



SIBUR AT IPTF. NEW GRADES AND SERVICES

The 10th Anniversary International Polymer Technology Forum (IPTF) was held on May 17-18 in St. Petersburg. It is the key event for technologists and managers of the industry.

The event brought together 261 participants from 150 companies. Over two days, they listened to 27 presentations about the problems the industry was facing and the ways to solve them. The speakers covered some very meaningful topics: improving the companies' operations efficiency driven by automation and lean manufacturing, optimizing the logistics and promoting the recycling processes in the country. The presentations by SIBUR specialists stirred great interest.

IN 2022, SIBUR WILL CONTINUE TO ENHANCE ITS GRADES ASSORTMENT. ALL THE EXISTING TECHNOLOGICAL CAPABILITIES AND THE R&D INFRASTRUCTURE WILL BE USED TO DEVELOP NEW GRADES SOLUTIONS

"This year the International Polymer Technology Forum is celebrating its 10th anniversary," Konstantin Vernigorov, SIBUR PolyLab General Director, says. "The Forum has evolved over the years, to become a striking event for the polymer industry. A beautiful venue, friendly atmosphere and strong participants — all these factors allow for a different point of view of the current challenges and use of collective thinking to define the optimal development areas. Our company has been the general sponsor of the event for the second year running. That is why we believe that we also contribute to the polymers processing and industry development."



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More grades — good and varied

Ilnaz Zaripov, Head of Technology and Innovations for Polyolefins Project Office, spoke about the grades assortment of the integrated company.

“One of the key elements of SIBUR’s value proposition is a broad variety of grades offered to the customers. It covers all the main needs of the industries, which use petrochemicals: packaging, transport, construction, healthcare, and agriculture. Another important factor is the well-balanced and complementary product portfolio, which we were able to create combining all the capabilities of the integrated company,” Ilnaz Zaripov says. “For example, the assets in Tatarstan added 1.2 Mt of polyolefins to 3.3 Mt produced by SIBUR. The proportion is vice versa for rubbers and polystyrene. Thus, 0.3 Mt of polystyrene produced in Tatarstan are combined with 0.1 Mt produced by SIBUR. As for rubbers, 0.8 Mt produced in Tatarstan are combined with 0.4 Mt produced by SIBUR. Naturally, such growth of tonnes and enhancement of the product slate allows for the integrated company to meet the customers’ needs on a larger scale.”

In 2022, SIBUR will continue to enhance its grades assortment. All the existing technological capabilities and R&D infrastructure will be used to develop new grades solutions. We will also continue our efforts in enhancing the grades assortment by utilizing all the opportunities associated with the licenses we are holding. Ilnaz Zaripov highlighted the new polyolefins grades coming soon; they are required for manufacturing various types of pipes, which are currently much needed in the industry. Impact copolymer of ethylene and propylene PP I 003 EX is used for sewage and drainage pipes, including pipes with profiled walls, and two bimodal HDPE grades: HD 03594 RC with excellent physical and mechanical properties and good process-ability, and HD 02604 PE for manufacturing big-diameter pressure pipes.



Konstantin Vernigorov, CEO of SIBUR PolyLab, noted the strong mix of participants — all these factors allow for a different point of view of the current challenges and use of collective thinking to define the optimal development areas.

SIBUR is focused on developing the new innovation brand Vivilen. This is an environmentally friendly solution with stable properties, a mix of high-quality primary feedstock and recycled polymers. Vivilen grades with an added 25% of rHDPE and rPP granules are used in manufacturing bottles for liquid household chemicals and shampoos, and buckets for inedible products. The material with 50% of rPE gives excellent heat-shrinkable films for multi-unit packaging or plastic bags for packaging.

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Kermen Bovaldinova, Ksenia Ustinova and Stanislav Khvostov, managers of SIBUR technical services, spoke about the key priorities of the company in the new environment: uninterrupted output of high-quality products capable of satisfying the market demand and on-going skilled assistance to our customers.

“Starting from 2014, we are actively cooperating with partners from different countries in testing various additives in our R&D centers,” Kermen Bovaldinova highlights. “This allowed us to develop the specifications for the chemical products supplied to us, and gave our partners a chance to improve their products in order to continue their cooperation with us. However, just like many other companies nowadays, we are facing challenges due to new sanctions packages which continue to be introduced as well as due to logistical complications. That is why we are forced to search for alternative ways to ensure the stable output of high-quality products. In the near future, we will have to change many components, including catalysts, and functional additives, which may affect the products’ quality. But our main task is to ensure stable operations and supplies to our customers.”



Ilnaz Zaripov, the Head of Technology and Innovations for Polyolefins Project Office, presented examples of the balanced nature and complementarity in the product portfolio of SIBUR.

“After we produce the first batch of a product with any changes, we first of all homologate our products at the procession lines in SIBUR PolyLab,” Ksenia Ustinova says. “We perform both primary tests, and trials of the finished products to understand the connection between the changes in processes and the changes of the finished products parameters, as well as to understand the level of feedstock quality with a new additive. Only after we have finished do we ship products to our customers for homologation at their sites. On behalf of the technical service and SIBUR PolyLab, at this stage we are ready to provide comprehensive technical support to the customers: to help them fine-tune their processing equipment and determine optimal processing modes, to test new or adjusted formulations — both at SIBUR PolyLab and at the customers’ sites.”

IN ADDITION TO STANDARD TECHNICAL SUPPORT OF OUR CUSTOMERS, DURING RECENT SEVERAL MONTHS SIBUR SPECIALISTS HAVE BEEN ENGAGED IN A BROAD-SCALE EFFORT TO SEARCH FOR ALTERNATIVE CHEMICAL PRODUCTS TO ENSURE STABILITY OF OUR CUSTOMERS’ OPERATIONS

In addition to standard technical support for our customers, during the recent several months, SIBUR specialists have been engaged in a broad-scale effort to search for alternative chemical products to ensure stability of our customers’ operations. We have already received requests from over 100 companies with an overall list of over 1,300 positions of various chemicals.

Take care of the customer inside and out ...

Various types of services are available for our customers: financial, logistical and technical ones. Yana Khilko, Vladimir Khaprenko and Alexei Bushmelev talked about SIBUR technical services.

“SIBUR Technical Service support the customer at all stages of operations. It helps to select the equipment and fine-tune the production lines, consults on the existing grade assortment and, if necessary, launches the grades customization for special needs”, Yana Khilko says.

Technical services are presented in six different areas, which have been launched based on the Customer's Personal Area:

1. Technical consultations in all accessible formats including Remote Expert at the customer's site, by videoconference or by using AR-glasses.
2. Developing new products and solutions including formulations based on our R&D centers.
3. Training of technical specialists in grades assortment issues, technical properties of the product and its usage, processing methods, and in narrow specialized issues of the industry. Videoconferences and webinars "SIBUR Business Practices" are held on a regular basis for this purpose. In-person training is available at SIBUR PolyLab and at other company sites.
4. The SIBUR digital technical service may improve the efficiency of the partners' operations by way of advanced data analysis of materials processing.
5. Laboratory support.
6. SIBUR's Certification test labs are always ready to perform analytical and physical-and-mechanical studies of the finished products. They perform 70+ accredited primary tests and issue a certificate of compliance with industry standards.



Kermen Bovaldinova, Kseniya Ustinova and Stanislav Khvostov, managers of technical functions within SIBUR, presented key priorities of the Company in the new prevailing conditions.

SIBUR technical service reached new heights with the new unique in-house platform - AR Remote Expert. This is a software and hardware system consisting of augmented reality glasses, a web application developed by SIBUR, and a protected video platform. This development allows for engaging an unlimited number of experts from different geographies. This is a way of rendering immediate support to the customer, saving time and money (no site visits required). Other advantages are lack of territorial and visa limitations, possibility of comprehensive support in the environment of the pandemic and other restrictions. This technology has proved its efficiency in practice. More than 250 site visits of external experts were substituted with the AR Remote Expert application.

Digital Technical Service (DTS) is another initiative of SIBUR. It is absolutely unique for the Russian petrochemical industry and deserves special attention. The initiative includes implementation of comprehensive recommendations and solutions developed with the help of advanced analytical tools and focused on improving the operational efficiency of the customer.

SIBUR HAS BEEN DEVELOPING ADVANCED ANALYTICS FOR SEVERAL YEARS. OUR EXPERTS LEARNED TO ANALYZE INTERNAL BUSINESS PROCESSES AND OPERATIONS

Artificial Intellect or Big Data plays a key role here. It allows for very a quick analysis of terabytes of data regarding all process parameters of both SIBUR and its customers, and thus find a solution for the process of fine-tuning, avoid negative events and improve operational efficiency.



Yana Khilko and Alexei Bushmelev, specialists from SIBUR's technical service, shared examples of how SIBUR helps with equipment selection and adjustment of the production line, consults on the current product mix and much more.

SIBUR has been developing advanced analytics for several years. Our experts learned to analyze internal business processes and operations. But the key value of this service is including into our analysis the data we receive from our customers regarding the processing of our products. Due to this, we can analyze the product across all the stages of its life cycle — from the moment the feedstock is loaded into the polymerization process until the finished product appears.

THE PRESENTATION OF SIBUR POLYLAB, THE CENTER OF APPLIED R&D, WAS MET WITH GREAT INTEREST. THIS RESEARCH FACILITY WAS LAUNCHED IN 2019 IN SKOLKOVO. IT IS EQUIPPED WITH 12 MANUFACTURING LINES AND OVER 100 STATE-OF-THE-ART TESTING UNITS

The Digital Technical Service is available in three options:

- The base level. This comprises a one-off diagnostics issuing a set of recommendations based on analyzing the target variable.
- Two other options are more complicated digital solutions, which may be either supported by our partners' in-house IT resources or located in the cloud service of SIBUR's infrastructure.

An example is the so-called Advisor, who will prompt ways to get the process back to standard parameters in case of any deviations.

The presentation of SIBUR PolyLab, the center of applied R&D, was met with great interest. This research facility was launched in 2019 in Skolkovo. It is equipped with 12 manufacturing lines and over 100 state-of-the-art testing units. More than 50 highly skilled specialists work in PolyLab. They are engaged in development and promotion of new types of polymer products and recycling technologies, as well as in testing new formats of customer services.



Elena Maltseva, Senior Marketing Expert for the Packaging Industry, and Sergei Davidov, Senior Manager for Digital Marketing, spoke about the industry development of polymeric solutions, market visions and potential growth points.

The key tasks of SIBUR PolyLab are as follows:

- Laboratory support. Performing analytical research in the polymers field. Testing the items manufactured from polymers using methodologies not available to our customers.
- Finished products quality improvement Identification and analysis of problem causes. Support in selecting the optimal operation modes. Support in implementing the quality control methodologies.
- Development of the grades range Analyzing the market trends. Exploring possible configurations of the product. Proposing solutions based on the grades manufactured by SIBUR.
- Certification tests Testing samples of pipes to receive record sheets required for certification. Testing of packaging using the customers' methodologies.