



## **NEW POLYETHYLENE PIPES**

PK KONTUR is developing the production of cross-linked polyethylene (PEX-a) pipes.

Cross-linked polyethylene (PEX) pipes are made from special high-density polyethylene – its molecules are linked (cross-linked) with each other, forming additional molecular bonds. The result is a new high-strength and elastic material, which is called cross-linked polyethylene. The cross-linking of molecules can happen in four ways. Peroxide is used in the production of PEX-a PK KONTUR pipes, which gives the pipe maximum cross-linking density and strength when compared to other types of PEX (b, c and d).

Flexible pipes made of cross-linked polyethylene first appeared on the domestic market at the turn of the 2000s. Over the past five years, demand for such products has increased by 10%–12%. The main consumers are developers of residential and commercial real estate, who use PEX pipes in hot and cold water supply and in heating. PEX pipes have a number of significant consumer benefits, in terms of their technical, physical and chemical properties, when compared with conventional systems based on polypropylene and steel pipes.



### **EXECUTIVE DIRECTOR OF PK KONTUR, DANILA KOTELNIKOV:**

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PEX pipes are easy to install in rooms without having to use fittings, which reduces the speed and cost of installation work. After any deformation, they restore their shape. Operating temperatures range from –50 °C to +95 °C. Due to a special layer in the pipe, oxygen is stopped from penetrating the pipe walls, which prevents the formation of air jams in the system and the loss of heat.

Russian manufacturers in 2020 accounted for about 50% of total supplies of PEX-a pipes to the Russian market. That is about 34,500 km of pipe. POLYPLASTIC Group is the largest manufacturer of these products in Russia, the remaining volumes are imported products from various manufacturers. The launch of the pipe production line at KONTUR will further reduce the volume of imports and offer customers a choice of domestic pipe systems.

“At the moment we are in the process of pre-commissioning one production line, and in future we plan to expand capacity,” said Danila Kotelnikov, Executive Director of PK KONTUR. “Our experience in setting up a similar production line for PE-RT pipes will allow us to carry out the necessary tests in the shortest timeframe and establish the stable production of PEX-a pipes under the G-RAY trademark. We expect to release the first products in June 2021. We already have buyers for them from among developers based in Yekaterinburg, and we are busy promoting the new products in other regions. We are targeting the medium price segment, as we are confident in our quality and are ready to support sales end-to-end – from delivery to installation.”



*Demand for flexible pipelines made of cross-linked polyethylene has grown at a CAGR of 10% to 12% over the past five years.*

PK KONTUR was established as a producer of polypropylene pipes and fittings in 2007 in Zarechny, Sverdlovsk Region. In 2009, KONTUR expanded its product range by launching the production of glass-fibre reinforced polypropylene pipes, and in 2010 aluminium reinforced products were added to the portfolio. In 2013, production of sewer pipes and fittings started. In 2014, G-RAY flexible pipes made from PE-RT were added to the portfolio. The production of pipes and fittings for use in underfloor heating, water supply and heating was developed. Fittings made of two materials, both brass and PPSU, were on offer to customers.

In 2020, the company began to produce reinforced polypropylene pipes for high-rise construction made of PP-RCT ProPress materials. In 2021, the production of G-RAY flexible pipes is planned to be expanded by adding the PEX-a pipe production line.

The company has more than 250 employees. Its client portfolio includes more than 150 customers from all regions of Russia, and a number of companies from neighbouring countries.

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Domestic supplies of PEX-a pipe to the market will allow developers to offer modern pipe systems on the markets of the Ural and Volga Federal Districts, stable product prices that do not depend on currency fluctuations, and convenient logistics. In addition, the company works with a network of distributors throughout Russia.

“We actively make use of the services of domestic plastic manufacturers,” said Danila Kotelnikov. “For example, we have a long-standing relationship with SIBUR in the supply of raw materials for the production of other products – pipes and fittings made of pressure polypropylene and sewer pipes and fittings, made of random copolymer and polypropylene homopolymer, respectively.”

Last year, PK KONTUR managed to increase the production volume for some types of products. For example, the production of sewer pipes and fittings increased by 30% due to the launch of a new production line. Investments in production totalled about RUB 80 million, half of which the company received as a subsidised loan under the Development Projects federal/regional programme. Following the launch of the PEX-a pipe production line, the company will continue to modernise and expand its production facilities to broaden its product range and increase production volumes.