products in its portfolio that are derived from renewable raw materials. As a result, sustainable solutions become more accessible to a variety of industries, including adhesives, plastics and coatings.

Christian Kohlpaintner, Member of Clariant's Executive Committee, comments: "Sustainability is one of Clariant's five strategic pillars. This new partnership with Neste is a significant milestone in providing a sustainable future for Clariant and its customers. It is an exemplary cooperation because it provides a competitive advantage for our customers while making a sustainable impact across the value chain."

Clariant's Licocene® performance polymers and waxes are already highly-valued by the adhesives, plastics and coatings industry for their ability to offer superior sustainability and performance in use. Through the partnership with Neste, Clariant can offer sustainable polyolefin solutions derived from renewable hydrocarbons.

Peter Vanacker, President & CEO, Neste and Gloria Glang, VP, Head of Global Advanced Surface Solutions Business, Clariant, agreed upon a new partnership to turn renewable feedstock into raw material for hot-melt adhesives, plastics and coatings applications (Photo: Neste)

Clariant
www.clariant.com
Neste
www.neste.com

Overall Solutions for Recycling Projects

■ Just four months after the founding of the new business unit KEYCYCLE, it can be seen that EREMA and its range of overall solutions for plastics recycling projects is being welcomed with open doors in the marketplace.

The newly formed team has in the meantime received a number of project inquiries, most of them for post-consumer and PET applications. The reason for the high demand is, on the one hand, the increasing industrialisation in the sector and, on the other hand, the growing interest among newcomers in plastics recycling.

KEYCYCLE supports such potential recyclers, as Manfred Hackl, CEO of EREMA, explains: "Customers often need specific consulting and support at an early stage – for example in the form of a feasibility study – for the complex, overall planning of a new recycling plant or the integration of the most suitable solution in the existing production environment."

The range of services offered by the new business unit is thus geared towards both customers who are looking for an overall solution but have only limited experience with plastics recycling, plus those who are already considering the idea but want to concentrate their resources on their actual core business. Furthermore, KEYCYCLE is also a competent partner when there are plans to optimise existing facilities or when a general planner is required for a variety of services.

Michal Prochazka, head of the business unit, sees the entire spectrum of engineering and integration services for plastics recycling solutions as the current focus of activities. They are joined by factory and logistics planning and project management on request. Since presenting KEYCYCLE for the first time to a broad international audience at the EREMA Discovery Days at the end of June, he has already received a large number of project inquiries from around the world. Prochazka sees this as confirmation that this new portfolio is the right decision on the right track. "Recycling projects are becoming increasingly complex because they have to interconnect a number of technologies. To realise such projects you need a high degree of system knowledge for industrial solutions, process know-how and experience in the implementation of large-scale projects. And this is precisely what we offer our customers," he adds, confident about the successful further development.

Michal Prochazka,
Head of Business Unit Keycycle
(Photo credit: EREMA)

EREMA Group
www.erema-group.com
KEYCYCLE.at
www.keycycle.at

New Teach Line Generation introduced

■ For the first time, Collin presented its new Teach Line machine generation at Fakuma 2018. Furthermore, a blown film line with the new series extruder was shown in operation at the Fakuma booth. The Collin Teach Line series includes extruders, compounders, roll mills, blown and flat film lines, stretching machines, water baths, pelletizers and pipe lines. The table-top machines are mainly used by universities, R&D departments or laboratories for tests, trainings and trials.

Optically revised and modernized, the Teach Line lines offer many improvements.

„From now on, all components of our new Teach Line series are all-digitally controlled. Moreover, as a result, the lines are completely prepared for Fecon", explains Dr. Friedrich Kastner, CEO Collin. Visual Fecon is the Collin company software package, with which different measured values can be recorded and analysed via PC. „Also new is that the width of the Teach Line lines could be standardized to 200 mm. Now, all voltages and frequencies are possible without any transformer – that means,

Collin flat film line with online rheology and camera inspection system

the lines internationally run without any accessory device", says Kastner. In the run-up of the Fakuma, Collin could have patented the new design line of the Teach Line lines worldwide.

Besides the new Teach Line series, Collin also showed a very compact Lab Line flat film line with chill roll, online rheology and mountable camera inspection system at its booth. With that, the company emphasizes its range of know-how from laboratory up to pilot production lines.

Rheometers are used for the determination of the melt viscosity and are therefore an essential element of the permanent quality control during the processing of polymers. The camera inspection system offers a continuous optical control of the film according to 10 error classes and 14 error criteria.

The flat film line with single-bearing winder is ideal for test series, product tests or the development of prototypes. Furthermore, it is an advantage that the line requires little space and that it is easy to handle.

Collin Teach Line new generation – blown film line and extruder (Images © Collin Lab & Pilot Solutions)

Dr. COLLIN GmbH
www.drcollin.de

Antistatic Masterbatch Solutions launched

■ Ampacet, a premier global provider of masterbatch and additive materials, services and solutions, has introduced Antistatic Masterbatch 6000025-E, designed for polystyrene (PS) sheets used in dry environments.

PS thermoformed sheets, like most plastic articles, are subject to dust pick-up during storage due tot he inherent static nature of polystryrene. Conventional antistatic solutions for PS sheets, trays and cups generally perform well uinder typical usage conditions (50% relative humidity).

When these PS products are used in very low humidity environments, however, they often lose their antistatic properties, leading to dust pic-up and electrostatic discharge.

Ampacet's Antistatic Masterbatch 6000025-E, specially formulated for use in polystyrene cups and thermoforming sheets, helps to eliminate dust accumulation and related aesthetic and contamination issues that may occur when PS products are stored and used in dry climatic environments.

Ampacet
www.ampacet.com

UA Sheet Processing Machines – High Demand

Fakuma visitors are always very interested in ILLIG sheet processing machines of the UA series

■ ILLIG Maschinenbau showcased a UA 100g and a UA 100Ed sheet processing machine at Fakuma in Friedrichshafen, Germany. Intelligent, process-controlled sequencing allows precision, reproducibility, flexibility and long-term reliability. The UA series provides impetus for part manufacturing regarding production and the machines feature high productivity and quality at the same time, and also ease of operation. Furthermore ILLIG is helping packaging and part manufacturers with Pactivity®, a 360° custom-made development of formed parts in thermoforming process. Each project begins with the customer's initial idea and ends with an outstanding final product that meets all requirements. ILLIG regards the development of thermoformed parts under sustainable aspects from the beginning to the point of reuse and considers the possibilities of optimal recycling when selecting materials. ILLIG possesses the necessary know-how in tool making and machine construction and is familiar with the technical requirements. The line is configured and developed further together with experienced engineers according to the developed solution. Then the implementation of the production system begins.

Fakuma machines UA 100g and UA 100Ed:
The UA 100g is equipped with a max. forming area of 960 mm x 660 mm and is suitable for sheet processing. All machine movements are completely servo driven. During the Fakuma show, various tools for the production of parts made of plastic sheets were used on this machine. This year´s additional presented UA 100Ed is equipped with a max. forming area of 950 mm x 560 mm. It is a pneumatically driven thermoforming machine with manual loading at a very reasonable price-performance ratio. The machine is designed for small and medium batch sizes and also equipped to be used as testing and/or laboratory machine with lower and upper table, a so-called loose parts control heating on both sides and connection for mold temperature-control.

ILLIG UA sheet processing machines – high demand:
ILLIG is the inventor of the first UA thermoforming machine with clamping frame ever employed in industry for sheet and roll processing. The demand for the reliable ILLIG sheet processing technology with accelerated self-controlled processes is still continuing on a high level this year. This high demand is based on the innovations implemented in all machine types of this series during the last years.

Innovation driver in thermoforming systems:
During the last years ILLIG initiated numerous innovations for automatic thermoforming machines and filed corresponding patent applications. Competitors also became aware of many further ILLIG innovations. These innovations are employed in its machines as technological progress.
Some of the developments in UA sheet processing machines frequently patented are: Servo motor drive, process-reliable sheet de-stacking, compensation of surrounding influences during heating and reduction of temperature decrease of the heated material until forming, prevention of chill marks and obtaining a uniform wall thickness distribution during forming, reduction of cooling time by using e.g. an air shower in the clamping frame and blowers which can be individually switched in groups. Moreover, ILLIG is the only system supplier of UA thermoforming equipment to offer patented process-controlled cooling air guidance to ensure part quality at a consistently high level. Machine operation is simple thanks to the fact that all important commands can be found on one page and the online optimization support allows forming pressure setting in combination with a frequency-controlled vacuum pump.
The technical concepts implemented in ILLIG thermoformers utilize the high capacity of servo-driven thermoforming systems to the full extent. ILLIG systems allow high productivity as well as reproducibility of all process parameters.

ILLIG Maschinenbau GmbH & Co. KG
www.illig.de

New Test Centre with complete Extrusion Line

■ Since a short time ago, BritAS has a new test centre in Hanau/Germany – there, recycling and compounding companies can perform test runs with their materials.
„For customers, it is an advantage that now, with the test line, we can test any plastic waste. The line can be installed either with the BritAS ABMF-0750-09 or the BritAS ABMF-0750-09-C. With that possibility, our range of service is increased even more and our position in the market is strengthened", explains Dr. Friedrich Kastner, CEO BritAS. „Moreover, our customers can test materials under real conditions. No matter whether it is post-consumer or post-industrial material. "Additional components of the line are a NGR C-Gran 85-110 VV HD with double degassing (cutter compactor) with a throughput of up to approx. 420kg/h as well as a die face pelletizer.
„With the ABMF PET, we have increased our range of products again. Both, temperature control and heating capacity are designed for higher processing temperatures. Furthermore, for the lower viscosities, the filter sealing is optimized by a die guiding. Of course, also the filter surface and the channel guiding are designed for throughputs with PET", explains Dr. Kastner and Thomas Lehner, Director Sales BritAS. At the moment, the ABMF PET is available with a filter surface of 570 cm^2.

BritAS Test centre (Image © BritAS Recycling-Anlagen)

The Automatic Belt Melt Filter ABMF 1600 is very successfully accepted by the market. „The advantage of this BritAS melt filter is that it ensures even more throughput and improved filtration. With the ABMF 1600, we have increased the filter surfaces by 50% and meet the requirements of our customers."
The ABMF series has proven itself for decades. The BritAS ABMF filter series filters contaminations effectively and efficiently out of plastic waste. BritAS filters are used in the post-consumer sector and for agricultural films but also for post-industrial waste.

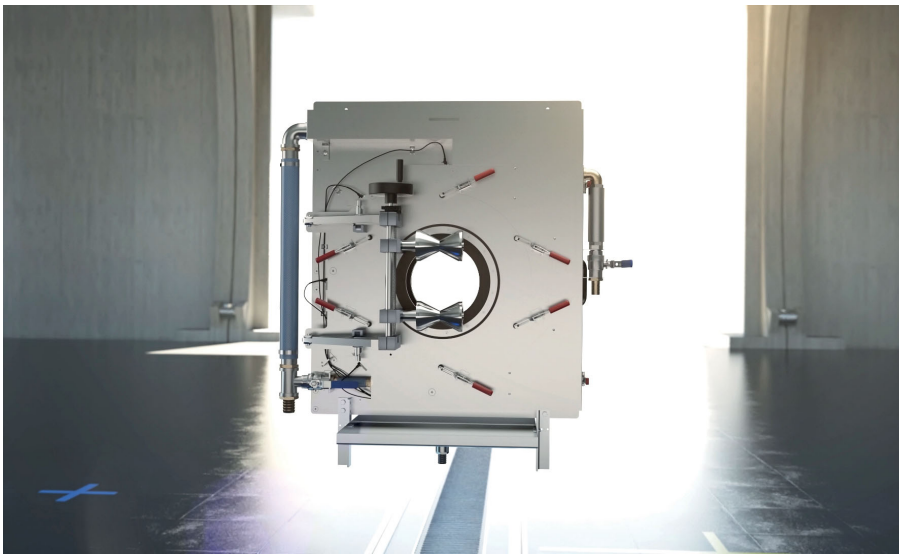
BritAS Recycling-Anlagen GmbH
www.britas.de

Newly presented at Fakuma: COLOUR VISION N°19

■ The Gabriel-Chemie Group presented its modern side and numerous new innovations at Fakuma 2018. Above all, the latest COLOUR VISION N°19 colour concept impressed with its creative colours, effects and surfaces, as well as with the narrative background of the connoted themes of „Responsibility" and „Timeline". True to the motto: with colours at the trend.
Experienced trend scouts and innovative colourists are working actively on the trends of tomorrow and together create a new COLOUR VISION collection each year. The trend themes connoted this year are „Responsibility" and „Timeline". „Rusty Matt Red", „Upcycled Marble" or „Honeybee Yellow" are all about responsibility and demonstrate a more responsible approach to our future. Therefore it is more important for the plastics industry to invest innovative resources in recycling and reuse-concepts. „Never stop dreaming, never stop asking" is the motto of the second trend theme of COLOUR VISION N°19. Many great visions, innovations and inventions took their course in the 70s or 80s and formed the big players per in the technology market for decades. Colours such as „Rebel Red", „Green Metallic Gloss" or „Ease of Blue" are reminiscent of a light-hearted and carefree time period in which many of today's most significant companies emerged.

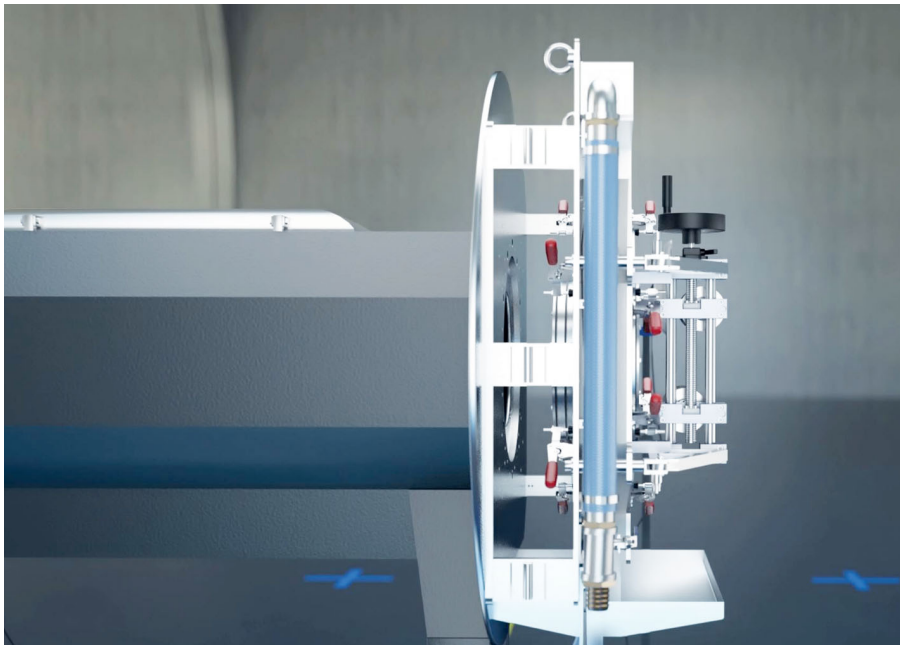
Further Fakuma highlights:
GABi, the virtual assistant of the „Master of Batch" portal presented at the Fakuma, also attracted many interested visitors to the booth with its visually striking appearance. The idea and the already far advanced technology set an important milestone for Gabriel-Chemie in the field of digital innovation. Special attention was also attracted by the in-house innovation: The Halal & Vegan Masterbatch.Project manager Sabine Nicolaus was happy about numerous media and promising cooperation requests: „What we offer is definitely unique! The globally recognized Halal certificate of the organization HQC, Halal Quality Control, as well as the so-called V-label, which is regarded as an international seal of approval for labeling vegan and vegetarian products. As a masterbatcher, we are on almost untouched terrain.
Ronny Baumert and Thomas Biewald (www.belaser.de) provided another highlight of the Fakuma trade fair appearance with their laser marking process live on the stand. „Trade fairs are an important topic. The Fakuma showed again that such events are essential for creating awareness, around the brand and the topic of plastic. The feedback was very good. And we're on the innovation front with projects like GABi and Halal & Vegan Masterbatch. „ says Mark Hannah, Head of Corporate Marketing & Productmanagement.

GABRIEL-CHEMIE Gesellschaft m. b. H.
www.gabriel-chemie.com
https://gabriel-chemie.com/Colour-Vision



MK 400 for all measuring, control and documentation tasks, a comprehensive solution for the automation of pipe extrusion lines.

AUREX MK – Process-fitting measuring chamber for highly precise measuring results



Very narrow design, mounted in extrusion direction, direct assembly on the vacuum tank, no support frame required.

iNOEX GmbH founded in 1984 stands for innovative measuring and automation technology for the plastics extrusion industry. The iNOEX headquarter in Melle (Germany) is the place where pioneering technology for the pipe, profile, cable and film industry is developed.

20 years of experience in ultrasonics are one of iNOEX's highlights and the brand name AUREX represents reliable ultrasonic technology designed for the measurement of wall thicknesses and diameters.

AUREX MK 400 – a comprehensive solution

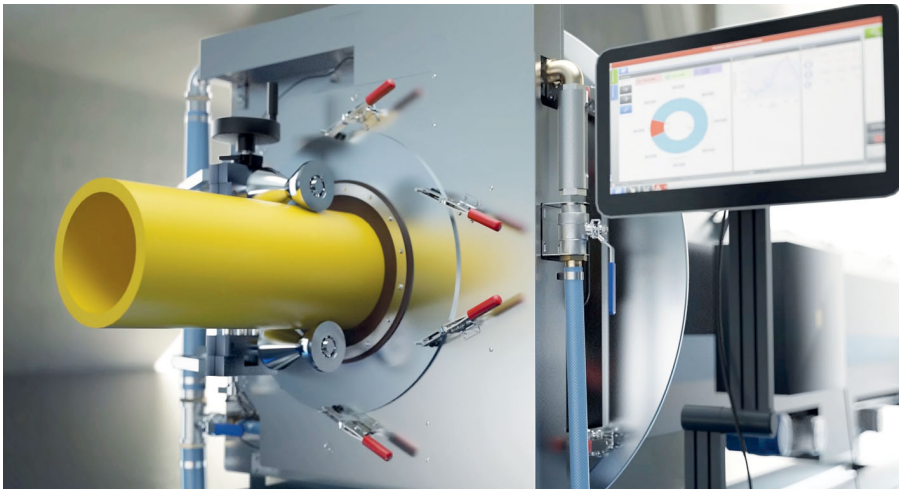
AUREX MK 400 for pipe dimensions of 32 – 400 mm reduces the product weight per metre and thus the overall production costs significantly whilst narrow tolerances regarding the wall thickness, the diameter and the ovalness are reliably adhered to. The large working range offers a high degree of flexibility and during changes from small to large pipe diameters, there is no need for sensor adaptation. The very narrow system is assembled in extrusion direction and directly on the vacuum tank. This makes a supporting frame redundant in order to account for the limited space available in an extrusion line.

Quickly operational

AUREX MK 400 is equipped with its own water collection tank including overflow device above the measuring chamber. It is ensured that the chamber is constantly and sufficiently filled with water. Thanks to the low water volume and the magnetic valve for fast and automated filling, the MK 400 becomes very quickly operational. Inside the system, air bubbles are able to rise to the top unhindered. The integrated water filter prevents system pollution. Further, the system disposes of a water collection basin for dripping water.

Perfect interplay of all components

Double sealings on the inlet side significantly improve measuring results as any air bubbles are removed from the pipe surface. On the outlet side, MK 400 is equipped with only one sealing. The sealings on the vacuum tank and all sealing sets can be easily and comfortably exchanged, quick fasteners on the inside and the outside help to ensure this. As the pipe is frequently not centered when it leaves the vacuum tank, this applies in particular to pipes with a diameter of ≤ 160 mm, it is centered and optimally guided by an easily adaptable manual double-cone guiding device. This guide element can be easily folded away, no tools required.



Detailed product information available at any time.

Precise measuring results

Ultrasonic sensors which are continuously rinsed with water to prevent any air bubbles from disturbing the measurement, are precisely designed to generate, receive and process ultrasonic echoes with the required exactness. The measuring electronics is a digital ultrasonic evaluation electronics with a highly precise performance and the proven AUREX software provides a flexibility to solve any measuring task. This combination of a high-end electronics and an innovative measuring technology is able to evaluate up to 7 product layers, starting at a wall thickness of 0,02 mm. The 21" terminal based on a future-oriented and cross-platform solution permits the visualization as a website through easy integration via browser. Continued access to the most important applications is thus guaranteed.

Comprehensive information

Measuring data is logged, thus comprehensive quality data can be provided at any time. The same applies to detailed product information. Particularly the adherence to very narrow tolerances of wall thickness, diameter and ovalness are of utmost importance. Further, wall thickness sizes, thin points, weights per metre and mass throughputs can be controlled by an iNOEX gravimetric system. As such, the production process becomes reproducible and remains on a constant quality level. MK 400 carries out almost all measuring, control and documentation tasks and can therefore be called a comprehensive solution for the automation of pipe extrusion lines.

Durable and easy to maintain

The robust product design makes it a very durable product. All cables and plugs are mounted outside the measuring chamber and inside the housing. Therefore, they have no contact with water which makes MK 400 a low-maintenance system. Ultrasonic sensors may even be exchanged during the ongoing production process. Further, MK 400 can be easily folded away from the vacuum tank which provides easy access to the sealings of the tanks whenever they need to be exchanged.

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German Leistritz Extrusionstechnik GmbH presented for the first time the design study of the ZSE 40 iMAXX twin screw extruder with innovative full cover at the Fakuma

Design study: the ZSE 40 iMAXX with fleXX cover (Image © Leistritz)

World Novelty: ZSE 40 iMAXX with FleXXcover

The new and innovative fleXXcover for twin-screw extruders is a solution that offers more safety for the operator, even easier handling and a high degree of flexibility. „We have taken a completely new approach in terms of machine cover," says Managing Director Sven Wolf. „Instead of being made of metal, our fleXXcover is made of a glass fiber textile that offers a variety of advantages." The design study of this revolutionary development could be seen on the new twin-screw extruder ZSE 40 iMAXX. „The ZSE iMAXX series already includes machines with 27 and 35 mm screw diameter. The expansion by a further size is the logical consequence," says Wolf.

fleXXcover – newly interpreted machine cover

The appearance and surface texture of the new cover are striking: it is made of a PTFE-coated glass fiber textile, a heat-resistant material suitable for extrusion processes. "The fleXXcover has a lower heat conductivity than metal. This results in a lower surface temperature." The machine cover is designed in four parts: two cover halves above the process section, two above the drive unit. They are attached to the base frame by means of plug-in connecting bars and fixed in place using pneumatic tensioning elements. Wolf explains: "This type of setup allows very simple handling. A single operator is able to remove each of the four parts without any additional tools." The removed cover can easily be rolled up, stored and exchanged. The combination of material, fixation and simple handling makes cleaning very convenient. "Since this is a more economical option than metal covers, each of the four cover parts can be purchased more than once if required, for example if the process setup is changed." Leistritz side feeders or degassing units integrated into the process setup are also covered with the material. "We presented this ingenious solution for the

Among others the Leistritz elongational rheometer for intelligent process monitoring was showcased (Image © Leistritz)

World Premiere" at the Leistritz booth: Sven Wolf (CEO) and Michael Thummert (Head of Corporate Communications) explained the advantages of the machine cover as well as the functioning of the extruder ZSE 40 iMAXX. In the picture shown: ZSE 40 iMAXX partially covered with the fleXXcover (Photo: VM Verlag)

first time as a design study for the new ZSE 40 iMAXX at the Fakuma," says Wolf. "With this, we want to offer our customers a further added value. We're very excited to receive their feedback."

ZSE 40 iMAXX

Due to the high specific torque (up to 15.0 Nm/cm³), the ZSE MAXX machines are among the most powerful co-rotating twin screw extruders. Added to this is the high volume in the screw facilitated by the large OD/ID of 1.66. The ZSE iMAXX extruders (27 and 35 mm) are convincing due to their intelligent and integrated design. At the Fakuma the ZSE 40 iMAXX was introduced for the first time. It is a machine which is particularly suitable for medium batch sizes and throughputs of up to 700 kg/h.

The extruder combines the convincing features of the ZSE iMAXX machines. The heating/cooling system and the heating elements are fully integrated in the frame or processing unit. This ensures optimum accessibility. Cleaning and replacing individual components is extremely easy. A central water connection is sufficient for the entire system. The ZSE 40 iMAXX is equipped with an energy-efficient synchronous AC motor for the main drive. Leistritz thus contributes to a resource-saving extrusion process. The majority of the electrical components is housed in a separate control cabinet. In addition, torque measurement can optionally be installed. By means of a monitoring system, the oil pressure and temperature of the gear box can be controlled at all times.

Smart solutions

"Industry 4.0 and the use of smart sensors play an important role. In the course of the continuous further development of process technology, we have therefore paid special attention to intelligent process monitoring," explains Sven Wolf. Leistritz showed how this can be done in the practice by means of the elongational rheometer exhibited at the trade fair. The Leistritz after sales sector also presented smart solutions, showing for example how service via augmented reality is done.

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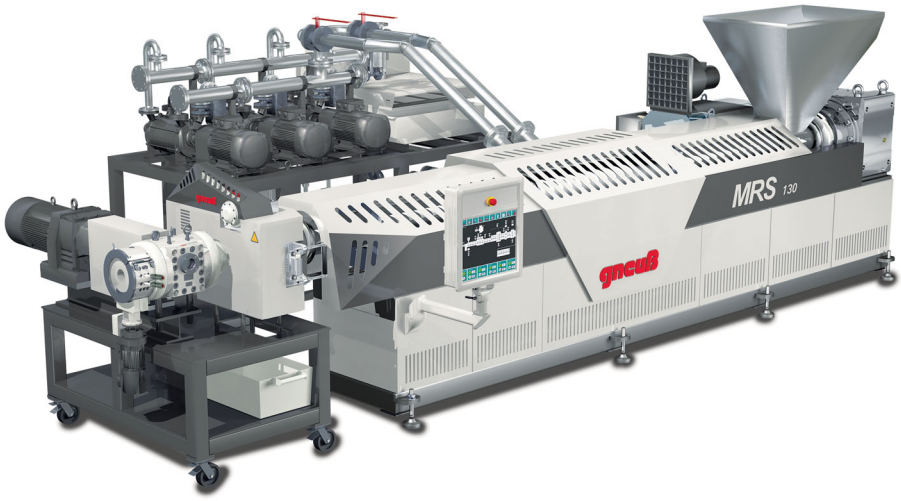
90459 Nürnberg, Germany
www.leistritz.com

MRS Recycling Process approved for Food Packaging Worldwide

Since the first "Letter of Non Objection" from the American FDA in 2009, the Gneuss recycling process based around the MRS extruder has received a large number of approvals for processing up to 100 % post-consumer and industrial polymer waste to food contact products



This year, Gneuss obtained food contact approval from Anvisa, the first-ever in Brazil. This approval is for the Gneuss PET process for recycling PET post-consumer and post-industrial waste to sheet for thermoforming to food contact containers. It is a significant contribution toward increasing polymer recycling.

In Latin America, the Gneuss recycling process has also achieved the standards set by the Colombian food safety agency, Invima and its Argentinian counterpart, Senasa for processing 100 % post-consumer PET waste to food contact products.

In Europe, the Gneuss recycling process has passed the EFSA challenge test for the processing of 100 % post-consumer PET.

A study by the British charity for promoting recycling, "Waste and Resources Action Programme" (WRAP) in 2016 showed that with the help of the Gneuss Recycling Process, it was possible to take post–consumer thermoformed PET pots, tubs and trays from household waste and recycle them back into the same products, for food contact. Unlike the re-processing of PET bottle flake to sheet for thermoforming, this process is a truly circular one.

The study was published under the title: "Development and optimisation of a recycling process for PET pots, tubs and trays".

Thanks to the unparalleled devolatilisation performance of the Gneuss MRS extruder, contaminants such as oils, other harmful volatiles and also odours are efficiently removed from washed PET scrap without the need for pre-drying or any other heat treatment of the material prior to extrusion. Avoiding the need for heat treatment of the material prior to extrusion saves not only investment and energy costs, a whole inflexible process is eliminated, together with the risk of damage to the material.

The polymer is processed extremely gently in the low shear MRS extruder. The final product has excellent colour (low yellowing) and transparency.

In addition to the food contact approvals for PET, this year Gneuss obtained approval from the American FDA for the processing of post-consumer polystyrene to food contact products. Polystyrene post-consumer waste can be reprocessed on the Gneuss MRS extruder to sheet for foamed and rigid food contact containers.

In 2009 and 2011, trials by the WRAP organisation already showed that with the help of the Gneuss MRS Recycling Process, it is feasible to achieve the conditions of the FDA challenge test for processing post-consumer polypropylene and polyethylene for food contact applications. The results of this test were published by WRAP under the titles "Commercial Scale Mixed Plastic Recycling – a report on the technical viability of recycling mixed plastic packaging waste from domestic sources on a commercial scale in the U.K" and "Development of a Food-Grade Recycling Process for Post-Consumer Polypropylene".

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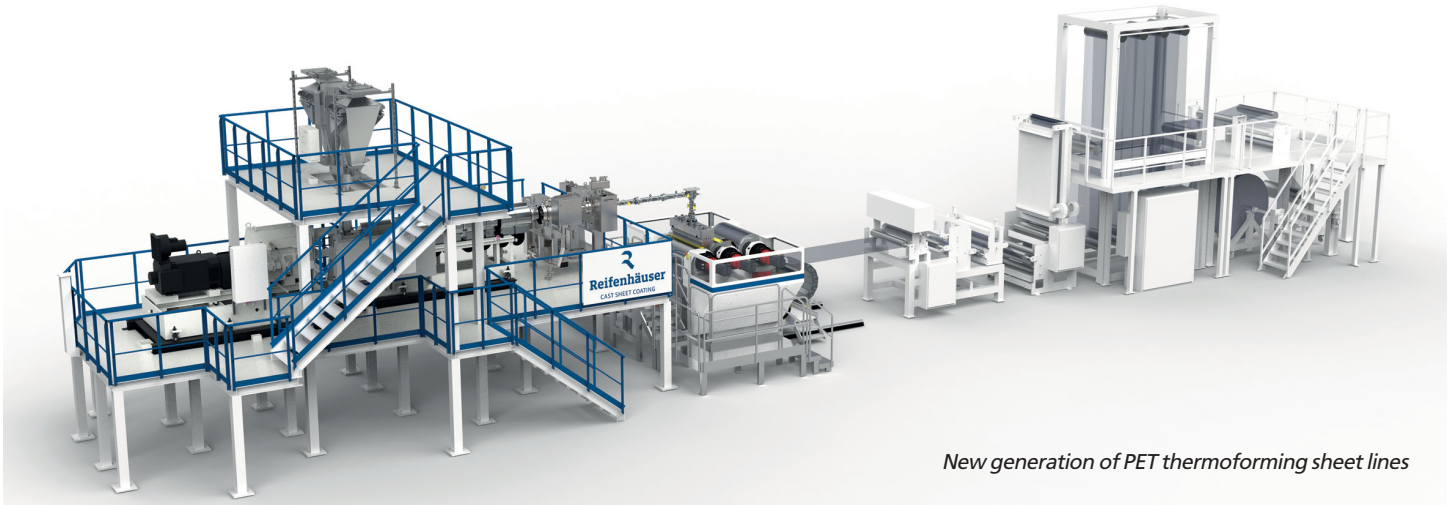


New generation of PET thermoforming sheet lines

A New Generation of PET Thermoforming Sheet Lines introduced

Following the big success of the 2013-release high-performance extrusion lines for PET thermoforming sheets with the patented mechatronic polishing stacks of the MIREX-MT-V design series, the next generation of this line type was presented this year

As in the past, the heart of these lines is the tried-and-tested synchronous "REItruder" twin-screw extruders, which are now in their third generation. In combination with dry-running high-performance vacuum pumps that work with an operating pressure of 5 mbar, and the degassing units on the REItruder that have continuously been optimized through the years, the systems meet the FDA requirements (N.O.L for Recycled Plastics #209) for films that are made of 100% recycled PET and are in direct contact with food. All required declarations confirming the line technology's compliance with EFSA requirements are provided; the user is responsible for applying for the appropriate EFSA approval.

Depending on the customer's requirements, various different coextrusion feedblocks are available from Reifenhäuser EDS, the youngest member of the Reifenhäuser Group. The customers have frequently expressed their desire for simple (quasi "plug and play") production. To meet this need, feedblocks are now available both for fixed layer geometries and for the tried-and-tested and highly flexible REIcofeed 2.1 systems that can be configured during operation. Additionally, completely modernized dies are available in the wide product portfolio of Reifenhäuser EDS. For example, the producer can choose between internal deckling for maximum flexibility in the film width, or a lip gap that can be configured during operation for fast thickness changes, as well as between manual or automatic operation with thermal expansion bolts.

After 5 years of successful worldwide use, the MIREX-MT-V high-performance polishing stack has also been fundamentally modernized. Depending on the system capacity, it has 3 or 4 polishing rolls. Additionally, an axis crossing for the first roll is available optionally, for the production of thin films with large widths.

The entire line has been prepared for the implementation of Industry 4.0 functions that are being developed group-wide by Reifenhäuser Digital. Thanks to the modular concept, the customers can decide individually which functionalities benefit their business activities and which are not needed (for the time being). The tailor-made solutions for individual needs are part of the portfolio of Reifenhäuser CSC, from "as simple as possible" to convenient fully automated solutions.

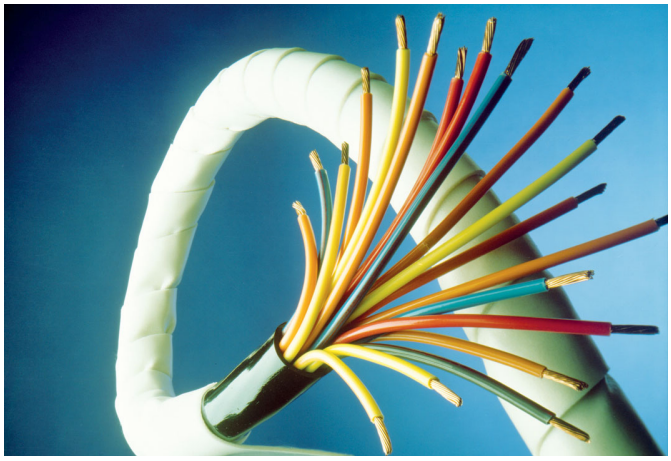
Reifenhäuser Cast Sheet Coating GmbH & Co. KG
Spicher Str. 46,
53844 Troisdorf, Germany

Dow Performance Silicones exhibited its innovative products together with its partner in Europe at Nexeo Solutions booth. Christophe Paulo, Industrial and Consumer Strategic Marketer, EMEA, Dow Performance Silicones tells about key products presented at Fakuma 2018

New Solutions Improving Processing and Performance for Packaging and Cable & Wire Applications

Interview with Christophe Paulo, Industrial and Consumer Strategic Marketer, EMEA, Dow Performance Silicones

Nexeo Solutions booth at Fakuma 2018



Dow Performance Silicones MB25-502 W&C

What is the new focus here at Fakuma 2018?
Christophe Paulo: At Fakuma, we're emphasizing our solutions for packaging. At the show, we presented the new DOW CORNING™ MB25-235 Masterbatch for form-fill-seal packaging production. Our customers can benefit from its long-lasting slip performance and non-migration to the film surface. You can use post processing for high-quality, attractive packaging and do not need to worry about problematic migration. You just need to add the new DOW CORNING™ MB25-235 Masterbatch into the outer (skin) layer of multi-layer films where you need slip. At Chinaplas 2016, we introduced an earlier version of this masterbatch. The new DOW CORNING™ MB25-235 Masterbatch is a new generation bringing a lot of complimentary benefits. Most importantly, it is food-contact approved across continents.
Also, for packaging, last year at Fakuma we launched DOW CORNING™ HMB-6301 Masterbatch for reducing COF in bi-axially oriented polypropylene (BOPP) film.

Please tell the readers of Extrusion magazine some words about Dow Performance Silicones' solutions for the wire and cable industry.
Paulo: As you know, insulation and jacketing applications adopt halogen-free flame retardants. And these mineral additives make processing quite hard due to the high loadings required for effectiveness. DOW CORNING™ MB25-502 masterbatch, launched last year, helps to improve processability of highly mineral-filled PE compounds. It is a great solution for customers focusing on very high throughput and improved surface appearance. And if you want more flame retardancy, our DOW CORNING™ MB50-002 Masterbatch optimizes processing and flow of LDPE resin, and above all, your flame retardancy properties.

Could you discover some of your prospects?
Paulo: We always have a presence at the biggest plastics shows around the world. We are going to introduce another masterbatch for films for the packaging sector at Chinaplas 2019, and we're also already planning for K 2019.

Why do you focus on flexible packaging now?
Paulo: We see that the market is looking for new solutions in packaging. Our customers want more speed in processing and higher throughput. That is just one area where we can assist them. There is also some concern about material migration in food packaging. Our products avoid migration between film layers and between the film and package contents, helping to prevent impact on downstream operations, such as printing and metallization and the potential contamination of food or other contents. We are always innovating to provide solutions that extend properties, enhance processing and reinforce materials to meet our customers' most pressing needs.

Mr. Paulo, thank you for this interview!

Dow Performance Silicones
ZI Chartreuse Guiers
38380 Entre Deux Guiers
France

We Are Glad to Have More Time for Technical Discussions at Fakuma

Interview with Sebastian Heitkamp, Global Marketing Manager, Cabot Corporation

At Fakuma 2018 Cabot Corporation, a leading provider of rubber and specialty carbons, masterbatches and conductive compounds, presented its innovative products for plastics industry. Sebastian Heitkamp, Global Marketing Manager, focused on solutions for extrusion application and highlighted the key exhibits

Mr. Heitkamp, please provide us with more information about Cabot's innovative products meant for extrusion processing technologies showcased at Fakuma 2018.

Sebastian Heitkamp: Cabot has a wide range of masterbatches specifically meant for extrusion applications, in particular, for pipe, sheet and thermoformed sheet. We also have some products for extrusion of fibers. The majority of our extrusion grades go to the packaging market. Our products are used for both food packaging and industrial rigid packaging.

At Fakuma this year, we introduced TECHBLAK® XP6468A and TECHBLAK®XP1002A black masterbatches for food contact applications. These innovative formulated solutions are made with recycled material and offer excellent purity and high color strength, designed for PET packaging applications. Both masterbatches are suitable for use according to the requirements of the European food contact Regulation (EU) 10/2011 and TECHBLAK® XP1002A will also allow the final article to comply with the requirements of the United States Food and Drug Administration (US-FDA).

As for industrial packaging, we have black masterbatches and conductive compounds for sheet extrusion. Our CABELEC® conductive compounds and concentrates for conductive packaging provide you with ultimate performance. These conductive compounds come ready to use, making it easier for our customers to manufac-

ture lightweight, recyclable parts that protect against damage due to dissipation of static charge. At Fakuma we presented CABELEC®CA6483 conductive compound. It is a novel formulation for ABS extrusion and thermoforming applications with very good results in surface resistivity.
Regarding pipe and film extrusion application, Cabot offers PLASBLAK® and TECHBLAK™ masterbatches that can extend the useful life of pipe and film and other products by protecting the underlying polymer against UV degradation.

As far as I know, Cabot also took part in Plastindia in February. In what regions is Cabot Masterbatch available?
Heitkamp: Earlier this year we announced an expansion project in Montreal, Canada, thus extending our global footprint in black masterbatch and compounds and increasing manufacturing capacity to better serve global customers and grow in advanced polymeric materials. We are a truly global company and packaging solutions are available in regions around the world.

What do you think about Fakuma 2018?
Heitkamp: Fakuma 2018 was well attended by top contacts in the industry. We had a number of very interesting conversations. I think Fakuma is a perfect event for deepening relationships, as it provides ample time for technical discussions.

Mr. Heitkamp, thank you for this interview!

Cabot Corporation
www.cabotcorp.com

Marc Schelles, Technical Marketing Engineer, Solvay Specialty Polymers

Lots of Very Promising Contacts within Short Time

Interview with Solvay Specialty Polymers experts: Andreas Lutz, Area Development Manager, Automotive Europe, and Marc Schelles, Technical Marketing Engineer

At the annual trade show in Friedrichshafen Solvay Specialty Polymers has launched new Ryton PPS grades and announced a new competence center located at Bollate, Italy. Andreas Lutz, Area Development Manager, Automotive Europe, and Marc Schelles, Technical Marketing Engineer, reveal more details about Solvay showcasing at Fakuma

Ryton PPS coolant line

Mr. Lutz, as our readers are mostly extrusion experts, could you please focus on the technologies presented at Solvay booth for the extrusion market?

Andreas Lutz: The new products we have presented at Fakuma are three Ryton polyphenylene sulphide (PPS) extrusion grades. Solvay's injection molding Ryton grades have exhibited a proven fit in many existing connector and bracketry fittings. And

now we are concentrating on the extrusion application for automotive sector, such as cooling.
Extruding Ryton PPS is something new to our customers. And after the pipe or a tube is extruded, it needs to be thermoformed which is the state-of-the art process for many pipe and tube applications. That is why we work very closely with our customers in the automotive industry.
We have three different formulations, Ryton®XE3500BL, Ryton®XE4500BL and Ryton®XE5500BL with the stiffness varying between 1500 MPa (218 ksi) and 2500 MPa (363 ksi). These are used for flexible tubes of different wall thicknesses and diameters. We also assist our customers to match the different stiffness requirements after post-extrusion thermoforming.
Besides, the fittings are also made of PPS. Using new Ryton extrusion grades for demanding cooling line assembly applications requests technical support in successful welding molded connectors and extruded pipes.

Mr. Schelles, as far as I know, in order to support the growth of automotive customers in the EMEA Solvay invests in the Application Development Center. Could you please tell us more about it?

Marc Schelles: We have the Application Development Center in Bollate, Italy. There our customers can take an opportunity to try new materials. Recently Solvay has added new extrusion equipment alongside the injection molding processing capabilities. It also aims at supporting the introduction of new PPS grades to the market.
In a dedicated fluid-handling design laboratory the customers can go through all the process from part design to prototype cooling line extrusion. They learn how to run the material. They can use our screw configurations and have the samples and then compare the results to those they have at their facilities.

Solvay booth at Fakuma 2018

Application Development Center Bollate, Italy

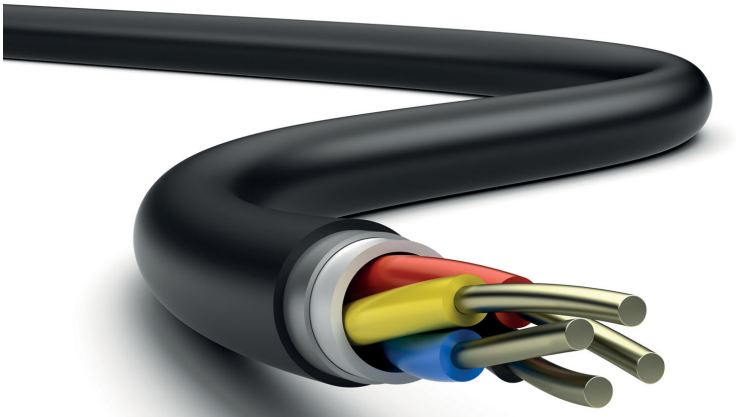
How do you like Fakuma 2018? Do you meet mostly existing customers here?

Lutz and Schelles: This year Fakuma is very busy. We have presented a wide range of our portfolio and we are glad our new products have had a successful launch. As for attendees, of, course, Fakuma means much for interacting with our existing customers. But I'm always surprised to see many new processing companies here. Actually, Fakuma is an event that gives you an opportunity to contact a lot of customers within short time. It is a very conveniently placed show, just in the center of European plastics processing area, including Germany, Austria, Switzerland. Sometimes the venue is difficult to reach, but, for sure, it's worth coming here every year.

Mr. Lutz, Mr. Schellers, thank you for this interview!

Solvay
www.solvay.de

How precisely silane can be metered during continuous plastics processing has a direct influence on the quality of the end product. This is why fast and precise control of the flow rate must always be guaranteed – even when different types of silane are being used for different products. LEWA GmbH from Leonberg, Germany, has a customer that faced this very challenge. The customer is a cable manufacturer that uses various types of silane as crosslinkers and adhesion agents to produce cable insulation.



Silane crosslinking is an established process that improves the performance of cables. In comparison to thermoplastic polymers, crosslinked polymers achieve much better results when it comes to resisting heat, deformation and weather effects (Source: Fotolia)

Customized Pump Technology enables Precision Silane Metering in Accordance with national Guidelines

In order to ensure uniform product quality from various manufacturing sites around the world, the company decided to go with ten metering systems made from outstandingly durable materials. At its core, the customer's system depends on the reliable LEWA Ecoflow diaphragm metering pumps – which provide flow rates between 0.5 and 10 l/h – in combination with the company's proprietary "LEWA Smart Control" technology and a high precision mass-flow meter. Continuous guide signal and measuring instrument feedback ensure sensitive and prompt control with only very minor deviations. Since the metering systems are being used worldwide, minor modifications were necessary for adapting to national regulations.

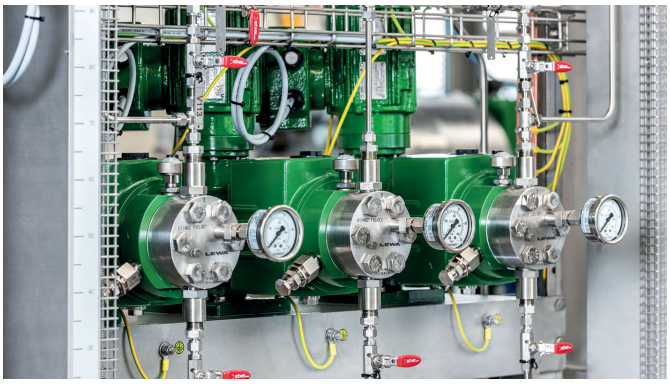
The LEWA Ecoflow diaphragm metering pumps are the core of the new systems. Thanks to their modular design, the systems can handle a wide range of fluids, including flammable, toxic, abrasive, viscous, environmentally harmful and sensitive fluids (Source: LEWA GmbH)

Silane crosslinking is an established process that improves the performance of cables. In comparison to thermoplastic polymers, crosslinked polymers achieve much better results when it comes to resisting heat, deformation and weather effects as well as electric flow and creep behavior. In addition, the process has the advantage of requiring much less energy for the procedure compared to similar methods such as radiation crosslinking. The results are lower operating costs for production and environmental conservation. One company that uses this process is a customer of LEWA GmbH. Depending on the application and product, the customer (a cable manufacturer) uses various types of silane to produce cable insulation, such as aminosilane or vinylsilane. Since silanes are usually highly flammable as well as highly reactive in combination with atmospheric oxygen, the systems used for metering must make safe handling possible. For these purposes, the company has been relying on customized metering systems from the LEWA pump experts for many years

now. The production expansion in 2016/2017 was no exception. The company was looking to buy systems for plants in Brazil, Colombia and Peru. And once again, they opted for the experts from Leonberg. "The customer's central solution requirements were reliability, safety and precision. We were able to offer a solution that met these requirements, both technically and economically," explains Roland Schwab, Product Manager at LEWA GmbH.

Tried-and-tested systems with custom designs:
The LEWA Ecoflow diaphragm metering pumps are the core of the new systems. Customers have the option to select from a variety of pump head types (diaphragm or packed plunger pump head), materials and surfaces, which means that their systems can be built to handle a wide range of fluids, including flammable, toxic, abrasive, viscous, environmentally harmful and sensitive fluids. The Ecoflow series can be used for flow rates up to 19 m³/h per pump head (the model used by the customer operates between 0.5 and 10 l/h) and discharge pressures up to a maximum of 1,200 bar. Tank sizes also vary between 60 and 240 l/h. The hydraulically actuated pump heads stand out in particular for their high operating reliability as well as a long service life, which is made possible by features such as the patented diaphragm protection system (DPS). This ensures that the pumps remain hydraulically stable even in the event of accidents or operating errors. As a result, the pumps are extremely reliable and have low maintenance and operating costs.
The systems have also been adapted to the customer's specific requirements. This way, it is possible to make modifications to the flow rates, connection voltage, system hierarchy and product supply without a hitch. At the same time, it was also necessary to construct the systems in accordance with the valid regulations of the country of installation – for example relating to implementing explosion protection. "Beyond that, the visual displays were each delivered in the language of the specific country," Schwab adds. Another one of the purchaser's requirements was that it be possible to use the systems universally for different silane liquid types. LEWA met this requirement by using high-quality materials. Stainless steel was used for the pump housing and PTFE was used for the sandwich diaphragm. These materials show hardly any wear, even when pumping aggressive fluids.

Measures for greater safety when handling silane:
LEWA took a variety of steps to guarantee the level of safety required by the customer for the handling the silane being used. These steps included designing the system in accordance with Ex-Zone 2 and equipping it with continuous monitoring for certain parameters such as fill level, flow rate and pressure or diaphragm status. "Additionally, an inert atmosphere is created by nitrogen blanketing," explains Schwab.
The reliable "LEWA Smart Control" controller allows for intuitive operation using a color touch panel directly on the control cabinet. The controller is integrated into the higher-level system control. Among other features, the touch panel delivers a general graphic overview of the individual processes and parameters as well as a summation of production related data. This data can then be used as a foundation for initial analyses in the event that maintenance should be required. Using an optional data connection, LEWA is able to connect to the system directly and provide support from their headquarters in Leonberg. This data connection even allowed LEWA to provide the customer with support during commissioning. Thereby, the process was able to be significantly shortened.



LEWA Smart Control guarantees metering accuracy. The controller handles this by carrying out a variance analysis and then instantly adjusting the flow rate as necessary (Source: LEWA GmbH)

Smart accuracy:
"We also fulfilled the third essential requirement – the requirement for accuracy—using LEWA Smart Control," Schwab explains. "The controller handles this by carrying out a continuous variance analysis and then instantly adjusting the flow rate as necessary." For the alignment, a high precision mass-flow meter is used as a measurement instrument for the actual value, and an external 4-20 mA guide signal is used for the target value. The customer also receives information on the status of the system by comparing the current flow rate for a specific point of operation with the flow rate stored in the controller for that operating point. For even greater reliability, the systems also each feature a redundant metering pump.
"To ensure optimal reproducibility, consistency and product purity of the plastics, it is necessary for the silane to be metered precisely and independently of external influences," Schwab states. "The fact that the customer once again called upon us to implement this process at various plants shows that we have truly earned the trust of this customer thanks to our technical expertise."

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“The PURITY SCANNER is currently the most accurate sorting equipment available on the market”

Minger counts on SIKORA’s inspection and sorting system for the highest material purity during recycling of technical and high-performance polymers

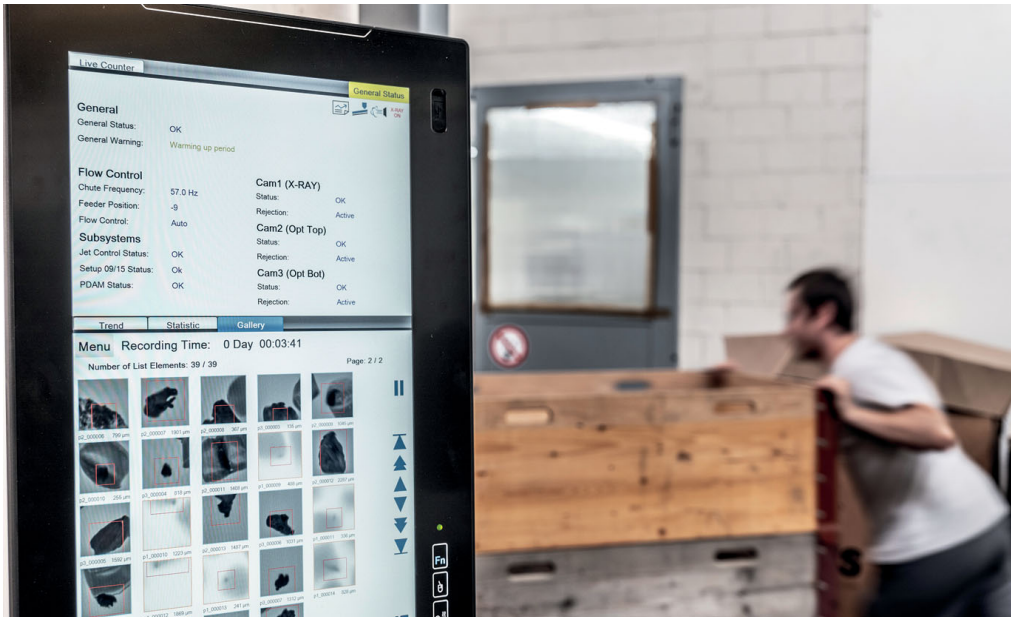
Minger Kunststofftechnik AG is a specialist for professional reprocessing of thermoplastic polymers. The company is especially renown in the area of technical high-performance polymers and is one of the leading reprocessors of fluoroplastic worldwide. Since 2018, the family owned company located in Appenzell/Switzerland has been using the PURITY SCANNER ADVANCED, an online inspection and sorting system from SIKORA, for recycling and thus ensures the highest material purity

Minger uses SIKORA’s PURITY SCANNER ADVANCED for inspection and sorting of plastic granulate; Bruno Ofner, CEO of Minger Kunststofftechnik AG

For the production and processing of polymers, the highest purity of the materials is essential and a crucial characteristic for the quality of the final product. The requirements on purity are accordingly high, especially for sophisticated materials which, for example, are used in the cable, medical, aerospace and food industries. For over 30 years, the company Minger has been active in the recycling business and produces plastic granulates as customized compound or as clean and pure regranulate, which is reprocessed as a service, respectively, as un-disclosed recipe. At Minger, they sort, clean, shred, ground, dust, granulate and compound – always with the demand to supply a pure regranulate that is practically equivalent to new material. At the same time, the company relies on a sustainable recycling concept for an optimal material cycle.

The application of innovative technology in the reproducing lines to ensure the highest quality and process optimization is a matter of course for the Swiss manufacturer. Since this year, the company has been using the PURITY SCANNER ADVANCED from SIKORA for online inspection and sorting of plastic material. “For our technical polymers and high-performance polymers – such as fluoroplastic, PEEK, polyamide, polyethylene or polypropylene – this quality approach was relevant for supplying first-class material”, says Bruno Ofner, CEO of Minger Kunststofftechnik AG. According to Ofner, there are several methods for material sorting on the market. The PURITY SCANNER ADVANCED convinced, however, on grounds of its future-oriented measuring principle and, above all, due to sorted, pure material. “Worldwide, we are the first company that uses this technology for recycling”, says Ofner. During the production of raw or recycled granulate, the plastic material can be contaminated by black spots, foreign particles or fine metal abra-

sion. These impurities are eliminated by the PURITY SCANNER ADVANCED. The inspection and sorting system combines X-ray and optical technologies and detects contamination inside the granulate as well as on its surface. Thus, transparent, diffuse and colored materials are reliably inspected for purity to 100 %. Contaminated granulates are detected and automatically sorted out. The result of the purity testing is significant because, in the extreme case, unusable material can be made usable again. "The material does not contain foreign particles and the quality is improved up to 100 %", explains Ofner and adds "the PURITY SCANNER ADVANCED is currently the most accurate sorting equipment available on the market. With the optical sorting systems used so far, generally only up to 96 % purity can be guaranteed. Then, however, impurities remain undetected in the pellet.



Process data with image gallery of contaminated pellets is clearly displayed at the monitor and evaluated

The SIKORA device is combined with an intelligent processor system, which analyzes and visualizes the sorting. For Minger, especially the statistical evaluations of the detected contamination sorted by number, size and frequency as well as an image gallery of contaminated granulates, which were detected by the optical cameras and X-ray camera, are of importance. All information is automatically saved and available in Excel format as well as image file. Also recorded is data such as the possible duration of the order, material type, throughput and rejection rate. This way, a full traceability is possible after a project has been completed. "We use the production data as reference for future orders. Furthermore, we forward the information as a final report to our customer, who receives absolute technical transparency about his product and the production process", explains Ofner.

Customers appreciate Minger's quality standard and know that sorting technology is a core element in the production process in order to ensure premium plastics. This strategy has a positive impact on all stages of the process chain. "By supplying clean, evenly reprocessed regranulates, we are supporting an automatic and smooth production process of plastic products", explains Ofner. Furthermore, Minger enables a sustainable material cycle by using innovative sorting technology from SIKORA. "Impurities are eliminated, the processed material can be reused and waste reduced", says Ofner. Hence, regranulates from Minger are nowadays a competitive alternative to new material, providing economic benefits whilst also protecting the environment.

By using the inspection and sorting system, the quality of the material will be improved by 100 % cleaness; left: pure material after sorting, right: contaminated material before sorting

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Award winning plastic innovations

motan innovation award ceremony during Fakuma exhibition

The winners have been confirmed: Three new ideas in the field of raw materials handling were awarded with the motan innovation award (mia) on 18th October 2018. The technology company motan runs the competition every two years to promote ideas and innovations that are too good to be forgotten

Sandra Füllsack and Carl Litherland (CMO motan holding gmbh, right outside) with the winners and jury members. From the left: Philipp Mählmeyer (2nd place), Reinhard Herro (First place), Bernd Michael (3rd place), Karl Miller (motan-colortronic Ltd. , Great Britain), Prof. Dr. Martin Bastian (SKZ Würzburg, Germany), Dr.-Ing. Peter Faatz (Process development for plastics technology, INA Werk Schaeffler)

The mia jury, a panel of four experts from universities and institutes in the field of plastics research, had short-listed six ideas, as finalists for the award in July after intensive evaluation. The three winning projects were particularly convincing in terms of innovation level, relevance for the practice in the plastics industry as well as feasibility and market opportunities, and prevailed over the other contenders.

Gravimetric suction box gives Reinhard Herro first place

The gravimetric suction box developed by Reinhard Herro is a new system for throughput detection with batch traceability for pneumatic conveying systems. It measures all material throughputs directly at the material source and thus replaces the usual measuring procedure at the consuming unit typically a material loader. By means of a gravimetric dispenser integrated in the suction box, each batch of material is weighed individually before conveying and then automatically assigned to the designated machine. With only one measuring system it is now possible to measure and control the material throughputs of many consuming units. In addition, the gravimetric suction box opens up completely new possibilities for the control and monitoring of pneumatic conveying systems, as many processes are automated. For example, the optimum filling quantity for material loaders is automatically generated and overfilling is prevented. The jury also acknowledged that the increase in the degree of automation was accompanied by an increase in the reliability of the plants. Reinhard Herro receives a prize of 10,000 euros for his innovative idea.

Philipp Mählmeyer achieves second place with his developed app

To be able to optimally serve large complex industrial plants requires a quick and precise retrieval of the current status information. The new app by Philipp Mählmeyer starts at this point: using clear, machine-readable codes (QR codes), which are attached to the aggregates, they visualize the required data on a mobile device. Thus, each operator can not only query status information easily, but also control the associated processes. For example, using a mobile device, mechanical adjust-

ments, calibrations and service work can be carried out directly at the machine. A major advantage of Mählmeyer's app: The installation effort and the costs are low compared to other systems, if the necessary system technology is already available and the controls can be addressed via a network. In addition, a sophisticated "right and role" system enables user-specific visualization on the mobile device. For example, a service employee will see different information compared to a plant operator. motan honours this project with a prize of 6,000 euros.

1. Reinhard Herro
Project idea: GAK system (gravimetric suction box);
Objective: Automation, control and monitoring of suction conveyor systems

2. Philipp Mählmeyer
Project idea: System control on a mobile device;
Objective: Query status information specifically via QR codes

3. Bernd Michael
Project idea: System METRO-Lay;
Objective: Efficient creation of routes for material and vacuum lines

The system METRO-Lay: Bernd Michael gets bronze for his innovation

With the highly flexible "METRO-Lay" system, material feedlines can be laid in a very uncomplicated and efficient way. METRO-Lay is the name Bernd Michael give his idea, which is made up of the terms "METRO" (representative of all motan conveying systems) and "Lay" (as a reference to one of the world's largest scaffolding manufacturer's Layher). The development consists of two essential components: the Layher Allround scaffold system, which serves as a supporting structure for material feedlines, and newly developed plug-in modules, which ensure faster and more secure installation of material and vacuum pipework. The combination of these two components optimizes the construction of feedlines significantly. METRO-Lay shortens assembly times, reduces assembly costs and thus increases the project margin. Even human resources can be spared by the comprehensibly structured system. Bernd Michael can look forward to a prize of 4,000 euros.

Award winners in the Dornier Museum Friedrichshafen

Sandra Füllsack, CEO and Carl Litherland, CMO of the motan group and the jury members presented the winning trophies at the official award ceremony on 18th October at the Dornier Museum, Friedrichshafen, Germany. The prize money totaling EUR 20,000 is donated by motan holding gmbh, which also supports the winners in patent applications and further development of their innovations right up to market introduction.

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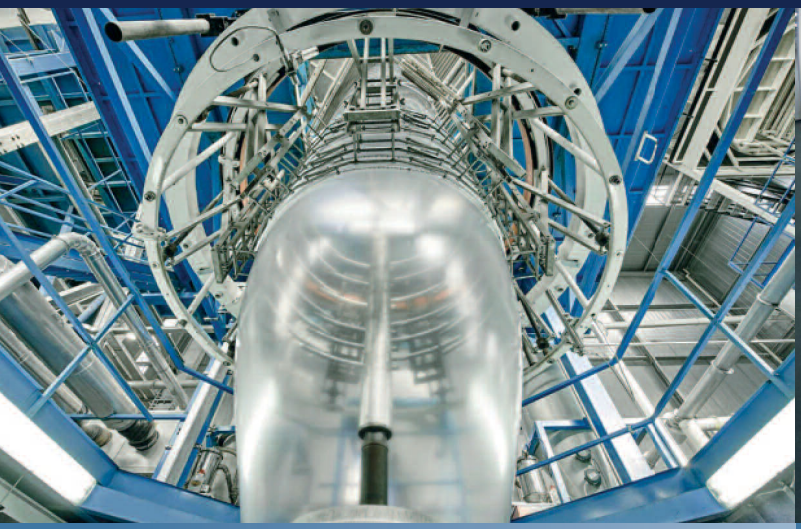

More than **60** plastics processing companies

More than **180** participants

KEY ISSUES

- Reduction of unplanned downtime and repairs - online diagnostics, monitoring and service.
- Digital transformation of a polymer industry enterprise - how to start?
- Modernization of equipment: from idea to implementation. How to avoid mistakes?
- What are the reserves for optimization at each stage of production (transportation, dosing, mixing, heating or cooling, extrusion or injection moulding, quality control, etc.)?
- "Lean" in the processing of plastics

SEPARATE PARALLEL SESSIONS for polymer processors by the methods of EXTRUSION and CASTING — producers of films, pipes, PVC profiles, plastic containers and other polymer products — for each group of manufacturers - the subtleties of technologies and processes, raw materials and additives, equipment and individual components, discussions, experience and exchange of views. We know that you are interested.

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