Dear Colleagues,

Here is another issue of the PLASTIC PIPES magazine in English. As usual, you will find articles on the Plastic pipes market in Russia and CIS countries, the most significant events that took place in the Russian plastic pipeline industry, large projects involving plastic pipes and other materials that hopefully will be of interest to you.

The changes in the political situation around Russia and plunging of oil prices in 2014 have greatly affected the economic situation in the country, particularly that in the plastic pipes market. Curtailing of federal investment programmes in construction, reduction in state budget financing of infrastructure projects, abnormally high credit interest rates, galloping inflation – all this lead to a drop in demand for pipe produce and to aggravation of competition. This crisis will, apparently, be deeper and longer than the previous ones and not all of the market participants will be able to survive it.

The market shrank, but it is still alive. The critical condition of the communal infrastructure requires reconstruction of utility networks in any circumstances. Construction companies have to purchase pipes, fittings and other components for the pipelines even in times of crisis. New construction has decreased, but is has not stopped. The largest suppliers of fittings and equipment, apparently, still have interest in the Russian market and continue their cooperation with Russian customers.

“That which does not kill us makes us stronger”. Any crisis creates new possibilities for active market players. Crisis draws interest to innovative and high efficiency products and creates favourable conditions for market expansion.

Only time will show how the situation further develops. We will carefully watch this development and try to impartially cover it on the pages of our magazine.

Miron Gorilovskiy,
Editor-in-chief

PLASTIC PIPES
Annual information and analytical digest

Publisher:
POLYPLASTIC Group

Editor-in-Chief:
Miron Gorilovskiy
Executive Editor:
Alexander Sazonov
Project Manager:
Mikhail Burenko
Art Director:
Maxim Kompaneets
Photo Editor:
Tatiana Gorilovskaya
Editorial Board:
Kirill Trusov, Ekaterina Krivosheina, Maxim Baranovskiy
Address:
18, Ochakovskoye Shosse,
Moscow 119530 Russia
Tel.: +7 (495) 745 6857 ext. 3125
E-mail: journal@polyplastic.ru

Circulation: 2000

INDUSTRY NEWS

PLASTIC PIPES MARKET

TECHNOLOGIES & MATERIALS

PLASTIC PIPES APPLICATION

PIPES SURROUNDING US

PERSONS

RADIUS GROUP AND AUSTRIAN DISTRICT HEATING LEADER KE KELIT FORM NEW JOINT VENTURE

Radius Group, the multinational market leader in PE Pipe and Fittings and KE KELIT, the leading Austrian Pipe Systems manufacturer based in Linz, are pleased to announce the formation of an exciting new joint venture between Radius and the District Heating business of KE KELIT. Radius will take a majority position in the new company which will trade under the name, Radius-Kelit.

Andy Taylor, Radius CEO, said: "we are overjoyed to be partnering with KE KELIT and the Egger family in establishing such an exciting new opportunity. District Heating is a core segment for the Radius Group and this move will provide all the right combinations to establish a springboard for European growth. The market experience, position and routes to market which KE KELIT, a pioneer in the European District Heating market, provide, combined with the innovative product proposition and the manufacturing and technology expertise from Radius will create a potent market participant. We look forward to working with our partners and their skilled and dedicated workforce to bring to the wider European market a unique offering of reinforced, flexible, pre-insulated plastic pipes designed specifically for high temperature and high pressure networks. This move is the latest in Radius' strategy to complement our core pipe and fittings business with closely associated products, services and technologies and in so doing enhancing our value added proposition to our customer base".

Karl Egger, KE KELIT CEO, said: "KE KELIT, one of the leading companies for domestic and industrial pipe systems, is pleased to have found an excellent partner in Radius for a joint venture in district heating and infrastructure projects. Many innovations will result from this partnership which will benefit the district heating market in Europe. Tradition, innovation, expertise, close relationships with partners and strategic planning are the strengths of this joint venture and the basis for future success".

KE KELIT is a 100% family owned company in Linz, Austria. It is one of the leading manufacturers of pipe systems for hot and cold water, heating, ceiling cooling, pipe insulation and compressed air. KE KELIT has been active in international markets for over 60 years and has manufacturing facilities at five locations and more than 20 offices in Europe, the Middle East and Asia/Pacific region. More details about the Ke Kelit Group can be found at http://www.kekelit.com.

Radius Group is the market leader in engineered polymer products in the CIS and the largest producer of polyethylene pipes and fittings in Europe. The Group is the market leader in polymer composite materials supply to the automotive, white goods and building materials sectors in the CIS where it is also the leading manufacturer of District Heating Solutions. The Group operates from 20 plants and exports to more than 50 countries worldwide with an annual turnover of c. €1bn and employs in excess of 7,000 people. More details about the Radius Group can be found at: www.radius-systems.com, www.polyplastic.ru, www.polymerteplo.ru.

Pioneers in PE Pipe Technologies

KE KELIT

RK radius - kelit infrastructure

POLYPLASTIC GROUP HAS ACQUIRED ITALSOVMONT PE PIPES PLANT

Press Service of POLYPLASTIC Group

POLYPLASTIC Group, the largest producer of plastic pipes and composite materials in Russia and CIS has expanded its presence in the south of the country by acquiring Italsovmont PE pipes plant in Volzhskiy, Volgograd Region.

Italsovmont Italy-Russian joint venture was founded in 1989. Initially the company was involved in production and installation of metal work. In 2009 the plant bought new equipment and changed its specialisation to production of HDPE gas and water pipes.

With two Austrian hi-tech Cincinnati Extrusion GmbH lines and Italian auxiliary equipment the plant can guarantee European quality at competitive price. All produce is GOST R certified.

The company has implemented an automatic raw materials consumption system which eliminates the influence of human factor, saves raw material and accounts for scrap in full volume. The system also keeps track of operation and stand-by times and on-line monitoring of main parameters of pipe production.

Moreover, the company has implemented a new sales system which splits traditional sales department into several levels. This helped to improve sales and the quality of customer services, as well as increase loyalty of the personnel.

Tatiana Felde, General Director of Italsovmont LLC: “We are glad to become a part of the largest alliance of PE pipes producers in Russia. This is certainly a new stage for our company. POLYPLASTIC Group manufactures a wide range of products and its sales geography is vastly spread all around our country and beyond its borders. This deal opens wide prospects and a possibility to contribute in the future success of the Group”.

RADIUS SYSTEMS AWARDED RUNNERS UP PRIZE AT LIONS' LAIR EVENT

Radius Systems showcased their innovative range of polyethylene pipe insertion for metallic mains offering in a Dragons' Den inspired contest, the Lions' Lair, an event jointly organised by IGEM and the Pipeline Industries Guild (PIG).

Four of the event sponsors were invited to give a four minute pitch on their company's new and innovative products and services to a group of distinguished judges: Adam Gosnold, executive director of Morrison Utility Services, Robert Murray, sector director of Skanska Utilities and Michael Caulfield, director gas at McNicholas Construction. Peter Jellis, Radius Systems gas coordinator, presented Radius's 17.5 mm pipe system and ServiFlex, a range of metallic pipe relining solutions for the renovation of ¾", 1", and 2" gas services.

ServiFlex is Radius Systems' ground-breaking twin-wall flexible polyethylene pipe liner, exclusively designed for insertion operations of 1" and 2" gas metallic service pipes. Its flexibility simplifies the renovation operations of gas service pipes as the PE pipe can be pushed through short radius bends without the need for excavation and with minimal disruption to customers. The development of their 17.5 mm polyethylene pipe system complements their offering and delivers considerable cost and installation benefits for the renovation of ¾" metallic pipes.

Peter Jellis, who was presented with the runners up prize by Cheryl Burgess, director general of the PIG and Steve McNicholas, compliance director of McNicholas Construction commented: "I am delighted to receive this prize on behalf of Radius Systems. As a manufacturer, we've always been dedicated to improving the gas plastic piping industry through innovative solutions, and it is good to see our work rewarded."

Source: radius-systems.com

THE FIRST HALF OF 2014 SAW 19% DECREASE IN HDPE IMPORT INTO RUSSIA

HDPE import into Russia has decreased by 19% in the first half year comparing to the same period of the last year, Market Report informs.

The total of 124.5 thousand tonnes were imported into the country within the first six months against 153.5 thousand tonnes in the previous year. 26.4 thousand tonnes of HDPE were imported in June.

The analysts from Market Report point out that the fall in import volumes was registered in all consumer sectors except for the blow moulding PE – Russian processers increased consumption of this grade of raw material from Uzbekistan and Poland.

Supply of HDPE for extrusion coating of big diameter steel pipes in the first six months has contracted by 17% to 32.6 thousand tonnes. June saw slight demand growth from processers comparing to May – 6.1 thousand tonnes against 3.3 thousand tonnes.

Import of HDPE for pipes decreased by 16% to 32.5 thousand tonnes in the first half year. 8.4 thousand tonnes was supplied in June, 8.1 thousand tonnes – in May. Low demand for plastic pipes and high prices for foreign PE were the main reasons for HDPE import decrease.

Import volumes of injection moudl-ing grade of HDPE decreased by 1% to 23.9 thousand tonnes within the first six months. The import volume maintained May's level of 4 thousand tonnes. Further import increase for this grade of HDPE is not expected due to export quotas that are in place in foreign markets and high prices, particularly, for Uzbek grades.

Buying of film grades HDPE decreased by 61% to 10.4 thousand tonnes in the first half year. Supply volume is expected to increase due to the planned closures for renovation of some Russian producers in July–September.

Import of HDPE for other consumption sectors in the same period decreased to 5.9 thousand tonnes against 6.3 thousand tonnes in the previous year.

Production of HDPE at Stavrolen will only resume in January 2015. Planned renovation is expected at Gazprom Neftekhim Salavat and Nizhnekamskneftekhim in the coming months. Russian producers have decrease production of HDPE by 13% to 373 thousand tonnes.

Source: rupec.ru

«NIZHNEKAMSKNEFTEKHIM» HAS PRODUCED 15 MILLION TONNES OF ETHYLENE

In April 2014 OJSC Nizhnekamskneftekhim ethylene plant had produced 15-millionth tonne of ethylene since the start of its operation and 7-millionth tonne of propylene, derived along with ethylene during hydrocarbon crude pyrolysis. The Plant had produced a record number of ethylene, over 605 thousand tonnes, 100.2% of previous year's level.

OJSC Nizhnekamskneftekhim is the largest petrochemical company with leading positions in production of synthetic rubber and plastics in Russian Federation. The company is founded in 1967 with major production facilities in Nizhnekamsk, Tatarstan Republic. OJSC Nizhnekamskneftekhim is a part of TAIF Group of companies.

Source: plastinfo.ru

START-UP OF THE NEW LINE AT SIBGAZAPPARAT

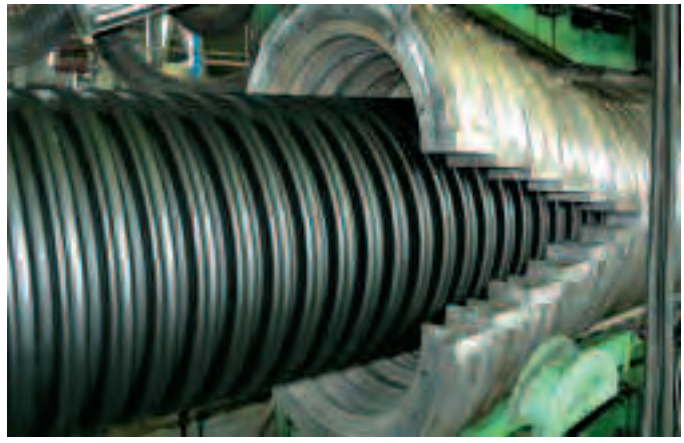
The start-up of the new line for PE pipes with diameters from 225 mm to 400 mm took place at SIBGAZAPPARAT plant in Tyumen on 10 April 2014. The line will produce long-expected 355 mm PE 100 SDR 17–26 pipes that are in great demand.

The plant has commissioned the new injection molding machine for fitting production, sizes up to 160 mm. It is also expecting to put a new extrusion line for 500–1000 mm pipes into operation.

Source: Press-service of POLYPLASTIC Group

CORSYS PIPES IN SIBERIA

ARE NOW AVAILABLE IN SIZES FROM 160 TO 800 mm



Vladimir Melnikov

In 2013 POLYPLASTIC Group management set a goal for Irkutsk Pipe Plant to implement production of 800 mm CORSYS pipes in 2014.

CORSYS line had to undergo modernisation in short period to perform the set task. This included the following works:

– production of pulling unit;
– corrugator upgrade;
– installation of extra cooling for the half-molds;
– replacement of the tilt tables;
– reconstruction of sockets welding unit;
– reconstruction of the cooling baths.

All above works had been performed from the fourth quarter of 2013 until the first quarter of 2014. Moreover, previously out-of-service cutter was reactivated. All changes had been implemented live with no shutdowns and meeting all production targets.

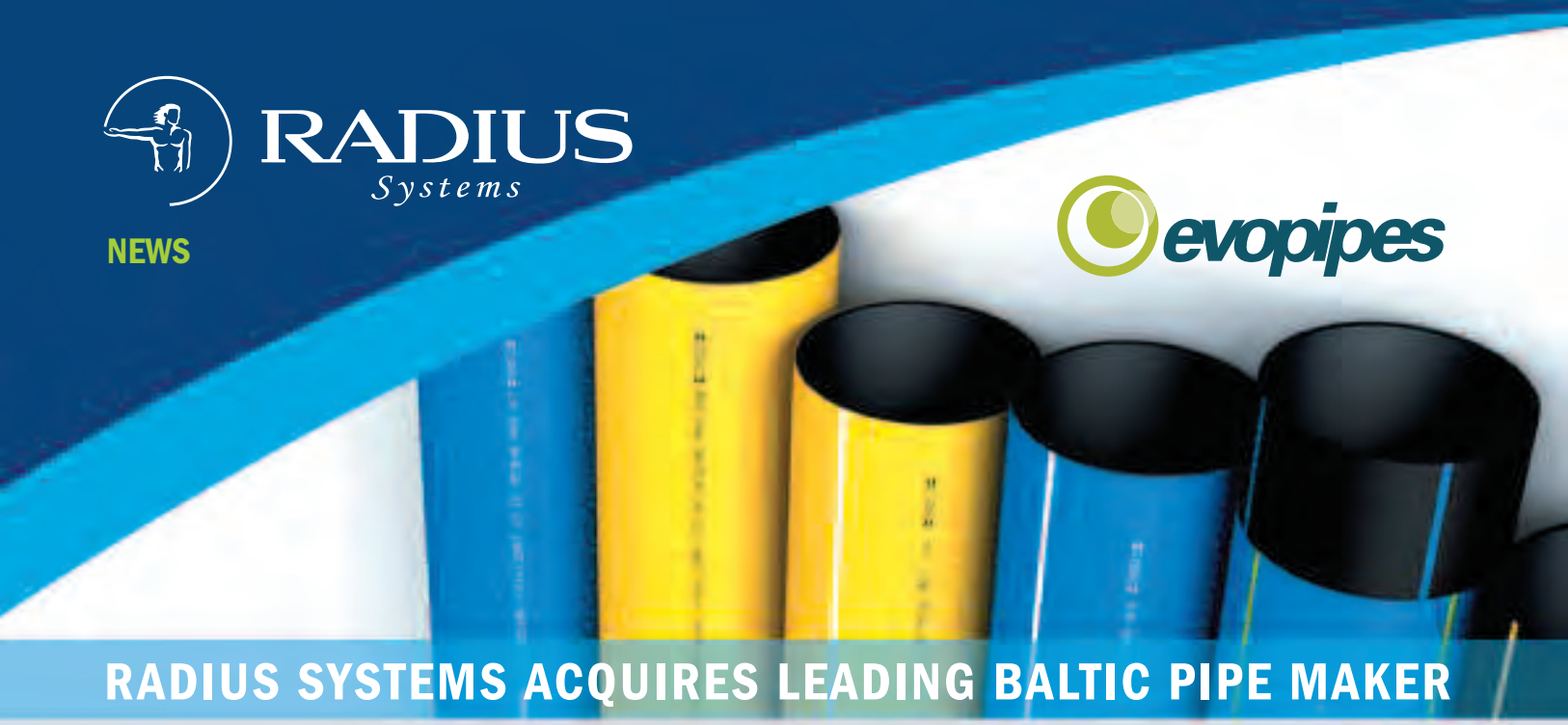
On 19 March 2014 Irkutsk Pipe Plant had begun production of CORSYS 800 SN8 pipes after settling operating conditions of the line.

Now the product range of CORSYS pipes has widened and includes pipes from 160 mm to 800 mm.

RADIUS Systems

NEWS

evopipes



RADIUS SYSTEMS ACQUIRES LEADING BALTIC PIPE MAKER

UK based Radius Systems, a leading international supplier of piping solutions to the Gas and Water utilities and District Heating sectors, is pleased to announce the acquisition of 100% of the issued share capital of the Latvian piping solutions company SIA Evopipes, for an undisclosed sum.

Evopipes, a leading manufacturer and supplier of polymer piping systems operates from a modern custom built facility in Latvia and exports to 14 countries in the Baltics, Central and Eastern Europe and Scandinavia. Target segments are water and gas transportation, gravity drainage, power and telecommunications. See the link below for more information.

Andy Taylor, CEO of Radius Systems, said, "we are delighted and excited to welcome Edgars Vilkins and his Evopipes team into the Radius family. Evopipes complements the Group from a product and geographical perspective and is consistent with our strategy, since becoming part of the POLYPLASTIC Group, to grow our core piping systems proposition both organically and by acquisition throughout Europe. In addition to its market leading position, Evopipes provides the perfect geographic platform to grow sales of our ever widening range of piping solutions and services and joins the Subterra, Aeon and Redman brands as a fourth acquisition in the past 12 months".

About POLYPLASTIC/POLYMERTEPLO/Radius Group

POLYPLASTIC/POLYMERTEPLO is the Russian and CIS market leader in engineered polymer products. POLYPLASTIC is the largest producer of PE pipes and fittings in Europe with a total annual production of c. 250Ktonnes and the market leader in polymer composite materials supply to the automotive, white goods and building materials sectors in the Russia/CIS markets with annual sales of c.80Ktonnes. POLYMERTEPLO is the leading manufacturer of District Heating Solutions in Russia/CIS with total annual sales in excess of 1,000 km. Radius is the leading UK producer of PE pipe and fittings solutions to all major utilities companies in the gas, water and telecoms sectors. The combined Group operates from 19 plants and exports to more than 50 countries worldwide. The Group has an annual turnover of c.€1bn and employs in excess of 7000 people. The combined Group is headquartered in Moscow. More details about the POLYPLASTIC/POLYMERTEPLO/Radius Group can be found at:

www.polyplastic.ru
www.polymerteplo.ru
www.radius-systems.com
www.evopipes.com

POLYPLASTIC GROUP

THE REPRESENTATIVE OF WWF HAVE VISITED KLIMOVSK PIPE PLANT

Press-service of POLYPLASTIC Group

WWF Russia, within the framework of its new nature conservation strategy for 2013–2017, put more effort into developing partnership with responsible business for improving ecology and reducing negative impact on public health. We are happy that POLYPLASTIC Group and WWF are moving towards such partnership.

At the end of 2013, integrated management system of the Group including quality management system and ecology management, was certified according to GOST ISO 9001 and GOST R ISO 14001. GOST R ISO 14001 is a part of international standards in ecology management, its major goal is to promote environment safety and eliminate pollution.

POLYPLASTIC Group has quality and ecology policy, amongst the goals of the company for 2013–2015 is rational use of resources by subsidiary companies and compliance with legislation and regulatory requirements.

On the 23 April 2014, the representatives of WWF have visited one of production facilities of POLYPLASTIC Group, Klimovsk Pipe Plant. During the tour they visited production floors, testing laboratory, waste processing shop. Water circulation system and no-water discharge created special interest of the guests.

WWF representative and POLYPLASTIC Group have agreed on preparation and signing the Cooperation Agreement in 2014.

ASBESTOS-CEMENT PIPES ARE BEING REPLACED BY PLASTIC PIPES IN MONTENEGRO

Despite the fact that asbestos is a cancerogenic substance and is banned in European Union, the material is used for water supply networks in Montenegro.

There are about 609 km of water pipelines made of asbestos in Montenegro.

«According to the data collected from the companies regulating water supply and disposal, the total length of asbestos pipes in Montenegro is about 609 km. Depending on the age of water supply systems, asbestos pipes make up to 70% of the total pipelines length, as it is in Ulcinj", says Sinisha Stankovic, representative from the Ministry of Sustainable Development and Tourism.

Presently these types of pipes are being replaced by several municipalities but the dynamic of works depends on the local government budget. The average price for one meter of water supply pipeline ranges from 80 to 200 euros.

Stankovic also reminds that according to numerous researches asbestos is only harmful when inhaling. Moreover, there is no direct contact with water – the internal surface of the pipe have a cement-mortar lining and pipe damages do not create serious hazard requiring immediate response.

The representative of Institute of Public Health state that asbestos has harmful effect on respiratory system when inhaling cancerogenic asbestos particles. The research that proves or contests the harm caused by asbestos in water pipelines has not been carried out.

The matter of particular materials choice and their properties are subject to the utility legislation.

Asbestos pipes are gradually being replaced by plastic or other safer pipes in Podgorica. Over 150 km of water pipelines were installed within the last few years using modern materials and new technologies.

Source: openmonte.com

ADDITIONAL INCENTIVES FOR PRIVATE INVESTMENT INTO WATER SUPPLY AND DISPOSAL

On 26 June the changes in Governmental Regulation of Russian Federation, «State Regulation on tariffs in water supply and disposal» came into force. They were initiated by the Ministry of Construction and Housing and Utility of Russian Federation and Federal Tariffs Service.

The guarantor companies responsible for water supply have got the opportunity to include business profit into the tariff. From now on 5% of the profit is guaranteed by the government in case if the operator reaches performance target in the long term. At the same time, tariff growth rate will not change as the money redistributed within the present tariff.

Moreover, company savings gained as a result of its energy efficiency will remain in its disposal for a long period.

"These measures will help to attract additional resources into industry modernisation as they will make water supply and disposal more viable and therefore attractive to the investors", says Andrei Chibis, Deputy Construction and Housing and Utility Minister of RF.

The changes are approved by D.A. Medvedev, Prime Minister of Russian Federation

Source: gosstroy.gov.ru

UKRAINIAN PIPE PLANTS CONTINUE TO WORK

By Igor Strelets

The political crisis of 2014 in Ukraine, which escalated to war in the East of the country, has triggered decrease in industrial production including plastic pipes sector. The volume of production in the first half year fell 35–40%.

Output of the plants maintained high level of stock in the previous years. Year 2014 saw stock levels reduced to optimal minimum with production mainly satisfying current demand.

Rubezhansky Pipe Plant (RPZ), the largest Ukrainian PE pipe producer, is currently experiencing the most difficult situation. Being situated in Lugansk Region, the plant found itself very close to the war zone. This significantly complicates the delivery to the customers, there are not so many people prepared to risk their lives. Moreover, the war made it absolutely impossible to do any kind of business in Lugansk and Donetsk. For most of the plant employees it is act of bravery to get to work under fire.

Nevertheless, the plant continues to work. Currently no more than 3 extrusion lines work out of 8 due to redundancy (partially voluntary), some people preferred to take unpaid leave, some were transferred to other plants of the Group. The plant dispatches product practically every day and complete the order on time and maintain good quality. The vast client base, which needs quality pipe and fittings, supports the plant, mainly water and gas supply companies from the North, East and South of Ukraine.

In the first half year of 2014 the RPZ produced 2200 tonnes of plastic pipes, which is 2.3 times lower than in the same period of 2013 (5160 tonnes).

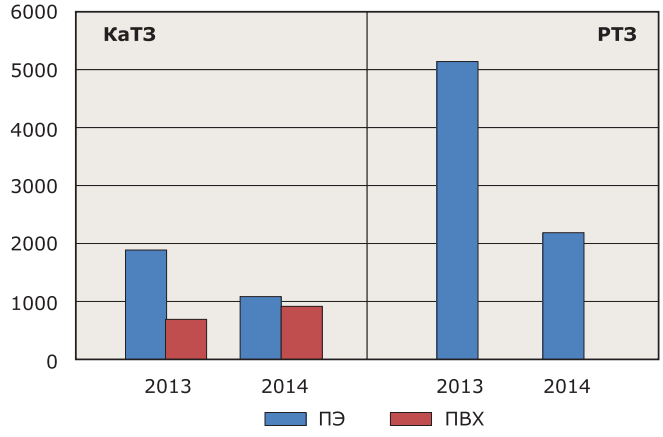
Kalush Pipe Plant (KzTZ) situated in Ivano-Frankovsk Region produces PE and PVC pipes for various applications. The products are mainly for Western and Central Regions of Ukraine.

As the result of the first half year, KaTZ produced 1100 tonnes of PE pipes for water and gas supply sector. It is 42% less that in the same period of the 2013 (about 1900 tonnes). This is due to decrease of governmental construction of external utility networks.

PVC pipes have seen growth, in the first half year 930 tonnes of pipes were produced. It is 36% more than in similar period of last year (680 tonnes). In the background of production decrease, such growth in demand is mainly due to private construction sector and high quality of KzTZ's PVC products.

A great number of water, sewer, heating and gas supply networks were destroyed as a result of war activity in Donetsk and Lugansk Region. Enormous restoration works will need to be done when the war end and a lot of pipes will be needed. The condition of the networks in the rest of the Ukraine is also poor. Modernisation of the utility networks will become one of priority tasks. The demand for quality plastic pipes, sooner or later, will grow in Ukraine.

Pipes Production at Kalush and Rubezhansky Pipe Plants in the I half year



RADIUS Systems

News

RADIUS SYSTEMS ACQUIRES REDMAN FITTINGS BUSINESS

Radius Group, the UK's leading supplier of Polyethylene pipes and fittings to the Utilities sector, is pleased to announce that it has purchased the trade and assets of the Redman Fittings Ltd. business from Tricorn Group, the AIM listed tube manipulation specialist, for an undisclosed sum.

Redman produces innovative jointing systems for use typically within the utilities industry and as a result is a perfect complement to the Radius proposition. Redman patented fluid compression fittings providing a strong and simple joints with fast and effective installation process whatever the site conditions.

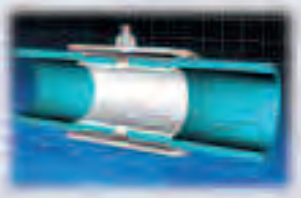
Andy Taylor, Radius CEO commented:

'Redman is our third bolt on acquisition this year since the POLYPLASTIC Group takeover in February and is a further commitment to growing the Radius brand. The brand and the product range fit well with our strategy to enhance our value added proposition to our customers and we are excited about the growth opportunity Redman brings to the Group for the UK and CIS activities'

POLYPLASTIC/POLYMERTEPLO/Radius Group *is the market leader in engineered polymer products in the CIS and the largest producer of polyethylene pipes and fittings in Europe. The Group is the market leader in polymer composite materials supply to the automotive, white goods and building materials sectors in the CIS where it is also the leading manufacturer of District Heating Solutions. The Group operates from 19 plants and exports to more than 50 countries worldwide has an annual turnover of c.€1bn and employs in excess of 7000 people. The combined Group is headquartered in Moscow. More details about the*

POLYPLASTIC/POLYMERTEPLO/Radius Group
can be found at:

www.polyplastic.ru
www.polymerteplo.ru
www.radius-systems.com



POLYPLASTIC GROUP

XI INTERNATIONAL WATER TECHNOLOGY FORUM

ECWATECH-2014

The largest Water Forum in Russia and CIS countries "Water: Ecology and Technology" took place on 3–6 June 2014 at Crocus Expo. It is dedicated to wide range of issues in water and sewer utilities, water supply and disposal, water technologies, regeneration and rational use of water resources, ecology in water industry and housing and utilities.

Within 20 years ECWATECH have become the most important and demanded platform for the exchange of information, ideas, latest technologies, mutual solutions, finding new partners for the whole water sector in Russia and neighbouring countries.

The scale of the Forum can be judged by the number of participants – 731 companies, 258 of them are foreign. The exhibition gathered participants from 28 countries despite the hard economic and geopolitical situation in the world. Countries like Austria, Germany, Denmark, China, Taiwan, Finland and Czech Republic have presented their national and regional pavilions in addition to the stands. A number of Ukrainian companies have taken part as well.

Mosvodokanal OJSC have presented odour removal systems which are starting to being used at sewer projects in Moscow. Historical exhibition with household items of XIX and the layouts of the first urban water networks was dedicated to 210th anniversary of Moscow water networks. Vodokanal of Saint Petersburg, the leader of innovations, presented Neva purification project "Clean Neva – Clean Baltic" within the framework of the Year of Gulf of Finland.

POLYPLASTIC Group, the leader of national plastic pipe sector, has presented complex solutions for construction of advanced hi-tech pipelines for water, gas and heat transportation. In addition to the wide range of pipes and fittings,

POLYPLASTIC has presented AEON and TALIS valves, plastic manholes and Subterra pipeline renovation technologies. The use of these technologies will reduce resources for transportation and increase safety and integrity of the infrastructure.

ECWATECH is an integrated event, traditionally consisting of the exhibition and business programme. This combination effectively combines demonstration of advanced technologies and discuss the matters at the conferences, seminars and round tables with participation of the major players in the sector.

Amongst the participants of the business programme and exhibition are the representatives of legislative and executive authorities of Russian Federation and municipal bodies, specialists in the industry, housing and utility companies, design, scientific and educational organisation, producers and service providers.

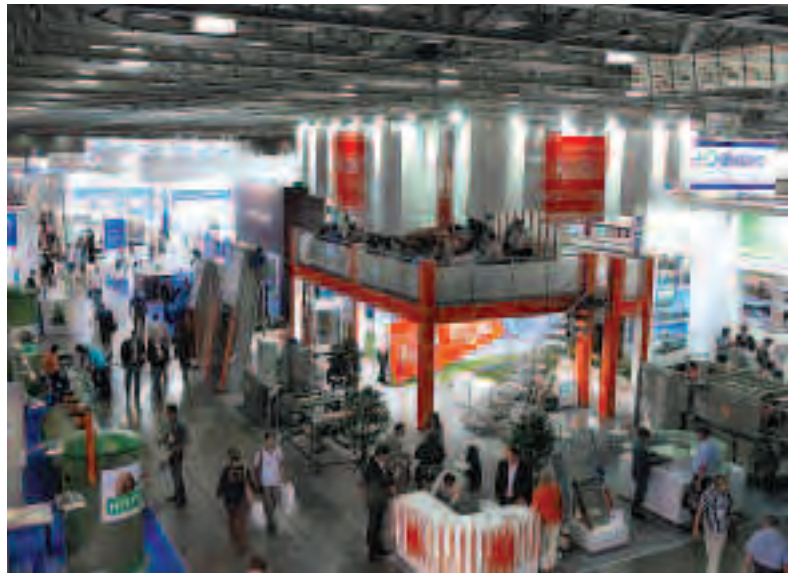
Delegation from Crimea, where solutions in water sector are vital, have visited ECWATECH for the first time.

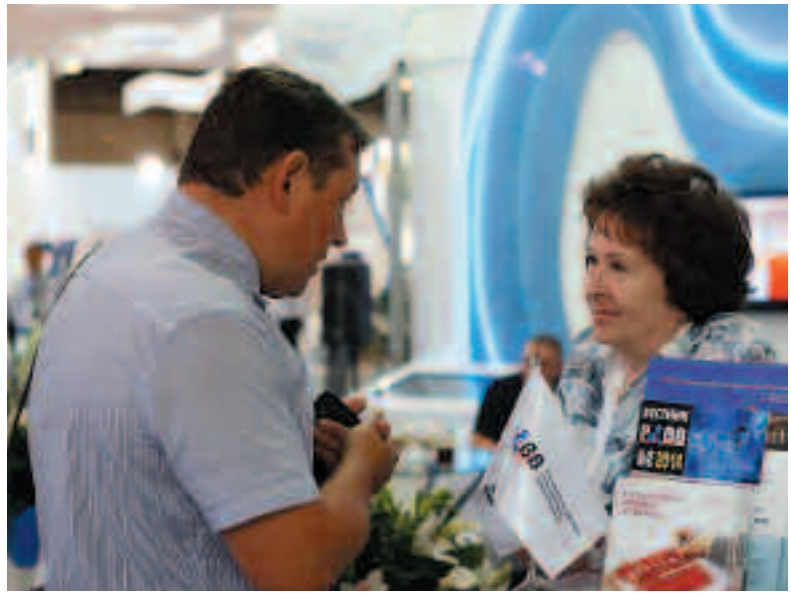
The business programme of ECWATECH this year included 18 conferences, seminars and round tables on current legislative and operational matters of water supply, water disposal, construction and renovation of the networks. The conference on “Improvement of legal regulation in Environment protection” of the Ministry of Natural Resources and Ecology of the Russian Federation, International Conference “Water supply and wastewater treatment in towns and communities”, NO-DIG Moscow – Trenchless technologies for underground infrastructure construction and rehabilitation, Mosvodokanal conference on current problems of development of water supply companies and other events attracted a lot of interest.

A number of large deals were made at the ECWATECH. For example, Herrenknecht AG, world’s leading manufacturer of tunnelling equipment has signed a number of contracts with Russian partners. It demonstrates they intend to continue cooperation with Russia despite current difficult political situation.

This anniversary ECWATECH saw a special children’s educational programme on water and ecology for the first time. A number of interactive lessons took place for children aged 3 to 6. The subjects of these lessons were water resources protection and regeneration, potable water and its importance, problems of waste treatment, and other topics concerning water supply and disposal.

Source: ecwatech.ru





TIME SCALE OF GAS PIPELINE RECONSTRUCTION ON PYATNITSKAYA ST. HAS BEEN REDUCED DUE TO CREATION OF THE PEDESTRIAN ZONE

"MOSGAS has reduced the term of gas pipeline reconstruction from one year to one and a half month due to creation of the pedestrian zone on Pyatnitskaya Street", reported the Press Centre of the company.

Reconstruction had been initially planned from September 2014 to August 2015 and now the works are rescheduled from 15 June to 1 August 2014. Unscheduled reconstruction of low and medium pressure steel gas pipeline is being done as part of creation and redevelopment of the pedestrian zone on Pyatnitskaya Street, according to the source of the agency.

Polyethylene pipes are used for reconstruction of the gas pipeline section. Presently the reconstruction works have been completed from the Garden Ring Road to Klimentovskiy Lane with total length of about 1,200 metres and works on the remaining 600 metres section have begun.

As reported earlier, Pyatnotskaya Street will be closed from 5 June to 10 August due to redevelopment.

Source: interfax.ru

SEWER PIPELINE IN THE CENTRE OF SAINT PETERSBURG HAD BECOME A MONUMENT

Petersburg Committee for protection of monuments has included a so called "Admiralty pipe" under the Konnogvardeiskiy Bulvar (Hourse Guards Boulevard) and Alexandrovskiy Sad (Alexander Garden) in the list of cultural heritage sites of regional importance. The relevant regulation was published in the website of Smolny.

Historically the Admiralty Canal passed along the Boulevard's route and linked the canal around Admiralty with water system of New Holland. In XIX the canal shallowed and a part of it between the Admiralty and the present Labour Square was sealed inside the brick pipeline used as a sewer.

During subway construction under the Labour Square in 1990s fragments of the pipeline were dismantled and a small reconstructed fragment of its brick arch had become a part of architectural composition. The plate with brief historical reference was mounted saying: "The Admiralty Canal passed here".

How can this protected engineering structure be used? "It depends on its condition and state. It can be shown people or simply preserved without showing. All of the options are common sense", said Oleg Ioannisyan, Head of Architectural Archeology of the Department for Study and Restoration of Listed Buildings of the State Hermitage.

Source: metronews.ru

RADIUS Systems

AEON

Aeon Metallic Valves

For Gas, Water & Fire Protection

Innovative valve solutions for gas, water and fire protection

Special range of resilient seated gate valves

Epoxy coated valves for corrosion protection

Leak-tight performance with low operational torque

For more details on our product range, please contact us on:
t: +44 (0)1325 746550, t: +48 61 2932 307,
e: info.eu@aeon-online.com
Visit our website www.aeon-online.com

Radius Systems Ltd
Radius House, Berristow Lane,
South Normanton, Alfreton,
Derbyshire, DE55 2JJ, United Kingdom
t: +44 (0)1773 811112
e: sales@radius-systems.com
w: www.radius-systems.com

Part of
POLYPLASTIC GROUP

POLYMERTEPLO GROUP AND MINSKENERGO HAVE FOUNDED A JOINT PRODUCTION

POLYMERTEPLO group together with Minskenergo, Belarus State Energy Company is completing the construction of the plant for pre-insulated steel pipes for heating networks.

Production capacity of PolymerTeploEnergo, the new enterprise, will allow yearly manufacturing of 250 km of pipes and fittings with diameters to 1220 mm.

The product range of the new plant will enhance POLYMERTEPLO Group's existing range of flexible plastic pipes and offer Belarus consumers the full range of materials and components for external hot water and heating networks.

Minskenergo is the largest producer of electricity and heat in the Republic of Belarus. The company offers integrated solution in production, transfer, distribution of electricity and heat, providing reliable energy to Minsk and Minsk Region.

POLYMERTEPLO Group is the leading developer and producer of high temperature plastic pipes for external networks of hot water and heat supply. The company had designed and produced new ISOPROFLEX-A pipes with enhanced reliability and 49 years warranty.

Source: Press Centre of POLYMERTEPLO

FORBES: 200 LARGEST PRIVATE COMPANIES – 2014

Forbes has outlined the top players in the non-governmental economy of Russia for the second time by publishing the rating of top 200 companies with less than 50% of government and foreign capital. The rating includes private companies and companies trading on the stock exchange. Companies are rated by reported revenue for the previous year with preferences to IFRS standards.

The list does not include banks, insurance, leasing, investment and other finance companies due to their substantial business and accounting distinctions from retail and industrial companies. Moreover, the rating does not include asset management companies but includes the companies they manage. It is comprised based on the financial results displayed in 2013.

Total revenue of the top 200 companies has remained at approximately the same level – 23.9 trillion roubles, which is only 1 trillion roubles more than in 2012. The growth by 4.4% was behind inflation (6.5% in 2013). It is not surprising that Russian economy started to slow down: GDP in 2013 grew by 1.3% comparing to 3.4% in 2012.

Non-public companies (there are 140 of them in the rating) traditionally grew slightly higher than those trading on the exchange. The total revenue of public companies (14.1 trillion roubles) grew by 3.4%, the revenue of non-public companies (they make 9.8 trillion roubles) by 4.6 %. However, some companies have shown great results despite the overall stagnation.

The rating list itself has practically remained the same – only 16 companies were outperformed and went out of the list, giving way to stronger competitors.

POLYPLASTIC Group has taken 193rd place with the revenue of the last year (27 billion roubles) in the overall rating for private and listed companies and 138th place among solely private companies.

Source: Forbes.ru

Competence in Plastics

PRODUCTS MADE OF
PE, PP, PVDF, ECTFE, FPP, FPO

- Water and gas infrastructure
- Energy industry
- Chemical and heavy industry
- Tank and apparatus construction
- Airplane and ship building industry
- Mining industry
- Landfill and hydraulic engineering
- Semiconductor industry
- Life science industry
- Building construction and underground engineering

- PIPING SYSTEMS
- CONCRETE PROTECTION
- SEMI-FINISHED PRODUCTS
- LINING SYSTEMS

agru
Competence in Plastics

AGRU Kunststofftechnik GmbH
Ing.-Pesendorfer-Straße 31
4540 Bad Hall, Austria

T. +43 7258 7900
F. +43 7258 3863
ads@agru.at

www.agru.at

KLIMOVSK PIPE PLANT
AS A PART OF EDUCATION PROGRAMME

Press-service of POLYPLASTIC Group

The group of attendees of further professional education course for Design and Operation of Main Oil and Gas Pipelines of Moscow State University of Mechanical Engineering, has visited Klimovsk Pipe Plant on 15 October 2014.

The group consisted of 16 people from Cyprus attending the course. The course was organised on request from the Embassy of the Russian Federation in the Republic of Cyprus to provide the series of activities (lectures, rounds tables, plant visits) related to "Design of Mechanical Installations for Distribution of Natural Gas". However, the theory would not have any value for the foreign specialist without practical lessons. The people came from different regions of Cyprus, different companies and backgrounds (amongst them were engineers, leading specialist, owners of engineering companies).

The guests were shown POLYPLASTIC Group presentation and products produced by all the companies of the Group. They also had a tour around the plant, visited the production department of smooth pipe, CORSYS, CORSYS PLUS pipes, Department of Custom-made items, moulding shop and the laboratory. The guest were particularly interested in the laboratory – they asked a lot of questions on regulations, quality control measures etc.

The scale of the plant, product range, a massive warehouse and innovative produce – all left the Cyprus guests impressed.

The feedback from the organisers was great – all attendees were impressed with the quality of the information they received and the hospitality of the organisers.

The visit to the Klimovsk Pipe Plant was a bright example of the Russian Best Practise transfer to Cyprus colleagues. This experience is very important for creation of modern pipeline systems in Cyprus.

POLYPLASTIC GROUP INCREASES PRODUCTION CAPACITY IN BELARUS

Press-service of POLYPLASTIC Group

Belarus division of the Group acquired a new plant. Slovechno-Bel Enterprise, the only Belorussian producer of unplasticized PVC pipes, has joined the Group.

The plant currently produces PVC pipes for sewers from 110 mm to 400 mm and PE pipes from 25 mm to 315 mm. Premises of the enterprise is over 4,700 m^2 with over 2,300m^2 of production area. Slovechno-Bel plant will continue its work as part of Belarus division of POLYPLASTIC Group adding its PVC pipes to the range of BelPolyplastic products.

The plant will undergo modernization of production infrastructure and full-scale reconstruction, which will integrate the enterprise into POLYPLASTIC Group – widen the product range, optimize produc-tion and warehouse areas.

INNOVATIONS WILL BE USED IN PREPARATION OF URAL FOOTBALL PITCHES FOR THE WORLD CUP 2018

Preparation of Ekaterinburg Sports infrastructure for the World Cup 2018 have entered an active phase, it has been reported by the press centre of the Mayor's office. FIFA specifies high requirements to the quality of football pitches that must maintain their properties regardless of the season and weather.

It is planned to use heating system at the Kalininets training pitch, which will consist of heating station, drainage and pipelines made of polyethylene and buried under the football pitch. The builders are considering use of ethylene glycol water solution as heat transfer agent with concentration from 30 to 42%. Special temperature gages will be installed in the lawn to monitor the temperature of the pitch surface.

It should be noted that fluid heating system for football pitches has a number of advantages comparing to other technologies (e.g. electrical heating) as the temperature of the heating medium is not high and it helps to maintain the desired temperature and its exact adjustment depending on weather.

Source: ural.aif.ru

VOLGASTROYEXPO IS THE PLACE TO MEET

By Ekaterina Maleeva

Volgastroyexpo International Exhibition, held in Kazan every year, is one of the largest exhibitions in Volga (Privolzhsky) Federal District. POLYPLASTIC Group and POLYMERTEPLO Group were presented by Cheboksary Pipe Plant and POLYPLASTIC RT at the exhibition in 2014.

The exhibition took place in three pavilion and open area with over 337 companies from 74 cities of Russia and 19 countries including Austria, Belarus, Belgium, Bulgaria, Hungary, Great Britain etc.

Exhibits in open area exceeded 4,000 sqm, total open area was 12,000 sqm. The event was supported by the Ministry of Construction, Architecture, Housing and Communal Services of the Republic of Tatarstan, Executive Committee of State Education of Kazan city and the Union of Constructors of the Republic of Tatarstan.

The companies and organisations have presented their products for water, heat, gas and power supply, ventilation and air conditioning, architecture and design, modern technologies in construction, equipment for buildings and facilities, ecology.

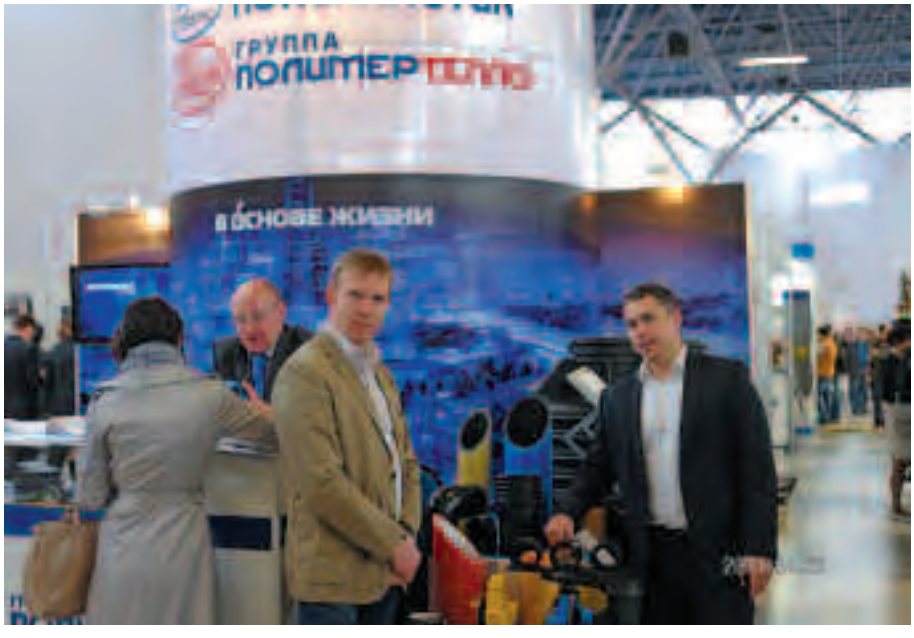
POLYPLASTIC Group and POLYMERTEPLO Group stand was visited by officials and specialists from over 230 design, construction and installation companies from Kazan, other cities of Tatarstan and neighbouring regions.

Plastic manholes for gravity sewers and inspection chambers presented at the stand have created a lot of interest. The visitors also noticed insulated pipes for hot water and heat supply. The stand of POLYPLASTIC also had samples of ISOPROFLEX, CASAFLEX, no-frost ISOCORSYS-U, ARCTIC-U pipes etc.

As a result of meetings with officials and specialists from the companies visiting the stand of the Group, a number of preliminary cooperation agreements have been reached.

Within the framework of the VolgaStroyExpo exhibition a number of seminars for specialists in the sector and the I Povolzhskiy Construction Forum “Intellectual construction in Russia. Reality and prospects” took place.

The exhibition hosted 8,500 people – specialists from construction sector, officials and specialists from large construction companies, representatives of small and medium businesses, sole proprietors from Bashkortostan, Mariy El, Mordoviya, Udmurtiya, Chuvashiya, Moscow and St.Petersburg, Nizhniy Novgorod, Kirov, Ivanovo, Penza, Postov, Saratov and other regions.



RADIUS SYSTEMS BEST PRACTICE EXCHANGE PROGRAMME

In February 2013 Russian POLYPLASTIC Group acquired Radius Systems. Management of both companies has set several programmes aimed to reach maximum synergy effect from this merger.

One of these programmes was designed for implementation of series of Radius Systems practices at POLYPLASTIC Group's plants, such as raw materials logistics, packing, warehouse processing, handling – all that can improve efficiency and quality of customer service.

There were no doubts that a lot could be learnt from Radius Systems. The company is a brilliant example of Lean Six Sigma strategy implementation (see "Lean Six Sigma"). Prior to acquisition the company was on the brink of going into administration and the need of crisis measures.

The waste reduction and operation improvements programme fairly quickly showed good results: Radius Systems have managed to reduce production cost, waste, raw materials overconsumption and increase assets value within the short period of time.

Senior operations managers from POLYPLASTIC Group and Klimovsk Pipe Plant have visited Radius Systems for

Best Practice Programme. As a result of the visit the specialists have concluded that goals cannot be achieved only by administrative measures, it is very important that middle managers and operators understand set goals and targets. That is why the three weeks' visit of the group from Klimovsk Pipe Plant to Radius System was organised in August 2014. The group consisted of Shift manager and Leading operator of solid-wall pipe production, Shift leader of corrugated pipe production, Technologist of Production Department.

Graham Thurlow, Operations Improvement Director of Radius Systems Ltd: "Professionalism and innovativeness"

The purpose of the visit was an exchange of best practise tools and techniques and for both POLYPLASTIC and Radius Systems employees to learn from each other, share ideas and where practical to introduce new practices and processes in their normal working environment.

The programme was delivered over a 3 week period between the dates of 11th – 28th August and consisted of some training room based presentations and discussions and factory floor "hands on" experience.

They also were given the opportunity to visit our Northern Ireland facilities, Banbridge and Lurgan.

The key topics covered in the best practise programme were:

1) To share our Operations Strategy at Radius systems with an emphasis on Quality, Cost, Delivery (QCD);

2) Provide an overview of the 7 key performance measures which are used:

– Not right first time;
– Delivery Schedule Achievement;
– People Productivity;
– Stock Turns;
– Overall Equipment Effectiveness;
– Value Added Per Person;
– Floor Space Utilisation.

3) Identify how we can improve further by effective execution of the strategy:

– Through SMART objectives: Specific, Measurable, Achievable, Realistic and Time-related;
– Measure attainment;
– Using facts to make decisions;
– Collaborate with our customers (Operational, supply chain & commercial benefits);
– Communicate effectively;
– Respond to failure and take corrective action;
– Celebrate success.

4) Material usage optimization to reduce scrap rates and increase yield;

– Right first time pass is a key measure of our effective use of resin;
– Scrap and overweight must be well controlled;
– Measurement of overweight against minimum specification;
– Radius Systems methodology, monitoring and control and escalation of issues and corrective action;

5) Approach to problem solving:

– Use of standardised tools & techniques;
– Performance linked improvement (root cause analysis, performance measures, closed loop process control).

Both POLYPLASTIC & Radius employees felt that the programme content had worked well, especially when our POLYPLASTIC guests were able to be "hands on" with the manufacturing processes. Representatives for Radius were very impressed with the skill level and knowledge of their POLYPLASTIC colleagues and commented on how they had integrated well and assisted in the day to day site operations.

The group size of 6 people seemed to work well as they could be allocated to different activities around the factory and worked with numerous people as the shift pattern rotated. Specific examples were raised on how tasks are carried out differently in Klimovsk with a number of good ideas raised on how we could reduce process set up and shut down here in Hilcote. Specific topics discussed by the group were:

– Thermal centering techniques;
– Use of Ultrasonic and Infrared hand held measurement instruments;
– Die pin heating;
– Calibrator care and cleanliness.

Our POLYPLASTIC guests commented that were taking back many examples of good ideas and ways of working which they would like to consider in their own working environment. The automation cells in our fittings manufacturing area was new technology for them, so good experience was gained here.

Other than the duration of the program where we agreed that a 2 week programme would work better in the future rather than the original 3 weeks, the consensus was that the content was relevant to their skill set and experience and they felt future groups would benefit from the programme. We discussed other ways that processes, procedures and ways of working could be shared as examples of best practise and we agreed that electronic transfer where practical would work well.

Our 6 guests were all very appreciative of the organisation which had gone into the programme and the involvement and camaraderie of all those involved at Radius Systems, likewise the team at Radius expressed that even when communication was difficult they had been able to find ways to communicate and make the process work well.

The process has involved lots of hard work and some long hours, but has proved very rewarding. We have also shared plenty of amusing times during the various social

activities of fishing, football, ice hockey etc. Great credit should go to our 6 guests for being so professional and receptive to the objectives of the best practise program.

On behalf of Radius Systems, I'd like to thank them all for their participation over the last 3 weeks

Aspects of British manufacture

It was difficult to surprise Russian Programme participants with modern pipe production equipment. The equipment they operate back home at their plant is similar to what you can find at any modern European production. The guests concentrated their attention on organisational matters, shop floor optimisation, duties allocation and communication between the departments.

For example, they noticed distinct duties allocation and responsibilities of the operations personnel, the Shift Manager deals with administrative work, technologists are responsible for preparation, start-up and parameters set-up, operators provide control, packing and dispatch to the warehouse. Functions of Quality control department and laboratory are provided by the same division working round-the-clock.

The guests have also paid attention to the distinct health and safety rules and strict use of PPE, such as steel-toes boots, different types of gloves, goggles, helmets, which are usual for European Manufactures.

They also learned about goods acceptance procedure, storage, raw material supply, automation, use of special handling equipment for coils, handling of pipes and waste, start pipe preparation, storage of ready produce at the warehouse and other.

Dispatch of ready produce to the warehouse is done by production line operator by logging the information on quantity and waste into the data base. The interaction between production and technical teams is done via centralised computer system by logging the information on breakdowns, equipment failures, repairs and maintenance.

Many things that Russian specialists saw at Radius Systems during the visit can be and must be implemented in Russia. The matter of loss minimisation, savings and quality management at all stages of the procession are becoming more significant. Radius Systems is a bright example of the strategy efficiency based on these principles.

FOR INFORMATION

LEAN SIX SIGMA

Lean Six Sigma is an integrated concept that combines the most popular quality management methodologies of the 90s: Lean Manufacturing, which is focused on waste and overhead costs elimination, and Six Sigma aimed at minimising variability of the process and stability of product characteristics.

Lean Manufacturing was created in Japan as methodology for elimination of waste in car industry. Its essence is the value for the customer. According to this concept the whole activity of the enterprise can be split into operations and processes that add value for the consumer (quality, functionality, design that customer would be prepared to pay for) and operations and processes that do not add value (e.g. storage). Therefore, anything that does not add value to the customer must be eliminated.

Six Sigma concept has American roots and was created to fight defects by reducing process variability in semiconductors manufacture.

Six Sigma concept name comes from the definition of standard deviation, which is described by Greek letter σ. The maturity of the production process is represented as σ-rating of deviations or the percentage of defect-free produce at the output. Six Sigma is the level of process efficiency with only 3.4 defects per million opportunities. The defect can be established at any stage of the process: e.g. no response to customer's request, mistake in the purchase order, incorrect invoice, non-conformity to the specification and others.

According to Six Sigma concept, one of the key factors of the success is good organisation. All activity is done within the project frame with set targets and terms. Each project will have roles and responsibilities allocated, set and clear project implementation order, integrated data logging. Each stage of the project is regularly monitored using metrics, set system of measured indicators.

Six Sigma methodology pays attention to statistic control of processes which predicts behaviour and give possibility to make correction in due time to avoid potential problems.

Six Sigma concept is comprised of the best practise which allows enterprises to achieve great economical results in short terms by reducing all types of waste and setting stable controlled processes. Six Sigma concept is widely used and can be implemented by any company regardless its size and industry.

PARTICIPANTS OF VII CONFERENCE OF WATER UTILITY COMPANIES AT CHEBOKSARY PIPE PLANT

By Ekaterina Maleeva

VII Conference of Water Utility Companies "Systemic problems in Water Utility and their solutions" was held on 25–29 August 2014 in the city of Cheboksary, the capital of the Chuvash Republic, with the support of the Chuvash Republic Government. The organiser of the Conference was the Russian association of water supply and water disposal (RAWW).

The Association, founded in 1990, unites water utility companies of more than 200 cities and towns of all regions of the Russian Federation; leading R&D institutes, design institutes, international water utility companies and companies supplying equipment and technologies to enterprises and organizations of housing and communal services.

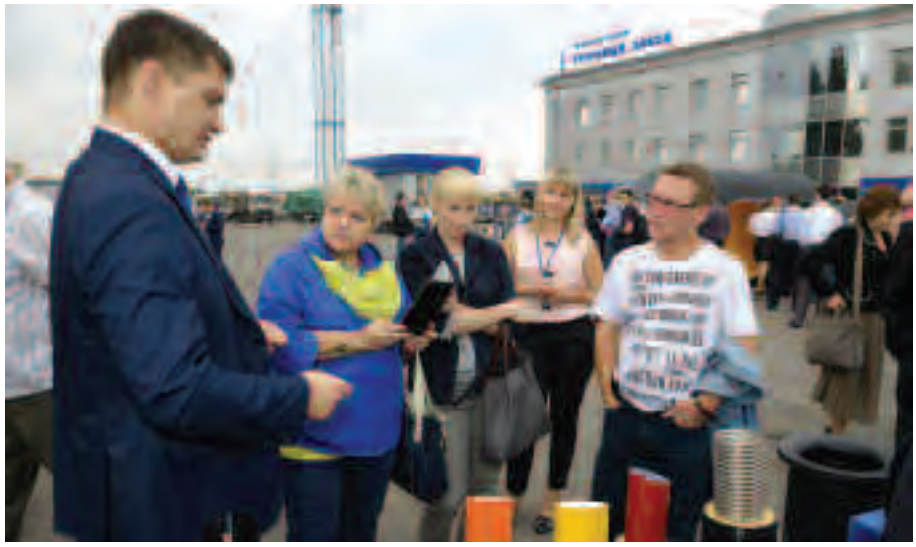
RAWW organises and hosts a Conference of Water Utility companies of Russia on an annual basis. As a rule, amongst the participants are representatives of State Duma, Ministry of Construction, Housing and Utilities of the Russian Federation, Ministry of Economic Development of the Russian Federation, etc.

Each year the choice of a city for the Conference venue is not accidental – the event is held in cities with unique experience and achievements in modernisation, management and attraction of investments in water and disposable water sector. RAWW has chosen Cheboksary for 2014 Conference.

POLYPLASTIC Group is a member of RAWW. Its daughter companies, Cheboksary Pipe Plant (ChTZ) and Trade House ChTZ, are situated in Novocheboksarsk, the Chuvash Republic.

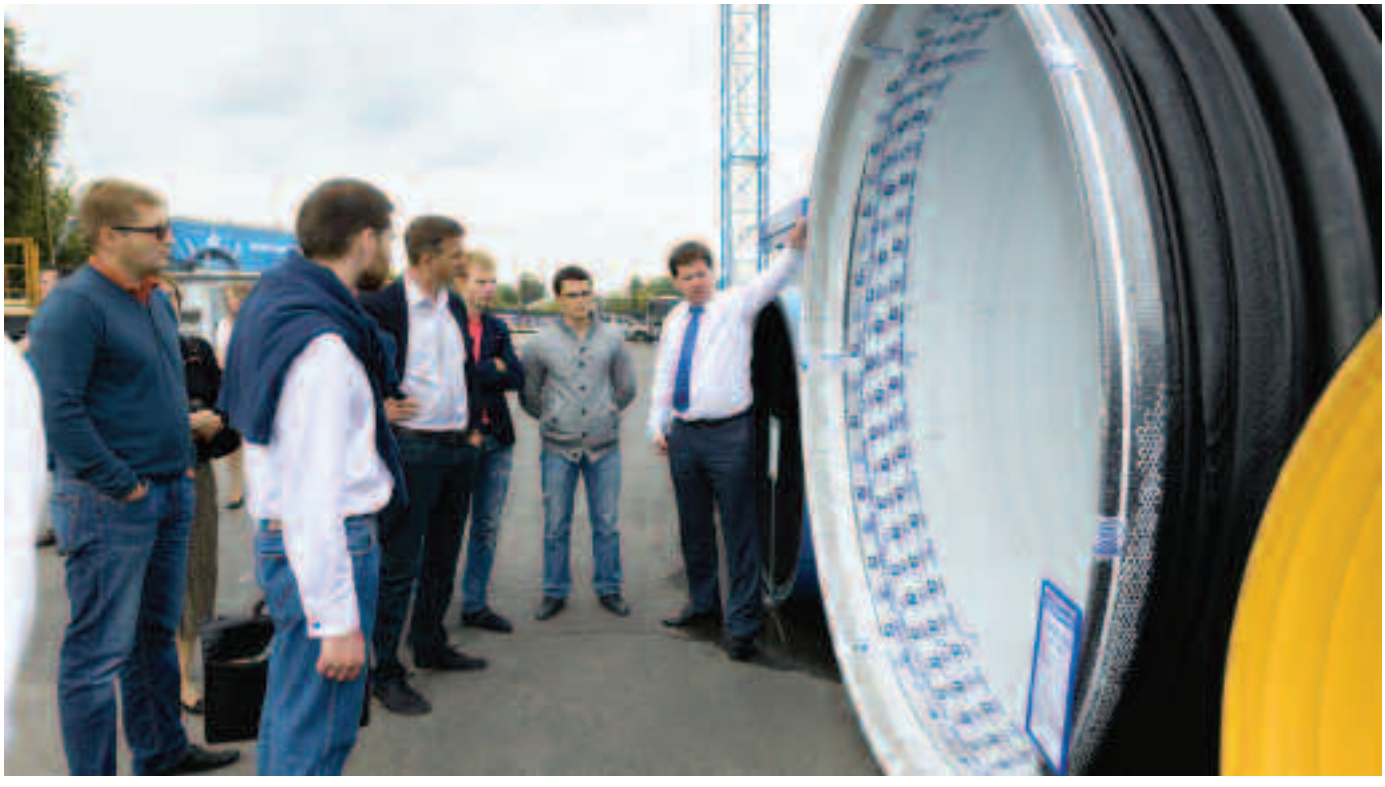
During the study tour organized within the framework of the Conference, its participants visited various enterprises in Cheboksary and Novocheboksarsk, including Cheboksary Pipe Plant, where they were acquainted with products manufactured by POLYPLASTIC Group: plastic pipes for water and gas supply and sewer networks, PE manholes for storm water and gravity sewers, fittings and heat insulated pipes.

To most of conference participants and guests POLYPLASTIC Group and its products were already well known. “POLYPLASTIC Group and this plant as a part of the Group has been a partner of RAWW for many years. It is well known, that one of the trends of modern water supply is the use of plastic pipes for construction of water supply systems. The company is highly rated in the sector. It is constantly modernising its production technologies using the latest achievements in science and technology as well as the results of its own research projects”, said Georgiy Samburskiy, RAWW Project Manager.



“We know this plant very well. It is a major player in the regional market of plastic pipes. Its production is very well organised and it is a big and modern production facility”, said Martin Kast, Director of Hawle, Austria, about Cheboksary Pipe plant.

According to Irkutskenergo OJSC representatives attending the event, for many years POLYPLASTIC Group products have been used in water supply and waste water disposal networks at Ust-Ilimsk Power Station,



which is a part of Irkutskenergo. This visit to Cheboksary Pipe Plant gave them an opportunity to see the whole range of products of the Group, get acquainted with new products and consult with specialists.

Extreme attention of the visitors was given to large diameter CORSYS PLUS as well as to MULTIPIPE and jacketed PROTECT pipes. Specialists from Yakutia showed much interest in ARCTIC and ISOCORSYS pipes meant for construction of non-frost water networks in the regions with cold climate. Representatives from France and Austria paid attention to heat insulated pipes for hot water supply and district heating networks. They were highly interested in advantages and features of installation of these pipes and were also impressed by geography of deliveries – all over Russia.

Discussions touched upon a wide range of issues related to cost-effective transportation and pipes installation, securing trouble-free operation of water supply networks, etc.

It was also noted that situation with utility networks modernisation in Russia remained tight. The only right solution was further and extensive use of advantages of modern and innovative technologies and materials, which PE pipeline systems are related to, while the average consumption of PE pipes per capita in Russia was 2.5–3 times lower compared to similar in Europe.

Summarising the results of the Conference, Denis Antropov, General Director of Trade House ChTZ, noted that all task meetings were very productive. “The representatives of Water utility companies know Cheboksary Pipe Plant and non-formal meetings only improve our partnership relations. It is a great opportunity to share experience in application of modern technologies in water supply and waste water disposal industry”, said Antropov. Meetings – negotiations created a base for further cooperation with a number of water supply and water disposal companies in use of plastic pipes.

PLASTIC PIPES INDUSTRY REMAINS IMPORT-DEPENDENT

By Marina Kuzmenko

On 29 October "Plastics Industry: Import substitution and investment during sanctions" Press Conference has taken place at ITAR-TASS Press Centre. Major players of Russia's plastics industry have shared their view on the situation the industry is facing in the run-up to the Plastics of Russia Forum.

Fares Kilzie, Chairman of the Board of Directors of CREON Consulting Group has said during the press-conference: "I accept that Russian plastics industry can survive sanctions from the USA but it will not be possible to effectively develop the industry with Western European sanctions due to mutual import-dependency in project financing, equipment, raw materials and other markets. Therefore, all diplomatic efforts should be deployed to overcome contradictions and return to normal trade relations with Western Europe, mainly with Germany".

Miron Gorilovskiy, President of POLYPLASTIC Group has highlighted the major problems in the processers' market: raw materials import dependency, high costs of basic polymers, poorly designed customs and tariff policy, absence of standards and technical regulation. According to him, plastic pipes for Russian infrastructure is an ideal example of import substitution: within the last 10 years home producers have replaced 95–97% of imported pipes for domestic infrastructure (water, gas and heat supply and distribution) using latest technology. "The pipes were imported in 90s and today we export our own produce to CIS countries and EC. These are our technologies, developed by us and in some cases they are far more advanced than in Europe. We are currently working on import substitution programmes for electrofusion fittings, components, valves, which allows us to widen the product range and sell not only pipes but the whole pipe systems", said M.Gorilovskiy.

Plastic pipes industry is import dependant. Shortage of raw materials – pipe grades of PE – in Customs Union countries is about 60%. Moreover, it is well known fact that establishment of production in Russia costs significantly more than overseas.

The customs and pricing policy towards PE and PP must consider them as raw materials but not the final product. The cheaper the processers buy raw material the more added value created inside the country, the higher the chances for import replacement and export potential of the industry, higher employment and more taxes paid in the country.

Final decision of Eurasian Economic Commission Board on cancellation of import duties zeroing for Black types of PE, which was taken in the last October Resolution will be seriously reflected on infrastructure modernisation. 65% of networks are worn out. This will lead to high number of emergency situations and increased burden on consumers given current lack of funding for network repairs and modernisation.

The situation in petrochemical industry is also catastrophic, Gorilovskiy pointed. The industry requires long-term investment, supported by the government through the interest rate compensation, tax breaks and other incentives. Given the current conditions of customs and tariff policy, our raw materials producers are forced to inflate the prices in the home market.

M. Gorilovskiy highlighted the necessity of investment into social infrastructure – roads, stadiums, hospitals, housing and utility sector – and all these projects should be based on state and private partnership, as no governmental fund will be enough. In the current stagnation, projects on road construction, bridges, networks, social infrastructure facilities can accelerate the development of plastic pipes production and various processing industries.

PLASTICS PROCESSING IN UKRAINE HAS REDUCED BY ONE THIRD

Ukrainian producers of plastic packaging and pipes have become the victims of complicated international relations between Russia and Ukraine and the war in the East of the country. According to the Marker Report Analytical Company's statistics, Ukrainian plastics industry have reduced production by 30% in average from January to August, mainly because of reduction in raw materials supply, the main source of which was Russian.

Processing has been reduced

In particular, as a result of the eight months of the current year, PE consumption in Ukrainian plastic industry was 152 thousand tonnes, which 27% less than in the same period of 2013.

According to Market Report, consumption of HDPE has become the most affected. The processors confirm they are experiencing problems with purchasing HDPE. "We had serious problems with HDPE supply in August and September", says Yuri Dotsenko, Director of Yurpak. According to him the supply was disrupted by war. "Ukrainian consumer has become insignificant to the exporters of PE raw materials. It has become less financially stable and there are logistics hurdles at supply to the Ukraine. It is much more interesting for Russian and European PE producers to work with the consumers from EC or other countries", complains the processor.

Therefore, it is a vicious circle: Ukrainian plastic industry have slightly reduced the demand for raw materials due to the general downfall and difficult political situation, the suppliers have changed the supply markets and chose the customer who can pay. As a result of this, Ukrainians started to get less than they are able to pay for. "Now our production output is only 40%", notes Dotsenko. They are expecting a better supply of PE into Ukraine in October and processing volumes will pick up, said Dotsenko.

Belarus instead of Russia

The situation is even worse with LDPE. The supply of LDPE was record low. "The total import volume of LDPE into Ukraine had dropped to the lowest level within the last 4 years – to 4.78 thousand tonnes (7.8 thousand tonnes was supplied to Ukraine in August 2013). The significant reduction of supply was from Russia and was down to shortage in the internal market of the country", said Sergey Karaichentsev, Monitoring department Manager of Marker Report Company.

It is quite interesting that traditionally the LDPE was mainly imported into Ukraine by Russian Tomskneftechim of SIBUR Holding. Due to the fact that the company decided to reduce the supply to Ukraine, Polymir, Belarussian producer, became a leader (23% of total volume of supply from January to August and 28% in August). Tomskneftechim has reduced export of LDPE by 60% to 9.5 thousand tonnes within eight months and Polymir has increased it by 22% in the same period to 12.7 thousand tonnes.

The prices are growing

While PE import and processing in Ukraine are crumbling, the prices for the produce are growing and reaching record levels. In August, for example, the price of LDPE and HDPE reached 27 thousand hryvnyas per tonne. It is a maximum mark within the last 7 years. For example, in 2007 the average price of PE was no more than 9 thousand of hryvnyas per tonne.

The situation with plastic processing could have been improved by giving the distributors and processor an access to cheap credits. This idea was offered by the processors themselves. Russian suppliers are used to work with Ukrainian partners not only by pre-payment. Their European counterparts are more loyal towards Ukrainian consumers of raw materials, however, they are more interested in supplying their own demand in the season. The current situation on the plastics market will hit the end user hard with more expensive product. For example, the producers of PVC-profiles have already announced the price per square meter in dollars, which strikes all who wanted to change the windows for the winter.

COMMERCIAL CONVENTION
OF PIPE DIVISION OF POLYPLASTIC GROUP

Press service of POLYPLASTIC group

The Annual convention of POLYPLASTIC Group Pipe Division subsidiary companies has been held from 6 to 8 February at Sheraton Moscow Sheremetyevo Airport Hotel. About 80 executives, officers of POLYPLASTIC Group Managing Company, managers of commercial subsidiaries and divisions participated in the convention.

The convention was opened by Miron Gorilovskiy, President of POLYPLASTIC Group. He noted that the situation in the industry and in the country has changed radically: ruble has lost more than half of its value, the war in Ukraine, the deepening isolation of Russia – all this could not be imagined in February last year. As a result, we are facing a drop in demand, closure of investment programmes, under-financing of current renovations and contraction of plastic pipes market. Nevertheless, despite the contraction of the market, the Pipe Division of the POLYPLASTIC Group has managed to increase sales by almost 5%.

According to M. Gorilovskiy, the current crisis will be quite lengthy compared to those the Group has experienced within its almost 25 years of development. Investment resources that left the Russian market due to the crisis will be difficult to return. The formula for survival and development has been known for many years – cost savings, business processes optimisation and competition for the market share.

Kirill Trusov, Head of the pipeline division, presented the activity report for 2014. He presented data on the situation in the plastic pipes market in the countries of the Group's operation (Russia – Ukraine – Belarus – Kazakhstan, RUBK zone). Ukraine has become the leader of falling markets, as was expected, with a 18% fall within the year. The fall is likely to continue, but in a slower pace in 2015 – everything indicates that the market in the Ukraine has achieved its bottom-line.

Belorussian market has slightly decreased mainly due to the reduction in investment activity because of the close economic relations with Russia and Ukraine. The difficult situation has reflected on the market. However, the decrease of 8% has only come up to 2000 tonnes.

Kazakhstan is the only growing market – compared to 2013 is has grown by 16% due to infrastructure projects postponed from the previous year. According to our forecasts, the growth will continue in 2015 in a slower pace than in 2014.

Russia is the largest market in RUBK zone. It contracted by 10% and influenced the RUBK market significantly – it decreased by 7%. Both stabilisation and serious fall of the market by 15–20% in 2015 is possible due to reduced demand and lack of investment resources in Russia.

Despite the difficult condition of the "falling market" trade companies of the Group have managed to increase sales: in Ukraine by 4% (600 tonnes) compared to 2013, in Belarus – by 26%, in Kazakhstan – by 20%. The most serious struggle for target numbers was in Russia, despite market contraction by 10%, divisions of the Group have managed to increase sales by 4.7%.

Therefore, the pipe division has fulfilled the task of increasing the market share, maintaining the output of the plants and the competitive price of processing.

Also K. Trusov noted that reduction in results variation of "sale per capita in the region" indicator shows similar high activity and good results for all commercial divisions of the Group.

Directors of subsidiaries spoke about the results of 2014 and shared their views and suggestions on work organisation in the current conditions. Cooperation between the Managing Company and its subsidiaries, motivation of business entities of the Group, innovative products in demand and many other topics were discussed during the convention.

Plans for 2015, another important topic, were widely discussed by the directors of the business units and top managers of the Group. Most of the divisions plan to maintain the levels of 2014 in their regions.

The president of the Group highlighted that crisis is the best time for market expansion, development of innovative products and optimisation. Successful companies create the grounds for future growth during crises. No development is possible without crisis.

SIBUR HAS BEGUN CONSTRUCTION OF ZAPSIBNEFTEKHIM IN TYUMEN REGION

SIBUR has begun construction of ZapSibNeftekhim in Tyumen Region. On 17 January the sinking of the first pile into the basement of the facility has taken place according to the press-service.

Currently the full design documentation for construction is complete. The approval from Glavgosexpertiza of Russian Federation was obtained at the end of 2014. Tobolsk administration has issued a permit for construction in January this year.

"The main preparation works are completed at the construction site. A number of contracts for design and equipment and materials supply for the future facilities are signed and are being fulfilled. The contract for design of facilities with NIPIgas, Russia's leading engineering centre in gas processing has been concluded", says the press-service.

The project of ZapSibNeftekhim involves construction of pyrolysis unit with capacity of 1.5 mln tonnes of ethylene per year (technology of Linde AG, Germany) and butane-butylene fraction with the capacity of 100 thousand tonnes per year. Also the project includes construction of facilities for production of different grades of PE with total capacity of 1.5 mln tonnes per year (technology of INEOS, Great Britain), PP production units with 500 thousand tonnes capacity (technology of LyondellBasell, Netherlads).

Total investment into ZapSibNeftekhim was preliminary evaluated at 9.5 billion dollars (about 360 billion rubles), including already incurred costs and planned costs for start-up, infrastructure and other works. The Holding intends to re-evaluate the project due to the currency changes and exchange rate.

It had been previously planned to complete the project within 5–5.5 years. According to the latest news from SIBUR, the schedule can be corrected: "As a result of reconsideration of the volume of investment, corrections in orders supply and equipment production, including navigation windows, the construction might take longer".

The construction of the complex will be implemented within the frame of previously signed investment agreement between the holding, Government of Tyumen Region and Tobolsk administration on integrated development of Tobolsk Industrial site. The parties have agreed on prolongation of the investment agreement for 10 years – until 2024.

Source: rupec.ru

GERMAN SPECIALISTS WILL JOIN EXPERT BOARD ON ENERGY EFFICIENCY UNDER THE MINISTRY OF CONSTRUCTION OF RUSSIA

Source: minstroyrf.ru

Ministry of Construction and Housing and Utility Infrastructure of Russian federation together with German specialists are starting the projects in energy efficiency in construction and housing and utility. The details were confirmed during opening of the German-Russian session in the framework of International Construction Exhibition BAU on 21 January in Munich, where Andrei Chibis, Deputy Minister of Ministry of Construction of Russia, Chief State Housing Inspector.

The German-Russian session was dedicated to development of energy saving technologies in construction and operation of the buildings. Andrei Chibis told about the measures taken by the Russian Government in this matter: "One of the priority goals for Russian State politics is increased energy efficiency of the economy, particularly in construction and housing and utility infrastructure. The key aim is reduction of energy intensity of the economy. Russia is significantly behind the European Countries and USA in this matter. It is mainly due to the structure of the economy, climate features, but we see a huge potential in energy savings". He also pointed that investment in energy saving technologies, development and deployment of energy management are rational and forward-thinking investment.

Federal Law on Energy Saving and Energy Efficiency Improvement was passed in 2009 in Russia. Currently Ministry of Construction of Russia is updating legislative basis for energy efficiency stimulation. Together with scientific society, specific indicators of energy resources consumption for all building types were established depending on the purpose of the object, climate and location. The specialists of the ministry were mainly using European practice due to which the requirements comply with world standards.

There is currently work being done on harmonisation of the requirements for energy efficiency of the buildings at all stages (design, construction, operation, reconstruction).

"Our goal is to improve energy efficiency of apartment buildings, including within the framework of complete renovation programmes. Every house should have an energy passport", said Andrei Chibis.

The plan for modernisation of communal infrastructure will include decommissioning of dated equipment and deployment of new energy technologies. Nowadays, companies working in energy supply must have a plan for energy-efficient development, undergo energy audits and supply the customers with meters.

The legislative basis, needed for transition to long-term tariff regulations in heat and water supply and water disposal, is completely formed, and conditions for active deployment of energy saving mechanisms and technologies are provided. The law stipulates compulsory transition to long-term tariff regulation from 2016.

Moreover, Ministry of Construction is preparing a Guide of the most effective technologies in Housing and Utility Sector. Accessible data base of most efficient technologies will be used for modernisation and construction of the housing and utility infrastructure showing guidance for technical and economical parameters of their deployment. Use of these technologies and equipment will help to reduce costs of modernisation of housing and utilities. In the future, all shown technologies will turn from recommended to compulsory.

During the meeting is was decided that a number of German specialists will enter Expert Board on Energy Efficiency under the Ministry of Construction for the pilot energy efficiency projects in Russia.

"Cooperation between Russia and Germany in construction and utility sector is very important for the stable economic development of both countries", said Andrei Chibis in Munich.

VNIPIENERGOPROM:

ISOPROFLEX-A PIPES ARE IN COMPLIANCE WITH THE DECLARED TECHNICAL AND OPERATIONAL SPECIFICATIONS

Press-service of POLYPLASTIC Group

The results of tests, carried out by VNIPIenergoprom, OJSC have confirmed that ISOPROFLEX-95A and ISOPROFLEX-115A pipe systems produced by POLYMERTEPLO Group, LLC fully comply with the declared technical and operational specifications.

Test reports are available on www.polymerteplo.ru.

Full-scale tests of samples of ISOPROFLEX-95A and ISOPROFLEX-115A pipes were carried out by "Pipelines and power equipment", the accredited laboratory of VNIPIenergoprom in August – November 2014.

Test program included experimental study of the following properties of ISOPROFLEX-95A and ISOPROFLEX-115A pipes:

– outward appearance of pipe products;
– pipe dimensions;
– the degree of cross-linking of the inner layer of the main pipe;
– resistance of pipe systems to constant internal pressure at constant temperature (in various modes);
– resistance to temperature cycling;
– resistance to pressure cycling;
– linear resistance to water penetration;
– long-term thermal resistance of insulating material;
– density of insulating material;
– water absorptions of insulation at boiling water;
– compressive stress of insulation at 10% deformation;
– thermal conductivity of insulation.

VNIPIenergoprom is a leading research and design institute for heat supply networks and integrated development programs for municipal infrastructure of the Russian Federation. VNIPIenergoprom also provides expertise in energy sector for federal government bodies of Russia. VNIPIenergoprom together with other organizations has designed 687 heat supply networks for cities and regions of Russia and CIS.

POLYMERTEPLO Group is a leading developer and manufacturer of plastic pipe systems for water supply and district heat distribution networks. The company has developed and launched production of the world's brand new ISOPROFLEX-A pipe system of enhanced reliability and the warranted operation life of 49 years.

ISOPROFLEX-A pipe is a flexible reinforced plastic pipe system with 49-year life warranty, specially designed for hot water- and district heating networks of the Russian Federation. It is characterised by its superb resistance to high thermal loads. ISOPROFLEX-A pipelines are designed to operate at 115°C of a heat-transfer agent and operating pressure of up to 1.25 MPa. This pipe system has been produced since 2004. It represents the basic pipe system for renovation of hot water and district heating networks of Russia. In 2014 the total length of all ISOPROFLEX-A pipelines in operation was more than 5 thousand kilometers.

"WELDING OF PLASTIC MATERIALS" INTERNATIONAL CONFERENCE

By Anna Zaitseva
Executive Secretary, Association of Welders of plastic materials

"Welding of plastic materials 2015" International scientific and practical conference took place on 5 February 2015 at Crocus Expo Exhibition Centre within the framework of Aqua-Therm Moscow.

The Association for Plastic Material Welders (AWPM) was the organiser of the event. Over 120 specialists from most of the regions of the Russian Federation and from foreign countries took part in the conference. They represented pipe production companies and providers of pipeline fabrication and erection services, R&D institutes, regulatory bodies, technical committees, The National Welding Control Agency (NAKS), non-commercial partnerships, as well as the largest State Unitary Enterprises of Moscow city and of Moscow region such as Mosgaz, Mosvodokanal, Mosoblgaz. There were more than 20 presentations made at three sessions for specialists working with various polymeric products.

Elena Zaitseva, Director of AWPM, opened the conference with a report on the work of AWPM. In her address she also emphasized the importance of development of new technologies as well as of regulatory and technical documentation in plastic welding.

Inessa Safronova, a member of AWPM told the conferees about possibilities of applying of international and regional standards on welding in Russia.

Alexander Chuprak, Technical director of NAKS and the Executive Secretary of TK 364 touched upon problems related to standardization in the field of welding and allied processes and to professional standards development.

The most interesting presentations in "Welding of Plastic Pipeline Systems"

session were made by Vladimir Kimelblat, Professor of Chemistry and technology of elastomers processing, department, Kazan National Research and Technology University; Vladislav Kovriga, Professor, R&D Director, POLYMERTEPLO; Natalia Biserova, leading technologist, Technological Department, POLYPLASTIC R&D Institute. The said presentations were devoted to problems and specifics of plastic welding and new methods of control of mechanical properties of welded joints.

Olga Amossova, Ph.D. Eng. Sci., Research Officer, Institute of Oil and Gas Problems of the Siberian Branch of the RAS, presented the results of a study on possibilities of welding of plastic pipes at low temperatures. The Institute has developed a scientific basis for solving a problem of welding of PE gas pipes in low temperatures and technical solutions to ensure welding process parameters.

The Leading manufacturers and dealers of welding equipment and fittings presented their new studies and shared their unique experience in practical application of modern welding technologies. Alexander Zhukov, General Director, "ADR-Technologiya", gave the detailed description of physical processes in pipes, fittings and welding equipment during electrofusion welding.

Apart from discussions on issues of welding of pipeline systems, proper attention was given to issues related to the use of plastic sheets, films and geomembranes.

Specialists from St. Petersburg spoke about Russia's experience in installation of geomembranes. It was especially stressed that strict observance of technology in respect of the use of rolled materials also implies the validity of engineering solutions, the quality of materials used and the quality of welding works. In his tern, Michael Ditrich, a representative of WEGENER, Germany, made a report on foreign experience and modern technical solu-

tions related to design and production of plastic sheet, film and geomembrane welding machines.

Discussions and networking continued during round-table meetings, personal talks and coffee breaks.

In the judgment of conference participants, the conference was characterised by a high level of organization, which led to a real success. The main goal was achieved as the conference managed to attract attention of a wide audience of specialists to actual problems and achievements in the field of plastic welding; to practical application of updated norms and standards as well as of the best welding technologies to promote successful development of industries that produce and use polymers.

Presentations from the conference are available on www.a-spm.ru on Useful Information page of the website.

STEPNOGORSK: RECORD START-UP OF THE UNIQUE LINE

Press-service of POLYPLASTIC Group

At the end of December 2014 Kazakhstani mass media reported a start-up of the new unique CORSYS ARM line for production of pipes with diameters from 800 to 1600 mm at Arystan pipe plant, Stepnogorsk. However, these reports did not show why this event was truly unique – unprecedentedly short terms of implementation.

The advantages of polyethylene are known for many years: light weight, flexibility, high chemical and corrosion resistance etc. One of the major parameters for large diameter pipes used for non-pressurised systems is hoop strength that ensures pipe operation at high outer loads. That is why PE pipes with structured wall, inner smooth and corrugated outer surface have become wide spread. Such design allows to reduce the weight and therefore the cost of the pipe while maintaining the hoop strength. The main feature of CORSYS ARM pipes is the profile with the steel basis that does not get in contact with neither transported agent not the ground, that is how significant hoop strength is achieved while reducing the total weight and cost of the pipe. CORSYS ARM pipes can be installed at any depth or at a smaller depth with heavy transport loads and their cost, in most of the cases, turn out to be lower comparing to the other profiled systems even at the hoop strength difference of greater than 1.5 times, which is more unusual for plastic pipelines. Moreover, the production technology allows to produce the pipes of any length and only limited by the capability of the transport.

CORSYS ARM pipes were implemented in Kazakhstan in summer 2014 for the first time for sewer pipelines renovation in Kostanay. The new pipe had drown a lot of interest from contractors and customers, the prospect of pipes implementation in Kazakhstan was without doubts. That is why the decision was taken to start production of CORSYS ARM pipes at Arystan Plant in Stepnogorsk as transportation of large diameter pipes from Central Russia was not cost effective. Moreover, flexibility and operational efficiency can only be achieved with local production.

Klimovsk pipe plant was undergoing works for increasing production capacity and increasing CORSYS ARM range to 2000 mm and installation of the new line. Then the decision was taken to move the existing line for CORSYS ARM pipes up to 1600 mm to Arystan. It was complicated by the fact that Klimovsk Plant was shipping CORSYS ARM pipes to Astana for the project of renovation of storm water sewer from Tlendiev to Seifullin street. It was necessary to complete the move within a very short period of time in order to fulfil the contractual obligation. Moreover, the start-up of the line before the New Year holidays was a very important factor for designers and suppliers to plan projects for 2015.

The strict plan of the move was designed by the specialists from Klimovsk Pipe Plant: only 4 days were allocated to decommissioning and loading, 5 days for installation at Arystan, 4 days to start-up of the line and training for the specialists from Arystan. Thanks to strict organisation and precision of the department of Klimovsk Plant, the seemingly impossible had been done, i.e. decommissioning started on 1 December and production of the first Kazakh CORSYS ARM 1200 mm pipe was produced by Arystan Pipe Plant on 23 December with dispatch of the pipe to the customer before the end of the year.

A number of water disposal pipelines construction and renovation using CORSYS ARM pipes is being designed in Kazakhstan. Production at Arystan Plant will significantly reduce the costs of transportation and increase the efficiency of orders completion as well as ensure Kazakh content of the product, which will give an extra advantage during design and construction of pipeline projects in Kazakhstan.

We are confident that high efficiency innovative CORSYS ARM pipes will find their place amongst the modern plastic piping that are used for large pipeline infrastructure projects.

INTERNATIONAL CONFERENCE

By Alexander Sazonov

Plastic Pipes XVII International Conference, one of the most important events of plastic pipes industry took place on 22–24 September 2014 in Chicago. The organisers were, traditionally, American Plastic Pipe Institute Inc., PVC4Pipes Association, PE100+ Association and TEPPFA, the European Plastic Pipes and Fittings Association.

462 participants from 32 countries took part in the Conference. The delegation from America was an impressive one composed of 228 members, the second largest delegation was from China (50 members), for the first time outnumbering delegations from Germany and The Netherlands.. Russia was represented by three participants and one member of Organising Committee. The Conference included 122 papers, 9 poster and 26 exhibition stands.

Stephen Boros, Chairman of Organising Committee, noted during opening of the conference that plastic pipeline industry was constantly developing and its rate for the next 10 years would maintain the same level, 10% more. Amongst major growth factors, he named the development of shale oil and gas production, growth of regional markets, innovations and achievements in evaluation of pipeline operation life. He also highlighted that plastic pipelines continued to displace the traditional materials, such as copper, steel, concrete and mentioned some new categories of projects like: “green the desert”, combating the post-effect of draughts, storm water disposal and others – the projects that became possible owing to development of polymeric technologies. According to some studies, trade turnover of polymer and related industries would reach 500 billion dollars by 2024.

The paper of TEPPFA European Plastic Pipes and Fittings Association and VITO Flemish Institute for Technological Research presented the latest results of large-scale research on integral environmental impact encountered during the life-span of particular plastic pipe system. The research included ecological impact evaluation of the pipelines for different purposes, made of different materials, at different stages of their lifecycle – production of the material, construction, operation and utilisation in comparison with pipelines made of traditional materials.

Peter Verlaan, representing Wavin and TEPPFA, told about the field experiment of construction of the sewage collector made of PVC and concrete pipes. Chronometry of installation of plastic and concrete sections confirmed that the use of plastic pipes significantly (30%) accelerated the construction process.

Presentations from Steve Sandstrum (ISCO Industries, Inc.) and Stephen Boros (Pipeline Plastics, LLC.) were dedicated to comparison analysis of the most commonly used pipe grades of PE designations – PE 100 of ISO and PE 4710 of ASTM. This topic was becomes very important due to the growing globalisation of plastic pipes market where large transnational project involve companies working according to different standards.

Later the conference continued in two sessions. Session 2A was devoted to a responsible approach to infrastructure.

Steven Folkman from Utah University told about results of lab tests on PVC pipes that were in use for 20–49 years. Those tests confirmed that life of PVS pipelines is not less than 100 years subject to observation of production and installation technologies.

John Kurdziel, Chief Engineer of Advanced Drainage Systems, told about required engineering properties for HDPE pipe utilizing recycled materials recycled materials

Kumhoong Lou from Borouge, presented the results of study on permissible amount of recycled material in PE pipes for drip irrigation used for "Green the Desert" project in Abu Dhabi.

Zoran Davidovski, Vice-President of Pipelife Group told about the VynylPlus 10-year programme and its goals.

Stephan Schuessler from Georg Fischer told about transparent PVC-U pipes designed by the company for photobioreactors for biomass growing present – a prospective raw material for a number of industries.

Andrew Wedgner (Borouge Pte Ltd.) showed how realization of even simple projects using modern PE pipe systems can improve the social environment in world's poorest countries.

Session 2B was devoted to joining methods and testing of plastic pipes.

Robert Eckert (FRIATEC AG – ALIAXIS Utilities & Industry) told about new effective ways of large PE pipes live branching.

Alex Geringer from Georg Fischer Piping Systems Ltd. told about new products – branch saddle system and electrofusion couplers with active reinforcement for large diameter PE mains.

Dominique Gueugnaut (GDF SUEZ) made a presentation prepared by the group of French specialists about ultrasonic phased array inspection of small diameter (63 mm) PE pipelines and fittings used for gas distribution.

Edward Ingham and Shepherd from Great Britain told about a developed national standard for training and certification of welders of PE pipes.

Pedrom Tayefi from Sheffield University told about analysis of the fatigue performance of contaminated electrofusion tapping tees and their link to installation failures.

Z. Jimmy Zhou (Dow Chemical Company) and Jim Johnston (McElroy Manufacturing Inc.) shared the results of a study on essential thermoplastic materials variables influencing the quality of welding.

Session 3A was dedicated to material properties impacting pipeline performance.

Stefan Dreckötter from Borealis told about the results of prolonged ISO 9080 hydrostatic testing and stress crack resistance of PEX-c pipes. In all cases the results were significantly above the existing requirements for the pipes.

Steven Horwatt from Equistar Chemicals presented a method of antioxidant content evaluation in PE using Rapid LC-MS technique, which is faster than standard OIT.

Representatives of Engineering Mechanics Corporation of Columbus and US Nuclear Regulatory Commission told about their study of critical flaw size in butt-fusion joints of HDPE pipes. This research was done in relation to development of amendments to Nuclear Power station inspection rules.

Chevron Phillips Chemical's presentation analysed internal tension in PE pipes when using dual cooling during extrusion and their effect on the rapid crack propagation performance of polyethylene.

Possibilities of using differential scanning calorimetry for exact evaluation of plastication of PVC pipes were reviewed in the paper of Engineering Systems Inc.

Dow Chemical paper was about effect of surface defects (scratches, etc.) on the long-term durability of PE pipes.

The subject of Session 3B was new plastic piping materials. The presentations were about PVC-O, PA-12, coloured master-batches and possibility of reducing costs of PVC pipelines.

During the second day of the conference the following topics were discussed: material testing advancements, trenchless technologies, joining and fitting solutions for polyolefin pipes; material performance in hot water applications.

Session 4A started with presentation from Korean specialist telling about the results of experiments on non-destructive evaluation of improper fusion for PE heat fusion socket joint using phase array ultrasonic imaging method.

Three papers from Advanced Drainage Systems were about creep rupture and creep modulus testing of HDPE and PP pipe grades.

Two papers from Kiwa Technology and Chevron Phillips Chemical were about the phenomenon of rapid crack propagation in HDPE and PP and factors causing it.

Session 4B covered trenchless pipelines construction and renovation technologies, evaluation of the long-term

Stephen Boros

Zoran Davidovski

performance of composite plastic liners, examples of effective implementation of trenchless technologies, including PVC pipes welding. The paper of Australian participants drew special interest – it was about the plough-in of a large diameter PE pipe installation – up to DN 630 and twin strands of 315 mm.

All papers in Session 5A "Polyolefin Pipe, Joining and Fitting Solutions" were about large diameter PE pipes. This session was opened by a representative of Qenos (Australia), who told about a unique rapid construction of 4-km 1600 mm pipeline for river (which destroyed the dam). Successful implementation of this product have prevented energy crisis of the whole state.

Roger Jepson from Union Pipes Industry spoke about the rapid spread of large diameter PE pipes in the Middle East and Asia.

Derek Muckle from Radius Systems gave an overview of installation of large diameter close fit PE liner.

Bernd Klemm (WIDOS) summarised experience and recommendations for joints welding of large diameter PE pipes.

Steve Sandrum (ISCO Industries, Inc.) together with his colleagues from Reinert-Ritz GmbH analysed the "weakest links" of large diameter PE pipelines and solutions for their elimination.

Presentations made at Session 5B were all about PE material performance in hot water applications. Japanese specialists presented two papers: one was about ageing and deterioration processes of PE-RT pipes and recommendations for measures against deterioration; the other one presented results of the long-term tests on PEX and PE-RT pipes used for hot water applications.

Three papers from Borealis, Borouge and Basell were about properties of new generation PP-RCT, multi-modal PP-R and PP125.

Session 6A focused on accelerated testing and service life assessment.

Scientists from Leoben (Austria) presented papers about PP multi-layer pipe lifetime assessment and correlation of results of the accelerated tests on samples of PE pipes of different shape with the ISO 9080 standard tests.

Specialist from Osaka Gas Co., Ltd. и Kyoto Institute of Technology presented a new method of the ring creep test for multi-layer composite pipes.

Karin Jacobson from Swerea KIMAB told about the mechanism of ageing of polyolefin pipes (PE and PP) in contact with chlorine dioxide and about comparison of the results of accelerated tests on PP pipes samples after operation.

Professor Vanspeybroeck (Becetel) told about PE pipes accelerated notch test (PANT-method) and its advantages compared to the standard method of notch tests according to ISO 13479.

The subject of session 6B was "Plastic Pipe Use and the Environment". The presented papers touched upon general subjects related to deployment and use of plastic pipes: the role of standardisation, training programmes, expanding of application, etc.

Session 7A was devoted to structure wall pipes. The papers were about the matters related to testing the pipe and manholes, corrugated PP pipes production technologies, evaluation of performance of corrugated pipes under high outer load and the content of recycled materials in them. Borealis focused on material properties for stormwater boxes – a new niche for storm water management.

Session 7B was opened with a presentation by Udo Anders (Baerlocher GmbH) on PVC stabilisers for pipes in different countries. A joint paper of Mexican and Columbian Dow and Universidad de los Andes in Columbia described experiments on HDPE to increase their abrasion resistance by cross-linking (adding peroxide masterbatches). Representatives from Swerea KIMAB gave an overview of plastic pipes used in steel pickling industry. Mexican specialist presented a mathematical model of gasket behaviour in the bell-and-spigot joint. Frans Scholten (Kiwa Technology) told about possibilities of an assessment method of electrofusion joints in PE pipes using energy-to-failure analysis and gave recommendations for effectiveness of the joints.

Session 8A was devoted to gas pipeline performance. Three papers were presented by Gas Technology Institute. The authors of one of the papers suggested a new technology for PE gas pipelines renovation using 2-component acrylic adhesive and PE patches, and announced test results confirming its reliability. The second paper was about two-year study of the impact of heavy hydrocarbon on PE pipelines. The third paper from Gas Technology Institute

was dedicated to remaining life expectancy and risk profile of vintage Ardyl A gas pipelines which were in operation during the period of 1972 1974. Other papers were also about life expectancy of PE pipelines, data on tests results with regard to PE pipe after 30 years of operation, performance evaluation methodology of pipe and electrofusion joints, (the paper from Institute of Polymeric Materials and Testing/ IKU) performance of PE 100 and PEX pipes in contact with liquid hydrocarbons.

Session 8B was all about application of PE pipes in industrial networks with severe operation conditions (temperature, pressure, chemical composition) in comparison with application connected with transportation of water and gas. The papers were focused on abrasion resistance of PE during pulp transportation, possibilities of implementation of PE-RT pipes in oil and gas and heating supply networks, as well as methods of PE liners connection in steel pipes renovation.

Session 9A was devoted to plastic pipes advancements.

Frank O'Callaghan from Iplex Pipelines (New Zealand) presented a detailed analysis of performance of pipelines made of different materials and destroyed as a result of earthquakes in New Zealand from 1987 to 2014 and gave recommendation on design of pipeline systems in seismic regions considering the complexity and costs of their restoration after the event.

Steve Sandrum and his colleagues (ISCO Industries) told about choosing pipe for 38 km pipelines project in San Antonio, Texas. It is not the most impressive project according to the Russian standards (diameter from 18" to 36" – 450 mm to 900 mm) but it was named one of the projects of the year by Plastics Pipe Institute.

Dug Sergeant (EPCOR Water Services Inc.) described development of water supply in Edmonton, Canada using PVC pipes. Chinese specialists told about their experience in underwater installation of steel wire reinforced PE composite pipelines across sea channels between the islands.

Specialist from Japan Polyethylene Corporation (Kawasaki, Japan) told about new grade of PE 100 – NOVATECTM HD HE222W combining easy processing (flow melt index at high load – 18 gr/10 min) and strength properties that are higher than required by the Association of PE100+.

Session 9B focused on lifetime of the pipelines and conditions for maintaining them.

A representative of Swerea KIMAB and Scandinavian Organisation of water users (4S-ledningsnät) presented results of studies determining whether 150-year PE water pipeline lifetime is achievable, what technical and organisational measures must be taken to achieve it.

Specialist from Jana Laboratories told about theoretical grounds for PE pipes use for potable water supply, operation assessment and residual resources.

Riccardo Barbone's (Georg Fischer Piping Systems) paper was dedicated to the history of pipeline systems. The analysis of driving forces and their evolution can help to determine further development of the industry.

Steve Sandstrum

Austrian specialists told about the results of small diameter PE pipes (50 mm) testing that have been in operation for decades (from 24 to 55 years) in water supply networks in Vienna and Graz. The results showed that the residual lifetime was still high and the operating lifetime would surpass the standard 50 years.

A joint paper of TEPPFA, Wavin, Borealis and Lyondell-Basell was about prediction of residual lifetime of gravity PE. The study show that their lifetime would be not less than 100 years subject to observance of all requirements.

Session 10A was about pipeline management. Two papers were about the Distribution Integrity Management Program of the US Department of Transport: Demmis Jarnecke from Technology Institute told about development of unified automatic system for data collection and processing of welding parameters. Randall Knapp from Plastics Pipe Institute told about problems of tracking and traceability in plastic gas distribution systems.

Two papers on pipeline assets management were presented by Jana representatives: they were about implementation of mechanical probability models for prioritising Aldyl gas pipeline replacement that has been in operation since 1960s and a new asset management JANAcquire55™ approach developed by the company.

Chinese specialists gave an overview of current condition of municipal water supply networks in China and the role of plastic pipes in their development.

Session 10B was devoted to problems related to slow crack growth testing in PE pipes. The conference participants presented test methods for PE100 RC pipes. British

Exova informed about the development of a slow crack growth resistance (Strain Hardening) test for assessment of ageing PE pipeline material. Despite the advantages this method did not show the reliable result.

Twelve briefs on different subjects were presented at the end of the conference: about development of new grades of PE pipe materials, design of pipes and fittings, examples of plastic pipes applications. There were posters were located in the conference hall.

The next Plastic Pipes Conference will be hosted in Berlin 12–14 September 2016. Zoran Davidovski, Marketing and Innovations Vice-President of Pipelife Group was nominated the Chairman of Organising Committee. It was also announced that intermediate Asian Conference will take place in Shanghai on 21–22 September 2015.

Notes:

Plastic Pipes Journal editorial staff would like to inform you that The International Pipes Conference has opened an online database containing all its papers since its first convention in 1970 in Southampton (UK) until their most recent event in Barcelona in 2012. The Online database is available on www.plasticpipesconference.com. If you are interested in obtaining conference papers from Plastic Pipes XVII, please contact Conference organisers at: ppxvii@congress.hu, tel. +36-1-212-0056, Mrs Eva Balassa.

Rob Spekreijse

RADIUSPLUS

Part of the Radius Systems Group

Subterra

Protecting Pipeline Infrastructure

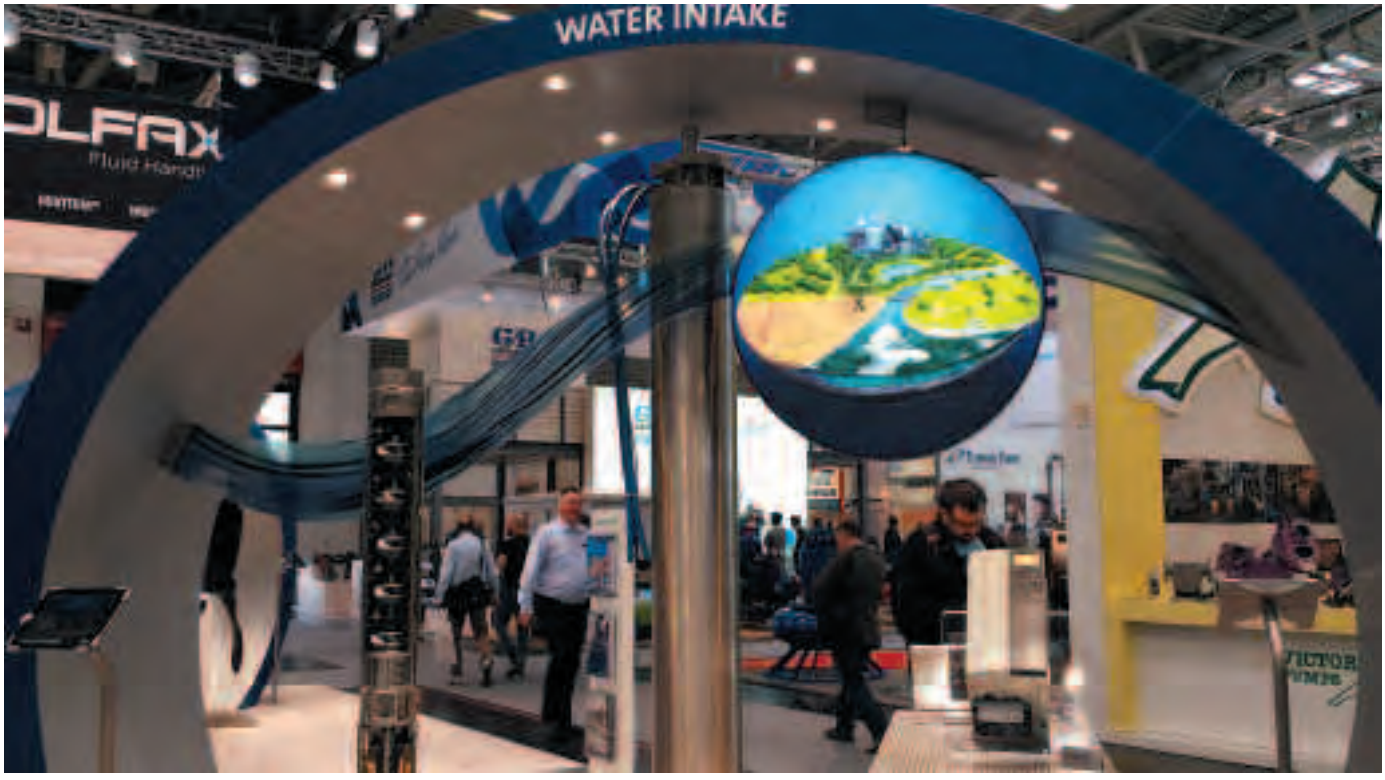
- Close-fit polyethylene lining technology for metallic pipelines
- Renovation of old gas and water pipes
- Wear resistant liners for new slurry pipelines
- Corrosion resistant barriers for on-shore oil & gas pipes
- Full service from bespoke liner production to on-site installation

For more details on our product range, please contact us on
t: +44(0)1773 582317, e: radiusplus@radius-systems.com
Visit our website www.radius-plus.co.uk.

RadiusPLUS Ltd
Radius House, Berristow Lane
South Normanton, Alfreton
Derbyshire DE55 2JJ, United Kingdom
t: +44 (0)1773 582317
e: radiusplus@radius-systems.com
w: www.radius-plus.co.uk

Part of

POLYPLASTIC GROUP



IFAT 2014

XVIII International Trade Fair for water, water treatment and purification, waste processing and utilisation IFAT 2014 – world's leading forum for ecology and environment protection took place in Munich from 5 to 9 May 2014. Specialists and experts in industrial production, public utility, water purification and supply companies, environmental protection companies, research and development institutes and organisations participated in the event.

According to Eugen Egetenmeir, Managing Director of Messe München, IFAT have broken all previous records in 2014 in exhibition space (230,00 sq.m.), the number of participants (over 3,000 from 59 countries) and the number of the visitors (over 135,000 including 60,000 foreign visitors).

The exhibitors have noted the high quality of the visitors: a significant share of them was decision makers, which resulted in successful negotiations and meetings with possible future productive cooperation.

Almost all leading European producers of plastic piping took part at the exhibition: Aliaxis (Friatec), Egeplast, Georg Fischer, HOBAS, PipeLife, Plasson, POLYPLASTIC, Simona, Wavin, valves producer like AVK, Hawle, TALIS, etc.

This substantial international forum is, above all, the platform for ideas exchange that gives a perfect opportunity to show latest innovations to the wide circle of potential customers and learn about experience of colleagues, evaluate the market trends and decide on the innovation priorities.

One of the tendencies in PE pipes production seems to be an extensive use of PE100 grade with high crack resistance (PE 100RC). Materials of this grade are not only used for pipes production but also for different types of fittings. It is quite possible they will replace the traditional PE100.

Push-fit type fittings are becoming very popular. They are mainly used for in-house water supply and heating networks, however, some manufactures like Reinert-Ritz are already offer fittings of significantly bigger sizes – up to DN500 mm.

A number of solutions in plastic manholes were also presented at the Fair, which signifies the growth of their use in pipeline systems. The main part of the solutions is leading toward production unification by creating module

design, which will allow assembly of the manholes using standard spares. Some companies presented new plastic hatches for manholes – plastics are pushing the metal out of this traditional "cast iron" niches.

Fitting suppliers have demonstrated solutions for cut-ins, pulling, bends negotiations etc., which are designed to help construction and operating companies effectively work with modern materials.

Stand of major German manufactures like Egeplast and Gerodur had consultants who spoke Russian. This proves the interest of Western producers in Russia and Russian speaking markets.

POLYPLASTIC Group presented Russian pipe producers. Its big and light stand was a centre of attraction of all Russian visitors. The stand demonstrated water and heating pipes and produce of the Group's partners: pipes for electrical networks from EVOPIPES, Radius Systems production and solutions, Subterra trenchless pipelines technologies and AEON valves.

It is estimated that POLYPLASTIC Group stand was visited by over 450 people from different countries – Germany, Austria, Switzerland, Italy, Netherlands, Denmark, Poland, Czech Republic, Spain and Britain. They were a lot of visitors from CIS countries and old partners of POLYPLASTIC Group. There was a magician at the stand who attracted the visitors. The guests were met with Bavarian beer and hot sausages. POLYPLASTIC Group's delegation was about 70 people. The stand held almost non-stop negotiations and prebooked meetings. However, the Fair was not the only programme of the visit. The Group organised excursions and meetings for the guests and partners, on the 7 May it held POLYPLASTIC evening at Hofbräukeller restaurant where the partners of the company were invited. The guests and employees (about 70 people) were officially presented a new family member, a Latvian EVOPIPES.

IFAT Fair comparing to other similar exhibition events has a very long history, the first IFAT took place in 1966. IFAT today represents the widest range of innovations and solutions for Environment protection. Climate change, raw materials price growth, increasing number of mega cities and industrialisation process in developing countries – all this stimulates demand for the produce and services. This Fair at large looks at water treatment, water purification, processing and waste utilisation and sets the strategy of rational use of natural resources and its conservation for future generations.

Next IFAT Fair will take place from 30 May to 3 June 2016 in Munich. Radius Systems and POLYPLASTIC Group and partners will definitely take part in the forum.

MILLION KILOMETRES OF DISTRICT HEATING NETWORKS

THE TOTAL LENGTH OF DISTRICT HEATING NETWORKS IN EURASIA IS GROWING THANKS TO WESTERN EUROPE AND CHINA

By Alexander Shmelev

Despite the widely spread opinion that district heating in Europe is rare, it is far from reality. According to European statistics [1] the length of heating supply networks in Western and Central Europe was 310 thousand km of single line at the end of 2011. Therefore, including Asia (300 thousand km), Russia and CIS countries (470 thousand km) the total length of district heating networks in Eurasia exceeds 1 million km, where Russia and China jointly make almost 60% of the total length (pic. 1, 2).

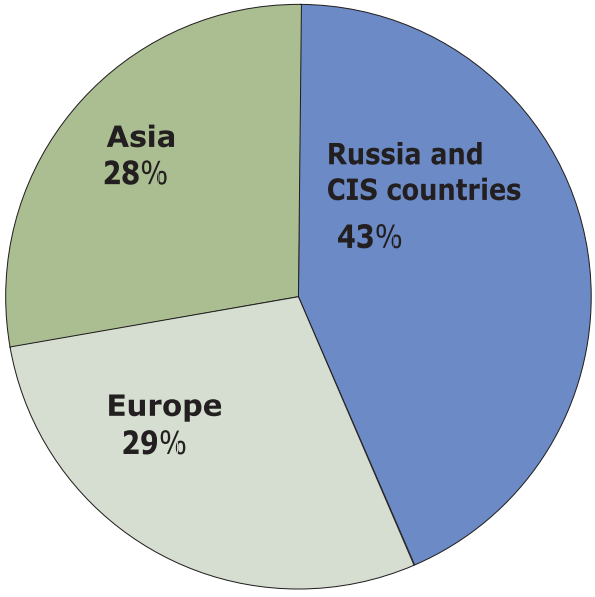
The share of district heating in the total heat supply system in different European countries varies from 2% in Iceland, where forming of geothermal system was speedily complete in the first half of 2000, to 1% in Norway, where employment in national heating supply sector do not exceed 2000 people (pic. 3).

Undoubtedly, very low level of district heat supply is conspicuous in Europe's backbone countries with total populations no less than 300 million people: Germany (12%), France (7%), Italy (5%), Netherlands (5%), Great Britain (1%).

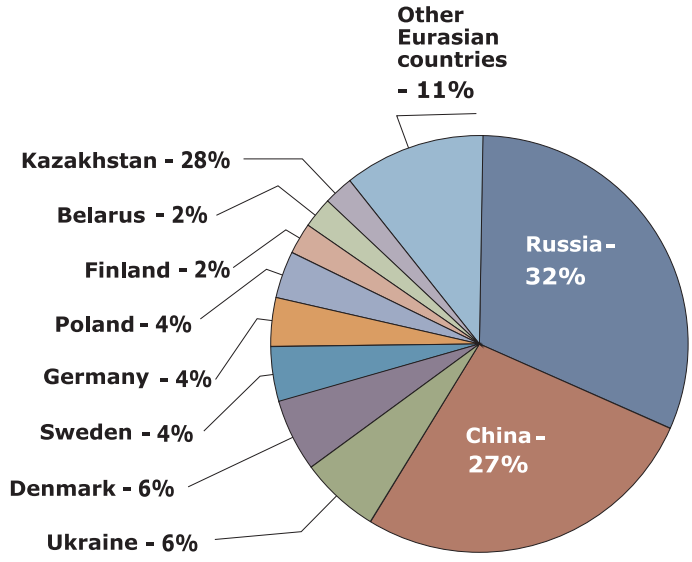
This colossal potential in prospective has good chances not only because of well-known ecological advantages. The latest large-scale study [2] shows that 60% of the European countries chose district heat supply based on economical factor.

The assumption that development factors for district heat supply in Europe are fundamental rather than speculative is confirmed by the following observations: global economic crisis of 2008 did not impact any trends formed by that time.

Pic. 1. District heating networks in Euroasia – regional structure
Source: Euroheat & Power; National statistics



Pic. 2. District heating networks in Eurasia, % of total length
Source: Euroheat & Power; National statistics



District heating in former USSR and Eastern Europe had tendency for reduction since the beginning of the 90s, whereas, in Western Europe and Kazakhstan it continued to grow at staggering pace (pic. 4).

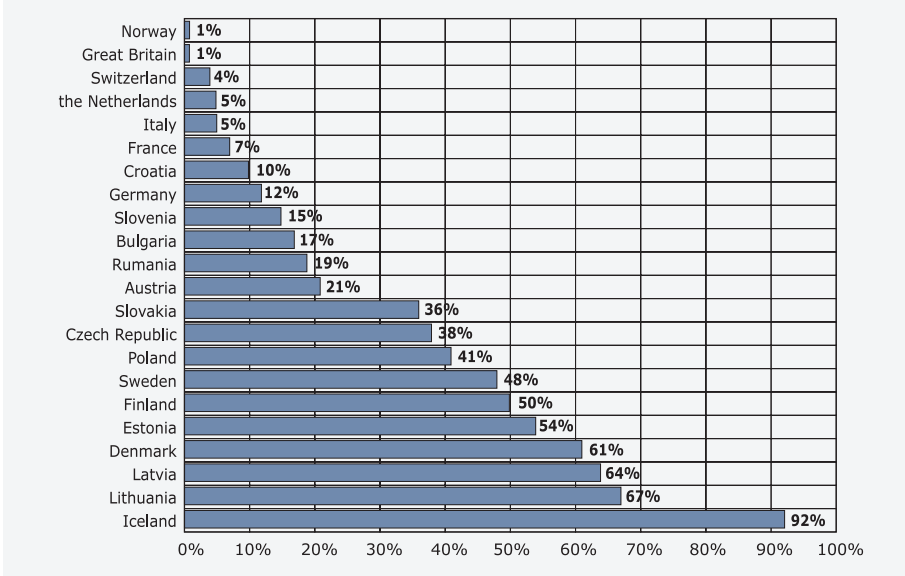
If the dynamics in Norway and Italy (which saw increase in the number of district heating networks within 4 years, from 2008 to 2011 by 10.3% and 8.0% accordingly) could be explained by low base effect, then Finland and Sweden (4.4% and 4.0 % accordingly of yearly increase in the same period) had impressive level of district heating.

10 European countries championing network replacement have jointly increased the volume of heat supply network by nearly 7,000 km in 2008–2011 (pic. 5). It is the lower value of average annual new pipeline construction of top 10 countries, excluding renovation and replacement of old networks.

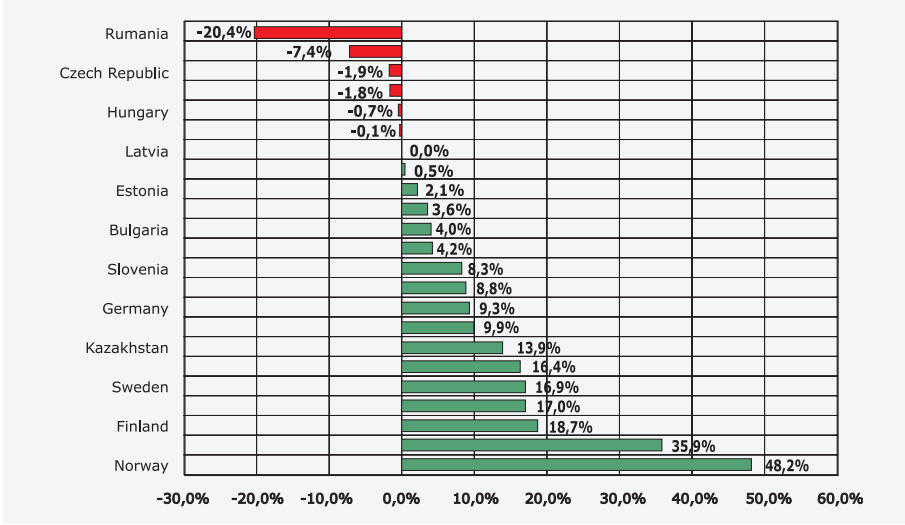
The future looks bright for district heating in Eurasia as a whole, if we take into consideration the fact the China has been keeping the rate of annual average increase of district heating at 13.5% for the last few years, putting tens of thousands kilometres of networks.

References:

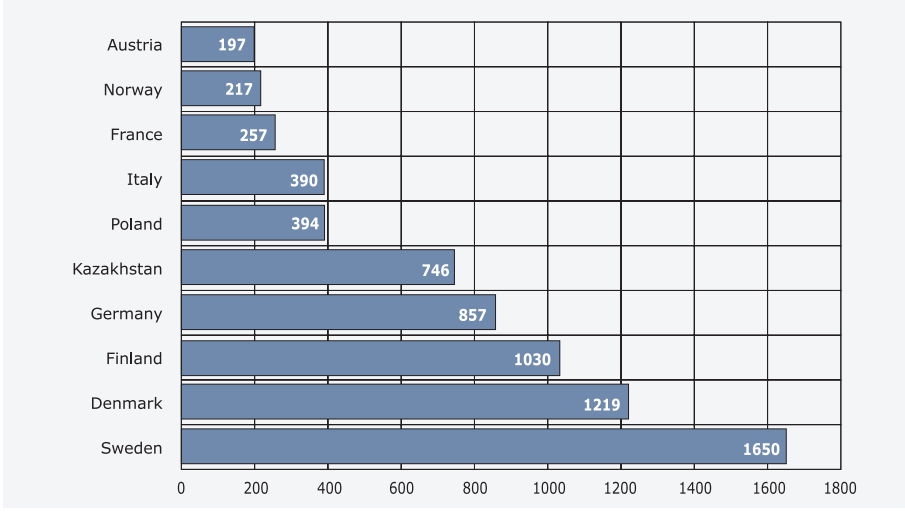
1. District Heating and cooling country by country 2013 survey. Euroheat & Power, Brussels, 2013.
2. The future competitiveness of district heating. Urban Persson/ Chalmers University of Technology/ Halmstad University, 35th Euroheat & Power, Paris, May 9th and 10th 2011.



Pic. 3. District heating services supply in Europe (2011), % of total population
Source: Euroheat & Power



Pic. 4. Relative increase in district heating networks in 2007–2011, %
Source: Euroheat & Power



Pic. 5. Annual average increase of district heat networks total length in 2008–2011 (Europe top 10), km of single pipeline per year

OMSK PIPE PLANT:

YESTERDAY, TODAY AND TOMORROW

By Liliya Schleiger

Omsk Pipe Plant (OZTI) is high performance industrial enterprise with over 15 years of history. OZTI as it stands today did not appear at once, there have been a number of significant events, one of them is becoming a part of POLYPLASTIC Group in 2012.

As a part of POLYPLASTIC Group the plant has gone through several important stages of modernisation and development.

In 2011OZTI had 11 lines for production of plastic pipes with the capacity just over 9 thousand tonnes. In 2013 extra 4 lines were put into operation and capacity increased up to 19.500 tonnes. In 2014 almost 23.8 thousand tonnes of pipe has been produced.

The number of personnel at OZTI in 2011 was 305 people, in 2014 it was 317 employees. With practically the same number of employees OZTI had increased production by over 2.5 times and labour efficiency risen twice.

In October 2012 the plant implemented production of CORSYS ARM corrugated pipes with steel reinforced profile with diameters from 1200 to 1600 mm. In 2013 the plant started production of pipes with protective jacket with diameters up to 400 mm, in October 2014 the plant started production of PROTECT pipes with diameters up to 1200 mm. These measures allowed the plant to increase the volume and the range of products and supply the demand from construction and installation companies of the Western Siberia, Ural and Kazakhstan in full volume. It has to be noted that OZTI had become the second plant in Europe, after Klimovsk Pipe Plant, to implement direct extrusion of the protective jacket for the pipe with diameter up to 1200 mm.

In the beginning of 2013 OZTI has opened the warehouse for fittings for 1700 pallet places. This opened the opportunity to respond to demand changes and fully satisfy Siberia, Ural and Kazakh markets.

OZTI modernised the equipment for production of pipe with PU foam insulation, they bought high pressure casting unit for PU foam moulding, shot blasting unit for steel pipes up to 1200 mm, corona treatment unit for internal surface of jacket pipes that allowed to improve the quality of the produce, increase the competitiveness and make OZTI become one of a few top Russian high quality producers.

Production of the manholes is the new field

PE manholes production has become one of important and prospective area for OZTI. In the beginning, the area for production of manholes was only no more than 40 sq.metres with 2 people. In 2012 OZTI produced 16 manholes. A year later the production was increased to 280 manholes, in 2014 it reached 736. Most of the manholes were made to order. We can confidently say that PE manholes are modern, reliable, long lasting. They gained good reputation amongst the customer and have taken the niche in the Western Siberian market.

Quality is our priority

Quality control is imperative at all stages of production and requirement towards maintaining and improving the quality of final goods are strictly followed. The plant started construction of its own hydraulic laboratory, which will have modern equipment for testing of plastic pipes.

OZTI implemented the integrated management system that controls all areas of the company operation. In November 2013 the plant had successfully passed certification of the integrated management system, which included quality control system in accordance with GOST ISO 9001-2011 and Ecology Management according to GOST R ISO 14001-2007.

OZTI today

Omsk Pipe Plant today is a high tech enterprise with a wide range of products. It consists of plastic pipes, PU foam insulation, manhole production and fittings production shops.

The success of Omsk Pipe Plant is made up by several factors. Firstly, it is a modern large scale manufacture of innovative products, secondly, the plant is directed to the market demand with attention to every client.

Finally, the major conditions for success of the enterprise are united team of specialists and competent management.

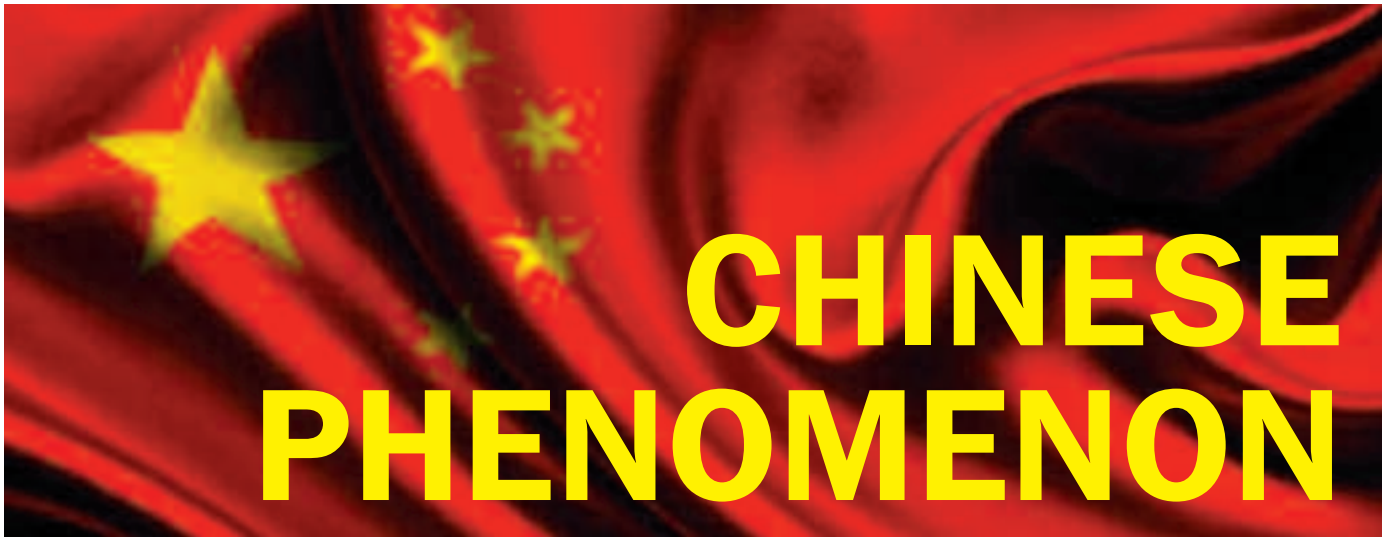
Development of corporate culture and favourable atmosphere create a positive vibe that helps the employees achieve goals and, therefore, add to the success of the whole enterprise.

PEBO

plastic materials
since 1987

specialized in HDPE and LDPE
compounds production for
extrusion and blowmoulding

PEBO Spa. 52038 Sestino (AR) ITALY - ph. 0575 772458
info@pebomaterieplastiche.com www.pebomaterieplastiche.com



CHINESE PHENOMENON

By Alexander Sazonov

When evaluating the situation on any of our (Russian) markets, including plastic pipes market, we often compare them with the West – either Western Europe or America (USA or whole Northern America, including Canada and rarely Mexico). We somehow ignored China, our Eastern neighbour, still automatically thinking it is a source of consumer goods and cheap imitations.

However, China is not only the country with the largest population (1.365 billion people as per August 2013) but also the largest producer and consumer of plastic pipes in the world. The data on Chinese market in different sources are not consistent, but this inconsistency is not great enough to distort its scale and dynamics.

According to China Plastic Piping Association – CPPA, production of plastic pipes in 2013 was 12.1 million tonnes, which 2 times more than total volume of both Western Europe and Northern America!

The dynamics of Chinese market is even more impressive: not so long ago, in 2005 its capacity was 5 times lower – 2.2 mln tonnes (pic. 1). This indicator is quite big if compared to the gross figures of other countries, however, consumption of plastic pipes per capita will be more significant for evaluation of the development level. The dynamics is simply stunning – it has grown from 1.6 kg to 8.9 kg within 9 years surpassing Russia and reaching Europe and America – with the population over 1.3 billion people!

It should be noted that more than half (55%) of these volumes made by PVC pipes (pic. 2) mainly due to low prices for acetylene PVC in China. Although, until recently its quality was quite poor but today this matter is being successfully solved. In the last few years the share of PVC pipes in total market volume is reducing, giving way to other polymers like PE and PP.

The growth of Chinese plastic pipes market in 2013 was 10%. According to CPPA experts, the market will continue to grow over the next 3–5 years at a slower pace – together with general slowdown of Chinese economy. Nevertheless, plastic pipes market continues to keep big and long-term development potential.

Urbanisation remains one of the major driving force behind the plastic pipes market. According to CPPA evaluation, the number of people moving from countryside to cities will reach 80 million by 2020 (i.e. roughly the population of Germany), and therefore, urbanisation and expansion of utility infrastructure – water supply and disposal systems, gas and heat supply – will continue. The other powerful market stimulating factor is development of the Western regions of China – which are behind the social and economic evolvement of Western and Central regions – and investments for development of industrial and social infrastructure. Moreover, consumption of plastic pipes in agriculture, industry, telecommunication is growing and the possibility of their application in mining, oil and gas is being considered. All this ensures wide prospects for future growth of Chinese plastic pipes market.

However, these prospects don't mean trouble-free development. The industry has some serious problems. First of all, significant overcapacity growing from year to year. According to CPPA, existing production capacity were half loaded in 2013 with the output growth of 10%. Low production capacity does not only increase competition but also reduces production profitability, which can't be sustained by small producers and leads them into bankruptcy. Moreover, overcapacity is mainly related to production of ordinary pipes made of unplasticised PVC. China is currently behind in production of modern plastic pipes like PVC-M, PVC-O, PVC-C and others – in raw materials, technology, quality of the products and the problem of misbalance between overcapacity and oversupply of cheap low quality produce along with increasing deficit of high quality and innovative produce is becoming ever so big.

According to different estimates, there are currently from 6,000 to 10,000 companies engaged in the production of plastic pipes in China [1]. Vast majority of them are small and medium companies with old technologies producing low quality products. Just a few of them have capacity over 10,000 tonnes per year and 15 largest of them make 25% of the whole Chinese production output

Top 10 Chinese producers of plastic pipes in 2013:

– CHINA LESSO Group Holdings Limited (former China Liansu Group Holdings Limited);
– Fujian ATON New Material Technology Co., Ltd;
– Hebei Bosoar Pipe Co., Ltd;
– Yonggao Co., Ltd;
– Nanya Plastics (Xiamen) Co., Ltd;
– Hubei Kaile Science and Technology Co., Ltd;
– GOODY TECHNOLOGY CO., Ltd;
– Chengdu CHUANLU Group;
– Chinaust Group;
– Anhui Guotong Pipe Co., Ltd.

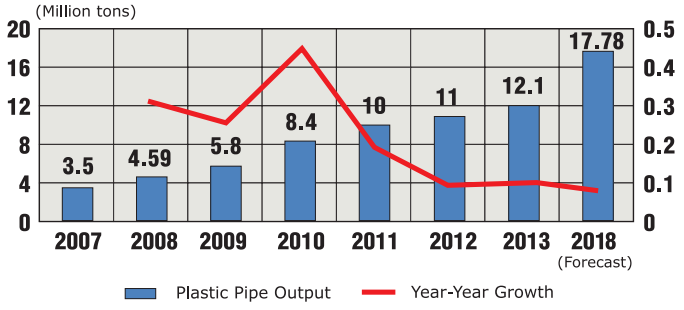
Some of these companies are very powerful with yearly output of hundreds of thousands tonnes. In the situation of Chinese market (overcapacity, fierce competition, deficit of innovative and high quality product), they have more advantages than small and medium producers in getting credit resources, production diversification, deployment of new technologies and new products. As the result of this, larger companies continue to develop showing bigger growth compared to average market figures. For example, Lesso Group Holdings Ltd. saw production capacity growing by 17% and 20% in revenue growth. Meanwhile, small and medium companies are forced to slow down and slide into bankruptcy.

Chinese market of plastic pipes will inevitably consolidate – growth and advanced development of the major players will lead to merger or displacement of small and medium companies. In the condition of disbalance between excess supply and unsatisfied demand for high quality produce, we can expect this process, similar to other markets, will lead to technical level improvement and reduction of counterfeit and low quality produce.

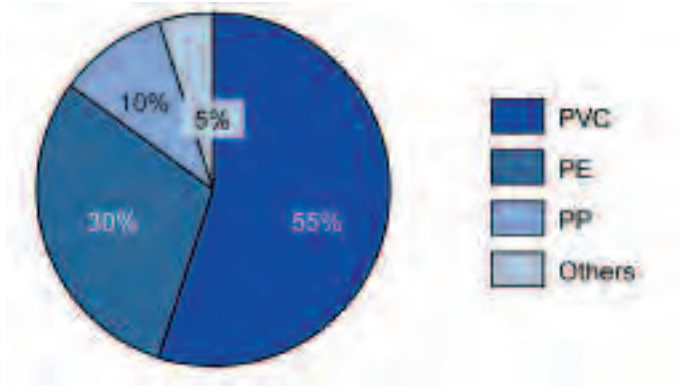
Chinese plastic pipes products at the moment don't make a serious competition to Russian producers if we don't consider supplier of counterfeit pipes made of natural grades of PE. As per the quality products, supply from China to Russia is not cost effective due to high costs of transport and import duties. The activity of Chinese producers is mainly directed at satisfaction of very high local demand.

"East is East and West is West". China is the world's largest superpower with enormous population and practically unlimited material and technical resources, that always lead and is leading its own way. They don't hesitate to copy technologies and foreign experience always choosing its own development strategy. Then fact that China has made a huge breakthrough in the development of plastic pipes market within a few years, from almost zero to reaching Europe and America, once again shows that plastic pipelines are

Pic. 1 Output growth of China plastic pipe



Pic. 2. Plastic Pipe Market Share



important part of modern construction and infrastructure modernisation. And if we search for examples to follow in the West and the East, we will see the same thing and it doesn't really matter anymore who we need to catch up with...

Sources:

1. www.pimchina.com
2. Toloken S. Chinese plastic pipe production grows 10 percent. – www.plasticnews.com

DANGEROUS
AMERICAN GAS PIPELINES

Gas pipeline explosion in San Bruno, California in 2010. 4 people killed and 51 injured

USA Today has published shocking results of journalist investigation on the condition of the gas distribution networks in the USA. For the last 10 years, since 2004, there have been more than 1,700 significant gas leaks resulting in 135 deaths, 600 injuries, and about $2 billion in damages. In other words, gas pipeline explosions leading to the destruction and loss of lives happen every other day in the USA.

Experts say that most of the explosions are caused by the poor condition of gas pipelines. The analysis of federal statistics data, thousands of pages of the reports from regulating bodies and gas companies, has shown that there are at least 30 thousand miles (48 thousand km) of cast iron and 56 thousand miles (90 thousand km) bare steel gas pipelines, which cause severe accidents.

For over several decades National Transportation Safety Board (NTSB), regulating bodies, experts and insurance companies investigating the cause of the explosions have been warning about the poor condition of the gas pipelines and the need of their replacement.

Cast iron pipelines cause most of the major destruction. It has to be said that the vast majority of over 1,000 gas utilities operate very little or none of the most vulnerable cast-iron mains, the largest share is concentrated in heavily populated areas with a higher risk of catastrophic consequences. About 83% of cast-iron mains are in 10 states, mostly in the Northeast. More than half the iron pipe is operated by just 10 utilities. And one third of it is buried in and around New York, Boston and Detroit.

Bare steel pipelines, most of which had been in operation since the end of 1960s, cause slightly less problems. Gas companies take various measures for service-life extension, invest in expensive cathode protection and provide regular inspections and diagnostics.

Bob Ackley, Pipeline Safety Expert of Gas Safety USA Consulting, compares the pipelines with a ticking bomb and thinks that their destruction is only a matter of time.

Gas pipeline replacement works are currently underway, but this process takes time and investment capital. Replacement of one mile of old cast iron pipelines costs over 1 million dollars and in big cities the costs will be several times more. A USA Today investigation shows that old pipeline replacement will generally take 10–20 years, but might take almost 50 years in some cases.

Sourse: usatoday.com

you don't have to choose

You don't have to choose between productivity and environmental sustainability, they are both possible with our two important innovations:

Swarfless cut and chamfer technology for PVC pipes that saves raw materials, eliminates recycling, reduces maintenance costs, and assures a clean and noiseless environment.

Electric belling machines with short-wave infrared ovens that are active only during the heating phase and for the time needed to reach the final set temperature of the material, thus reducing energy consumption and avoiding scrap material.

Go green with us

SICA®
Plastic pipe processing machinery

www.sica-italy.com
tel +39 0544 88711 fax +39 0544 61340
info@sica-italy.com

POLYPLASTIC RESEARCH INSTITUTE

HAS IMPLEMENTED ISO 9080:2012 METHOD OF DETERMINATION OF THE LONG-TERM HYDROSTATIC STRENGTH OF PIPE GRADES OF POLYMERS

POLYPLASTIC Research Institute together with accredited laboratories of Klimovsk Pipe Plant and AND Gaztrubplast Plant has mastered and implemented a method of evaluation and the long-term strength forecast for thermoplastics used for pipes production, including pipes reinforced with high-tensile yarns.

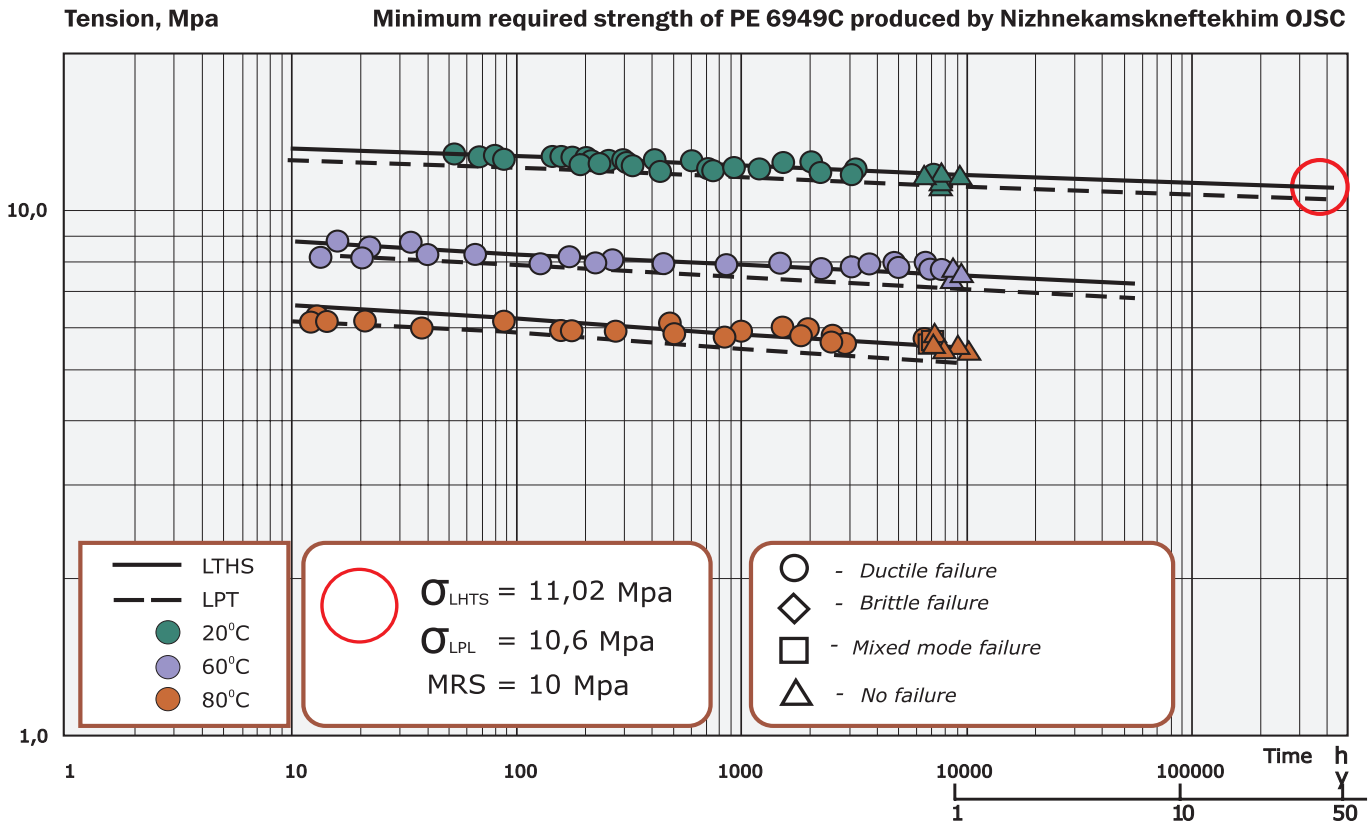
The method is based on a number of international and Russian standards [1–5] which specify the requirements for materials and pipes and methods of determination of the long-term strength and of operational properties of pipelines by testing pipe sample pieces for internal hydrostatic pressure.

ISO 9080-2012 "Plastics piping and ducting systems – Determination of the long-term hydrostatic strength of thermoplastics materials in pipe form by extrapolation" is a basic standard specifying the test method and statistical treatment of test results. According to this standard, tests are carried out on samples in pipe form made of material under consideration to determine the value of the long-term hydrostatic strength. This International Standard provides a definite procedure incorporating an extrapolation method using test data (time to samples failure) at three or four different test temperatures. For example, tests of HDPE pipe test pieces should be carried out at 20°C, 60°C and 80°C.

For each temperature selected, a minimum of 30 observations shall be obtained, spread over the testing time 10–7000 hours. Internal pressure levels shall be selected such that at least four observations will occur above 7,000 hours and at least one above 9,000 hours.

It should be noted, that test equipment should ensure ±1°C the water temperature maintenance accuracy and –1...+2% of the pressure maintenance accuracy constantly up to the time of failure. Besides, each pipe sample piece should be pressurized individually with internal pressure generating a strictly definite stress in the pipe wall.

Accredited laboratories of POLYPLASTIC Group have all necessary



test equipment meeting entire requirements in accuracy and precision of measurements.

Test data are analysed by regression analysis according to standard [1] or a similar current home standard [5]. The results of this analysis are expressed in equations of the temperature- and time-dependence of the average value of the long-term hydrostatic strength σLHTS and lower limit of long-term strength confidence interval σLPL.

The derived equation of the temperature- and time-dependence of strength is used for determination of the minimum residual strength defined as MRS, which serves for classification of material under conside- ration according to standard [3] or for calculation of operational properties of the pipeline including variable operational conditions according to standard [6].

Strict observance of test precision conditions (temperature and pressure maintenance accuracy) and of statistical treatment of test results, using software packages for the stress-rupture calculations, recommended by standard [1] allows determination of strength properties of the pipe materials with 97,5% probability by extrapolating them to given operating life, for example for 50 years.

The described above test method was used for classification and further certification of the following HDPE pipe grades that are widely used at present:

– PE 4PP25B – produced by Stavrolen LLC as PE80 grade;

– PE 6949C – produced by Nizhnekamskneftekhim OJSC as PE100 grade;

– PE 2HT11-9 – produced by Kazanorgsintez OJSC as PE100 grade.

The monitoring tests for hydraulic strength carried out during the outcoming inspection of pipes from each production-run confirm the reliability of the standard extrapolation method (SEM) and accuracy of control test parameters and equipment settings.

The below figure is a graphical presentation of the results of the SEM analysis for PE 6949C.

References:

1. Plastics piping and ducting systems – Determination of long-term hydrostatic strength of thermoplastics materials in pipe form by extrapolation // ISO 9080:2012.
2. Plastics pipes and fittings – Reinforced thermoplastics pipe systems for the supply of gaseous fuels for pressures up to 4 MPa (40 bar) // ISO/TS 18226:2006.
3. Multilayer piping systems for hot and cold water installations inside buildings // ISO 21003:2008.
4. Thermoplastics materials for pipes and fittings for pressure applications – Classification, design coefficient, and designation // ISO 12162:2009.
5. Plastic pipes. Determination of long-term hydrostatic strength of the samples by extrapolation//GOST R 54866-2011 (ISO 9080:2003).
6. Plastics pipes for conveyance of fluids under pressure. Miner's rule. Calculation method for cumulative damage. EN ISO 13760:1998.

TRENCHLESS

RENOVATION OF LARGE DIAMETER PIPELINES

By Vladimir Butin

The importance and demand for renovation of sewers and water disposal pipelines using trenchless methods are without doubts. The rehabilitation of sewers is increasingly becoming a problem for many Russian cities. The need for renovation of gravity pipelines with diameters of 500–3500 mm is rapidly growing. This trend is caused by deteriorated condition of the sewers, which are mainly made of reinforced concrete. Accidents and breakdowns lead to negative consequences on social and production infrastructure as well as environment.

The wear of reinforced concrete sewers is caused by several factors, mostly due to physical and chemical impact of aggressive substances, formation of acidic condensate at the top of the pipe and gas corrosion. "The wet" part of the sewer is exposed to abrasion wear, leaching and biofouling.

The advantages of trenchless technologies are very obvious:

– Excavation and road works take less;

– Independence from regulatory services, which coordinate the works (the less the interference with underground infrastructure the less works need to be coordinated);

– Practically no danger of damaging other underground communication surrounding repaired pipeline.

The deployment of these technologies in Russia shows that the costs are lower or just under those of conventional methods. Moreover, there is always a choice between expensive and budget types of trenchless methods. The cost of works are directly depend on the complexity of the equipment used at the site. Some methods require expensive equipment and others only need a minimal set of tools. Therefore, the price of renovation differs. Trenchless methods are in general quite lucrative.

When analysing modern trenchless technologies, we can say that adequate methods of trenchless renovation must insure the internal elements providing high chemical resistance and necessary structural properties. This is due to the fact that residual resource of large diameter sewers in most of the cases do not exceed 30% in Russia. Renovation techniques like sleeves, cement mortar or polymer lining, thin walled PE pipe casing and elastic bands can only provide leak tightness and might be ineffective. The use of inappropriate renovation technique can't stop structural deterioration and, therefore, cannot ensure designed operating life.

From this point of view, PE modules are the most prospective and effective method of restoration of structure and integrity of operational parameters of the pipeline.

The main advantages of this technology are:

– High chemical resistance and structural properties;

– Relatively low cost;

– Easy and simple installation;

– No need in specialist equipment at the site;

– Possibility of live renovation (no need to disconnect the pipeline).

The only disadvantage is the cost of delivery of the bulky oversize elements to the site.

Let's describe the method for pipe-in-the-pipe method of live modules installation.

Description of Spirally Wound pipe modules with male/female thread joint system for installation in active sewer flow conditions.

The work is done in several stages.

The first stage is the inspection of the pipeline to determine its real condition. It includes inspection of the manholes, chambers, pipeline layout, internal CCTV, determination of position and elevation of the pipeline sections.

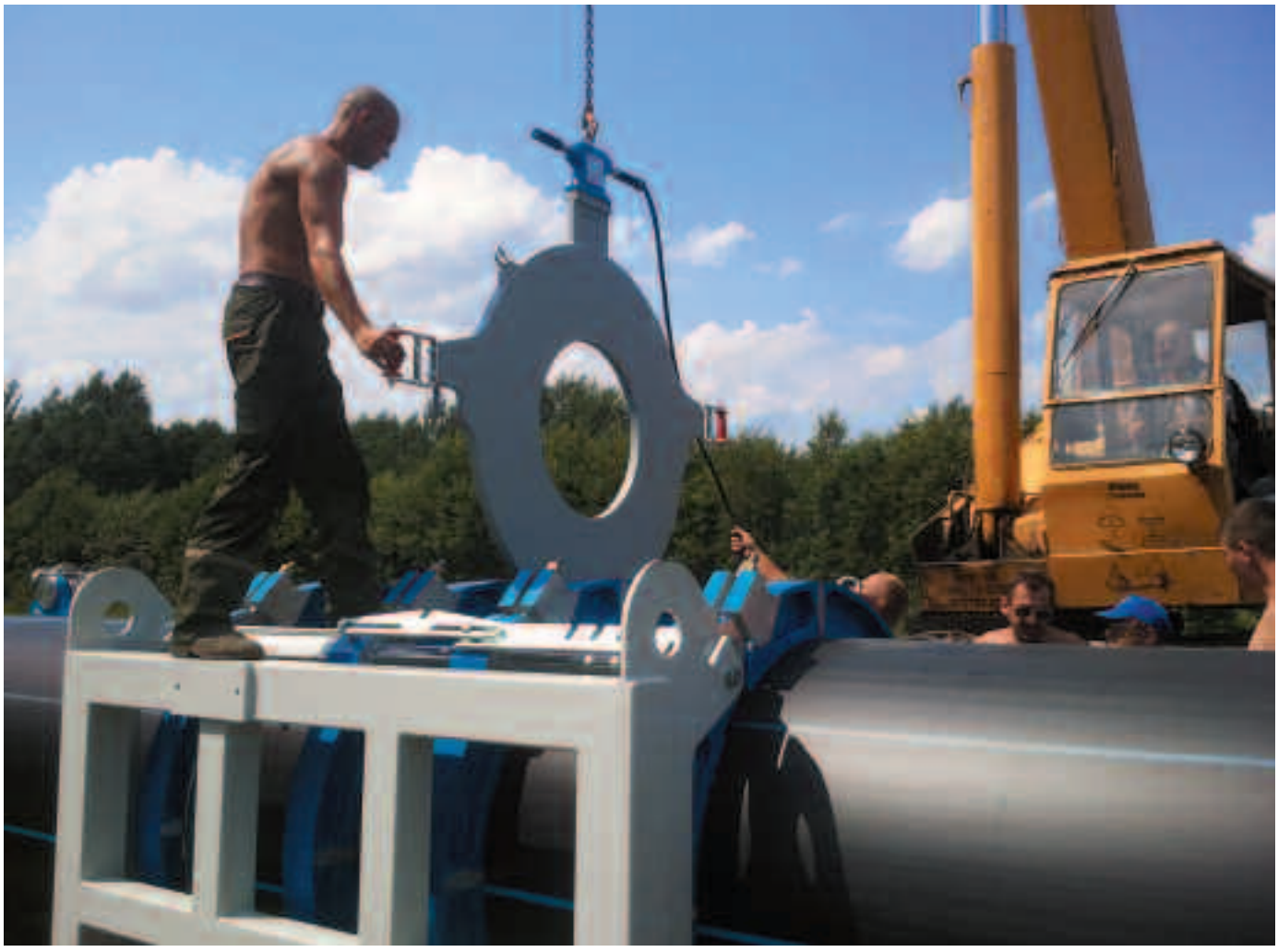
Evaluation of defects, report and technical solutions are provided upon completion of the inspection. The right threaded modules of necessary diameter, length and hoop strength are selected, the position of the pits is determined and operations schedule is finalised.

The second stage includes preparation works: coordination and obtaining of the necessary approvals, opening of chambers and manholes, pit excavation if needed, delivery and storage of the materials and equipment positioning. Pipeline cleaning and repeated CCTV is provided.

At the third stage, the threaded modules are fed into the pipeline through the chamber or start pit, connected using the winch, pushed through the pipeline live, using the winch (normally in the direction of the flow). The sludge effectively serves as a lubricant that protects the outer surface from damage, the buoyant force reduces the load and assist the installation.

At the end of this stage the pipe is fixed and the gap between the host pipe and a new pipe is filled with the special filler forming a solid three-layered structure. Then the works quality control is done, the chambers are restored and the pipeline is ready for operation.

Renovation of worn sewers using SPIROLINE® modules is one of the most simplest, cheap and efficient methods where works are done live. This eliminates the need in bypasses. It has been proven that in most of the cases this is the only possible way of emergency renovation of sewer pipelines.



PIPES FOR NUCLEAR POWER PLANT: THE SCALE AND RESPONSIBILITY

By Vladimir Kovalenko

Construction of a nuclear power plant in Belarus has been discussed since the beginning of 1990s. Both Belarus and the Baltic Sea States experience power shortages and have to import electric power from the EU states and Russia. Power shortage has become even more acute after the shutdown of Ignalina Nuclear Power Plant in Lithuania in 2009 (its permanent closure was one of conditions of Lithuania's joining the EU). Works on the nuclear power plant construction began in Belarus in 2006. In December 2008 Ostrovets site that is situated 18 km from Ostrovets town, Grodno Region, was chosen as a construction site. River Viliya (Neris), 10 km away from the site was to become the main source of water for the plant.

In May 2012, after a long period of preparation works and documents approval at all levels, including international, Byelorussians started construction of the first unit of NPP. At that time United Company OJSC NIAEP – CJSC Atomstroyexport (Russia) became the general design and construction contractor with Gomelpromstroy OJSC, Lidagazstroy OJSC and other major construction companies of Belarus with comprehensive experience in construction of projects of various complexity acting as subcontractors. In November 2013 foundation laying was started – in accordance with the working schedule.

In general, the use of 1200 mm diameter PE pressure pipes is quite uncommon in Europe, especially for large-

scale projects as this one (the total process water pipelines length – 33 km). A profession body with its expertise, experience and equipment was needed to perform all types of works on the pipelines construction.

That is why, STS-Belpolyplastic, the largest Belarus producer and supplier of plastic pipes was recruited. In addition, at request of Belkommunproekt Design Institute, its technical specialists have also actively participated in the development of "Nuclear Power Plant of the Republic of Belarus. Off-Site Process Water Supply. First- and Second-Stage Watermains" project.

In the framework of project implementation, special and unique fittings were required to allow for connection of the water supply pipeline sections as the use of conventional welded t-joints, especially reduced ones, was impossible due to their size. In this connection Reinert-Ritz was invited to supply special 1200 mm solid flanged T-connections and Georg Fischer – to supply special electrofusion PE 100 SDR 26 D 1200 couplings.

About 20 km of pipes have already been delivered. The project is actively underway.

NOTES

This is the first nuclear power plant under construction in Belarus. The AES-2006 nuclear plant alternative was chosen for NPP construction as it fully complies with the IAEA recommendations and guidelines; is characterised by a high level of safety based on utilization of independent active (generally for BDA) and passive (generally for BDBA) elements, as well as for its cost effectiveness.

Each of the two power units will supply 1150 MW. Commissioning of unit 1 is planned for November'2018, of unit 2 – for July'2020. The design service life of this Belarus nuclear power plant is 60 years.

TESTED BY THE ELEMENTS

A PLASTIC GAS PIPELINE HAS SURVIVED TWO FLOODS

By Alexander Novikov and Sergey Kitov

The gas pipeline of Kubangazifikaciya OJSC was like hundreds of other gas pipelines designed and constructed all over Russia. However, this gas pipeline was the one that had the opportunity to demonstrate high reliability of plastic pipes and their resistance to natural calamities.

DAG Institute has started the design of "High pressure gas pipeline construction from Svetloe to Aderbievka village in Gelendzhik" in the end of 2010. The length was over 5 km with a diameter of 160 mm. The gas pipeline route was crossing rock grounds and after a technical and financial assessment the proposal from POLYPLASTIC Group to use PE100 SDR 11 160 mm PROTECT pipe with a PP composite protective jacket was accepted. This pipe allows to construct without a sand bed. The project had successfully passed State Expert Review and construction set off in 2011.

Donator LLC, the Contractor, started construction works. The project was going quite fast, way ahead of the deadlines, so in less than in two months the major part of the pipeline was built and part of the pipes were laid in trenches and along their edges.

On 5 October 2011 a torrential rain in Gelendzhik Region of the Krasnodar territory caused floods. The survey done by Marine Hydrometeorological Service of Gelendzhik the next day showed that the levels of Aderba river raised to 3.8 metres from its normal summer levels of 50 cm, stayed for 6 hours and then dropped to 2.5 metres. The river destroyed the bridge, roads, flooded some houses, structures, allotments. The water flow turned cars upside down, pulled the trees out of the ground, knocked down numerous pylons. The gas pipeline was also under the risk. About 3 kilometres of the trench prepared for the laying of the pipe was washed away or submerged with stones, trees, and debris.

However, the plastic pipeline withstood the impact, even the open parts of the pipelines that were not yet laid into their trenches were intact. In some places the protective jacket was damaged or partially torn but the survey showed that the pipe itself has maintained its integrity.

That was not the end of the trouble for this gas pipeline. Several months later, in the beginning of July, Krasnodar Region had another disaster – the notorious flood of 2012 which saw 3–5-months' norm of precipitation in two days. The levels of rivers Aderba, Bakanka, Adagum had reached dangerous levels causing flooding of residential areas. The disaster damaged 7200 houses, wrecked gas, power, water supply, created disruption of railway and road traffic. The number of victims was about 34,000 and 171 casualties. Specialists called the flood devastating and some compared the flood to a tsunami.

The gas pipeline had survived this flood too, apart from several sections of uninstalled pipes that were gone with the flood. After another inspection of the gas pipeline, GazNovaciya LLC has made corrections in the project and installed 1500 more metres of pipeline. The plastic gas pipeline, which survived two floods had successfully passed pressure tests, is currently running like clockwork.

GF Piping Systems

+GF+

Utility

Solutions from one source for safety & reliability in distribution

Security and reliability of distribution lines and connections in water and gas utilities is an indispensable basis for high performing supply systems. We meet this demand with safe, reliably monitored and controlled systems as well as material-independent connections: Main lines, distribution lines or service lines - our solutions and products cover all applications from the source to the point of use.

GF Piping Systems Ltd.
Moscow Representative office
125047 Russia Moscow
1st Tverskaya-Yamskaya str, 23
Phone +7 495 258 60 80
ru.ps@georgfischer.com
www.gfps.com

THE FIRST BATCH OF NEW PIPES DELIVERED TO THE LANDFILL

Alexander Novikov, Sergey Kitov

The project of solid waste landfill in Belorechensk Region of the Krasnodar Territory planned amongst the other things disposal of filtrate caused by rains.

This brings special requirements to drainage pipes. The storage height of solid wastes is about 60 m and the pipes must be robust enough to withstand the load of the layers and machinery. However, steel and concrete pipes are useless in this case because the filtration of solid waste landfills is highly aggressive and can bring the pipes out of service fairly quickly.

OOO InzhProektKompleks, Design Company, has decided to use perforated plastic pipe for the construction of drainage system. These pipes are exceptionally resistant to all types of corrosion, have good hydraulic properties and ability to self-clean. However, none of the existing types of perforated plastic pipes have met the required toughness index.

POLYPLASTIC Group has PERFOCOR perforated pipes with nominal ring stiffness of SN16. The calculations proved that they will not withstand the designed load. In Autumn 2013 Klimovsk Pipe Plant has produced first batch of PERFOCOR pipe with ring stiffness of SN24 which were in full compliance with required properties. The decision was taken to use these pipes for the project.

OOO POLYPLASTIC South has supplied 3.5 km of PERFOCOR SN24, 315 mm pipes to the Intermunicipal solid waste landfill in Belorechensk Region of the Krasnodar Territory. OOO SpetsMontazh, the Contractor, could see the advantages of the new pipes – they are light comparing to concrete and steel pipes, quick to install, connection is simple and reliable. Optimal price and quality balance was the major argument in choosing the product for the drainage system of this important intermunicipal project.

THE MATCH WILL GO ON IN ANY WEATHER

By Roman Mitrushkin, Ivan Larikov

If you love football and watch matches that are held in late autumn and early spring in Russia, then you would feel pity for the footballers who play water polo rather than football. And if you play football yourself then you will know what they go through.

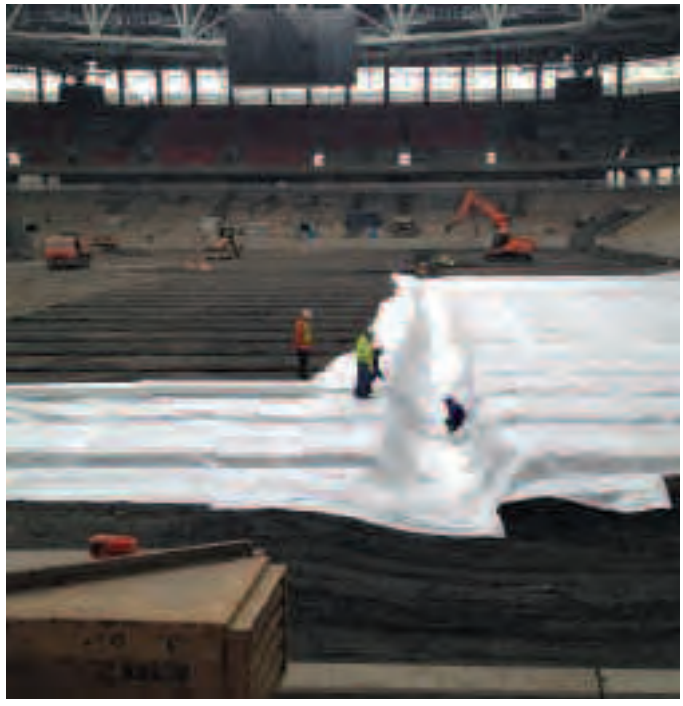
Modern technologies for football pitches allow to reduce the dependency of the pitch condition from the weather. Spartak Football Club, therefore, along with the foreign players and the coaches, have invited SIS Pitches, a British company, the leader of the construction of artificial and natural pitches for sport stadiums with extensive experience in design and stadiums preparation including international projects.

Spartak Stadium is the first in Russia equipped with the latest soil ventilation system, fully automatic pitch watering and heating. The basis for these systems is pipe networks. POLYPLASTIC Group has become the supplier of the materials and worked closely with the specialist from SIS Pitches

in implementing this difficult innovative project. Thanks to the wide range of products, the ability to manufacture practically any leak-tight pipe structure and experience of the specialists, all set targets were implemented in due time.

CORSYS and PERFOCOR pipes manufactured by Klimovsk Pipe Plant have made a major part of the drainage system. Despite the fact that it was a drainage system, there were special requirement towards the integrity of the joints. This unusual requirement to the system of perforated pipes is due to strict compliance of design and actual carrying capacity of the system providing soil ventilation of the pitch. Ventilation units create depression in the drainage system and increase the water absorption during heavy rains. After the rain, the same units pumps air into the pipes working as a big fan drying and ventilating the root systems of the pitch.

The connection of CORSYS and PERFOCOR meet the highest requirement and pass the test of the quality control department for leak tests with deformation of the coupling to 10% and angle displacement to 5% at air and water pressure. That is why the SIS Pitch designers were confident using POLYPLASTIC Group products and had



the opportunity to consider everything to the smallest details.

Design, drawings approval, manufacturing of manholes and gathering manifolds of CORSYS pipes were a separate task. SIS Pitches specialist highly commended the quality of the products, timely delivery and professionalism of POLYPLASTIC Group's employees. Spartak Stadium has become the first joint project and made step for further cooperation between the two companies, confident in continuing the work at the football pitches in Russia and assist in taking Russian football to the new level.

The stadium design meets all requirements and recommendations of FIFA. All metal works and roofing are completed, the seats installation is underway, preparation of the base for the pitch is being completed. The works for the front part will be competed in May. This will be the best stadium of this scale in Russia. Otkrytie Arena Stadium (Otkrytie Bank has bought rights to name the stadium) will open on 24 July as part of Tushino 2018 Project. The stadium will have this name at Confederation Cup in 2017 and World Championship in 2018.

COMMISSIONING OF THE RECORD PIPELINE

By Peter Titov, Nataliya Krivonozhenko

The unique gas pipeline made of PE pipes has been commissioned in Setovo Village, Tobolsk Region. Its length is almost 130 km, diameter – 315 mm, operating pressure – 1.2 MPa. It is currently the longest PE SDR9 gas pipeline in Russia. The new pipeline has linked 18 settlements of Tobolsk and Yarkovskiy Regions.

The delivery of pipes to the site had been carried out from January to April 2014. Specialists from POLYPLASTIC Ural have supplied the full volume of pipes in just four months.

Gas pipeline construction works were going on round the clock. The contractor, OOO Zapsibgazprom-Gazifikaciya, has shown a great deal of competence: all employees have completed advanced training on cutting edge methods of PE pipes welding at POLYPLASTIC Ural Training Centre (accredited by National Agency or Testing and Welding) and ensured all welding works are in compliance with the regulation even at extreme weather conditions, at –30°C.

High quality of the products and services, strict compliance with deadlines are requirements towards the companies involved in this strategically important project of the region. As Vyacheslav Vakhrin, Deputy Governor, stated, the commissioning of the gas pipeline has become a symbolic start of the gas supply programme of Tyumen Region, which is planned until 2017. The implementation of the programme is a result of effective cooperation of the local government and Gazprom OJSC. The company will invest in gas distribution networks of over 1,000 km supplying gas to over 73 thousand people.

Vladimir Yakushev, the Governor of Tyumen Region, thinks this event is very significant for increasing the quality of life and for promoting business in the region. He highlighted the importance of involving local companies in the project. Plastic pipes for this project were supplied by SIBGAZAPPARAT Plant (Tyumen), part of POLYPLASTIC Group.

AEON VALVES – BRITISH QUALITY FOR THE NORTH-WEST

By Maria Laber

In August 2013 Radius Systems, a British company acquired by POLYPLASTIC Group six months before, bought AEON, the famous English manufacturer of unique valves with dual seal. POLYPLASTIC Group, as a result of this, received the opportunity to offer its customers AEON valves for gas distribution networks, oil and gas industry, firefighting and water supply systems.

AEON products are currently very commercial, used in the North West and already deployed in numerous projects.

POLYPLASTIC Group and its partners Avangard Engineering and Armoreal have gained great experience in dealing with the companies using the product.

AEON products are used in many construction projects, including one of the largest projects of development of Murino (Ruchyi). This project involves a number of house building factories and several buildings are currently being constructed. AEON valves were used by many of them, such as LSR Groups of Companies, UNISTO Petrostal, Normann and others. The projects are currently under construction. Companies such as SMU-303, Megameid, Setl City, Leader Group, Pilon, Vozrozhdenie are among our customers who have already seen the advantages of AEON products.

AEON products make up a major part of the water supply network rehabilitation of Vodokanal of Saint Petersburg, which choose suppliers very scrupulously and thoroughly, checking the quality of the products. AEON valves are currently used at the North aeration station. AEON brand has become a part of the New Saint Petersburg, water supply networks of one of the largest Gazprom sites in the city, Lakhta Center, were installed with AEON valves. Most important sports facilities of the city, including the ones that will host the European Football Championship, such as Petrovskiy Stadium, will be equipped with AEON valves.

AEON valves are used at water supply networks renovation of recreational structures such as legendary Gostiniy Dvor (Guest House).

Customers' confidence in AEON products is proved by their application at the projects, strategically important for national security, such as Almaz-Antei Plant, Oktyabrskaya Rail Way, M10 Federal Morotway "Russia".

"We value our effort in promoting the brand in the market and follow every project where AEON products are used. Our corporate culture and customer service means that we keep all statistics and feedback on the quality of the supplied products for each project", said Mikhail Shleyev, General Director of OOO Avangard Engineering.

Application of AEON valves for Saint Petersburg's networks is a proof of the reliability of AEON products. They can be used in housing construction, networks construction and renovation, water supply, disposal and firefighting projects of any complexity.

POLYETHYLENE MANHOLES GET RECOGNITION IN SIBERIA

Liliya Shleiger

Modern plastic manholes more often replace heavy reinforced concrete manhole during installation of pipelines in West Siberia. Although old concrete manholes are still being repaired, the customers prefer plastic installations for the newly built project.

Such decision was made during construction of the sewer pipeline on Zavertyaeva Street in Omsk, where 34 manholes with diameters of 1200 to 1600 mm were installed. Technical specialists from the contractor company have highlighted the practicality and light weight of the products. The installation had been carried out without special heavy lifting equipment.

Polyethylene manholes have received special recognition in Novosibirsk. 85 manholes with the diameter of 1200 mm were used during construction of general and storm water sewer of the "Evropeyskiy Bereg" (European Bank) microdistrict. The construction project of Industrial and Logistics Park in Novosibirsk Region requires installation of over 100 manholes, some of them are already installed. Redevelopment of Industrial and Logistics Park in Tomsk is undergoing and requires over 400 PE manholes with the diameters of 800, 1000 and 1600 mm.

"Reinforced concrete manholes today do not meet the requirements of the modern construction reality. Their short service life does not justify their cost related to their frequent repairs and maintenance. The advantages of using polyethylene manholes: durability, minimal maintenance costs, have been already recognised in Siberia", Alexander Kuchma, Technical Director of POLYPLASTIC ZapSib comments.

THE FIRST CORSYS ARM PIPELINE IN KAZAKHSTAN

Renovation of the sewer networks is in process in Kostanay, at Frolov Street from Baimagambetova Street to KNS-3 pumping station. Balkhash Trubomontazh LLC is providing the replacement of worn reinforced concrete pipes.

The pipelines go through the central part of the city at the laying depth from 5 to 8 meters and provide water disposal for the major part of Kosta-nay. It has been decided to use CORSYS ARM SN16 corrugated PE pipes reinforced with steel profile due to the importance of the project. The design of these pipes ensures high corrosion resistance, durability and great hydraulic properties with high ring stiffness of steel. All these properties relate to the pipes up to 2.4 meters in diameter.

The pipes produced by Klimovsk Pipe Plant, 1323 metres of pipes of 1200 mm and 325 metres of 1400 mm, were delivered to Kostanay at the end of June for the main sewer.

Since it was the first application of CORSYS ARM in Kazakhstan, STZ Arystan Trade House LLC invited specialists from the POLYPLASTIC Group Training Centre for pipeline installation.

Specialists from the Training Centre and the representatives of Balkhash Trubomontazh provided incoming pipe control, checked equipment required for installation, told about storage and transportation of CORSYS ARM pipes, gave instructions on how to use manual extruder and gas torch. They described all features of the installation process during the welding of the first joint. The next joint was welded by both teams.

The specialists from Balkhash Trubomontazh LLC have learned to weld CORSYS ARM pipes and made tree joints. The specialists from Training Centre checked the quality of the joints and did not observe any failures.

All works were provided above ground because the trench was not ready. The features of CORSYS ARM pipes installation were covered in another lecture.

As a result of the supervised works the act was signed by the representative from the customer, supplier and the Training Centre. The main result of these three days was the confidence that all works at this highly important project in Kostanay will be done professionally and in a quality manner.

Due to high interest in such unique pipes in Kazakhstan, the production technology and joining of which was developed by POLYPLASTIC Group, the decision has been made to deploy the first line for 1600 mm pipes at Arystan, Stepnogorsk Pipe Plant. CORSYS ARM will be produced in Kazakhstan from spring 2015. This will reduce the cost of transportation to Kazakhstan and will ensure high Kazakhstani content of the product which is favourable when designing and constructing of major pipelines in the Republic of Kazakhstan.

EXCITING WATER AND PIPES

By Marina Kuzmenko

It has been unusually noisy and lively at the hall No. 6 during ECWATECH 2014 and CityPipe 2014 International exhibition at Crocus-Expo, the place for industry professionals on the 4th and 5th of June 2014. POLYPLASTIC group together with Mosvodokanal OJSC and Nestle Water-Coolers Service have organised a “Water education for children” Programme at the exhibition for the first time in Russia. The idea came from the pavilion organised at Wasser Berlin exhibition in order to attract young people into the industry.

It is very important to tell children about ecology and environment protection from an early age, to teach them the importance of these issues to humankind. Pure water and the protection of water resources are becoming very crucial today.

The aim of the event was to tell the young audience about the complicated chain of water treatment and supply of clean potable water to the users, widen their horizons and explain the importance of caring attitude towards water.

It was the second event of such kind for POLYPLASTIC Group. The first event, Pipe Conference for Children organised for the children of the Group’s employees, took place at the Business Centre of the Group and at the AND Gaztrubplast Plant in 2013. It was very successful. The Conference showed that children are interested in what their parents do, they like to visit the company and feel a little more grown-up. The initiative was supported by Nestle WaterCoolers Service and Mosvodokanal OJSC and offered to include topics like water saving, water purification, treatment and supply to the consumer. These issues are very important and complex, and the programme was built to make the little ones stay focused and not lose interest.

The space was provided by ECWATECH.

All the preparation works are done, balloons are inflated, equipment is ready, and the first group of participants arrived to the exhibition. The stand in the children’s zone attracted a lot of interest from the visitors and the loud gangs of children passing from pavilion to pavilion brought a lot of smiles.

Over 100 children visited the exhibition within 2 days. The first group consisted of children whose parents work at POLY-

PLASTIC Group, Mosvodokanal and Water supply companies of the Moscow region. Groups of 25 children were formed beforehand by the age ranged from 6 to 17. Each programme was adjusted live to make sure everybody was involved. The groups were joined by the children who came to the exhibition with their parents – this was a surprise for them and their parents, who found free childcare for 2–3 hours and could work effectively at the exhibition.

The programme included educational and practical lessons and games. The programme started with a little lecture on the Nestle WaterCoolers Service, where volunteers told about the benefit of water for people, water content in different products, water resources and supply ratio on the planet, need for ecological balance. The practical information will be of great use for the kids in education and in life.

After that the groups moved to Mosvodokanal stand, where Professor Cleverchap was showing different physical experiments in his “secret laboratory” and invited kids to participate. Each participant received a laboratory technician title, worked with chemical agents, made souvenirs by themselves and received a reward for participating.

The last stage of the educational event were lectures and practical lessons for connection and welding of the plastic pipes prepared by POLYPLASTIC Group. In the small presentation, made especially for the kids, they told about the history of

pipelines in the world, pipes evolution and their types, they explained how water is transported to the houses, demonstrated pipelines routing and briefly told about the materials for production of pipes and their properties.

The introduction presentation was very important to prepare the kids for a practical part, which had three stages: electrofusion welding, compression connector, assembly/ dismantling of the valve in the manhole.

All works were done with interest, enthusiasm and wit. There weren't problems with things that grow-ups would consider difficult for kids. The task to build letters and digits and make "2014" and "Water" out of pipes and compression fittings took less time than the others. Welding equipment took longer because they needed to follow all instruction. "The welders" left their signatures upon the completion of welding as was stated in the instructions.

Two-meters high plastic manhole was very popular: all participants went inside, went upstairs, assembled and dismantled the valve inside it.

Children who completed their task early played the game called "catch clean water drops" set at the children's zone by Mosvodokanal.

After completing 3 stages the groups checked the integrity of the welded joints and took a group picture. 30 children from Nahabino Grammar School prepared a surprise: not only they participated in the programme but also showed their talents – they sang songs, danced, read poems dedicated to water saving and environment protection.

At the end of the event every participant received a certificate for "Taking the course for young specialists in plastic pipelines" from POLYPLASTIC Group, a certificate from the organisers of Children's zone and gifts.

Young participants left the event full of excitement and joy. The event turned out to be very warm, kind and informative and marked the beginning of summer holidays. Children said they have had an amazing day and that they would love to come again next year.

As for adults, the event reminded them who they do their work for.

ANDY TAYLOR

Andy Taylor – CEO and Member of the Board of Radius Systems Ltd., Head of Mergers & Acquisitions committee.
1999 – 2005: Group Managing Director of Hepworth Building Products, a division of Hepworth Plc, a £700m turnover Heating and Building Materials Group.

2005 – Oct 2010: Wavin BV, Executive Vice President, Member of the 4 man Management Board (by way of the acquisition of Hepworth Building Products in 2005) with Executive responsibilities for the Regions UK/Ireland, South West Europe, South East Europe and all activities outside of Europe, the Building & Installation Strategic Business Unit, R&D and the Group's commercial activities.

– How did you come to plastic pipe industry? What affected this decision? What made the main influence?

– After over 20 years in the Automotive, Aerospace and Electronics industries I joined Hepworth Plc in 1999 as CEO of the Building Products Division, comprising three businesses all supplying the Building Materials Sector. Hepworth Drainage (Clay sewer), Hepworth Concrete (Concrete Pipes & Fittings) and Hepworth Plastics (plastic pipes and fittings for Hot & Cold, Rainwater, Soil and Waste, Pressurised Water supply and underground gravity). Hepworth was keen to bring someone from a different background who had worked in more 'dynamic' industries to change the culture and direction of the businesses.

– What do you think was your major challenge and major achievement in the industry?

– In 2000, Hepworth Plc went public to private and were bought by the Vaillant Group, family owned market leading boiler manufacturers. As part of the transaction Vaillant management decided that Hepworth Building products was 'non-core' and ran an auction to sell the business. The price aspirations were not met and the management team was challenged to increase the value of the business. Three years later we sold the business to Wavin for 3.5x the best offer we had in 2000. As a Wavin Management Board member I was part of the successful public offering of the business in 2006, facilitated the integration and consolidation of Hepworth into Wavin which added 150 Ebitda basis points to the Group performance overnight, and helped the Group to realize record sales of €1.7bn and Ebitda of €234m in 2007/8. When

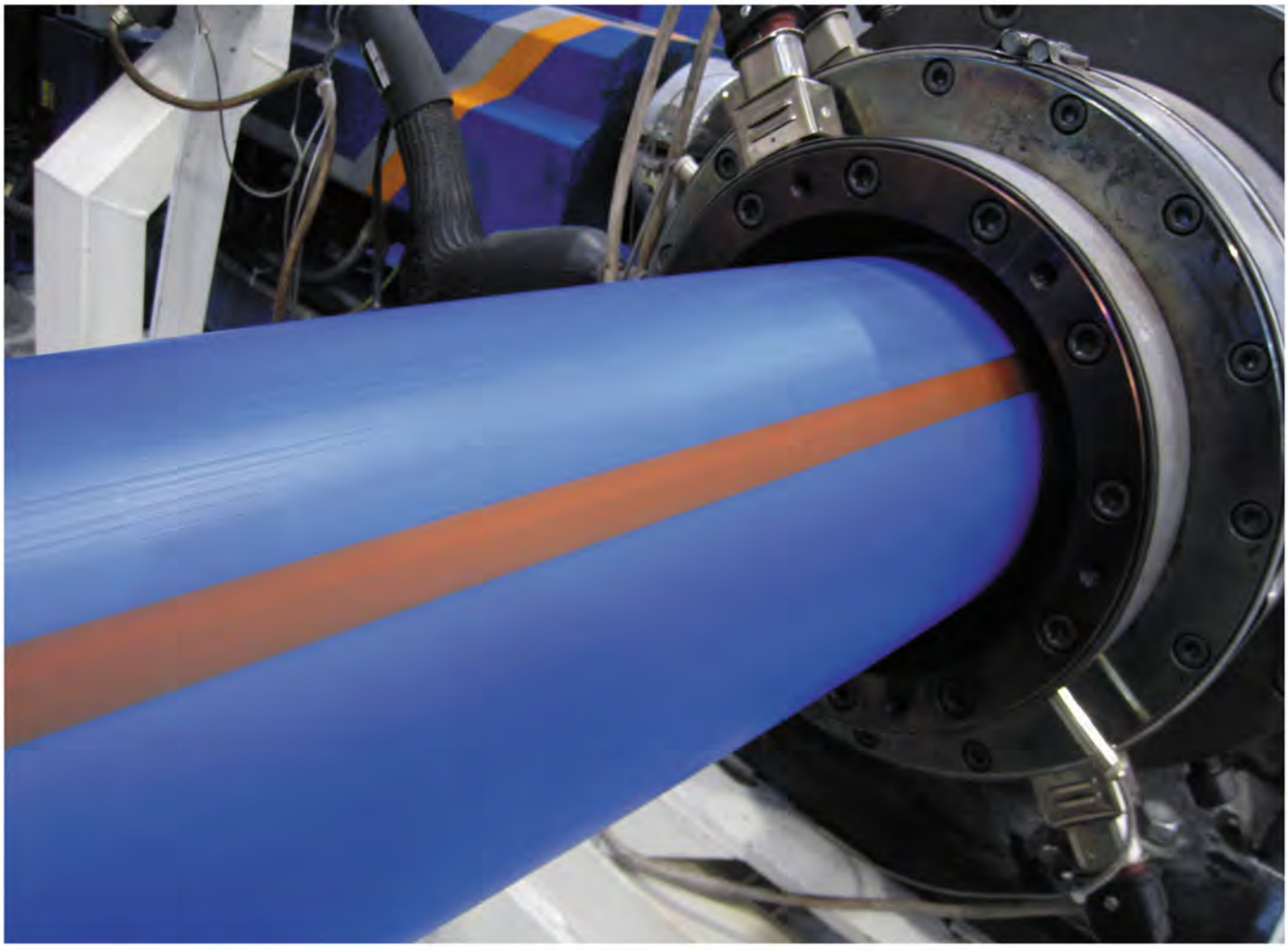
the crisis hit in 2009 I implemented an automotive cost/efficiency model which helped the Group to realize cost reductions/efficiency improvements of €45m. I also made a number of acquisitions in my 6 years with the Group.

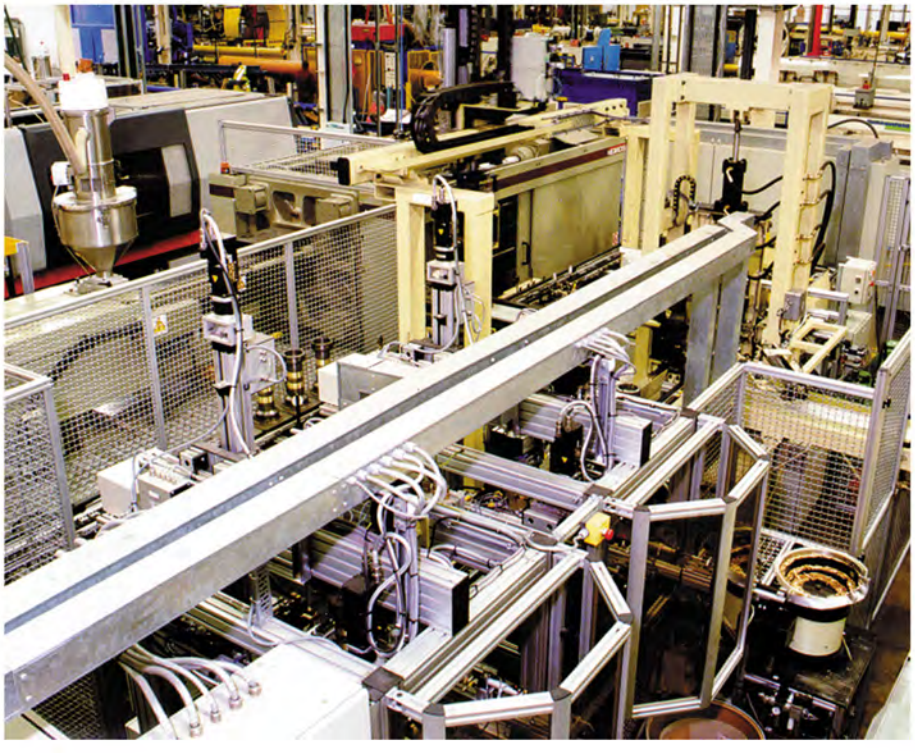
– Have you been involved with any "dead end" projects that were not completed? Were any of them wrongly forgotten?

– Projects never begin life as 'dead ends' and only become so if circumstances change or the upfront evaluation and prioritization has not been well implemented. I wish I had €100 for every acquisition project that failed to be realized!

– What changes have you seen in European market of plastic pipe systems while working in the industry?

– Strangely enough the European market for pipes and fittings is fairly monolithic, in some aspects the 'tectonic plates' move faster. By and large in manufacturing the same players exist today as in 1999. The big change





has been the consolidation in the 'route to market'. Saint Gobain, Wolseley, Cordes und Graeve and Frans Bonhomme have all been part of a massive consolidation which has forced changes in manufacturing. Price pressure, efficiency demands, logistics challenges have all been forced up the Supply Chain and many manufacturers have not been able to take out cost fast enough to remain acceptably profitable. We should not be surprised about these pressures as many other industries have already weathered such demands.

– What was the Global Financial Crisis affect (negative and positive) on the plastics pipe industry?

– As there were very few 'casualties' (i.e. no major players went out of business) the crisis created massive over capacity in the industry which dragged prices lower. Unfortunately ours is an in-

dustry which seldom recovers the value reduction realized in such situations. Our client base perceive 75% of the products we produce as commodities and with some lingering over capacity it has been virtually impossible to recover inflationary input costs through higher prices.

– What do you think about the future dynamics of European, and specifically Eastern European market of plastic pipe systems?

– Today 15 manufacturers represent only 35-40% of the market for plastic pipes and fittings in Europe. There are hundreds of small producers particularly in the Eastern regions. There has to be some form of consolidation which will create more scale which is the driver for cost reduction and efficiency improvement. Only once this has been achieved will manufacturers be able to discuss with the major Distribution Groups on a like for like basis.

– Which new developments in products, materials and technologies might impact the future of plastics pipe industry tomorrow?

– Anything which takes out cost and improves efficiency is paramount and as an industry we need to think more about this. IBM does not accept a whole shift of scrap whilst changing over a line and Mercedes does not add 4% of free material value to its cars. Our industry needs to get tougher and move towards a 'zero defect' environment. The benefits are immense. With regard to products, I was once told by a former Boss that I should make my products obsolete before the competition does and so, if innovation is an imperative within our business then we should invest appropriately. Unfortunately, unless we have 'ground changing' innovation (particularly in a segment which is perceived as mostly commoditised) we only create temporary monopolies which exist only as long as it takes our competitors to replicate our improvements. Of course, we need to create such temporary differentials but equally we should look to other areas for opportunities to create value. Taking a lesson from other industries we should look at the transaction cost involved in dealing with our client base. What more could we do to make that relationship more efficient? Areas such as Vendor Managed Inventory, Category management and Logistics management have been very profitable target opportunities in other industry segments.

– Can you, please, say a few words directly to our readers – Russian Pipe industry professionals?

– Our year of Russian parentage has been an exciting and dynamic journey

resulting in a very rewarding working environment. The synergy benefits are very much 2 way and we have lots to learn from each other. We are working hard with our colleagues to bring new and interesting products and technologies to your markets which we hope will make a significant difference in our relationships in the future.

– In the addition – several questions for the form of Marcel Prust. What is your hobby?

– Golf, music, family, food and drink.

– What is your main feature of character?

– My 'Scottishness'!

– Where would you like to live?

– Scotland, without the rain and with average temperatures of around 28°C.

– Who are your favorite writers?

– Goscinny&Uderzo, Johnny Hart, Charles Dickens.

– Who are your favorite poets?

– Robert Burns, T.S. Eliot.

– Who are your favorite artists and composers?

– Eric Clapton, Stevie Ray Vaughan, Mozart, Debussy.

– Who are your favorite personages?

– Stephen Hawking, Bill McLaren, Denis Law.

– What is your favorite dish and drink?

– Fish, shellfish, burgundy and Scotch Whisky (not less than 12 years old).

– Which historical personages arouse sympathy?

– William Wallace, Robert the Bruce, Shakespeare, Einstein.

– What is the condition of your spirit in nowadays?

– Motivated and content.

– What is your favorite aphorism?

– Carpe diem (Seize the day)

– If the devil offer you the immortality, would you agree?

– Only if he could make me 25 years younger and irresistible to women!