YourTube

Technology Motion Knowledge

04•2011
№1 (04)

Vicki Avril – woman of steel

10-Year Anniversary

The Age of Nanotechnologies

Three magazines aimed at audience groups — hailing from a variety of countries and continents — are published in parallel Russian, Romanian and English editions. Naturally, the highlights are different, depending on the division. We offer you a compilation of selected materials published in the Russian and Romanian editions of **YourTube** No 1(04)

A distribution agreement is signed between TMK-Artrom and the American Crispin, Inc.

Romanian Products Conquer America

The American pipe market is the world's largest and one of the most aggressive and competitive. Before TMK-Artrom products could win a desired position in the U.S. market, the production facilities in Slatina, Romania had to undergo a complete upgrade and reconstruction. This work was followed by numerous production tests and certifications before the company entered the elite circle of recommended suppliers. One of the key challenges faced by TMK-Artrom in its operation in the American market is the need to continuously optimize logistics, both in order to make its services more customer-friendly and to reduce transport costs on overseas delivery of pipes. Today, Romanian products have gained a firm position in the U.S. market, but this position rests upon constant managerial, marketing and technological efforts of all the company's employees and its top management.

Peter Yank: «The TMK team has clearly succeeded in adapting its plants to European standards very quickly.»

Metallurgists Pass Euroexam

In 1993, after a cooperation agreement between Romania and the European Union had been signed, restructuring of the Romanian metals industry got underway. The adaptation of Romanian enterprises to European standards was long and difficult. In September 2010, the European Commission published its final report on monitoring of the Romanian metal sector. According to the report, Romania had successfully completed restructuring of its state enterprises and become a full-fledged player in the European market. In an interview with **YourTube**, Director of the Industrial Policy Department at the Romanian Ministry of Economic Affairs, Peter Yank, gave a positive evaluation of TMK's activities aim at adaptation to EU requirements, "I greatly appreciate that the company is open to dialogue and knows the essence of competition. The TMK team has clearly succeeded in adapting its plants for European standards very quickly."

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TMK TAKES PART IN 11TH ANNUAL INVESTMENT CONFERENCE

American Chamber of Commerce of Russia (AmCham), the largest and most influential association of foreign businesses, held its annual conference this March in Moscow, Russia. The event was chaired by the president of AmCham, Andrew Somers. Vladimir Shmatovich, Vice President of TMK for Strategy and Development, spoke about TMK's experience in investment exchange between Russia and the United States. "TMK works according to a different scheme," said Shmatovich. "After we purchased the assets of IPSCO, we were conferred the status of an investor in the United States and one of the world leaders in the steel pipe industry. Now we are working diligently to exchange experience and technologies developed in Russia and the United States and favorably affect the general investment climate of our countries." ■

NEW UPSETTING MACHINE IN BAYTOWN

In January 2011, TMK IPSCO's facility in Baytown, Texas commissioned a new premium upsetting line that will significantly increase the capability and product range of the facility's upsetting operations.

The new line will allow Baytown to produce heavier forged ends needed for premium connections. Previously, Baytown had only applied API upsets, which are less heavy and do not require these large machines.

"Our API upsetters have traditionally been single-forge, small stroke machines," said Charlie Canatella, Plant Manager at Baytown. "The equipment in the premium facility is much stronger and applies a double forge to the pipe end that is needed for premium tubing connections."

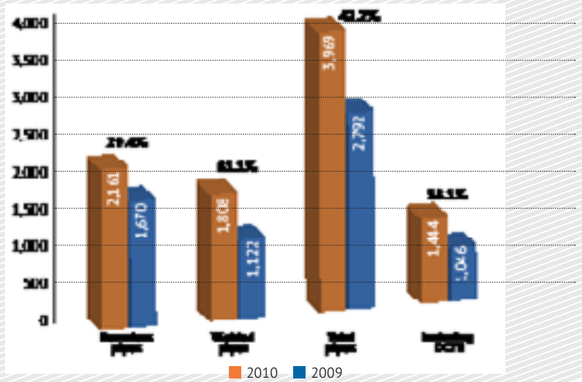
Although the premium upsetting machine came online in January, Baytown's engineers continue to develop tooling for a variety of sizes based on the customer's needs.

"The engineers will be working on these sizes throughout 2011, with the goal being the ability to capture the entire range of tubing produced at Koppel that is designated for premium connections," said Canatella. ■

TMK PRODUCTION INDICES FOR 2010 SHOW GROWTH IN ALL BASIC SEGMENTS OF PIPE BUSINESS

Last year, the pipe market demonstrated positive dynamics of a post-crisis market recovery. The entire year was marked by high demand for large diameter pipes in the Russian market thanks to the large-scale investment programs at Gazprom and Transneft. Increased orders by energy companies for pipes used in oil and gas production resulted in TMK shipping greater volumes of this product. Summarizing the results of 2010, TMK's share of the Russian market for seamless OCTG was about 60%. TMK shipped 397,000 tonnes of pipes with premium connections that were developed by the Russian (TMK family) and the U.S. (ULTRA) divisions of the company, a production level that is 27.7% above the level of 2009. ■

TMK pipe shipments in 2010 (000' tonnes)



APPOINTMENTS

PIOTR GALITZINE ELECTED TO TWO MAJOR U.S.-RUSSIAN BUSINESS GROUPS

In early 2011, Piotr Galitzine, Chairman of TMK IPSCO, was elected to the Board of the U.S.-Russia Business Council (USRBC), a Washington-based trade association that provides business development, dispute resolution, government relations, and market intelligence services to its American and Russian member companies. Galitzine was also elected to the Board of the Russian Chamber of Commerce of Texas (RCCT), which was created in 2009 with the goal to promote business ties between Russia and Texas. Since 2011, TMK has been a platinum sponsor of RCCT. ■

TMK IPSCO SPONSORS YOUNG BALLERINA

In February, TMK IPSCO awarded Taylor Ash, a sixth grade student from Kleb Intermediate School in Houston, Texas with a scholarship to spend the summer studying at the Kirov Academy of Ballet in Washington, DC. The Kirov Academy was established in 1990 by Oleg Vinogradov at the invitation of President George H.W. Bush.

Ash began studying ballet in the third grade and trains with the Koenig School of Dance for at least 20 hours each week. A member of the International Ballet of Houston, she dreams of becoming a professional ballerina and hopes that her experience this summer at the Kirov Academy will eventually lead to participation in the academy's full-time program. Ash is described by her teachers as a student who conducts herself with determination and self-discipline at school, although with ballet, it's not all about hard work for her. She has an "indescribable" feeling from dance and enjoys the many friendships she has formed during her years of ballet study. ■

2nd THREAD LINE OPENS IN BROOKFIELD

On February 28, TMK IPSCO's ULTRA™ facility in Brookfield, Ohio began a two-week commissioning phase for its second thread line. Groundbreaking for the second line took place in early October 2010 during a visit to the facility by TMK's Board of Directors. The second thread line will allow the plant to thread pipes up to 13 5/8" in diameter, up from the previous size range of 2 3/8"-7 5/8" under the first thread line. Each line is capable of manufacturing 18-20 pieces per hour for DQX pipe, and 5-6 pieces per hour for SF and FJ pipe. In addition to threading, the facility in Brookfield also manufactures connections fittings and accessories for oil and gas exploration and recovery.

Strategically located to service the vast Marcellus Gas Shale, the Brookfield facility currently employs more than 60 individuals. Total employment at the facility is projected to increase to over 100 with the future addition of a third thread line. ■

30th ANNIVERSARY IN WILDER

On April 21, TMK IPSCO's facility in Wilder, Kentucky will mark its 30th anniversary. Although steelmaking on the site has a history stretching back to shortly after the U.S. Civil War, it was Newport Steel's reopening of the facility in April 1981 that paved the way for TMK IPSCO's ownership. More than 100 of the original employees at the plant's reopening are celebrating their 30th year at Wilder.

The facility in Wilder has two welded pipe mills, which produce ERW pipe ranging from 4 ½" to 16" in diameter, respectively. A number of strategic investments are underway at Wilder, including the installation of new 16" mill facing machines, a project to reduce the plant's dependence on intra-rail service to its 16" pipe mill, which will result in a lowering of costs. TMK IPSCO also intends to commission a thread shop at Wilder later this year, which will reduce the costs the company incurs when it ships pipe to other facilities for threading. All of the investments are designed to increase profitability resulting in many more years of operation. ■

MARKETS

U.S. INTERNATIONAL TRADE COMMISSION APPROVES DUTIES ON CHINESE STEEL DRILL PIPES OF UP TO 450%

In particular, the Commission estimated that low prices for the pipes imported from China are resulting in harm to American producers. It should be noted that two Chinese pipe producers, Baoshan Iron & Steel and Shanxi Yida Special Steel Import and Export, were not involved in the antidumping probe. However, international analysts do not rule out that they will be unable to avoid analogous sanctions in 2012. The petition against cheap imports was submitted by the U.S. pipe producers VAM Drilling USA Inc., TMK IPSCO, U.S. Steel Corp., as well as the United Steelworkers trade union. ■

For two years now, we have been the world's largest producer of oil and gas pipes, and we enjoy a huge share in all the lucrative segments of the global pipe market. Moreover, we have gained admission to the elite club of premium OCTG producers.

A Global Leader

Six years ago, OAO TMK affirmed its development strategy as a global player. The company achieved its goal and today leads the global pipe industry. Dmitry Pumpyanskiy, founder of TMK and Chairman of its Board of Directors, notes that what is even more important than past achievements is for the company to realize it cannot afford to be complacent when it comes to its future advancement.

What were TMK's goals when it entered the market 10 years ago?

From the outset, the company set an ambitious goal for itself–to become an industry leader and a key player in the global pipe market. Russia's major pipe producers had afforded the company a strong primary manufacturing base, which proved to be a critical initial advantage. However, the company still had a long way to go before it would attain its goal. It had to acquire the assets needed to become an integrated global public company capable of supplying high value-added products to 70 countries around the world. We soon realized that we might find ourselves on the sidelines unless we rebuilt or modernized our existing manufacturing facilities, created our own research center, and set up an international sales network.

Consequently, in 2005, the Board of Directors approved TMK's development strategy to position itself as a key player in the global pipe market. Aiming specifically at increased sales of high-tech products primarily to oil and gas companies, the strategy has proven to be effective both in the boom years and during periods of crisis, when the market's high-tech segment turned out to be more stable than the other segments. We have since continued to develop product ranges simultaneously for other sectors – for the energy sector (including nuclear), the construction industry, housing and communal services, the shipbuilding industry, the aircraft and aerospace industries, as well as agriculture. TMK is unequalled in the diversity of its product range and the size of its customer base.

Today TMK is a key player in the global market for steel pipes and has a manufacturing and commercial presence in the major regions around the world where pipe is used. For two years now, we have been the world's largest producer of oil and gas pipes, and we enjoy a huge share in all the lucrative segments of the global pipe market. Moreover, we have gained admission to the elite club of premium OCTG producers. TMK enjoys a solid reputation in the business community and has a reliable history of partnership with major corporations. Our results today are the targets we set when we shaped TMK's development strategy, but even more important is the fact that the company continues to advance. Our plans going forward are aimed at strengthening our achievements and streamlining the company's operations.

What major changes has the pipe market seen over the last decade? How does TMK feel in this market?

Certain fundamental changes combined to make market competition significantly fiercer. During the period of rapid economic growth that preceded the recent crisis, many pipe producers worldwide were able to reequip their plants or build new ones. Thus, the pipe industry's modernization boosted the output and hence the supply of pipe products considerably, which brought about a realignment of the top pipe manufacturers. Moreover, China, as it did in many other economic spheres, asserted a strong presence in the global pipe market. With its tremendous human resources and enormous growth potential, China today accounts for more than a third of the world's total pipe output.

Fiercer competition has toughened the rules of the game and has induced many countries to bar foreign manufacturers from entering their home markets. Furthermore, they have introduced obstructive import duties to protect their domestic manufacturers. Today, TMK has entered a new stage in the rigorous competition with global pipe makers and the major producers based in China, Russia and some other countries. The actions of the dominant international players will ultimately reshape the global pipe industry.

EXECUTIVE PROFILE: DMITRY PUMPYANSKIY

Dmitry Pumpyanskiy (b. 1964), Chairman of the Board of Directors of OAO TMK. He graduated from the Ural Polytechnic Institute (now Ural Federal University, City of Yekaterinburg) with the degrees of Doctor of Economic Sciences and Candidate of Technological Sciences. He has written more than 70 scientific works.

From 1991 to 1998, he held executive posts at several major metallurgical plants in the Ural region. In 1999, he was elected Chairman of the Board of Directors of OAO Sinarsky Pipe Plant. In February 2002, he headed ZAO [Private company] TMK. He has been Chairman of the Board of Directors of OAO TMK since 2005.

A member of the Management Board of the Russian Union of Industrialists and Entrepreneurs (RSPP), Dmitry Pumpyanskiy heads the RSPP's Committee for Technical Regulation, Standardization and Compliance Assessment. He also sits on the Management Board of the Chamber of Commerce and Industry of the Russian Federation, and chairs the Sverdlovsk Regional Union of Industrialists and Entrepreneurs. He is a member of the Board of Directors of the World Steel Association.

What do steel pipe users today expect from manufacturers? How do you respond to your customers' increasing requirements?

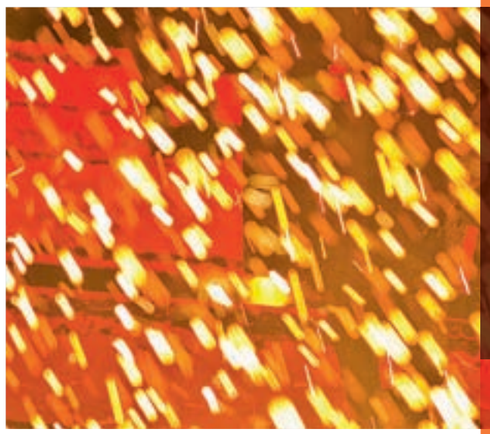
The present development levels of such key industries as oil and gas, chemicals, thermal and nuclear energy, shipbuilding, and aerospace are very high indeed. It is natural that these industries should demand high quality pipe products from manufacturers. Oil and gas companies, which represent a priority market segment for TMK, have also been increasing the quality specifications of the pipes they buy from us. This is because the era of easy oil is nearing an end, which is making it harder and harder - and more and more expensive - to extract each barrel of raw hydrocarbons from the ground. Nowadays, deeper wells with more sophisticated profiles are needed to exploit new oil and gas deposits, especially as production has been taking place in increasingly severe climatic and other conditions. In view of these difficulties, the big market players — the oil and gas majors — demand that manufacturers supply reliable pipes with specific properties. Sometimes each individual well in certain oil and gas producing regions requires the use of a special type of pipe that has to be newly developed. Thus, if a pipe producer is to maintain its advantages and market niche, it must be able to develop and mass-produce a specific type of pipe that the customer urgently needs. It must also provide its customers with logistics support if need be, as well as organize efficient sales and after-sale services. Because of cutthroat competition on the pipe market, a manufacturer who wants to remain in business must offer top quality products at an acceptable price, with delivery made as quickly as possible.

It is well known that business success requires the ability to respond promptly to the urgent needs of the market. Does TMK manage to do that?

In quite a few cases, TMK has succeeded in immediately providing certain products that customers have requested. We always try to hold certain products in reserve in the event that a customer places an order on short notice, and we also try to always be ready to produce what our customers may eventually need.

Our new products that are in demand include large diameter longitudinal welded pipes for modern oil and gas pipelines, as well as high-strength drill pipes, casing, and tubing. These products find use in well construction, as well as in the production and transport of hydrocarbons in extreme conditions, including in permafrost regions, hostile and corrosive environments, and in high operating temperatures both onshore and offshore.

TMK Board of Directors



I WOULD LIKE TO TAKE THIS OPPORTUNITY TO CONGRATULATE THE THOUSANDS OF PEOPLE WHO MAKE UP TMK'S MULTINATIONAL TEAM ON THE COMPANY'S 10-YEAR ANNIVERSARY. WE ARE COMMEMORATING THIS EVENT WITH FULL CONFIDENCE THAT WE WILL SUCCEED IN REALIZING OUR GOAL OF MAKING TMK THE LEADER IN THE GLOBAL PIPE INDUSTRY. I SINCERELY WISH ALL OF US THE BEST OF LUCK IN ALL OUR ENDEAVORS AND LOOK FORWARD WITH OPTIMISM TO FURTHER ACHIEVEMENTS IN OUR WORK AND CREATIVE EFFORTS. I AM CONFIDENT THAT TMK'S HIGHLY PROFESSIONAL AND ACTIVE EMPLOYEES WORLDWIDE ARE CAPABLE OF ACCOMPLISHING OUR GOALS.

TMK is Russia's only company that offers gas-tight, threaded connections. The TMK-Premium family has developed a Russian line of premium connections, and a group of connections branded ULTRA™ is used widely in the United States and Canada, specifically to extract gas from shale and oil from the bitumen sands. TMK has set up a global Premium division, which proactively interacts with customers worldwide, offering them a wide range of innovative tubular solutions.

We are continuously engaging in new product development. Right now, for example, we are in the final stages of developing so-called heat-insulated pipes, which have a unique system of laminated heat insulation. These pipes can easily withstand permafrost conditions and are therefore fit for use in Gazprom's Urengoy deposits in Siberia. TMK is also creating a technology to produce threaded pipes from 13Cr steel, which is highly resistant to hostile environments. In collaboration with TMK-INOX, a joint venture between TMK and RUSNANO, we have begun producing high-precision pipes from stainless steels and alloys by using nanotechnologies.

To reinforce our innovative capabilities on different continents, we are developing RosNITI (Russian Research Institute of the Tube and Pipe Industries) in parallel with the construction of a scientific research center in Houston, Texas (USA). This center will develop and test the latest types of premium products before they are implemented in industry.

How advanced are TMK's pipe-manufacturing technologies?

TMK's technology levels are very high thanks to our strategic investment program to modernize production facilities. The program covers all stages of the manufacturing process, from steelmaking and pipe rolling all the way down to finishing operations, product quality control, stenciling and packaging.

The company thus enjoys significant competitive advantages with regard to its manufacturing capabilities. We now have the world's largest pipe-producing facilities, with unique plants capable of turning out a very wide range of products that enjoy considerable demand. As for the company's main product line, OCTG, TMK fares far better than its competitors, which above all is due to the high quality of its products — a quality standard it has attained through its state-of-the-art manufacturing methods and technology.

To demonstrate our current technological advantages, I will cite an example. The modern PQF (Premium Quality Finishing) mill installed at TMK's Taganrog Metallurgical Works (TAGMET) ensures that deviation in pipe wall thickness is no greater than plus or minus 6%, which is half the amount factored into Russia's existing State Standards. Such a minor level of deviation marks a revolution in the technology for hot rolling of seamless pipes, as it allows us to obtain seamless pipes that are not geometrically inferior to welded pipes. This novel technology paves the way for us to mass-produce products like drill pipes, including those for deep-water drilling. To date, only two companies in the entire world possess this technology.

Over the last few years, we have made significant upgrades to our Russian and Romanian plants' machinery and equipment.

Technology improvement, however, is an endless process, and we do not intend to rest on our laurels. The initial investment projects in our current plans include a continuous FQM (Fine Quality Mill) pipe-rolling mill at the Seversky Pipe Plant and the introduction of electric arc furnace steelmaking at TAGMET.

I should stress that in order to speed up improvements to our premium pipe-producing facilities, over the next few years we will be implementing a large-scale investment program at our American enterprises, which have long been regarded as reliable partners by their local customers. ■

History of TMK: from a local producer to a global company

2001

TMK was founded as an investment company in the pipe-producing sector and Trade House TMK was established.

CALGARY, Canada

CAMANCHE, Iowa
GENEVA, Nebraska
TMK IPSCO, Downers Grove, Illinois
BROOKFIELD, Ohio
KOPPEL, Pennsylvania
AMBRIDGE, Pennsylvania
CATOOSA, Oklahoma
WILDER, Kentucky
ODESSA, Texas
BLYTHEVILLE, Arkansas
HOUSTON, Texas
BAYTOWN, Texas
TMK North America, Texas

2006

TMK floated its shares on the London Stock Exchange. The company took over the Romanian plants TMK-Artrom and TMK-Resita, as well as the Russian joint venture, Orsk Machine-Building Plant. TMK Middle East was established as a trade house that same year.

10-Year Anniversary

2002

Volzhsky and Seversky Pipe Plants and Taganrog Metallurgical Works came under TMK management. A representative office was opened in Baku, Azerbaijan.

2003

Sinarsky Pipe Plant came under TMK management. TMK-Kazakhstan was also established that same year.

2007

The company took over the service enterprises Truboplast, Pipe Maintenance Department, and Russia's only research institute specializing in the pipe industry, RosNITI. TMK-KPV and TMK-Premium Service were established. TMK's shares began trading on the MICEX exchange. Representative offices were opened in Turkmenistan and Singapore.

2004

TMK Storage Complex was established as a company.

UpoRT
Nizhnevartovsk district
TMK Oilfield Service, Truboplast
Yekaterinburg
STZ
TMK-CPW
Polevskoy
SinTZ
Kamensk-Uralsky
RosNITI
Chelyabinsk
TMK-Premium Service
Moscow
TsTB
Buzuluk
OMZ
Orsk
TMK Europe
Köln
TMK Global
Geneva
TMK-Resita
Resita
VTZ
Volzhsky
TMK-Kaztrubprom
Uralsk
TMK-Kazakhstan
Astana
TMK Italia
Lecco
TMK-Artrom
Slatina
TAGMET
Taganrog
Branch of Trade House TMK
Azerbaijan
Branch of Trade House TMK
Turkmenistan
TMK Middle East
UAE

TMK Africa
Cape Town

2008

American pipe assets were purchased and the TMK IPSCO division was established on this basis. The TMK Oilfield Services division was founded as well. TMK also took over TMK-Kaztrubprom (Kazakhstan).

2005

TMK went global that year, establishing a trading company under the name of TMK North America and opening a representative office in Beijing, China.

Branch of Trade House TMK
China

2009

Branch of Trade House TMK
Singapore

The TMK European division was established, consisting of TMK Europe, TMK Italia, TMK-Artrom and TMK-Resita. TMK-INOX was established to focus on the production and sale of stainless steel pipes.

2010

TMK Africa Tubulars was established in Cape Town, South Africa, and a trading office in Calgary, Canada was opened. TMK's shares began to trade on the OTCQX electronic platform.

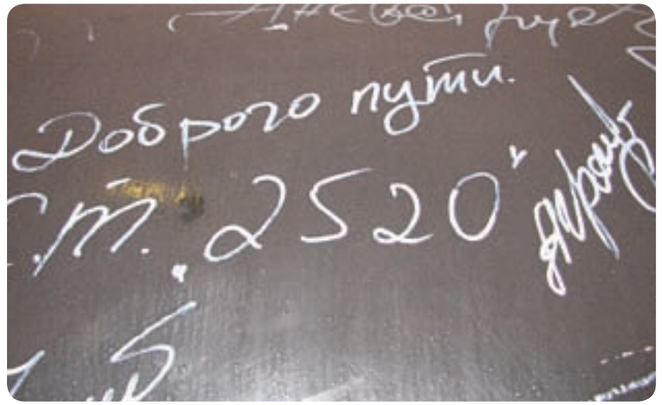
TMK WAS THE FIRST IN RUSSIA TO...

- to produce and supply gas-tight premium connections to the Russian market. Currently, TMK has a wide range of its own patented, Russian-made premium connections and ULTRA (TMK IPSCO) premium connections. To date, TMK is still the sole domestic producer of these high-tech products.

- to start producing spirally-welded gas line pipes with a diameter of 1420x15.7-18.7 mm at Volzhsky Pipe Plant in 2002. Until as recently as 2006, Volzhsky Pipe Plant remained the only Russian company that produced large diameter pipes and played a significant role in the construction of the country's gas transport system and the resurrection of domestically-produced, import-substituting large diameter pipes (LDP). Since 2008, when the longitudinal welded pipe mill was commissioned at Volzhsky Pipe Plant, TMK has mastered the production of longitudinal welded large diameter pipes. TMK's total production capacity of large diameter pipes has increased to 1.2 million tonnes per year.

- to master production of a premium type of cold-resistant, high-strength seamless pipe, which is made of the special ship steel PCF 40W, at Volzhsky Pipe Plant in 2007. The pipes are intended for jack up floating drilling rig (JFDR) structures in arctic conditions with direct impact of dynamic ice loads. The first pipes with higher cold resistance were used for the construction of the Arctic 100 JFDR (Gazprom) in the Barents Sea.

- to successfully conduct field tests of casing with the premium class threaded connections in horizontal wells, which are the most complicated well type in operation. Pipes with a diameter of 168.28 mm, a wall thickness of 8.94 mm, C95 grade and TMK GF connection, which are made in TAGMET, were tested in 2008 at the Sterkhovo deposit, which is operated by NOVATECK in the Yamalo-Nenets Autonomous District.



10 YEARS OF SUCCESS!

- to use the new rolling process in production of seamless OCTG in three-roll stands of the PQF mill, as opposed to the conventional two-roll process. The new process provides high accuracy in the geometric dimensions of the pipes. A pipe-rolling complex with a continuous PQF mill produced by Germany's SMS MEER was commissioned at TAGMET in 2008. It is designed to produce pipes with a diameter of 73-273 mm and wall thickness of 5-25 mm.

- to deliver OCTG pipes for offshore wells. In 2010 and early 2011, casing with TMK GF connections and tubing with TMK FMT connections made by Sinarsky Pipe Plant were delivered to the Yuri Korchagin deposit in the Caspian Sea (developed by LUKoil). The connection was threaded by TMK-Kaztrubprom.

- to join the Industrial Liaison Program at the Massachusetts Institute of Technology (MIT), one of the world's leading scientific and research centers. This elite club includes about 200 well-known companies from around the world that are active in making innovations. TMK has been a participant at MIT since 2010 and so far remains the only Russian company represented at this prestigious research university.

- to start producing stainless steel and alloy precision pipes by applying nanotechnologies. Production was set up within the framework of TMK-INOX LTD, a joint venture with RUSNANO at the beginning of 2011. The innovative products with augmented specifications in terms of strength, toughness, corrosion resistance, geometric parameters and surface quality are intended for companies in the nuclear, heat and power, mechanical engineering and chemical industries.

Houston Visit by Russian Industrialists Highlights Key Issues in Growing U.S.-Russian Commercial Ties

On February 22-23, a mission of the Russian Union of Industrialists and Entrepreneurs (RSPP), an independent, non-governmental body made up of more than 328,000 organizational and individual members, visited Houston, Texas for a two-day conference and meetings with local businesses and public officials. The conference, which was devoted to "Innovations in the Oil and Gas Industry," was sponsored by the Russian Chamber of Commerce of Texas (RCCT) and included six panels covering a wide range of issues pertinent to the energy industry and Russian collaboration with international partners. TMK was represented by several delegates, including TMK IPSCO Chairman Piotr Galitzine, who spoke on one of the conference panels.

Russia is Houston's sixth largest international trade partner. Our purpose today is to learn more from one another, and in doing so, identify trends, best practices and opportunities to build productive and sustainable partnerships at individual, corporate and regional levels.
Ed Gonzalez, Vice Mayor Pro Tem and Houston Council Member

GROWING BILATERAL TIES

Dubbed the "Energy Capital of the World," Houston is home to 219 firms that do business in Russia and approximately 50 Russian companies that operate subsidiaries there. Many of these companies operate in the energy sector, including oil and gas producers, logistics firms, and companies that provide related legal and financial services.

Relationships are being forged in other areas as well. Several major educational institutions like the University of Houston and Rice University, as well as NASA, have all established partnerships in Russia and contribute to scholarship, research and development, and space exploration. The Texas Medical Center, the world's largest, is in the process of establishing a partnership with a medical institution in Russia.

"The City of Houston has been fostering bilateral ties with partners from the Russian Federation for years," said Ed Gonzalez, Vice Mayor Pro Tem and Houston Council Member, during his opening remarks. "Underpinning these ties is a substantial and rapidly growing trade relationship. Russia is Houston's sixth largest international trade partner, with total trade being valued at $8.9 billion in 2010, a 39.9% increase from 2009 levels. Our purpose today is to learn more from one another, and in doing so, identify trends, best practices and opportunities to build productive and sustainable partnerships at individual, corporate and regional levels."

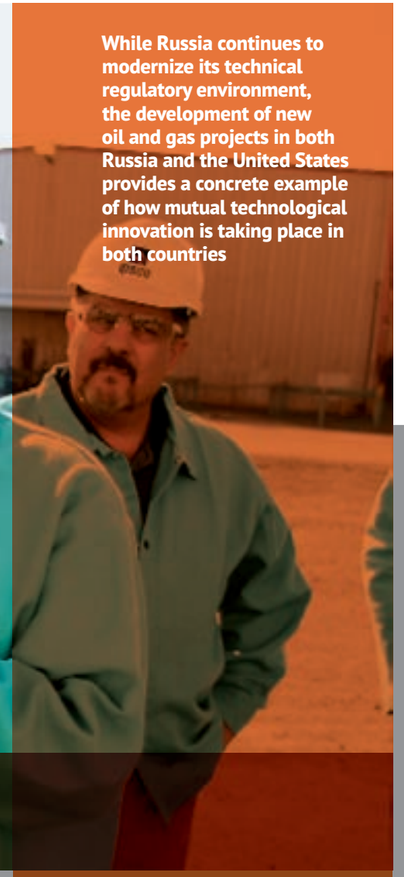
Russian officials attending the conference also expressed their desire for greater cooperation.

"I would like Texas to be a real leader in developing cooperation with the Russian Federation," said Nikolay Babich, Consul General of the Russian Federation in Houston. "It's not just about developing contacts between Russia and America; I really hope that this conference will provide some practical agreements between Russian and American companies."

Aside from numerous commercial and organizational ties, Houston also enjoys several official relationships with Russia. Since 1995, Houston has been a sister city of Tyumen, one of Russia's most important oil and gas centers. In 2007, a protocol for cooperation with Moscow was signed during a trade mission led by Houston Mayor Bill White. And at the conference this February, two senior delegates from the RSPP—Anatoly Ledovskikh, Head of the Federal Agency of Subsoil Use of Russia, and Andrey Lotsmanov, First Deputy Chairman of the RSPP Committee for Technical Regulation, Standardization and Conformity Assessment—were recognized as Honorary Citizens of Houston.

ISSUES OF TECHNICAL REGULATION

The numerous U.S.-Russian ties are underpinned by real changes



While Russia continues to modernize its technical regulatory environment, the development of new oil and gas projects in both Russia and the United States provides a concrete example of how mutual technological innovation is taking place in both countries

Following the first day of a conference in Houston organized by the Russian Chamber of Commerce of Texas, delegates from the Russian Union of Industrialists and Entrepreneurs (RSPP) paid a visit to TMK IPSCO's facility in Baytown, Texas. Members of the delegation toured Baytown's new heat treat facilities, which were brought online in early 2009. Most of the Russian green tube imported into the U.S. is processed at Baytown before being threaded for connections that match U.S. customers' requirements.

taking place in both countries. In Russia, some of the most important work today concerns reform of the country's technical regulatory environment. Leading this effort is the RSPP Committee for Technical Regulation, Standardization and Conformity Assessment, which is headed by Dmitry Pumpyanskiy, Chairman of the Board of Directors at OAO TMK.

In the first panel of the conference, Andrey Lotsmanov, a metallurgist by background and First Deputy Chairman of the Committee, devoted his presentation to the role that industry plays in the development of Russia's technical regulations.

"At first glance, issues of standards are not very interesting, and it would seem that they don't affect us directly," said Lotsmanov. "But by way of a humorous example, at breakfast the other morning, I found out that standards are quite important when I opened the little jar of jelly at the table. When I tried to take it out with my teaspoon, which is how I would do it in Russia, I couldn't get it to work. The standard for the jelly jar and the standard for the teaspoon were different. What we need is for Russian and American standards to match up with one another."

The RSPP Committee for Technical Regulation, Standardization and Conformity Assessment was established on February 15, 2006. It actively engages with international and national organizations in a number of countries and industries, including the International Organization for Standardization (ISO), the American Society for Testing and Materials (ASTM), the American Petroleum Institute (API), and the International Association of Oil & Gas producers (OGP)

Current levels of standards harmonization vary by industry in Russia, but according to Lotsmanov, the metals industry was one of the first in Russia to adopt international standards such as ISO. This early adoption has been one of the key reasons why the sector has not only survived during periods of economic difficulty but has developed so successfully as well, exporting nearly half of its products.

Russia is passing through a "transitional period," according to Lotsmanov, where the government has stopped performing many of the functions regarding standardization and business is just beginning to take on these functions.

"Many Russian enterprises have already received ISO 9000, ISO 14000 and ISO 18000 certificates," said Lotsmanov. "Such certificates carry great importance when these companies ship products overseas, and they are obligatory before companies can place their shares on the securities markets."

TMK INNOVATION IN RUSSIA AND AMERICA

While Russia continues to modernize its technical regulatory environment, the development of new oil and gas projects in both Russia and the United States provides a concrete example of how mutual technological innovation is taking place in both countries. Such innovation, especially of an international collaborative nature, is especially critical for a global pipe manufacturer such as TMK.

Piotr Galitzine, Chairman of TMK IPSCO, took part in a panel discussion on "U.S. Industry—Innovations and Technology Transfer," where he talked about TMK's innovative products in both Russia and the United States, which are critical to many of the new oil and gas projects that are coming on line. In Russia, some of the strongest demand has been for TMK's large diameter pipes.

"Large diameter pipe demand will remain robust as regions of production continue to move away from consumption centers across Europe," Galitzine said. "And as more pipeline projects come online in America, we will also see demand there for TMK's large diameter pipes."

TMK has supplied large diameter pipes to several major Russian projects, including the Sakhalin-Khabarovsk-Vladivostok line, the Eastern Siberia-Pacific Ocean (ESPO) Pipeline and Nord Stream, which will stretch from north of St. Petersburg to Germany through the Baltic Sea.

In the United States, innovation at TMK IPSCO is centered largely on its ULTRA™ line of premium connections, which are crucial to developing the country's unconventional oil and gas reserves. These projects require products that can support drilling in ever deeper and higher pressure environments, such as those found in the vast Marcellus Gas Shale, the Eagle Ford Shale and the Bakken Oil Shale, all of which are among the many developments where TMK IPSCO's products are being used.

"The way drilling trends are going, we will have drilling depths of 25,000 feet and hydrofracking pressures of up to 25,000 psi, which places all sorts of performance demands on the pipe," said Galitzine. "Pipes with our premium, integral, connections are designed such that the diameter of the pipe and the diameter of the connection are the same, which is very important because it allows you to drill a smaller hole, get in more quickly and get out more quickly."

Speaking of TMK's 2008 acquisition of 10 U.S. production facilities, Piotr Galitzine stressed the benefits of having a foothold in the United States, which remains the world's most important drilling region.

"As we've noted before, the U.S. is an extremely innovative and technology-driven market, and together with Russia, it gives us a strong presence in the two regions that together drill 55% of all the world's wells," said Galitzine. "We're very happy to be part of that market and to be globally balanced in a way that allows us to apply our technology all over the world."

Building Commercial Bridges Between Russia and Texas

Elena Bespalova is Executive Director of the Russian Chamber of Commerce of Texas (RCCT), which she helped to establish in 2009 as a way to foster business cooperation, trade and investment between Russia and Texas. Bespalova holds an MBA from the University of Antwerp.

Ms. Bespalova, can you give us a little background on the Chamber? How long did it take to turn the vision into a reality?
Well, given Houston's status as the energy capital of the world with its more than 3,500 companies active in the industry, and Russia's status as the world's largest producer of oil and gas, it was only natural to have a platform for cooperation in Houston where joint commercial projects could be explored. In 2009, five key organizations—the Consulate General of Russian Federation in Houston, Greater Houston Partnership, U.S. Commercial Service, City of Houston, and the Port of Houston—came together with the necessary resources. At that point, it only took a couple of months to formally establish the Chamber.

What role do non-energy companies play in the Chamber?
Energy and companies related to the industry were the most logical place to start, and at present they make up about three quarters of the Chamber's membership. We do have a number of other companies, though, particularly in the areas of nanotechnology, biotechnology, medicine and aerospace. There is a big need for cooperation in these areas too, which was emphasized by the delegates from the Russian Union of Industrialists and Entrepreneurs (RSPP) at the conference we held in February.

One of the biggest challenges we face is the need to break up stereotypes. Stereotypes that are held by both Russian and U.S. companies serve as the main barrier to effective collaboration. Unfortunately, some companies are still held back by a sense of danger when it comes to doing business in Russia. Our goal is to get companies to overcome that fear.

Does the Chamber work with other organizations that are focused on supporting Russian and American trade?
We work very closely with the U.S.-Russia Business Council (USRBC). We are members of each other's organizations and promote each other's events. For example, the Chamber supported the USRBC event "From Silicon Valley to Skolkovo" that took place in San Francisco last October. We promoted this event in Houston, and many Houston-area representatives ended up traveling there. For their part, USRBC helped us out quite a bit with the recent RSPP visit to Houston.

What are some of the major challenges the Chamber faces?
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What do you hope to achieve from TMK IPSCO's membership in the Chamber?
Well, TMK IPSCO is the brightest and best example of a Russian company's investment in the U.S. economy, and it shows how Russian and American companies can work well together. This example should motivate other companies to follow suit, especially on the American side.

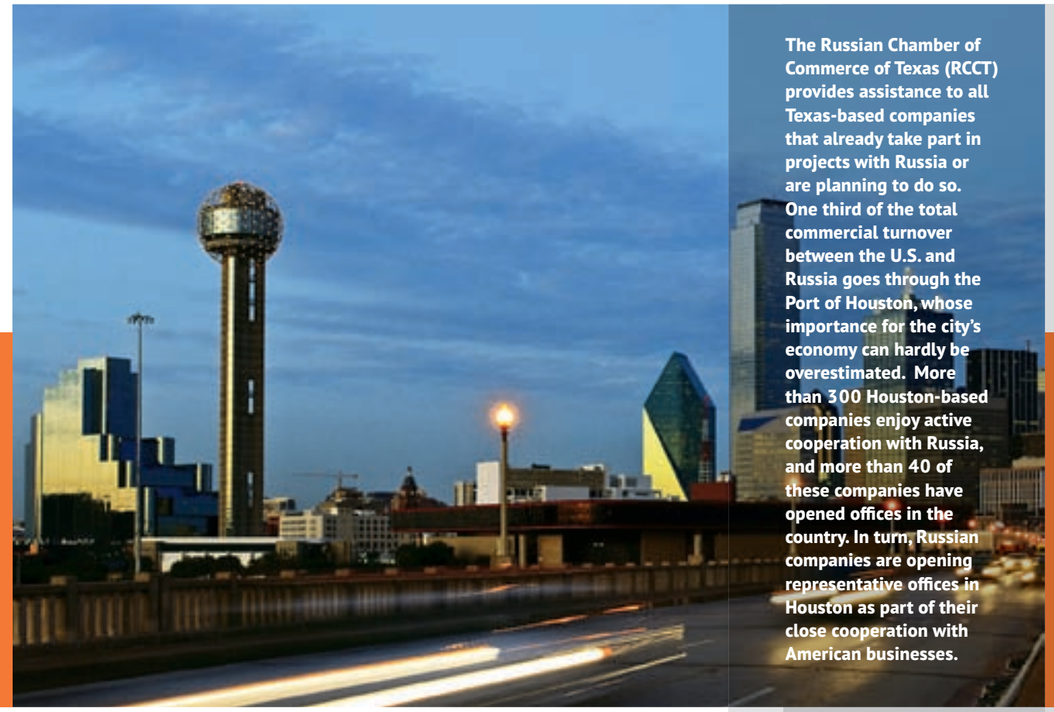
We are eager to work with TMK IPSCO to help it inform U.S. companies about TMK's great investment in the U.S. It is very important that a lot of companies are aware of this and take it as an example.

We are eager to work with TMK IPSCO to help it inform U.S. companies about TMK's great investment in the U.S. It's very important that a lot of companies are aware of this and take it as an example. We are also ready to contribute by using the Chamber as a platform for TMK IPSCO to expand into other markets as much as possible.

What are some other Chamber events we can look forward to in 2011?
The RSPP visit to Houston, which is our major annual event in February, is one that we plan to really grow for next year. This year was quite successful with 20 Russian delegates, a big increase over the first event in 2010.

The next big event in Houston this year will take place during the Offshore Technology Conference (OTC) in May. We are planning to host a CEO roundtable, which will bring together executives from oil and gas companies to discuss areas of common interest.

In June, we will take part in a trade mission to Russia, where we plan to organize B2B meetings for U.S. companies. ■



The Russian Chamber of Commerce of Texas (RCCT) provides assistance to all Texas-based companies that already take part in projects with Russia or are planning to do so. One third of the total commercial turnover between the U.S. and Russia goes through the Port of Houston, whose importance for the city's economy can hardly be overestimated. More than 300 Houston-based companies enjoy active cooperation with Russia, and more than 40 of these companies have opened offices in the country. In turn, Russian companies are opening representative offices in Houston as part of their close cooperation with American businesses.

Trade Organizations Help TMK IPSCO Keep Pace with Technology, Regulations and Networking

From testifying before the Congressional Steel Caucus of the U.S. House of Representatives in Washington, D.C., to organizing activities in local communities where the company's plants are located, many TMK IPSCO employees work to support the company's position on various oil and gas industry issues.

Leading these efforts is Scott Barnes, Vice President and Chief Commercial Officer, whose role in the company's government affairs arena has continued to expand throughout his 25-year tenure. He most recently assumed full responsibility for government affairs and works to coordinate clear and consistent messages that help shape policies favorable to TMK IPSCO.

Barnes also oversees the company's partnerships with oil and gas industry trade organizations on the national, state and regional levels. These organizations represent independent oil and natural gas producers and service companies, advocate on their behalf and support lobbying efforts that benefit the industry.

THE BENEFITS OF MEMBERSHIP

"It's important for TMK IPSCO to belong to organizations in which we have a common cause," Barnes said. "Most companies cannot afford the staff required to monitor the issues, research the arguments, develop position papers and lobby the governing bodies. But through membership in organizations that specialize in certain fields, we as a company can have a voice in the decision-making process."

One of the organizations to which TMK IPSCO belongs is the Independent Petroleum Association of America (IPAA). This national trade association gives its 400 corporate members and 6,000 individual members a virtual seat at the table when advocating their views before the U.S. Congress and federal agencies. IPAA also works to educate the public about the industry's important role in creating jobs and securing a U.S. energy source.

"Our members support lobbying efforts on behalf of the oil and gas industry," said Bob Jarvis, Vice President of Membership and Capital Markets at IPAA. "We help direct legislative and regulatory policies that are fair and favorable to our industry."

IPAA also operates in close cooperation with 44 unaffiliated independent national, state and regional associations, including the Marcellus Shale Coalition, of which TMK IPSCO is also a member. The Coalition educates government officials and the local communities about all aspects of producing natural gas from the vast Marcellus Shale, which covers a large part of western Pennsylvania and eastern Ohio where TMK IPSCO operates three production facilities.

"The Marcellus Shale Coalition is really the definition of a grassroots organization that is active in forming policy at the early stages of developing this energy resource treasure," Barnes said. "The Coalition has multiple committees to address various disciplines required to develop the basin. By working together with our customers, suppliers, competitors and other parties with vested interests on issues related to the Marcellus Shale's development, we can help shape governmental policy for our mutual benefit."

The "mutual benefit" comes in the form of increased networking opportunities, easier access to key energy company personnel and improved sales, Barnes said. "Through this process our customers get to know our company better and look to us for assistance in meeting their business goals."

Although many trade organizations exist, Barnes said TMK IPSCO is selective about which ones it joins. "You only get out of an organization what you are willing to put into it." Therefore, he said he wants the company to be an active participant in each organization it joins. "Through association with these types of organizations and serving on their boards, the company is recognized as a leader in the industry.

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Scott Barnes, Vice President and Chief Commercial Officer of TMK IPSCO

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Being a leader leads to further access," Barnes said.

"Both IPAA and the Marcellus Shale Coalition provide TMK IPSCO the opportunity to network with the end users of our products. Building these closer relationships helps us understand their challenges and how we can provide solutions."

TODAY'S KEY ISSUES

Barnes works with trade organizations to monitor the many state and federal laws, regulations and environmental issues facing the oil and gas industry today.

In March 2010, he testified before the Congressional Steel Caucus – U.S. House of Representatives on behalf of the Committee on Pipe and Tube Imports (CPTI). The CPTI represents the majority of the country's steel pipe, tube and fittings producers, including TMK IPSCO. Barnes has served as a director on CPTI's board and will become its chairman in May.

The CPTI focuses its advocacy efforts on matters related to trade and develops legislation that will benefit the industry and its workers. It has filed several unfair trade cases, many aimed at Chinese government subsidies that have led to import surges, thereby taking business away from domestic producers such as TMK IPSCO.

Barnes testified that obtaining trade relief gave companies, including TMK IPSCO, the confidence to invest in new facilities that created new jobs. "This is good news, and even better, the message resonates that stopping unfair Chinese trade practices creates new jobs in America," he said.

"My interest as chairman will be to advocate for strengthening and better enforcement of U.S. trade laws. We have been successful in prosecuting unfair trade cases against China within the last two years. The objective now is to work with the Department of Customs and Border Control to enforce these hard-fought rulings to ensure the domestic industry realizes the relief we have won. We need to ensure that the importers do not circumvent the rulings through either outright fraud or product switching."

The environment and climate change are also forefront on the government affairs agenda. "The company has a vested interest in protecting the environment for ourselves and future generations. Our goal is to inform policymakers of the cost-benefit of some of the competing proposals in order to arrive at a position that is economically feasible and does not place unreasonable demands on our industry and company," he said.

"Our task is to provide a balance. As suppliers to the industry, we need to support our customers' efforts with high-quality products and technology, and as a country, we need to develop this plentiful energy resource to continue to grow our economy."

Scott Barnes

Jarvis agrees, noting that regulators are seeking more limits on natural gas exploration. "For example, some agencies worry that hydraulic fracturing, conducted 10,000 feet underground, may potentially harm drinking water from wells only 200 feet underground. Limiting this type of exploration will eventually impact all of our members, including TMK IPSCO's ability to sell more tubing," Jarvis said.

"Technology has advanced to safely recover the oil and gas trapped in the shale basins. However, different groups are issuing misinformation to promote their own agendas about its safety," Barnes said. "Our task is to provide a balance. As suppliers to the industry, we need to support our customers' efforts with high-quality products and technology. And as a country, we need to develop this plentiful energy resource to continue to grow our economy."

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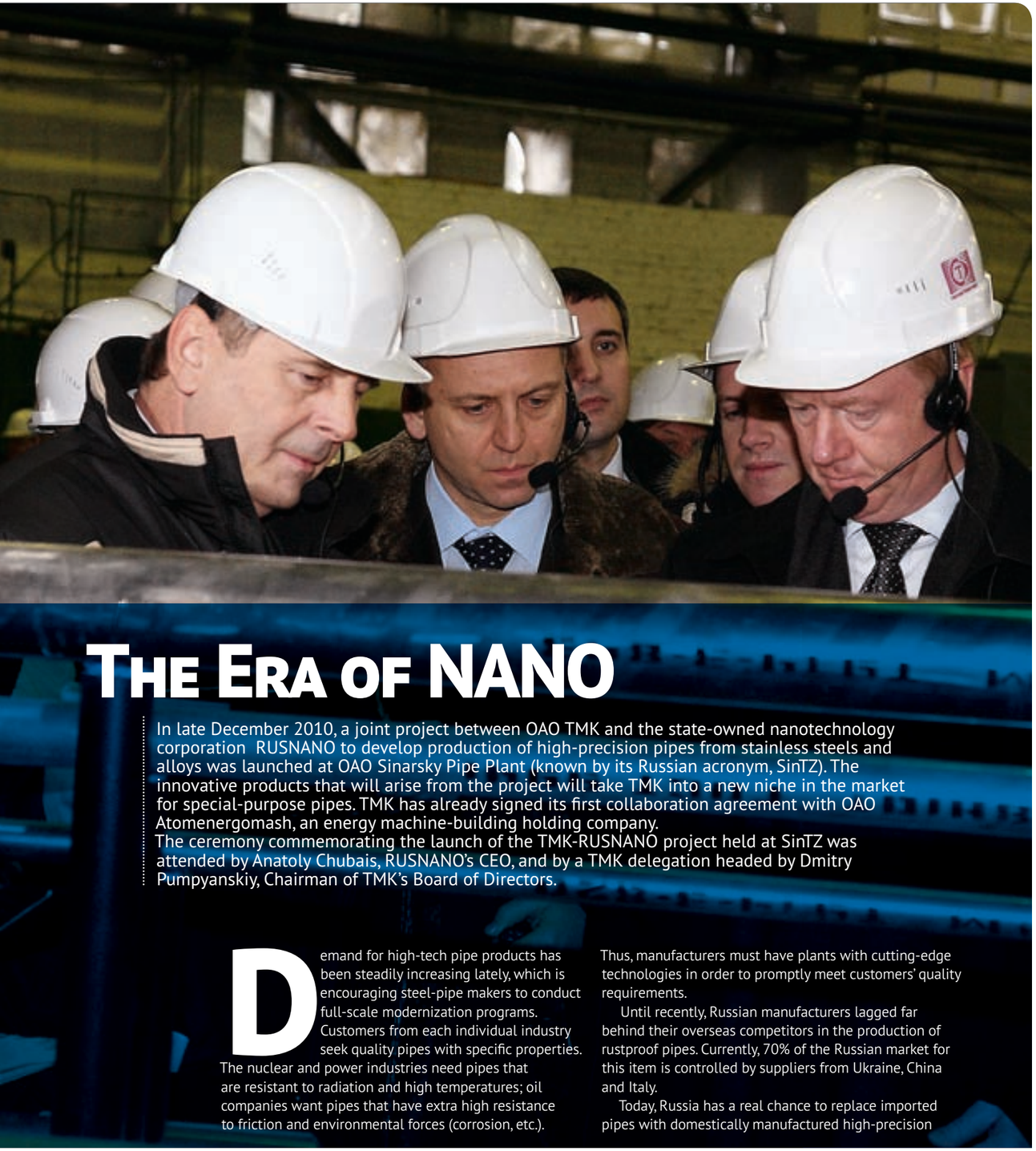
Scott Barnes

TEAM EFFORT

Although Barnes leads the company's government affairs efforts, he said many employees are critical to informal grassroots advocacy work on TMK IPSCO's behalf. Managers and plant supervisors regularly meet with local environmental, safety and regulatory agencies, and human resource specialists organize the company's involvement in local communities where its plants are located. And through association memberships, company managers help shape industry positions on current events and pending legislation.

"All of these activities and relationships are essential to our business and the well-being of the North American steel and pipe industry," Barnes said. "We need active assistance and constant vigilance from our political representatives or our industry will lose in the highly competitive environment in which we operate." ■



THE ERA OF NANO

In late December 2010, a joint project between OAO TMK and the state-owned nanotechnology corporation RUSNANO to develop production of high-precision pipes from stainless steels and alloys was launched at OAO Sinarsky Pipe Plant (known by its Russian acronym, SinTZ). The innovative products that will arise from the project will take TMK into a new niche in the market for special-purpose pipes. TMK has already signed its first collaboration agreement with OAO Atomenergomash, an energy machine-building holding company.
The ceremony commemorating the launch of the TMK-RUSNANO project held at SinTZ was attended by Anatoly Chubais, RUSNANO's CEO, and by a TMK delegation headed by Dmitry Pumpyanskiy, Chairman of TMK's Board of Directors.

Demand for high-tech pipe products has been steadily increasing lately, which is encouraging steel-pipe makers to conduct full-scale modernization programs. Customers from each individual industry seek quality pipes with specific properties. The nuclear and power industries need pipes that are resistant to radiation and high temperatures; oil companies want pipes that have extra high resistance to friction and environmental forces (corrosion, etc.). Thus, manufacturers must have plants with cutting-edge technologies in order to promptly meet customers' quality requirements.

Until recently, Russian manufacturers lagged far behind their overseas competitors in the production of rustproof pipes. Currently, 70% of the Russian market for this item is controlled by suppliers from Ukraine, China and Italy.

Today, Russia has a real chance to replace imported pipes with domestically manufactured high-precision ones for use in the nuclear industry, aircraft construction, and the high-tech sector.

Dmitry Pumpyanskiy, Chairman of TMK's Board of Directors, told the gathering at the SinTZ ceremony about the launch of the high-precision pipes project, "At long last, our economy, our market and we ourselves have reached maturity. We are now aware of the necessity to revive the high-tech and large-scale production of high-precision, rustproof pipes with novel properties and superior usability," he said.

With a view to consolidating its position and subsequently playing the lead role in this ambitious segment of the steel pipe market, last year TMK designated an independent, specialized business to oversee the production and sales of high-precision, rustproof pipes. The principal innovation in this business has been the application of nanotechnologies in metal treatment to create a new generation of pipes.

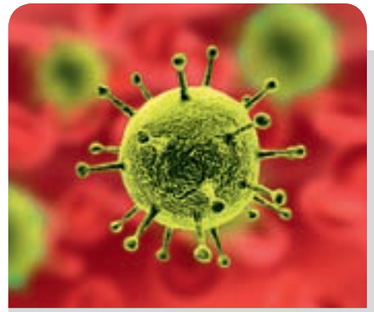
TMK's partnership with state-owned RUSNANO has materialized in the form of a joint venture called TMK-INOX, which has played a big role in developing the production of high-precision, rustproof pipes by means of nanotechnologies.

WHAT IS RUSNANO?
RUSNANO stands for the Russian Corporation of Nanotechnologies (Rossiyskaya korporatsiya nanotekhnologiy). Founded in 2007 to pursue the government's policy in nanotechnology, RUSNANO addresses this task by becoming a coinvestor in nanotechnology projects that have considerable economic and social potential. The corporation's goal is to stimulate the growth of Russia's nano industry so that its output may reach RUB 900 billion per year by 2015.

As of February 2011, the number of requests for financing that the corporation received was 1,891. The Supervisory Council of RUSNANO has already approved 104 projects with budgets totaling RUB 347 billion, including co-financing by RUSNANO to the amount of RUB 140.1 billion. Among them, 92 are investment projects, eight are projects to form Russian and international venture funds, and four are projects to build nanotechnology centers. Out of the total number of projects that have already been endorsed, 28 have foreign participation. To date, RUB 64.2 billion has been invested in nanotechnology projects.

Alexander Shiryaev, President & CEO of TMK, noted, "TMK-INOX is a joint project of key importance since it is being carried out under the government's policy to support Russian manufacturers of innovative products."

According to Anatoly Chubais, CEO of RUSNANO, the state corporation has been keeping a watchful eye on what is happening in the pipe industry; thus, the choice of TMK as a partner for the joint project was not accidental. He stressed the following point: "TMK's dynamism, high efficiency and high modernization rates are based on the latest scientific solutions; this allows us to characterize the pipe manufacturer as the technology leader of the national pipe industry.



ENGINEERING ON A NANOSCALE

"Nano" is a prefix signifying a billionth part of a meter; that is, a nanometer, which is a thousandth part of a micron. Managing the formation of the microstructure of steels on such a nanoscale allows maximal utilization of the potentialities of various chemical compositions of steel or an alloy. For example, the isolation of the nanoflakes of carbides, nitrides and intermetallides – given that the volumetric proportion is considerably smaller than one percent – will ensure a manyfold increase in resistance to plastic deformation. In this process, the effect is intensified manifold while the average size of the particles diminishes from several dozen to several nanometers.

WHY HAS TMK'S PRECISION, RUSTPROOF PIPES PROJECT ATTRACTED RUSNANO'S ATTENTION?

Georgy Kolpachev,
Managing Director of RUSNANO

When examining the project, we conducted research and obtained the opinions of independent experts. They stated that nanotechnology engineers had played a key role in achieving endurance and sleekness properties of the end product.

We scrutinized the commercial potential of the innovation to find out how far it is possible to create a product that will be needed by customers working in different fields – power machine building, machine building for nuclear power plants, for oil and gas fields, and so on.

RUSNANO's Supervisory Council decided to support TMK's project, which means that we appreciate its potential. We hope that with our participation a leader in the manufacture of precision rustproof pipes will appear in the Russian market. We hope that our pipes will enjoy demand in Russia and other countries. Our calculation is that our joint venture stands a good chance of success in the markets of the CIS and European countries.

Any investment project comes with risk, to be sure, but we know how to minimize it. Working together with the TMK team, we will mount an ambitious effort to make TMK-INOX a market leader.

DMITRY PUMPYANSKIY,
CHAIRMAN OF TMK'S BOARD OF DIRECTORS

The theory of hardening metals and alloys by methods of plastic deformation and heat treatment was developed long ago. However, the technical know-how to implement that theory as a new technological method belongs to us. This method consists of monitoring the nanostructure formation at all stages of production during hot plastic deformation, cold rolling and heat treatment. In this procedure, the parameters of the metal's structure and substructure come under control on a nanolevel. These treatments, when combined, lead to the creation of a particular nanostructure, which makes it possible to attain a higher, modern-day level of usability. This achievement has resulted from three years' research, which was financed by Russia's Ministry of Industry and Trade; private funding was provided by TMK. The research work was conducted by RosNITI with the participation of the Bardin Central Research Institute for Ferrous Metallurgy [Russia's leading research center for the creation of metallurgical technologies and new materials]. Consequently, the research generated new grades of stainless steel and alloys on a nickel base. It also gave rise to new methods for their treatment, and we are going to implement them on a practical level.

Moreover, the fact that we have been able within a short time to adopt all the necessary decisions testifies to the professionalism of our TMK colleagues."

Amazingly, the decision to set up the joint venture was agreed upon in principle in early December 2010, and by the end of that month, the two parties were already in possession of a complete set of signed documents needed for the establishment of TMK-INOX.

NO LAYOFFS DUE TO REDUNDANCY

TMK's Dmitry Pumpyanskiy said, "The new venture [TMK-INOX] should become a model for the culture of production, a model for the fulfillment of technology tasks, a model for enhancing the workers' wellbeing."

The TMK-RUSNANO project is in line with TMK's strategy for overhauling its manufacturing facilities – a strategy that TMK pursues consistently at all of its manufacturing locations. At SinTZ, state-of-the-art equipment will be installed, which takes into account new scientific solutions developed both in Russia and abroad. Already in place at SinTZ is a new rolling mill designed for long pipes, which was made by the Elektrostal electrometallurgical plant. A second mill is in the installation stage, having been supplied by VNIIMETMASH (All-Russia Design and Research Institute of Metallurgical Machine-building). A new unit for polishing external pipe surfaces is already working at SinTZ.

The upcoming plans call for SinTZ to acquire furnaces with a protective atmosphere based on extra pure hydrogen, as well as pipe-bending machines that can give long pipes a customized V-shape. Also to come into service at SinTZ are modern units that use nondestructive control methods, units for the electrochemical polishing of pipe interior and exterior surfaces, as well as marking and packing equipment that improves pipe usability.

TMK is certain that TMK-INOX will create new jobs owing to the high potential demand for the joint venture's products. This belief was shared by all the participants in the ceremonial event at SinTZ. Vladimir Salamatov, Deputy Minister of Industry and Trade of the Russian Federation, said, "I am confident that the unique products of TMK-INOX will enjoy huge demand." Anatoly Chubais (who used to head RAO UES of Russia, the national electricity grid, before he became CEO of RUSNANO), noted that Russia's energy complex badly needed a novel, high-precision pipe. According to Chubais, the entire strategy of the Russian pipe industry focuses on the transition to pipes capable of bearing "super high loads" (high temperatures and pressures). He added, "This is not the traditional 300 to 500 degrees Celsius and 130 atmospheres; this is high-pressure steam of 600 to 650 degrees Celsius. That is why the power industry of the future will need a cutting-edge precision pipe. Precision pipes have very close tolerances in size, form, chemical composition, and mechanical properties."

Proceeding to practical business, TMK-INOX and the chief user of its products, OAO Atomenergomash, concluded their first agreement on collaboration. The document was signed by TMK-INOX General Director Leonid Marchenko and Atomenergomash General Director Vladimir Kashchenko. "A new life is beginning for us," said Dmitry Pumpyanskiy at the ceremony of launching the TMK-RUSNANO precision pipes project at SinTZ. One can only agree with him. The new life will be different not only in terms of new equipment, new jobs, and new market niches gained by TMK; it will be a new life on a nanotechnology level. ■

FACT BOX: TMK-INOX

The joint venture utilizes the facilities of tube-rolling Workshop No. 2 at Volzhsky Pipe Plant, and those of Workshop C-3 at Sinarsky Pipe Plant.

The stakes of TMK and RUSNANO in the venture are 51% and 49%, respectively. Its authorized capital is RUB 2.6 billion, and investments in the venture project total RUB 3.7 billion.

The venture's total output of seamless rustproof pipes and pipes made from alloys is 7,000 to 8,000 tonnes per year. Its output of welded pipes (the machinery and equipment for their production are being installed) will reach 10,000 tonnes per year by 2015.

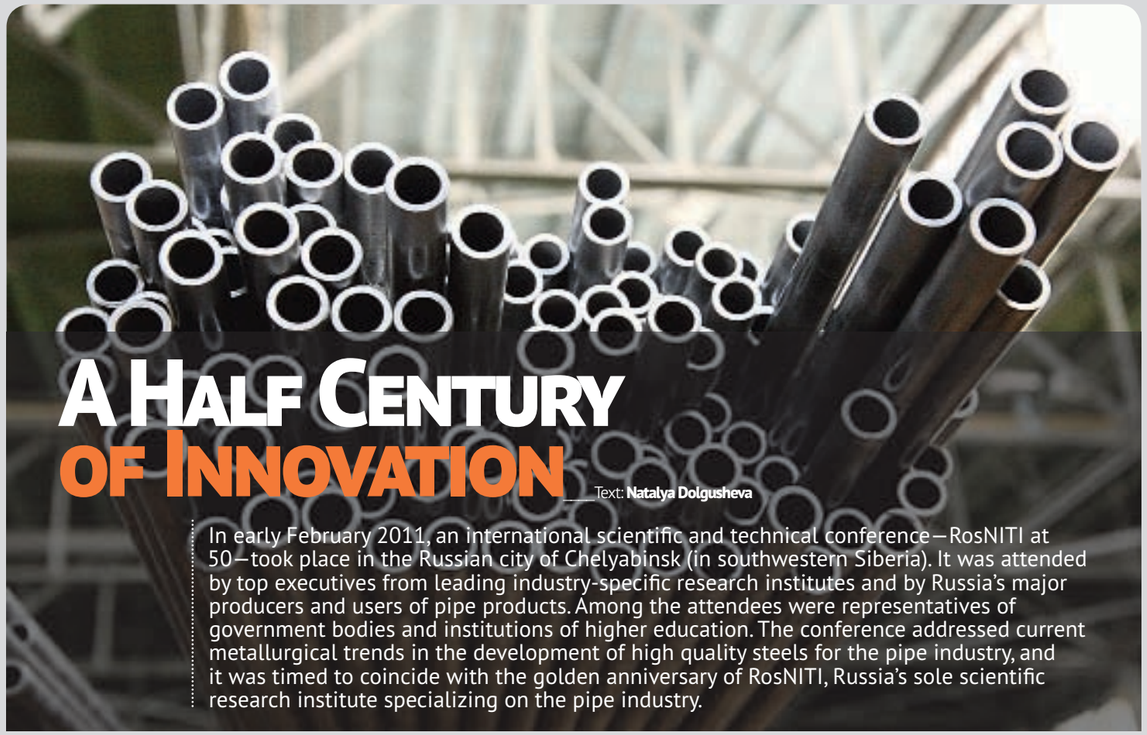
RUSNANO's Managing Director Georgy Kolpachev has been elected Chairman of the Board of Directors of TMK-INOX. Its General Director is LeonidMarchenko.

One of the metallurgical projects in RUSNANO's current portfolio is a project of ZAO Plakart, which specializes in introducing modern technologies to apply functional coatings. This project's total budget is an estimated RUB 4 billion, including RUSNANO's investment of RUB 1.220 billion.

Coatings by ZAO Plakart are intended to protect drilling rigs, bridges and metalwork against corrosion, and to prevent wear and tear of lock valves and pump-and-compressor fittings. The coatings are also good for equipment used in oil and gas drilling, as well as in extracting and refining oil. The project technologies (gas-thermal spraying and ion-plasma magnetron sputtering) have been replacing obsolete and ecologically harmful, including galvanic, technologies. The cutting-edge technologies make it possible to obtain unique coating properties. One example is the increase obtained in the resources of gas-turbine engines through the application of various functional nano coatings, which ensure greater efficiency and power of the engines, thereby providing a solution to a key problem in developing fifth-generation gas-turbine engines. Ultimately, these factors will substantially improve the specifications of Russian aircraft.

Gas-thermal coatings have clearly proved their worth in protecting the work surfaces of crystallizers of continuous billet casting machines, furnace rollers, as well as the surfaces of elements in the transport systems of continuous lines and in work instruments.

Nano-coating technology will help many Russian economic sectors to manufacture highly competitive products with novel properties. These items could include a new generation of water equipment and vessels whose hulls will be resistant to hostile marine environments. Nano-coating technology has a diverse range of applications.



A Half Century of Innovation

Text: **Natalya Dolgusheva**

In early February 2011, an international scientific and technical conference—RosNITI at 50—took place in the Russian city of Chelyabinsk (in southwestern Siberia). It was attended by top executives from leading industry-specific research institutes and by Russia's major producers and users of pipe products. Among the attendees were representatives of government bodies and institutions of higher education. The conference addressed current metallurgical trends in the development of high quality steels for the pipe industry, and it was timed to coincide with the golden anniversary of RosNITI, Russia's sole scientific research institute specializing on the pipe industry.

Viktor Semyonov, Director of the Basic Industries Department of Russia's Ministry of Industry and Trade, delivered a welcoming address to the conference attendees. "One key task in industrial development is to form a market for innovative products," he said. "TMK is Russia's largest pipe holding company, and part of its efforts has been to develop the science and technology of metallurgy; as a result, it has upgraded its pipe manufacturing technologies and created novel products by means of scientific research."

RosNITI General Director Igor Pyshmintsev delivered a report on the history of the Institute's development and presented the results of its research initiatives over the last decade. He paid considerable attention to the men and women who had initiated the creation of RosNITI, as well as to the programs to educate young scientists.

He noted, "Within TMK, we have increased by nearly 2.5 times the number of employees engaged in scientific research by creating a system of planning scientific research work with industry's needs in view. Ninety-nine percent of our equipment has a service life of up to five years. We are now going further by creating new technologies and products designed for various branches of industry."

He spoke about several major trends, such as the manufacture of large diameter pipes, oil country tubular goods (OCTG), rustproof oil and gas pipes, special-purpose items, and other unique products for the country's oil and gas sector.

Today, energy companies are beginning to explore and develop hydrocarbon deposits that are located deep below the surface. They are active in deep-water drilling on the continental shelf and are laying more and more pipes on the seafloor.

FACT BOX: SOME KEY EVENTS IN ROSNITI'S HISTORY

RosNITI (Russian Research Institute of the Tube and Pipe Industries) [originally UralNITI] was founded in January 1961. It is the Russian metallurgical industry's sole research center that focuses on the theory, techniques and technology of manufacturing steel pipes and cylinders.

RosNITI has taken out more than 200 Russian and foreign patents, and made more than 1,000 inventions related to the manufacture of pipe products.

Since 2003, RosNITI has been collaborating with TMK as a strategic partner. In 2007, it became part of the company and provided a base to set up a unified system to manage innovations, namely, the TMK Research Center.

Igor Pyshmintsev

Alexander Shiryaev

Moreover, the volumes of raw materials transported via pipeline systems are constantly increasing. These factors all serve to increase customers' requirements concerning the quality and properties of the pipes. Oil and gas companies need unique materials and technologies, precisely the kind that RosNITI has been developing. According to Igor Pyshmintsev, one clear example is the transition from producing grade K60 pipes to grade K65 pipes, which makes it possible to increase operating pressure to 11.8 MPa, thereby boosting pipeline capacity.

The experience of utilizing such pipes was described by Taymuraz Yesiyev, head of the pipeline safety laboratory at Gazprom VNIIGAZ. One unique pipeline is the Bovanenkovo-Ukhta gas line, which links the Bovanenkovskoye gas deposit on the Yamal peninsula to Gazprom's Unified Gas Supply System. This pipeline passes through Arctic areas, crosses permafrost regions, and runs on the floor of the Baidaratskaya inlet. For the first time in Russia, this project makes use of large diameter pipes (1,420 mm) of new grade K65, with a pressure of 11.8 MPa.

Pipes for gas lines have been subjected to the most stringent testing – hydraulic tests by means of artificial incisions and pneumatic field tests (13 such tests were carried out). The corresponding pipe and steel plants participated in the tests, which the products ultimately passed. Their manufacturers (four Russian and four foreign companies) can produce grade K65 pipes, Taymuraz Yesiyev said.

Georgy Filippov of the Bardin Central Scientific Research Institute of Ferrous Metals talked about the work being done in the field of metallurgy on high quality steels for welded and seamless pipes.

Elena Khlusova, deputy head of the Prometey Central Research Institute of Structural Materials in St. Petersburg, noted that by 2020 customers would receive unique pipes for work in extremely rigorous and corrosive environments.

Representatives of the machine-building sector presented their plans to develop and manufacture equipment for making new-generation pipes.

After the scientific discussions allotted for in the conference's program, RosNITI's partners and friends congratulated the Institute on its golden anniversary. The celebration continued with an honoring of RosNITI's veterans, many of whom had participated in the Institute's establishment.

At a press conference held during the event, TMK's President & CEO, Alexander Shiryaev, noted that RosNITI's scientific research had contributed significantly to the successful development and implementation of new technologies and, consequently, unique products are being manufactured.

He said, "TMK's strategic investment program is being successfully implemented thanks to, among other things, RosNITI's important and indispensable solutions, and to those specialists who are helping us to put new equipment into service." A new stage in the development of TMK's research ties has been its participation in the Massachusetts Institute of Technology's (MIT) Industrial Liaison Program (ILP), which envisions the initiation of joint work on important topics and on key trends in the development of TMK's businesses. TMK is the first and so far the only Russian member of the ILP. Such a partnership with MIT's globally recognized experts in the fields of business and technology affords TMK access to MIT's unique treasure-trove of knowledge, which offers the Russian company fresh opportunities to develop and promote innovative products in Russia. ■

ROSNITI'S UNIQUE DEVELOPMENTS

- Development of OCTG goods – casings, oil and gas line pipe and drill pipes that are resistant to environments saturated with hydrogen sulfide.
- Development of a strategy to determine the fracture strength of grade K65 high-strength pipes for the construction of new-generation gas pipelines.
- Development of a strategy to calculate the velocity and temperature modes, as well as to calibrate the rollers of metering machines at the Volzhsky Pipe Plant.
- Development of a piercing mill at the Volzhsky Pipe Plant with the application of solid-state 3D modelling.
- Development of the theoretical foundations for introducing and applying highly effective grease lubricants in pipe manufacturing at the Volzhsky Pipe Plant, the Sinarsky Pipe Plant, and TAGMET (Taganrog Metallurgical Works).

North American Customers Benefit from TMK's Global Product Line

In June 2005, TMK opened a small trade house in Houston's Galleria as a way to gain a foothold in North America. At the time, TMK had already begun to grow rapidly, opening a sales office in China that same year and the following year acquiring TMK Europe GmbH in Germany along with its two Romanian plants: SC Artrom SA and SC Combinatul Siderurgic Resita.

The company acquired IPSCO Tubulars and NS Group from Sweden's SSAB several years later in June 2008. That acquisition further strengthened TMK's position in the United States, which despite the country's maturing oil and gas fields has continued to be one of the world's most important drilling regions.

Bruce McKee, Vice President and Chief Supply Chain Officer at TMK IPSCO:
"We are bringing product in from state-of-the-art Russian PQF mills. These mills manufacture pipe that meets and often exceeds U.S. domestic specifications, which in turn allows us to offer our customers a wide range of top-quality product."

INTEGRATING TMK IPSCO'S PRODUCT LINE

When TMK acquired IPSCO's 10 production facilities in 2008, the company suddenly had the ability to manufacture a wide range of products in the United States to satisfy customers there. TMK was able to tap into a loyal North American customer base for seamless product up to 140mm (5 1/2") in diameter and ERW product of up to 406mm (16") in diameter. The company has also benefited enormously from the rapidly growing ULTRA™ line of premium connections.

In order to complement the size range produced by its mills in North America, TMK's Russian and Romanian plants supply seamless pipe through 406mm (16") in diameter, as well as large diameter welded line pipe through 1,422mm (56") for DSAW and 2,540mm (100") for spiral.

STRONG DEMAND REGARDLESS OF ORIGIN

TMK's evolution into a global company entailed far more than the mere acquisition of production assets to satisfy local markets. On the contrary, it meant establishing a sophisticated logistics program to satisfy customer demand for all types of tubular product, regardless of the geography of supply and demand.

"We've wanted to maximize the American mills, that's a given," said Chuck King, President of TMK North America, the company's original trade house in Houston that serves as the importer of record for Russian and Romanian pipe. "If we can make an ERW product here, we don't want to have TMK's own seamless product compete with that, unless our customers have a specific need for seamless. And for offshore projects, imported seamless often is very important."

Most of the product supplied to North America from Russia comes from TMK's Volzhsky Pipe Plant, which primarily provides casing, coupling stock and line pipe, as well as TAGMET, which supplies mostly line pipe,

Chuck King, President of TMK North America: "And for offshore projects, imported seamless often is very important."

coupling stock, mechanical tubes, and casing. A smaller proportion of imports come from the Sinarsky Pipe Plant, which provides mostly line pipe, casing and oilfield tubing.

TMK-ARTROM in Romania ships primarily heavy-wall mechanical pipe and drill pipe hollows to its American customer base.

"We are bringing product in from state-of-the-art Russian PQF mills," said Bruce McKee, Vice President and Chief Supply Chain Officer at TMK IPSCO. "These mills manufacture pipe that meets and often exceeds U.S. domestic specifications, which in turn allows us to offer our customers a wide range of top-quality product."

As with the products manufactured by the American plants, demand is strong for TMK's Russian and Romanian offerings. Demand is particularly high for TMK's Russian-manufactured seamless line pipe of 406mm (16") diameter.

LOGISTICAL CONCERNS

The vast majority of imported Russian and Romanian product arrives directly at the Port of Houston, although small amounts are occasionally offloaded in Baltimore and Delaware. In some cases, the company has made a few shipments directly to Canada.

The logistics of TMK's North American import program involve considerably more coordination than simply receiving product in Houston and passing it along to the customer. Some of the product that arrives from Russia is in a green tube condition, which means that it has not been heat treated and is far from being customer-ready.

"We receive two types of pipe," said Steve Trudell, director of Contract Manufacturing, a new TMK IPSCO business unit dedicated to managing the company's supply chain for imported Russian and Romanian pipe. "We have to-grade pipe and green pipe. When green pipe comes in, it is sent to Baytown for heat treat and threading."

Unlike green tube, to-grade pipe has already been heat treated and is closer to being ready for the customer.

TMK's specialists have instituted a rigorous approach to quality that places the emphasis upstream, which allows them to catch and address potential issues early in the manufacturing process.

"I complete the processing of to-grade pipe completely by having it threaded by outside threaders," said Trudell. "The entire purpose of this program is to make pipe available to customers in the United States without them having to source it themselves from overseas."

CONTINUOUS QUALITY IMPROVEMENT

Regardless of the plant's location or the product in question, quality control has always been hugely important for TMK. As the applications for TMK products become increasingly more severe and the drilling environments ever more harsh, the performance demands of TMK pipe have continued to grow. To meet and exceed the expectations of its

Prasenjit Adhikari, Vice President and Chief Technology Officer at TMK IPSCO: "Our inspection programs and tight quality control system allow us to capture nonconforming pipes early in the manufacturing process."

customers, TMK has taken a proactive approach bringing its quality and continuous improvement programs to a higher level. The company's Russian, Romanian and American specialists work together very closely on quality to make sure that all pipe sold meets the specifications of U.S. customers.

"Our inspection programs and tight quality control system allow us to capture nonconforming pipes early in the manufacturing process," said Prasenjit Adhikari, Vice President and Chief Technology Officer at TMK IPSCO. "The strategy for continuous improvement is to use information from every defect. As information on any nonconformity is found, we work proactively with the mills to find the root cause of that occurrence. Once the root cause is known, a corrective action is developed to ensure that similar issues do not happen again in the future."

TMK's specialists have instituted a rigorous approach to quality that places the emphasis upstream, which allows them to catch and address potential issues early in the manufacturing process."We take a three-pronged approach that

TMK's evolution into a global company entailed far more than the mere acquisition of production assets to satisfy local markets. On the contrary, it meant establishing a sophisticated logistics program to satisfy customer demand for all types of tubular product, regardless of the geography of supply and demand.

seeks to look at the value stream from end-to-end. Those three prongs are people, processes and technology," said Adhikari. "With people, our approach ensures the proper training of people at all levels to guarantee a consistent approach to manufacturing. With respect to process, we work to ensure the right type of process controls, the right work instructions, and the right inspection procedures to make sure that any nonconformity is found as early as possible. With technology, it simply means matching a given technology and its capability with the product specifications."

Russian and American colleagues are sharing data on a weekly basis to communicate their findings. These meetings allow specialists at the Russian mills that supply the U.S. market to make investigations and take corrective actions when necessary.

"We dig into the inspection data looking for patterns of imperfections," said Adhikari. "We then communicate the imperfection or defect finding to make sure the mills use that information to continuously improve their processes and process controls."

Aside from holding weekly conference calls, TMK's quality specialists participating in the program travel to the company's Russian and American mills.

"I have already visited Volzhsky and TAGMET," said Adhikari, "and TAGMET has already sent their representatives to Houston. The experience with our Russian colleagues has been extremely positive. Both sides' participation and willingness to work together collaboratively has been outstanding."

IMPORTING RESPONSIBLY

Even with product that meets and often exceeds U.S. customer specifications and a world-class logistics program in place, strong demand can present challenges when it comes to importing product.

"Even though we purchased IPSCO and operate an American company, we're also mindful of the fact that we are still an importer," said King. "We must be prudent about how we conduct our business and be a responsible supplier to the community. As a global company, this mind set affects TMK in every country where the company operates." ■

Flowing into Nord Stream

Text: **Marina Litvinenko,** SinTZ

The Nord Stream gas pipeline, which is being laid on the Baltic Sea floor, will deliver Russian gas directly to Europe. The pipeline's starting point is the Portovaya compressor station outside Vyborg (a seaport on the Gulf of Finland in the Leningrad Region of northwestern Russia). Portovaya is unique because for the first time ever, its gas transport system will deliver gas over such a long distance without the aid of additional compressor stations. Special seamless pipes to build the Portovaya station were supplied by TMK.

The Portovaya compressor station will become a unique facility in the global gas industry with respect to aggregate capacity, operating pressure (220 atm), the distance over which gas will be transported, and to the daily volume of gas drying. Gazprom is utilizing cutting-edge technologies and equipment in the pipeline's construction. The engineering specifications were developed specifically for the Portovaya compressor station.

TMK has become Russia's sole pipe maker to have manufacturing facilities capable of producing specialty pipe products for such a complicated high-tech project. The pipes designed for the Portovaya compressor station, which is unique in its technical and operating characteristics, were made at the Sinarsky and the Volzhsky Pipe Plants. The anti-corrosive coating on the pipes was applied at the Truboplast Plant.

All in all, Gazprom has supplied around 800 tonnes of seamless pipes with a diameter of 60.3 to 406.4 mm and a wall thickness ranging from 4.4 mm to 20.62 mm. Their grades range from X56 to X70, with a high working pressure of 22.15 MPa. Piping will link the individual technological units of the Portovaya station, such as its gas-pumping aggregates, a plant for preparing gas for transport, and other components.

SURVIVAL OF THE FITTEST

In view of Portovaya's uniqueness and technological complexity, Gazprom was very careful in choosing a company and plant to supply the pipes. Officers from the gas concern's technical services visited TMK plants, including the Sinarsky Pipe Plant (SinTZ) to conduct a technical audit and inspect the entire chain of production. They saw how the workers do their job, and they studied the performance specifications of the equipment.

SinTZ had some interesting things to show the Gazprom representatives. The plant has everything necessary to manufacture the most complex products. Over the last five years, in line with TMK's strategic investment program, SinTZ modernized its equipment, commissioned a thermal treatment shop in its C-3 department, a reduction mill in T-3, a hydro-press in T-2, and many other pieces of equipment. Gazprom saw how the plant's specialists and workers are all highly skilled.

The Gazprom delegation was positively impressed by what they saw at SinTZ. Shortly after its visit, the company awarded TMK an order to manufacture pipes for Portovaya. A rush period set in at Sinarsky, for the plant had to produce a consignment of unique products that neither it nor any other Russian plant had ever made.

Nadezhda Tikhontseva, head of the Central Factory Laboratory at SinTZ:
"Many things had to be done for the first time. We had to fine-tune the pipe manufacturing technology at each stage of the process."

THE CUSTOMER'S TERMS

SinTZ had to produce 143 tonnes of seamless pipes with beveled ends. For these pipes, Gazprom laid down a whole series of extra requirements above those that apply to standard pipes. Based on these requirements, RosNITI (Russian Research Institute of the Tube and Pipe Industry) developed special specifications – TU 14-3R-113-2010 ("Seamless steel pipes for gas pipelines with an operating pressure of up to 22.15 MPa inclusively"). The specifications placed higher demands, in relation to API 5L, on the chemical composition of the metal, on the quality of the external surface of the pipes, as well as on their mechanical properties and geometrical parameters. Nondestructive testing methods were also prescribed. Time spent on hydro-testing time and the level of test pressure was substantially increased.

Before production started, Dmitry Ovchinnikov, Technical Director and First Deputy Managing Director at SinTZ, held several meetings with representatives of the workshops involved in fulfilling Gazprom's order. The plant's specialists agreed upon all the issues that might arise during the manufacturing process and determined the bottlenecks that would require special attention.

Nadezhda Tikhontseva, head of the Central Plant Laboratory at SinTZ, recounted, "Many things had to be done for the first time. The technology of pipe manufacturing

THE NORD STREAM GAS PIPELINE

The Nord Stream gas pipeline is a fundamentally new route for exporting Russian gas to Germany, Britain, the Netherlands, France, Denmark and other European countries. The capacity of Nord Stream's two parallel lines will amount to 27.5 billion cubic meters of gas per year. Nord Stream will run on the Baltic Sea floor to link Russia's Baltic coast with Germany's Baltic coast in the area of Greifswald. The length of the underwater section of the gas pipeline will be 1,224 kilometers. The Nord Stream project is being carried out by Nord Stream AG, whose shareholders are Gazprom (51%); Wintershall Holding (a subsidiary of BASF SE) and E.ON Ruhrgas (15.5% each); N.V. Nederlandse Gasunie and GDF Suez S.A. (9% each). Construction of the gas pipeline began in April 2010. The first of its two lines will have been built in 2011, after which construction of its second line will begin. This line will reach the German coast in 2012.

had to be perfected at every process stage." Aware of the responsibility, all specialists from the plant's different sections worked well in a close-knit team – specialists from the Technical Department, the Central Factory Laboratory, the tube-rolling shops T-2 and T-3, the wire drawing shop C-3, the Laboratory of Nondestructive Control and Diagnostics, and the Technical Control Department.

The pipes passed through all stages of the technological process. They were rolled by thermoplastic robots TPA-140 and TPA-80, after which they were sent for heat treatment in Shop C-3, which is outfitted with equipment from Olivotto. After that, the pipes were calibrated in accordance with the specified parameters for diameter and wall thickness. The ends of the pipes were then beveled, and the pipes underwent ultrasonic and magnetic particle inspection, after which they were tested on a hydro-press and, finally, they were packed and shipped. The process of manufacturing all the pipe dimensions in the customer's order took about three weeks.

According to Eduard Blinov, foreman of the pipe heat treatment section of Shop T-2, the main difficulty in pipe rolling was that the specifications called for more stringent diameter tolerances. The maximum deviation of the outside diameter along the pipe's body should be no more than plus/minus 0.8% from the nominal outer diameter; on the end portions of a pipe (on a length of no more than 100 mm from the bearing face) – no more than plus/minus 0.5%.Owing to the extra demands made on the geometry of the pipes, they were subjected to additional calibration when undergoing heat treatment.

Eduard Blinov, chairman of the heat treatment section of the T-2 workshop at SinTZ:
"The main difficulty in pipe rolling was that the specifications called for more stringent diameter tolerances."

CONTROL

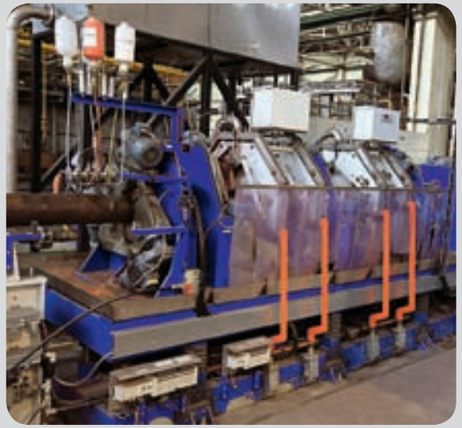
Special requirements concerned not only the manufacturing process; quality control of the products was also unique. The customer stated that three types of nondestructive testing be conducted: ultrasonic (along the pipe's body), magnetic particle inspection (on the beveled ends), and hydraulic testing.

Hydro pressing was conducted in the threading section of Shop T-2, where pipe ends were beveled on EMAG machine tools. A hydro-press is installed with them on one technological line, which is why the two operations were performed without shifting the pipes.

Andrei Ilyichev, chief specialist on product quality and head of the Technical Control Department at SinTZ:
"It is a pleasure to recognize that there will be an element of our work in Nord Stream."

Gazprom specialists, in turn, followed the pipe manufacturing process very carefully and conducted painstaking acceptance tests. At the initial stage, they marked several pipes in order to hold an additional "examination" of the finished products later at OOO Gazprom VNIIGAZ to pass judgment on the quality and reliability of the SinTZ pipes. This is how Gazprom checks all the pipes that it purchases.

The samples for testing were chosen by the Gazprom representatives themselves. Out of a large number of pipes placed on the inspection table, they selected the ones that should be rolled aside. For the experiment to be valid, they marked the selected samples with their own original signs, so as to make it impossible for the selected samples to be replaced by others. Then they closely followed the movement of the products throughout the production chain.



Ultrasound unit for controlling pipe thickness.

At the concluding stage and after all necessary factory tests had been made, those pipes were located and the needed samples were picked out, after which specialists from Moscow's Center for Reliability and Facility Resources of the UGSS conducted qualification tests right in the workshop. The testing program provided for control of the pipes' geometric parameters as well as the metal's chemical composition and microstructure. It also called for testing the metal for hardness and for conducting a bending impact test within a temperature range of +20 to -80 degrees Celsius.

All the tests were successful – they showed not critical figures, but the needed average values. Two pipes taken to VNIIGAZ (Russian Scientific Research Institute of Natural Gases and Gas Technologies) for additional study also showed solid results. The customer was satisfied with the quality of the product, with the timeframe for their manufacture, and with the culture of production at SinTZ.

The SinTZ staff remembers the Gazprom order with pride, although they admit that they had to overcome many difficulties in order to fulfill it. Andrei Ilyichev, head of the Technical Control Department at SinTZ and chief specialist on product quality, noted, "It is a pleasure to recognize that there will be an element of our work in Nord Stream. Gazprom trusted us with such an important project, and we dealt with it successfully, complying with all of Gazprom's wishes. They are a very important partner for TMK."

TMK has become Russia's sole pipe company whose manufacturing facilities have proven ready to produce specialty seamless pipes for Nord Stream, an extremely complex and high-tech project. ■

More than 1,200 kilometers separate the Russian Baltic coast from the German coast on the opposite side. Nord Stream starts from the Portovaya compressor station located near the seaport of Vyborg. The pipeline ends in the German city of Greifswald.

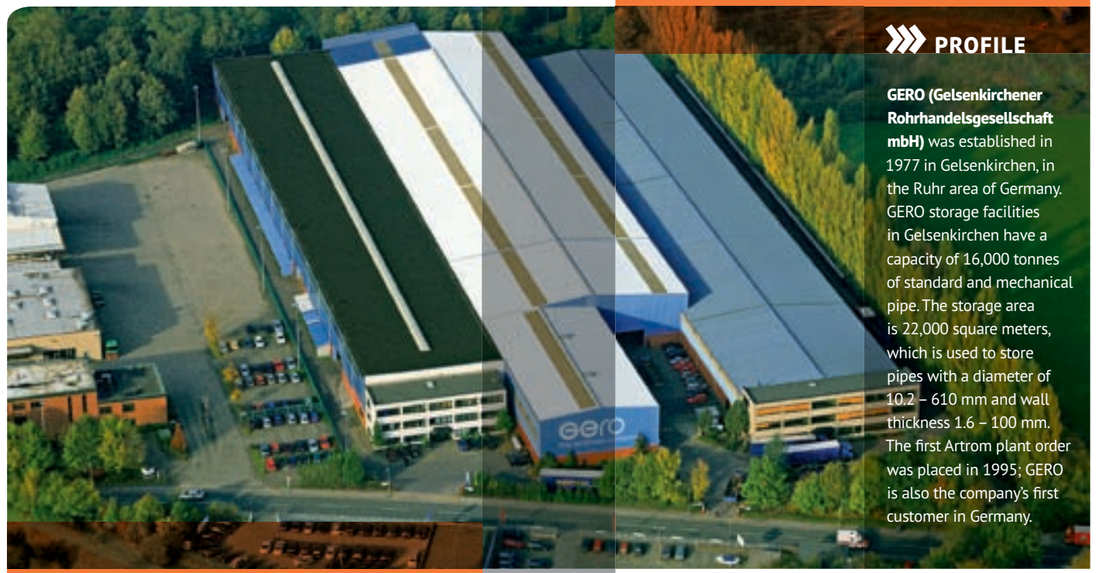
At a ceremony marking the start of the construction of Nord Stream's first of two lines April 2010, Alexei Miller, Chairman of Gazprom's Management Board, presented State Hermitage Museum Director Mikhail Piotrovsky with a portrait of Empress Catherine I of Russia, painted by Dutch artist Andreas Meller in 1712, and bought by Gazprom from a private collector.
It turns out that Nord Stream and Catherine I are linked by the city of Greifswald, where the Russian empress was painted, and where the pipeline will rise from under the sea onto the German coast. Alexei Miller has promised to keep a copy of the painting at the Portovaya compressor station. Toward 2012, the Gazprom CEO intends to release a stamp depicting Catherine I against a background showing the pipeline on a map of the 18th century Baltic Sea.

PORTOVAYA COMPRESSOR STATION

The Portovaya compressor station is located in a bay of the same name near the port city of Vyborg. This is the end of the surface Gryazovets-Vyborg pipeline and the starting point of the Nord Stream pipeline. The first compressor facilities are expected to start operating in 2011. Gazprom calls Portovaya a unique project. The compressor station will have six gas-pumping units with a capacity of 52 megawatts, and two units with a capacity of 27 megawatts. This will be the first time that that 52-megawatt units will be used in Russia's Unified System of Gas Supply (UGSS). The plant for preparing gas for transport is also unique since it has no analogue anywhere in the world to date in terms of its productivity level (170 million cubic meters of gas per day).

Conquest of Europe

A strategic partnership with the German company GERO helped TMK-Artrom become a key player in the European market.



PROFILE

GERO (Gelsenkirchener Rohrhandelsgesellschaft mbH) was established in 1977 in Gelsenkirchen, in the Ruhr area of Germany. GERO storage facilities in Gelsenkirchen have a capacity of 16,000 tonnes of standard and mechanical pipe. The storage area is 22,000 square meters, which is used to store pipes with a diameter of 10.2 – 610 mm and wall thickness 1.6 – 100 mm. The first Artrom plant order was placed in 1995; GERO is also the company's first customer in Germany.

Adrian Popescu, General Director of TMK-Artrom, believes that cooperation with GERO has become a real commercial and marketing school for the company. "We were very lucky to have come across GERO, a company specializing in the sale and promotion of mechanical pipes both in Germany and northern Europe. We discovered the secret of making sales in this market, which is the main focus of our marketing efforts," he said.

For their part, GERO found a reliable and serious business partner with great ambitions in Slatina. GERO representatives say, "We have developed good relations during these years based on trust providing for stable and ever-increasing business. As soon as we had established business ties, we noticed how carefully our Romanian partners treated each of our purchases. It was their intention to ensure safety and quality. Our German partner appreciates the constant improvement of the production process by TMK-Artrom. The high quality of raw material provided by TMK-Resita is an additional guarantee of high grade of the end products. The company believes that "Artrom" means high quality for GERO. We appreciate that our cooperation is based on mutual trust. We are sure that it will continue and allow for growth and success in our business in the future."

Reliability, safety, cooperation and mutual trust – these are the principles on which business relations with the German company GERO, a partner of TMK-Artrom for more than 15 years, have been built.

GERO is Artrom's main customer in Germany. The collaboration began in 1995 with small sales of about 400-500 tonnes per annum and increased to 4,000-5,000 tonnes per annum.

GERO is one of the major stock distributors in Germany, and orders from this company cover the entire range of standard sizes produced by TMK-Artrom. Mechanical pipes made of steel St 52 and St 37 are ordered most frequently, as well as small quantities of St 35.8 steel pipes for boilers within two length classes: 5-7 and 10-12 meters. At present, the largest orders are placed for ASSEL mill products (about 75% in ASSEL and 25% in CPE in 2010).

"The expectations related to the 2011 pipe deliveries for GERO are high, as the demand for mechanical pipes has grown significantly in the German market. In addition, the automotive industry, the largest consumer of mechanical pipes, is undergoing expansion, thus warming up our hopes for a growth in deliveries to GERO in 2011," said Popescu. ■

Women of Steel

Vicki Avril,
President & CEO, TMK IPSCO

Elena Blagova,
Managing Director, Volzhsky Pipe Plant

Cristiana Vaduva,
Financial Director, TMK-Artrom

Equal rights for women in business come as no surprise to anyone these days. Yet, because manufacturing and metallurgy are especially male-dominated industries, the progress made by women is particularly remarkable.
In this issue, we showcase three women in the business. They come from different countries and have different life experiences. Yet, they are working together toward a single future. They work at TMK.

IT IS SURPRISING HOW MUCH WE ARE ACTUALLY ALIKE

Vicki Avril, a native of Urbana, Illinois, holds a bachelor's degree in Accounting from the University of Illinois and an MBA from the University of Chicago. Married with two grown children, Ms. Avril has enjoyed a career in the steel industry that spans more than 30 years and has held numerous leadership positions in finance, strategy and operations. She is currently President and CEO of TMK IPSCO.

Ms. Avril, you've surely been asked this before, but how was it that you chose to enter an industry that is dominated by men?
Taking you back to my very early years, I was both athletic and adventurous. This was an unusual trait for females at the time. As a result, in order to pursue interests such as mountain climbing, spelunking or even more tame activities such as racquetball, I had to join groups of boys in these activities. So when it came to working in a male-dominated industry, it felt very natural.

Professionally, I was interested in both engineering and business. While my degrees are in business I began with a double major in engineering and business. The engineering program at my university was not accustomed to having female students, and it was a very difficult environment for me. As a result, while continuing with some engineering courses, I majored in accounting.

Due to my engineering interest, I really wanted to be in a business that made things as opposed to working in accounting services. Steel and pipe manufacturing has been a perfect way to satisfy my intellectual curiosities and be part of a business that has technological challenges. When you combine my interest in business and engineering with comfort in working with men, entering the steel industry was an ideal fit for me.

What were some of the early challenges you faced as a woman striking out on this path?
A lot of people know this story already, but for younger people, and for women in particular, I feel it's worth repeating given the lessons I learned.

In college, I started out with two majors, with one being engineering. I wasn't taken seriously by several of my professors in engineering, however. One professor asked me to take notes on the blackboard because the class would rather look at a woman than at him lecturing. As a result I had no class notes to take home and study. And then there was another professor who once posted the average male grade for the class and the average female grade; I was the only female in the room. I left engineering because the program was made more difficult due to a lack of support from professors and uncomfortable due to the way I was treated. I could have stayed and fought, but I quickly realized that I had more to gain by going after other opportunities. That's a lesson I've gone back to time and time again during my career. Doors sometimes close in front of us, but there are often other doors, much better doors, waiting to be opened. And that's an important lesson for women and men alike to keep in mind.

> **The language and approach to business might be different, but the goal of manufacturing world-class quality products remains the same in both hemispheres. In fact, in some ways it is surprising how much alike we actually are.**

What would you advise young women today about engineering given your experiences?
Well, that was quite a while ago, and a lot has changed since I was in school in the 1970s. While there might be some of that old mentality left, young women have many more opportunities today. I have returned as a guest lecturer to some of the classes that were dominated by men when I attended college, and I have been thrilled to see a much stronger female presence. While women remain a minority in both engineering programs and manufacturing industries, they are and have made great advances. It's very important that young women approach things with a cool head and seek out the support of other women and men in their chosen career paths.

Does the steel industry have organizations that represent women?
Yes, there's the Association of Women in the Metals Industries (AWMI). I gave the keynote address at their annual conference last September in Tucson, Arizona and spoke at the Wisconsin and Ohio regional conferences this March. AWMI is a strong networking organization and is a big source of support and motivation to women who set out to work in the metals industries.

Do other women from TMK IPSCO participate in AWMI?
Yes, all together there are 14 women in TMK IPSCO that belong to the organization. One of the women in our Houston office attended the annual conference with me last September, and just several weeks ago in March, one from our Chicago office joined me at the AWMI-sponsored event in Columbus, Ohio.

What does the existence of this organization say about the steel industry? Is it still a male-dominated industry that's difficult for women to succeed in?
Huge strides have been made since AWMI was founded in 1981. The organization actually has as many male participants as females. These are men who support the advancement of women and are taking an active part in their career development. Taking this one step further to my current experience in the industry, our male colleagues are some of the most supportive professionals you'll find. TMK IPSCO has a lot of women working at all levels across the organization. There are fewer in production roles, but they are there.

When you first started out in the steel industry, did you have much interest in international business?
When I first joined the steel industry, all the big U.S. companies were very domestic. The general belief was that steel could not cross the ocean. Because the industry held on to this belief for so long, it suffered greatly when Japan started aggressively importing to the U.S., which drove down steel prices and took market share away from the domestic producers. Having studied for a year in London and later working briefly at the London School of Economics, I was interested in international business, but I never imagined that my career would take the path it has.

Inland Steel, where I worked for 23 years, was a $5 billion revenue company with the largest steel plant in the United States, which contained multiple mills in East Chicago, Indiana. It was a fully integrated mill that owned ore mines, coal mines and the largest U.S. distribution company, but they were all in the United States. Inland Steel was an important player in the U.S. steel industry, but major cross-border deals were not explored until the 1980s after the Japanese became such a force in the industry. At Inland, I learned that the industry needed to become globally competitive and could not ignore what the rest of the world was doing. We ultimately ended up selling the company to Mittal as the company made its first venture into the United States. I look back fondly at my time there. My many years at Inland prepared me very well for the new and very different roles I'd later play at IPSCO and now TMK IPSCO.

A large part of my job is getting all plants with very different traditions to work together as a single, cohesive company. We have very established traditions to honor and an international identity to forge, and doing that is a huge but very rewarding responsibility.

How was it that you came to IPSCO?
After Inland was sold in 1998, I spent several years working as the CFO of Wallace Computer Services, which was a business-printing company based in nearby Lisle, Illinois. And just as I had participated in the sale of Inland, I was also part of the deal to sell Wallace. In 2003, an opportunity presented itself at IPSCO, and after taking the position, it wasn't long before I realized how much I had missed being in steel, a business that I had always found more comfortable than paper.

Was IPSCO also a victim of the steel industry's globalization?
That's right. Although IPSCO had both Canadian and U.S. steel plate and pipe assets, it was still an American-based company. The timing was such that IPSCO was increasingly being considered an acquisition target. A few short years later in May 2007, Sweden's SSAB came in and bought us.

What came next—TMK's purchase of SSAB's tubular assets in the U.S. in June 2008—is familiar territory. What did you take away from your brief exposure to Swedish business culture?
SSAB itself was going through a culture change. While they were integrating the new U.S. assets, they still had assets in Sweden that had been brought together through acquisition but had not been fully integrated. The company had different management styles and cultures that they were trying to bring together under one culture and harvest the synergies of best practices. This is actually not all that is different from TMK. TMK has assets in both Russia and now America that were brought together through multiple acquisitions.

What has surprised you most about working for a Russian company?
Although we've found ways to get around it and are working quite well together, the language barrier was greater than I had expected. Aside from language, with Russia the biggest challenge has been getting used to the more formal nature of how business is handled. In all honesty, though, these aren't serious challenges, and they are certainly things that we can and indeed are overcoming very well. The language and approach to business might be different, but the goal of manufacturing world-class quality products remains the same in both hemispheres. In fact, in some ways it is surprising how much alike we actually are.

For you personally, how is being President and CEO of TMK IPSCO different from the previous positions that you have held?
While the company is smaller, the level of responsibility is obviously greater. Having a broader span of responsibilities allows me to have a much greater impact on the business.

What's unique and very rewarding about TMK IPSCO is not only the fact that we have partners in Russia and indeed around the world, but our employee base here in the U.S. is really quite unique. We have employees at some of our plants who have been with us for a very long time. For example, our plant in Wilder, Kentucky is celebrating its 30th anniversary this year and 104 of the employees there have been with us all 30 of those years. We also have very new plants like our ULTRA facility in Brookfield, Ohio, which was opened just last summer. So, a large part of my job is getting all of these plants with very different traditions to work together as a single, cohesive company. We have very established traditions to honor and an international identity to forge, and doing that is a huge but a very rewarding responsibility.

What does TMK IPSCO have to look forward to in 2011?
A lot! Last year we returned our business back to strong results after a terrible year in 2009. We are growing our product portfolio by complementing our U.S. production capabilities with Russian and Romanian imports from our sister mills. We are cooperating on a global basis in developing premium products to service the more difficult drilling environments. We are expanding into South America as TMK evolves from being a Russian and American company to becoming a truly global company. We're investing in both the assets of our business and leading technology that is turning heads in the industry. This year, we will continue to grow as we support our customers as they grow in the energy and structural services sectors. And we will continue to set the stage for an even stronger and bigger TMK. ■

TMK's Pearl of Volzhsky

Elena Blagova, Managing Director of Volzhsky Pipe Plant

Her biography is a fine example of personal achievement, fulfillment of goals and objectives through one's own efforts anda and hard work. It is an example of devotion to her chosen vocation, and of involvement in the surrounding world. As a woman on the hard, male-dominated road, her professional formation was a long and difficult path.
It was a path of creativity: from an ordinary metallographic laboratory technician to a worker at the Central Plant Laboratory, from a hot metal brander to the brilliant financial director and now the Managing Director of the Volzhsky Pipe Plant.

The Volzhsky Pipe Plant (VTZ) is the industrial heart of the young city of Volzhsky in Russia's Volgograd Region. Volzhsky is a satellite city and something of a city within a city. The plant's huge territory encompasses 450 hectares (1,112 acres), and it is young and beautiful: well-attended lawns, smooth roads, whitened curbs and renovated buildings. The five main production shops (an arc-furnace shop, three tube-rolling mills, and an electric welding shop), as well as 26 auxiliary and service departments operate at the plant. The plant's expansive social facilities comprise 11 canteens, one of the best children's camps in the region, tourist camps, the region's best outpatient clinics, retail center including a beauty salon and even a flower shop. The Biryuza swimming pool offers six swimming lanes, a fitness studio, several saunas, a martial arts hall, a gym, a tanning salon, a billiards room, a hair studio, a coffee shop and a ready-to-cook food store.

This is one of the largest and best enterprises both within TMK and in the world in general. Over the 10 years of its operation as part of TMK, the plant has vastly increased its production and financial capacities. The volume of pipes shipped has doubled from 516,000 to 1,090,000 tonnes per year, steel production volumes have increased from 459,000 to 836,000 tonnes per year, and the plant's revenue has grown 150 times. VTZ is the true pearl of TMK.

For nine years, Elena Blagova has been employed at this sophisticated and unique enterprise. Her biography demonstrates a long and thorny path in metallurgical engineering. She has gone all the way from begin a plant worker to becoming the managing director of this large plant.

It has been a time of ups and downs, of constant relentless work and personal growth. She combines external gentleness, womanhood and inner stamina, persistence and the ability to achieve her goals by carrying people with her.

For her contribution into the development of Russia's metallurgical sector, Elena Blagova was awarded a Certificate of Merit from Russia's Ministry of Economic Affairs of Russia, a Medal of the Order of Merit for the Fatherland (2nd degree), and a medal for excellence in the pan-Russian project "Efficient Human Resource Management." She is a repeated laureate of the regional contest "The Best Manager of the Year," an honored worker of the VTZ awarded with the plant's gold medal. In 2010, VTZ's reorganization and the results it achieved won international recognition. The plant was awarded the certificate "The Best company of Europe," with the Order of Queen Victoria having been conferred on its managing director for honor, dignity and valor. For her charity work, Elena Blagova has been honored with the Order "The Star of Creation."

What were your career aspirations when you were a child? Have you turned away from your dreams or have you gone after new dreams?

I had always dreamed of becoming a doctor and had even entered medical school. While in high school my classmates and teachers used to tell me: "When you become a doctor, we'll be coming to you with all our problems." It's not for nothing that our hospital ranks the best in the region. Medicine is my calling, but destiny has decided otherwise.

My parents, who were metallurgists (together they have over 80 years in the industry), advised me to enter Chelyabinsk Technical University, which is known for its traditions. There was a branch in the town of Zlatoust. I submitted the application (the enrollment competition among girls was four applicants for every place), passed the exams successfully and was enrolled in the group that was to specialize in "metallurgy of ferrous metals – steelmaking."

Following graduation, I was assigned to go to Chelyabinsk. After that, I got a job at the Zlatoust Metallurgical Plant.

Which events in your life would you consider as being fundamental in your career as the head of a large industrial enterprise?

Nothing is accidental. To achieve success and to be able to form a life journey, one first needs such personal qualities as industry, will power, strategic thinking, leadership capacities, care for people, love for one's work and originality. Secondly, acquired knowledge is of great importance: basic education, work experience, and the desire to improve any situation. No indifference at all!

I worked for 20 years at the Zlatoust Metallurgical Plant. I had started my career as an ordinary laboratory worker before I entered the university. Then I worked as an engineer in the technical development department, as an economist in the planning and economic department, as an engineer of production planning analysis in the production department, as the head of the pricing office, deputy chief accountant, and then as financial director.

All this was useful to me later, but at that time I couldn't understand the reason why I had to change positions five times a year when I was raising a little daughter. It was a tough period, but life always gives you an opportunity to change the situation. I was sent by the plant's management to take a course at the Moscow State Open University. I studied in the Department of Management and Economy in Ferrous Metallurgy. I defended my graduation thesis under the title "Price Formation in Ferrous Metallurgy." That was the start of my career in the financial and economic sector.

In 1999, I met people who changed my life dramatically. I was introduced to the Head of the Trading company of Sinarsky Pipe Plant, Dmitry Pumpyanskiy and his deputy, Alexander Shiryaev. Three years later, they made an unexpected proposition to me. They offered me the position of the financial director at one of TMK's plants, either Seversky or Volzhsky. Upon seeing VTZ, I made my choice and moved to Volzhsky.

The city and the work at the plant were the greatest challenge of my life. It involved an immense amount of work with a new team. People seemed absolutely alien to me, as if they came from another country. Everything seemed harsh there; even the climate was harshly continental. I was overcome with fear at the thought of becoming the director of finance and economy! There were not even finished-products storage areas at the plant. Each member of the team had his own personality and displayed no team spirit. It has taken six years of work in this position to change me and to change the system. The Volzhsky Pipe Plant today is the result of our efforts.

I literally fell in love with the Volzhsky Pipe Plant at first sight. Its power impressed me.

Where did you get started? What were the most challenging projects carried out under your command during that time?
We started by creating an efficient system of financial management at the plant. We concentrated the plant's cash assets and their responsibility within a single service. Later, that system helped us overcome the global financial crisis of 2009 without any dramatic losses, efficiently organize operations under tight financial conditions and even earn a profit.

If TMK proposed that I head the development and implementation of SAP R/3 at the Volzhsky Pipe Plant today, I would decline. This was one of the most complicated projects in my entire career.

A major problem affecting the plant's economics was the high rate of metal consumption. We were able to calculate a single index of metal consumption per tonne of product ordered taking into account loss due to technology and nonconformity of quality. I think that out of everything that we did, taking metal into account was the best.

To ensure responsibility of the shops' staff for compliance with the technology, product quality and final result, we introduced a fundamentally new system of salary formation based on key individual performance indicators that included a single end-to-end metal consumption index.

We greatly altered the HR policy. Manpower problems had a direct impact on production. We had a big problem with shortages of expert personnel for the arc-furnace shop, so we carried out an analysis of the production processes and personnel there. We determined those positions that were vital in terms of occupation. To prepare a reserve, temporary staff positions were created and long-term experts from the shop were assigned to train these positions.

In 2004, the company made the decision to create and implement a corporate information system based on SAP R/3. TMK assigned VTZ to be the pilot plant, and I was appointed as the executive project manager. That was a difficult time, as I had to shoulder the responsibilities both of the financial director as well as the project manager. For two years we worked at creating the system, and in 2006, it was brought into operation. For the first time in Russia, the information system SAP R/3 was implemented at an enterprise simultaneously covering seven integrated modules. The most difficult part of this work was to adapt the company's business processes for this system. The plant accomplished it well. Then the unique project was replicated at TMK's other plants. The system has been functioning successfully for five years now, and it has developed further.

As the financial director, I often had to deal with specific problems of production, technology and human resources. During these years, the plant was managed by Alexander Lyalkov. This was the best time, and I learned many things by working with him. He always gave his help and support. It was under his guidance that VTZ produced its first million tonnes of pipes in one year.

In 2007, you were appointed the plant's managing director. The plant has been fully transformed under your direction. What have been your most ambitious projects?
In 2006, the company's management adopted the Strategic Investment Program and the plant faced the challenge of a total reconstruction of its production facilities.

From 2006 to 2010, we fully modernized the steelmaking facilities in the arc-furnace shop. The gas cleaning system was completely reconstructed and the AC-EAF and the two slab-producing plants were modernized. This enabled production capacity to be increased from 500,000 to 900,000 tonnes and improved the quality of products and lowered their prime cost.

In 2007, the tube-rolling mill No.1 saw the implementation of the advanced rolling technology with a short mandrel for production of thin-wall long OCTG pipes.

In 2008, in the welding shop, a new pipe-welding complex with a capacity of 650,000 tonnes per year for the production of large diameter, longitudinally welded tubes, along with two docks for external and internal rust-inhibiting coating were introduced.

From 2008 to 2010, the production facilities of the tube-rolling mill No.3, were reconstructed in two stages: new production lines for casing and heat treatment were constructed, and hot rolling section was completely modernized changing over to an advanced round billet rolling technique.

Every project was both complicated and unique, and I had to take part in each one personally. The key to the success of any project is the ability to select a relevant management system and implement it. This ensures 70 percent of the success. It is vital to choose general contractors who are reliable partners. Don't hesitate to opt for quality, professionalism and reliability - cheapskates end up paying twice! A team of like-minded professional colleagues is an important factor for success. The plant has a team of specialists who worked with us to solve the most complicated problems quickly and efficiently. Our projects succeeded. All of them were finished on time and within the budget limits. All the new production capacities have been mastered to date.

The plant's performance indicators for last year and those for January and February 2011 are the outcome of this long and difficult work. In 2010, VTZ shipped 1.09 million tonnes of pipes and 199,300 tonnes of billets. This is the best performance in the last 20 years of the plant's operation, and it was the most profitable year VTZ's history as part of TMK.

Supported by TMK's management, upgrading of social facilities has been carried out all these years in order to create normal work conditions at the plant. For the first time in forty years, capital repairs at the outpatient hospital have been carried out and modern diagnostic equipment has been purchased. Leading specialists from the city and region have been invited to work at VTZ. The children's health improvement camp has been fully renovated. Free parking lots under security surveillance have been constructed. A retail services center with a beauty salon has been opened. Amenity rooms at the welding shop, compressor sections and tube-rolling mill No.2 have been overhauled. Capital repairs to canteens were made at the welding shop and tube rolling mill No. 3. The swimming pool is currently under construction.

How is the work of the Volzhsky Pipe Plant, and your work as its manager, progressing within the large family of an international company?
The Volzhsky Pipe Plant was the first to join TMK. This plant was always given more attention than the others, and its specifications were always very strict. It is probably true that in any family a heavier burden of responsibility falls on the one who is the first. Awareness of the fact that the facility is backed by huge financial, production and personnel resources of a large international company adds to the confidence of the staff as far as their work is concerned.

TMK will mark its 10th anniversary in April. What are your feelings about this event?
Ten years have gone by quickly. I am proud of our enterprise, one that over the years of operating under TMK has managed to renovate and expand its facilities. In the next 10 years I would like the company to become even more powerful. We have already achieved many advantages in the global market. To ensure further growth, it is necessary for the company to grow toward horizontal integration using the creative potential and initiative of each person among the 44,000 employees of TMK. Self-motivated people should be the basis for the company's further progress.

What tasks are the thousands of staff members of the Volzhsky Pipe Plant facing today and, in your opinion, what are the opportunities you see?
This year is a year of quality and stable operation for the production facility. Everything that has been constructed by us must now be mastered, and the plant must operate at a profit. This is a year for developing new kinds of products and new technologies. The company has set a task to increase output, and all the conditions for this have been created.

The plant's prospects depend on the market. We are ready to work and deliver products that conform to all the specifications of Gazprom, Transneft, as well as domestic and foreign oil and gas companies.

Do you have a personal "manager's code of conduct" that you observe in your work and in your communication with colleagues?
Being a manager means great responsibility. The manager is responsible not only for himself or herself but, first of all, for the people under his or her authority. It is not for nothing that a manager's work is compared to the hard labor of stonecutters.

A manager should not be indifferent or insensitive either to the people or the business under his or her subordination. A manager is a creator who should always generate ideas and whose main objective should be to bring to the surface the full potential of the people around him or her. A manager should strive to manage, not to command. Management should focus on people, not processes… I do not always measure up to this standard, but I try to.

Is there a difference between the male and female styles of management?
Certainly, women and men are different in their essence, and their styles of management differ accordingly.

As a rule, women are noted for their highly organized disposition, exactingness, honesty, and their intrinsic intuition. At work they tend to turn their teams into mini-families. They avoid conflicts between managers and lengthy meetings, and they are keen on the details.

Men tend more to be strategists. They invest more significance into logic, less into emotions. They are more calculating and talkative.

Is your work with your male colleagues marked by the same harmony?
I would like to see more support, understanding on their part. However, and quite unfortunately, indifference, obstinacy and sometimes opposition are more common. Of course this is not the case with all men, and not all of the time.

How does your workday start?
The workday starts at five o'clock in the morning, with phone calls to the plant's supervisor and to the production director. The production process is continuous, and the manager of a facility such as our plant has to dedicate all his time only to business. To achieve the result, it is necessary for me to be constantly in the swing.

Is personal appearance important for a female manager?
Our human nature does not go away at any rate. Men were born as men, and women as women. Any woman, particularly if she is a manager, must dress with care and look well. However, this is equally true for men.

What human qualities do you value in your colleagues, especially in men? What do you find hard to accept in people?
As far as my colleagues are concerned, I value decency, diligence, and expertise. In men I appreciate generosity, openness, indulgence, reliability and thoughtfulness. I believe that the main quality in a man is manliness. Envy, greed, laziness and indifference are objectionable in my view.

And what is Elena Blagova like at home among her family?
At home I appreciate peace and quiet above all things.

How do you like to rest and recharge yourself? Do you have any hobbies?
Like most business people, I am usually badly in need of free time that could be spent on travelling. I like outdoor activities. My hobbies are painting, flowers, and design. I like cooking, and I am good at it. I always do the cooking myself if I have time. I like having guests at my place, buying presents for my friends, as well as receiving welcome attention. Unfortunately, those good old simple human relationships are becoming rare these days, as is the ability to offer support to your nearest and dearest.

Can you say that you have achieved everything you want and that your current lifestyle suits you?
I would like to meet that person who has achieved everything he or she wants and who is completely satisfied with everything.

Awareness of the fact that the facility is backed by huge financial, production and personnel resources of a large international company adds to the confidence of the staff as far as their work is concerned. ■

EMPLOYEES OF THE VOLZHSKY PIPE PLANT SPEAK OF THE PLANT AND THEIR DIRECTOR

Sergey Lokshin, Head of the Drop Hammer Shop:
At the moment, the Volzhsky Pipe Plant is one of Russia's leading enterprises. At our plant, advanced technologies in steelmaking and pipe production are being used. It is no secret that good labor management is the result of the top management. Our director is one of the very few managers who demonstrates by personal example the attention and care that one should give to work and how objectives should be set and tasks should be fulfilled. One of the chief assets of a manager of that level should be aspiration to implement projects aimed at improving the work environment and the corporate culture. She possesses this quality.

Vladimir Shiryaev, Head of Pipe Rolling Shop No. 1:
Our plant is one of the best in Russia as far as engineering facilities and selection of management and technical staff is concerned. This facility has not seen such fast re-equipment since it was first commissioned. It is entirely to the credit of our director that such efforts have been invested to develop the community and personal recruitment and appointment of top managers.

Tatyana Shmelyova, Head of the Public Catering Section:
Elena Blagova and I come from the same part of the world. She has a rare and truly wonderful quality: she is capable of valuing and preserving friendship. We are amazed at the fact that considering the scope of work, she never forgets to wish one a happy birthday or to inquire how one is feeling.

Lyudmila Reshnina, Nurse of the Medical and Sanitation Division:
Our director is very talented. She has done a lot for the development of the community! She takes care of the health and the living conditions of her employees.

Vitaly Yablokov, Leading Engineer in the Technical Department:
Everything that is happening at the Volzhsky Pipe Plant never fails to amaze me! For one thing, what surprises me is the tidiness here. The windows in the office-rooms are PVC windows! Wages are paid on time. And I am taken aback by how interested the management is in qualified personnel: the plant has paid to train me in a new profession related to intellectual and laborsaving work.

Lyudmila Zinkevich, Storekeeper of the Technical Dispatching Center:
Our plant is beautiful. The impact of a woman's hand and care is everywhere to be seen. Previously there was nothing to look at on the way from the security gate to the shop. Now the heart leaps with joy and the eyes feast on the rich green lawns and the trees. And this year firs have been planted. Our director both replaces equipment and makes the world around us look and feel better.

Cristiana Vaduva: I am a hopeless optimist

Cristiana Vaduva has been Financial Director at TMK Artrom for 17 years. Her main principle both in life and in management is to trust people. And it works all the time.

Cristiana, how was it that you came to work in metallurgy an industry that is traditionally dominated by men?
After I graduated from the Economics Academy in Bucharest, where I majored in Finance & Accounting, I was sent to Targovishte to work as an intern economist at the Special Steels Plant, which today is owned by Mechel, a mining and metals company based in Russia. I knew very little about metallurgy at that time. I was fascinated when I saw the transformation of melting metal. It looked like lava, volcano and sunset at the same time. Even now, it's still a miracle to me, and I never miss a chance to visit the shop floor.

I spent three years at the plant in Targovishte, and then followed my husband to Slatyna, where the newly built Artrom tube plant was located.

So you are among those who have been working at Artrom since the very beginning?
Yes, I am an old-timer. I started in 1985 as an economist. In 1989, six months after I was appointed Artrom's chief accountant, a revolution took place in Romania, and we had to adapt to new working conditions and a new life.

It is widely thought that accountants are very conservative. Was it difficult to adapt to the changes?
It is never easy to get used to changes. The way things have turned out, however, my life is about changes. We got experience in working with different accounting systems, starting within the communist system. We then lived through a difficult transition period, and now we work with the European accounting system.

Fifteen years ago, Artrom held an IPO. It also had to go through the processes of privatization and adaptation to EU requirements. In 2003, Artrom joined the TMK Group. Working in an international company meant that I had to comply with new, high requirements and gain new professional experience. We keep upgrading our skills together with TMK. When working in a global company, one has to be dynamic like the company itself.

How do you collaborate with your Russian and American colleagues?
It's very important for me to feel the support of my financial colleagues from Russia and the United States. We are all in one team, and we are ready to accomplish difficult and ambitious tasks. Working together, we are able to find financial solutions that allow us to successfully implement our investment programs and boost the company's capitalization, developing its European division. We comply with TMK requirements to prepare accounting papers in accordance with IFRS (International Financial Reporting Standards). We are able to accomplish our tasks because we cooperate with each other and understand one another.

It's a shame, however, that communicating with colleagues is limited by the language barrier.

How does one feel after being a high-level executive for 17 years?
Leadership is more about obligations than gains. I believe that being a leader is both a vocation and hard work. A leader must understand what the people he or she works with do, and how to lead them. He or she should become an integral part of the management team.

EXECUTIVE PROFILE

Cristiana Vaduva was born in 1959 in the city of Amaru, approximately 50 miles outside of Bucharest. She graduated from the Bucharest Economic Academy (majoring in Finance & Accounting). Her career began in 1990, when she started as an intern economist. She was later appointed chief accountant. In 1994, she was appointed Financial Director at Artrom. She has received a number of internationally recognized certificates:

- a diploma from the Romanian Certified Accountants Association (1990);
- an international certificate in accounting, ASEBUSS-ATC INTERNATIONAL (2006);
- a certificate from the Romanian General Industrialists Union (National Tax System) (2009).

She is married and has two daughters.

It's very important for a person to find a suitable place for himself or herself and work with pleasure. Otherwise life could turn into a nightmare. Despite the heavy workload, I am never tired because I like what I do and I enjoy coming to work.

What is your main principle of management?
I am a hopeless optimist. I trust people. I believe everyone should be trusted because there is something good in everyone. And it can be used for our common good.

How does it feel to be in a male-dominated environment?
I'm in a male-dominated environment all the time, and this doesn't interfere with my work. Fortunately, men have never interfered with my work; I have never been snubbed because I am a woman. The people at Artrom are remarkably respectful towards women. They are very open and competent.

How do you manage to cope with the huge workload?
It's very important for a person to find a suitable place for himself or herself and work with pleasure. Otherwise life could turn into a nightmare. Despite the heavy workload, I am never tired because I like what I do and I enjoy coming to work. To relax, I have a painting studio in my house. I like to mix colors and paint. I paint nature in general, not specific landscapes. It's my feelings that I paint. This is my way of relaxing. And I am very glad that my husband and my daughters appreciate my artistic endeavors.

I also like to spend time relaxing by the lake or river, but I can't sit still for long. It's very important for me not to be alone; I need people, sounds, movements. ■

The Magic of Metallurgy

Text: Elmira Samokhina

TMK has taken part in an international program of the Union of the Board of European Students of Technology (BEST). The company, together with Ural Federal University, which is named after Russia's first President Boris Yeltsin (UrFU), organized a practical course for students as part of the Magic Metal educational project.

To participate in the project, the students had to go through a competitive selection process. There were 10 applications for every seat available on the project.

These visits made the European students think of returning to Seversky Tube Works in the future, but next time as staff members.

BEST is a rapidly growing student network focused on innovation. One of its Russian centers is UrFU, which has held annual courses for its own students and for European students since 2003. This year, a 10-day course was dedicated to metallurgy and, along with lectures and laboratory practical sessions, the program included visits to metallurgical production facilities. At UrFU's request, TMK invited students from the major technical universities in Europe to one of their production facilities. Seversky Tube Works in Polevsky (Sverdlov Region) was chosen to showcase the latest technologies and equipment used in the steel industry. According to the project participants, the Urals are the center of metallurgy in the European part of the country. As for the experience at Seversky, it was unique for the young specialists considering that the plant's team managed to build virtually a new plant without stopping production.

In addition to the facility, the students visited the Sevrksaya Blast Furnace museum complex and met with Igor Pyshmintsev, General Director of the Russian Institute for the Tube and Pipe Industries (RosNITI), which is a member of TMK.

The head of the industry's leading institute spoke about current developments and the production of a new generation of high quality steel pipes. "TMK has production facilities on nearly on all the continents and it is successfully integrated into the world economy as a global company. Participation in the international students' project is very important, as it enhances continuous sharing of experience between our employees in different countries as well as joint research work with foreign universities, including those in Western Europe," said Pyshmintsev.

To see the efficiency of the new technologies, the students were invited to the steelmaking complex at Seversky. "I've never been to such a production facility before," said Javier Zamarripo from the University of Naples Federico II. He was impressed with the scale of production and its effectiveness. "It is very beautiful to watch the process of metal being born," he added. A student from the University of Valladolid (Spain), Alfonso Ezquerro, was a bit more pragmatic, "the Urals are one of the major metallurgical centers in Russia and this visit can be useful to my future career."

Internationality is one of the advantages of the international student organization BEST, which was founded in 1989. Members consist of more than a one million talented and proactive students from 92 universities in 33 European countries. BEST aims to help students of technical subjects expand their horizons through an understanding of cultural differences between countries.

Panagatis Apostolios, a student from Patras University in Greece, explained what the experience meant to him. "I am glad that I could come here and was able to visit such a big pipe producer. Russia supplies gas to the whole of Europe, so it was interesting to see how pipes are created and the factors that our prosperity depend on."

Agata Sawicka, a student at Gdansk University of Technology added, "Such programs are very important as meeting colleagues in different companies makes our future travels around Europe easier."

Darya Polozova, a student in the Department of Metallurgy at UrFU who is also an author of the Magic Metal project and a trip organizer on the Russian side, said, "there are no separate departments of metallurgy in Europe. Therefore, even such short visit to the Urals is helpful in understanding the trends in modern metallurgical production and in evaluating the effect of their implementation in the industry."

"The lectures and practical training expand our understanding of the metallurgist's profession, especially considering the fact that European universities do not focus on preparing specialists for this specific industry. There is also a cultural aspect to the project, which involves gaining communication skills and practicing teamwork in a multinational group," said Polozova.

The project's international concept fits perfectly with the TMK strategy. "By supporting such projects, our company enhances the development of scientific and cultural communications, as well as an awareness of the actual state of the Russian pipe industry," notes Natalia Khonina, head of a separate TMK subdivision in Yekaterinburg. ■

Global Strength

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