



Single Source

In the extreme conditions defining today's exploration, production and transmission landscape, only an elite few have the capability to truly offer a single source for energy tubular solutions. At TMK, we produce one of the industry's most comprehensive lines of energy tubulars, including OCTG, premium connections and line pipe. We support these products with an extensive team of technical experts dedicated to meeting the evolving and challenging needs of the oil and gas industry. So whether your project is in shale, oil sands or deepwater, make TMK your first and only call for tubular innovation, quality, value and service.



Tel: 888.258.2000

YourTube

Technology Motion Knowledge

12-2012
№3 (10)



18

Carl Raycroft:
Going
Beyond
the Standards

4 Dmitry Pumpyanskiy's
interview with Reuters

22 TMK in China

32 Underwater treasures



Toward a Greener TMK



YourTube is targeted to three audience groups representing various countries and continents and is published in Russian, Romanian and English. Multimedia versions are now available in Russian and English



YourTube is now available for iPad

Read articles and enjoy a wide range of multimedia extras: comprehensive stories in pictures, updated videos, interactive analytics and infographics. Follow TMK news in motion!

TABLE OF CONTENTS



2	News	
4	Side by side with our customers	TMK chairman Dmitry Pumpyanskiy talks about the pipe market and the company's growth potential
6	R&D open house	First guests welcomed at the new R&D center in Houston
8	Cover story Under environmental law	TMK's chief environmental engineer Irina Koldaeva speaks about changes to national environmental law changes and the company's environmental solutions
12	ECO modernization	Advanced technology helps TMK mills to improve quality and reduce their environmental footprint
16	Blowing the dust off TMK-RESITA	Gas treatment system upgraded at TMK-RESITA
18	Going beyond the standards	TMK IPSCO works to make its operations environmentally safer
20	Markets Russia admitted to the WTO: what are the implications?	Russia joins the WTO: is this good news for Russian pipe companies?
22	Russian pipe for the Celestial Empire	Beijing office of Trade House TMK contributes much to TMK's success on the Chinese market
26	Anniversaries Premium-class company	TMK-Premium Service: five years of success on the premium pipe market
28	Russian investments find success in Romania	Hundreds of guests, including Romanian Prime Minister Victor Ponta, other officials and numerous well wishers, attended the 30th anniversary of TMK-ARTROM
30	Production A quantum leap	TMK-INOX commissions a new line to manufacture stainless steel and alloy-based welded precision pipe
32	Partnership Underwater treasures of Nautilus	TMK produces its first X80 seamless line pipe to support a unique offshore drilling project
34	Business community Survival strategy	Major companies seek ways to survive in Europe's competitive pipe market
36	Society Making a better world	Young employees contributing to our future

YourTube
Technology Motion Knowledge
3 (10) DECEMBER 2012

Incorporator:

Project manager:
Svetlana Bazylichik
BazylichikSI@TMK-group.com

Editor's office address:
Russia, 105062, Moscow, 40
Pokrovka Street, Bldg. 2a
Tel.: +7 (495) 775 7600
Fax: +7 (495) 775 7601

E-mail: pr@TMK-group.com
www.TMK-group.com

Certificate of a publication
No. FS77-40128 of June 11, 2010
The edition is registered with
the Federal Service for Supervision
in the Sphere of Communications,
Information Technology and Mass
Communications.
Any use of the materials without
the editors' consent is prohibited
Printed in the Print.Market LLC
printing office.
Print run is 4,000 copies.

людиpeople
Publication printer: ЛЮДИPEOPLE Group
129085, Moscow, 21 Zvezdny Boulevard, bldg. 1, office 18
Tel.: +7 (495) 988 1806
E-mail: ask@vashagazeta.com

Editor-in-Chief: Yelena Kostyuk | Art director: Maksim Guelik
Designer: Aleksandra Marochkova | Correspondents: Anna Vasilieva
(Russia), Adam Fuss (USA), Olga Kolomeets (Romania), Mikhail Semenov
(Russia) | Production Director: Oleg Merochkin | Photo: Russian Look/
Picvario | Color correction: Alexander Kiselev, Sergey Souslov

» TMK-KAZTRUBPROM BEGINS PRODUCING PIPE WITH AMERICAN DIAMETER

TMK-Kaztrubprom has begun producing a new type of premium product—casing diameter 177.8 mm (7 inches) with TMK family premium connections. The facility previously manufactured such casing with a diameter of 168.28 mm (6 5/8"), which is traditionally used in the Russian oil industry. In recent years, however, the significant spread of well designs using the American standard-diameter casing eventually made it an international standard. The potential usage of this pipe diameter is much wider; it is widely used abroad and in oil and gas field projects in Russia and the CIS that are under development by international companies. ■



» CASING AND TUBING SHIPPED TO YAMAL

TMK shipped a batch of casing and tubing with premium connections to Yamal LNG to support development of the South Tambey oil and gas condensate field.

This field on the Yamal peninsula is one of the largest in the world. It is developed by Yamal LNG (an 80 percent subsidiary of NOVATEK with a 20 percent interest owned by Total). The project involves construction of an LNG facility, a port and related infrastructure. Investment requirements are valued at approximately RUB 1 trillion.

TMK's five production operations contributed to the batch: TAGMET, Seversky Tube Works, Sinarsky Pipe Plant, Volzhsky Pipe Plant and TMK-Kaztrubprom. Some 3,000 tonnes of tubular products were shipped in total with diameters ranging from 89 to 324 mm. The shipment was made up of TMK PF, TMK CS and TMK FMC threaded casing and TMK FMT threaded tubing. These will be used to equip the first eight production wells. Over 200 wells are expected to be drilled in total at the South Tambey field. ■

» ORSK PRODUCTS TO CARRY API MONOGRAM

The Orsk Machine-Building Plant recently completed an audit of the quality management system in which the plant's pipe manufacturing operations were found to be in compliance with API standards. The Orsk Machine-Building Plant was granted a license to use the API monogram in the production of casing and tubing, including products with premium connections.

The Orsk Machine-Building Plant is the first of TMK's Russian facilities to be certified to manufacture elements of API casing and tubing, as well as oil and gas equipment components—crossover subs, pup joints and couplings. This license will allow TMK to offer a complete supply of casing and tubing fully certified under API standards. ■

» LUKOIL'S CASPIAN PIPELINES

TMK has started shipments of pipe to be used in construction of deep water pipelines at the Filanovsky oil and gas condensate deposit in the North Caspian Sea, which is under development by Lukoil.

Oil and gas pipelines on the seabed connecting the Filanovsky and Korchagin fields, the latter of which is also operated by Lukoil, will be laid by Bumi Armada Caspian, a division of the Malaysian oil services company Bumi Armada Berhad. Saipem SpA, a

global leader in the construction of underwater pipelines, will build oil and gas pipelines connecting a block of the Filanovsky field with the shore in the area of Kalmykia.

In June 2012, Bumi Armada Caspian signed a contract with TMK to supply line pipe for the project. In August 2012, TMK's Volzhsky Pipe Plant shipped the first consignment of seamless line pipe with three-layer polyethylene external coating. Overall, by April 2013, TMK is to supply over 12,000 tonnes of line pipe with a diameter ranging from 114.3mm to 660mm to Bumi Armada Caspian for the project.

In July 2012, TMK signed a contract with Saipem SpA to supply 58,000 tonnes of longitudinal welded pipe for the construction of an underwater pipeline with a diameter of 711 mm and a wall thickness of 25.4 mm. Grade X65 steel with an external three-layer polyethylene coating will be used. The first consignment of pipe (2,100 tonnes) was shipped in September 2012. Over the 1.5 years of the contract period, TMK will supply more than 70,000 tonnes of pipe in total for the project. Ballasted concrete external coating will be applied to the pipes before they are welded into the pipeline. ■

» DUTCH TO STUDY ENERGY USE AT SEVERSKY

At Seversky Tube Works, a joint Russian-Dutch project on energy conservation has been launched with the goal of identifying opportunities for energy efficiency and conservation.

Consultants from the Sverdlovsk Region's Institute of Energy Savings have been engaged to conduct training sessions for the Russian participants. Foreign experts plan to continue training in order to implement subsequent phases of the project, and carry out monthly project monitoring. The project is scheduled to be completed by June 2013.

Seversky was selected to implement this pilot energy conservation project given its status as an advanced manufacturing facility that is actively modernizing its operations. The experience acquired during this project will eventually be extended to other TMK facilities, which have also shown interest in the project. ■

» THREADS FOR HALLIBURTON

TMK and Halliburton International Inc., one of the world's leading oilfield services companies, have signed a contract to provide threading services. TMK Central Pipe Yard (Buzuluk, Orenburg Region), which is part of TMK Oilfield Services, will be responsible for fulfilling the contract by threading components of casing equipment for Halliburton's Russian division. It is expected that in the future, along with standard threads, TMK Central Pipe Yard will thread the entire line of TMK Premium Connections for Halliburton.

In August 2012, TMK Central Pipe Yard fulfilled its first order for Halliburton by threading components of casing equipment with diameters of 146, 168 and 245 mm. ■



SIDE BY SIDE WITH OUR CUSTOMERS

In his interview to the Reuters international news agency, Dmitry Pumpyanskiy, Chairman of the Board of Directors of TMK, talked about the company's formula for success and its potential growth areas and explained why doing business overseas is not that big of a challenge. Below is the abridged version of the interview.

How did TMK manage to become the largest producer of steel pipe in the world?

It did not happen at once. The TMK brand emerged in 2001, and gradually we were able to consolidate four major Russian pipe plants within our company. From the start, we aimed to create the broadest possible product range, and we managed to achieve that. Currently, we produce pipe of all grades, from regular carbon steel to stainless steel, of all sizes and for all sectors. Moreover, we offer our customers not just tubular products, but also a full range of services, i.e. packaged solutions. That is probably what guarantees our success. And moving forward, we are continuing to work under the same principle of always standing by customer's side.

What are some of the problems you are facing while doing business in Russia?

We do not equate doing business in Russia with the word 'problems'.

That word does not reflect the fact that in the past 10 years we have been able to create a successful company. I have been working in metallurgy for more than 25 years and have been doing business in Russia for the last 15 years. Today we have production facilities in five countries – Russia, the U.S., Romania, Kazakhstan, and a soon-to-open service center in Edmonton, Canada. Our products are sold in 85 countries. We have sales offices in 13 countries. Without a doubt, every country has its own business climate, mentality, laws and ways of doing business. These elements may be very different, but business will always be successful if done honestly and openly. We pay particular attention to following the laws and traditions of those countries where we work.

Are you planning any major acquisitions in the short term?

As a global company, we are always on the lookout for new

opportunities. But every action has to have a solid economic foundation. Currently, TMK is a highly-leveraged company, and we need to work on reducing our debt burden. That is why we are not in the market for any major mergers or acquisitions. Besides, TMK is already the biggest

“

Our products are sold in 85 countries. The business climate may vary in different countries, but business will always be successful if done honestly and openly

company in the world in terms of production capacity – six million tonnes of pipe per year. That being said, I would like again to point out that we are trying to be closer to our customers and that means presence in all major oil and gas producing regions, since approximately 70 percent of our products are used for exploration, production and transport of hydrocarbons. Some analysts are already calling us an oilfield service rather than a metallurgical company,

and we agree with that direction. Moving forward, we plan to develop finishing, threading, repair, coating and heat treatment capabilities in the regions where our customers operate. We want to have readily available on-site capabilities for casing running and design, which are impossible to manage from the main office. This is why we will continue to invest in such projects in oil producing areas or look for opportunities to acquire existing capabilities.

How can you comment on information circulating in the market place about the potential consolidation of the Russian oil sector? Would it impact your company positively or negatively?

I think that if such consolidation were to happen it would have practically no effect on us. Of course, every company has its own development strategy, but all major oil and gas players are interested in maintaining their reserves and levels of production. And that requires consistent levels of investment in process equipment, including our tubular products. Therefore, changes in the line-up of oil and gas companies will have practically no effect on the demand for our products.

Considering that the oil sector in Russia is divided between private and state-owned companies, who do you find easier to work with?

We would not have become a market leader if we characterized our customers as 'bad' or 'good'. We appreciate all of them and strive to perform at the highest level in all circumstances. This requires us to meet their expectations in terms of quality, delivery and pricing.

Still, which companies are your most active customers?

Our main customers are major oil companies, such as Gazpromneft,

We offer our customers not just tubular products, but also a full range of services. That is probably what guarantees our success

Rosneft, TNK-BP, Surgutneftegaz and Lukoil. They account for 70-80 percent of our orders. Last year, for example, Lukoil chose TMK as its sole supplier of tubular products. As for gas production, all Gazprom projects remain crucial for us, as we cover 85 percent of their needs for drilling and production pipe. We have a joint R&D program with Gazprom that continues to evolve to meet new objectives. Our cooperation with our partners is both longstanding and long-term. Upgrading of our plants was carried out by taking into account the growing needs of our partners in advanced products.

In your opinion, will the situation with large-diameter pipe stabilize leading to a rebound in demand?

Demand is already rebounding. In fact, the recent drop in demand was temporary and expected. Many major pipeline projects were completed last year, including certain Gazprom projects, as well as projects in Kazakhstan, Turkmenistan and Uzbekistan. Russian producers supplied approximately 2.8 million tonnes of pipe for these projects last year alone. It is a huge volume, almost a record-breaking one. This year, I think, deliveries will be at the level of 1.7-1.8 million tonnes, mostly due to the fact that new projects are being launched only in the fourth quarter of this year. Deliveries have already begun for the onshore segment of the South Stream pipeline and for the second train of the Bovanenkovo-Ukhta project. Transneft announced its plans for the fourth quarter of 2012 and for 2013, and it is obvious that they will require substantial

quantities of pipe both for current operations and for new projects in the north. We will also strive to take part in projects in other CIS countries. So starting in the fourth quarter and all the way through 2013 we are expecting steady demand for large-diameter pipe. I do not think that quantities will reach 2011 levels, but they should provide enough orders to utilize our plants.

And how is your business in other global markets?

It is common knowledge that the European market is going through some difficult times. Our Romanian branch is among the top five European pipe manufacturers for machinery and the auto industry and has a reputation for being a reliable and effective partner. Therefore, we are hoping that shipments will remain at their present level. As for the U.S., which is the biggest oil and gas market in the world, we consider it strategically important in the long term. We are trying to constantly develop our U.S. production capabilities in order to have flexibility to fully utilize them at any time. This is the most important objective for us. We are also planning to expand the product range available to our American customers by taking into account products manufactured at our overseas plants. Owing to the growth in oil and gas production in the U.S. by using advanced methods for developing shale and oil sands, we foresee long-term demand for our products. We will continue to develop our business by paying attention to the needs and requirements of our U.S. and overseas customers. ■

R&D OPEN HOUSE

Nine months after employees began moving into the company's new R&D Center in northwest Houston, TMK IPSCO's industry-leading technology investments were finally ready to be showcased to a wide audience. On October 1, key customers and suppliers from throughout the energy industry, government officials, and members of the national and local media joined company leaders at an open house held at the R&D Center.

During the morning session, TMK IPSCO hosted government officials, business association leaders and the media at a press conference. Several prominent Texas state government officials spoke at the event, including Esperanza "Hope" Andrade, Texas Secretary of State.

"This new state-of-the art facility will create hundreds of jobs for our citizens," said Secretary Andrade during the press conference. "It will also position Texas as a leader in the global economy. This investment is the culmination of the largest foreign direct investment by any Russian-owned company in Texas. With billions of dollars in trade between Texas and Russia every year, I believe growth in Texas will only increase opportunities between our state and TMK."

In a statement issued following the event, Texas Governor Rick Perry commended the TMK Group, stating that the opening of the R&D Center and the relocation of TMK IPSCO's headquarters to Houston will create 500 local jobs. "The Lone Star State continues to attract employers from across the nation and around the globe to create jobs and investment," Governor Perry said.

Other prominent government and business leaders in attendance at the event were Texas State Senator Rodney Ellis, Alexander Zakharov, Consul General of the Russian Federation in Houston,

Houston City Council Member Oliver Pennington, and Andrew Pidgirsky, Chair of the U.S.-Russia Chamber of Commerce.

"We are pleased that so many guests were able to attend the open house and see our commitment to innovation first hand," said Vicki Avril, President & CEO of TMK IPSCO. "One of the cornerstones of our long-term strategy is product and service development for oil and gas industry customers. Having a fully-functioning R&D Center will better enable us to focus on customized, engineered

There are billions of dollars in trade
between Texas and Russia every year

solutions for nontraditional drilling environments, as well as on new applications and services for existing products."

Following the press conference, visitors toured several areas of the facility, including the scanning electron microscope (SEM) lab, areas housing mechanical and collapse testing equipment, the corrosion lab and an area featuring connection load testers. TMK IPSCO's new state-of-the-art R&D Center is intended to serve as the heart of the company's innovation initiatives—new product design and development, experimental and validation testing, and advanced metallurgical research—and is a key part of the company's long-term strategy to drive growth in oil and gas markets.

In the afternoon, a second session of the open house was held for suppliers and customers, including oil and gas majors, as well as distributors. Product and service innovation aimed at meeting oil and gas end users' needs is a key mandate

The company has invested
a total of approximately
\$26 million in its R&D
center

for the company's new R&D Center, which will work closely with TMK's research division in Russia—RosNITI (Russian Research Institute for the Tube and Pipe Industries)—based in Chelyabinsk, Russia.

"This center is the second leg of our R&D efforts," said Piotr Galitzine, Chairman of TMK IPSCO, stressing the importance of having "a strong presence in Houston, the capital of oil and gas exploration in the U.S."

Since breaking ground on the new facility in May 2011, the company has invested approximately \$26 million in the building, hiring R&D personnel and acquiring key pieces of equipment. At the time

of the open house, more than 100 individuals are employed at the facility, which includes R&D personnel, sales staff and TMK Premium product development teams. This number is expected to grow with the upcoming relocation of TMK IPSCO's headquarters from the Chicago area to Houston.

Prasenjit Adhikari, Vice President and Chief Technology Officer at TMK IPSCO, commented on the R&D Center's development: "Since moving into the new center in early January, we have been busy acquiring many of the key pieces of testing equipment that will enable us to turn our R&D vision into a reality. We are excited to open our doors to showcase our industry-leading investments." ■

UNDER ENVIRONMENTAL LAW

Running a competitive and stable business that at the same time is also responsible – one that ensures environmental safety – is the requirement of our contemporary society, which has finally realized the delicacy of nature's balance. The issue is clear to businesses as well; a company's environmental status determines its reputation, presence in global markets, and its ability to attract investment or receive credit.

To learn about which environmental solutions are being implemented at TMK's manufacturing facilities and about upcoming changes in Russia's environmental laws, YourTube spoke with **Irina Koldaeva**, Chief Environmental Expert at TMK.



Ms. Koldaeva, have attitudes toward the environmental friendliness of manufacturing operations undergone change in recent years?

Absolutely. The environmental aspects of our operations are becoming an inseparable part of the business as a whole and a much more significant component in terms of our competitiveness. Global practice has reached the point where environmental performance is regarded as one

of the most important parts of operational efficiency in general.

A responsible business today seeks concerted solutions to economic, social and environmental challenges. To a large extent, if the air is not suitable to breathe, and the water to drink, then no economic activity really makes sense. Maintaining environmental balance, conserving resources and minimizing negative environmental effects are all hugely relevant. Ensuring environmental safety is one of the top priorities at TMK when it comes to development. TMK's environmental policy is designed to ensure that the company's business is conducted in accordance with international standards and national environmental laws in the countries where it operates.

Does the role of the state become more relaxed given such interest on the part of companies themselves?

No, of course not. On the contrary, in most developed countries environmental activity is beginning to occupy an important place in both state governance and economic

regulation. Russia is no exception. Likewise, in today's Russia, environmental protection is given increased attention at the state level. On April 30, 2012, Russia's president signed a document entitled "Fundamentals of State Policy in the Area of Environmental Development of the Russian Federation to 2030." This document clearly states that environmentally friendly economic growth, as well as environmental safety, is among the state's chief strategic goals. Moreover, a presidential decree has declared 2013 to be the Year of Environmental Protection. And what is especially important for business is the fact that major reforms to Russia's environmental laws are underway. Eight new bills and numerous regulatory acts will be adopted in the near future.

Are the changes in environmental law connected with the fact that Russia is preparing to join the Organization for Economic Cooperation and Development (OECD)?

Yes, one of the conditions for joining is for national environmental laws to conform to acts adopted by the OECD on environmental matters. Executive agencies are currently preparing a memorandum that should be supported by real efforts to implement significant changes to environmental legislation. To put it briefly, international environmental requirements and standards should cover different types of economic activity. Serious changes in the legal field await us, and these changes will end in the transition to a new system of standardizing acceptable levels of environmental impact. Manufacturing facilities will see the establishment of norms regarding emissions, water spillage, as well as heat and electricity usage on the basis of the best available technology.



Global practice has reached the point where environmental performance is regarded as one of the most important parts of operational efficiency in general

How significant are the environmental risks in the metallurgical industry?

Any industrial production will have an effect on ecosystems. In using resources and materials, we always see emissions and spillages at the exit point. If we talk about the actual environmental risks, which are understood to be negative changes in the environment as a result of exposure, then we have those risks under control. Legislative rules require the development and implementation of a plan to eliminate accidents and spills of petroleum products, as well as to take actions under adverse weather conditions. All of these requirements facing TMK's facilities, are,

of course, being met. As for the level of exposure, this is being evaluated as part of our environmental control.

And, it goes without saying that risk management and environmental protection should be based on modern approaches to management organization. Such approaches for our company include system tools for environmental management, namely the ISO 14001 Environmental Management System.

So it turns out that environmental risks, to a large degree, lie in the legal area?

In actual fact, yes. Russia has quite a few regulations concerning environmental protection. But

these documents are not always consistent. They are often ambiguously followed by various agencies, which review and amend them. Many of the requirements are unreasonable, and fulfilling them correctly is seen as a difficult problem.

In a period when legal requirements are rapidly changing, becoming tighter and more layered, it is important to react in a timely manner. After all, these changes require not only the implementation of organizational and technological solutions, but also additional financial resources. All of this has to be planned out in a timely manner.

To minimize such risks in the past year, the Russian Division has introduced a corporate information system that immediately notifies employees of changes in legislation. Twice a year, plant employees have the opportunity to participate in workshops with lawyers and representatives of supervisory agencies to seek clarification and advice.

It is also important not just to receive information passively, but to work actively going forward. Thus, our membership and participation on the Committee on Environmental, Industrial and Technological Security at the Russian Union of Industrialists and Entrepreneurs allows us not only to be aware of trends regarding legal requirements, but also to provide expert opinions, participate in formulating a unified business position concerning these legislative bills, as well as to influence the improvement of existing regulations.

How can the environmental effects of manufacturing be minimized?

Some people believe that the problem can be solved only by

With the development of low-waste technologies and technological progress we will approach being waste-free

building treatment plants. However, even the most effective treatment plants are not a panacea. After all, most treatment plants in operation consume energy, and in turn, they also generate waste. This is a way of solving the problem at the “end of the pipe” (i.e., battling with consequences). But we need to look at the “head” of the process, influence the cause, and, namely, focus on reducing the resource intensity of production and moving to low-waste technologies. This is why TMK’s investment programs are designed to give priority to modernization and the introduction of environmentally friendly production processes—processes that are based on the best available technologies and make use of modern equipment with minimal impact on the environment.

Is waste-free or low-waste manufacturing realistic?

This is one of the trends in industrial manufacturing today. Waste-free manufacturing is a type of closed system organized similarly to the cycling of matter. Waste produced is fully processed into commercial products, and the main products return back to the production cycle once they have outlived their usefulness. Waste-free production is the ideal model and something that we should strive for.

Low-waste manufacturing means that the harmful effects of activities do not exceed permissible levels. For technical, economic, organizational or other reasons, part of the waste is sent for long-term storage and disposal. The whole point is to reduce this very part. And this is a realistic model for manufacturing. With the development of low-waste technologies

and technological progress we will approach being waste-free, but it is a long process.

Is the task of reducing waste that is disposed of in the environment being resolved at the company’s production plants?

Yes, this is one of the main tasks. The company’s plants are taking real steps to recycle and reuse. System-wide work is being carried out to reduce the amount of waste placed into storage, as are elimination of waste accumulated over decades of manufacturing and recultivation of lands that have been disturbed.

Our manufacturing facilities are currently placing about 7 percent of all waste generated into storage. All other waste is reused in production, sent for recycling or sold as raw materials for other industries. Over the past three years the company’s plants have processed more than 2 million tonnes of accumulated waste. For example, Seversky Tube Works is not just processing slag that has accumulated, but it has used it to build a drop-hammer site. Remaining slag is processed as quickly as possible, so that man-made mineral formations at Seversky will be eliminated.

Which projects to increase environmental safety are being implemented at TMK’s plants?

Among the most significant is the reconstruction of steelmaking facilities at Seversky and TAGMET. Replacement of obsolete open-hearth furnaces with electric arc furnaces (EAF), as well as the installation of a continuous casting machine, brings us to a qualitatively new level, not only in steelmaking but also in environmental protection. The project at Seversky has already been implemented, and it fully conforms to

In the last three years investment in environmental protection has amounted to about RUB 1.3 billion

current requirements regarding improved energy efficiency and environmental safety. At TAGMET the caster has been installed, and the construction of the electric arc furnace is being completed. By introducing high-tech modern equipment that has the least impact on the environment, we are aiming to minimize harmful effects at the early stages of our technological processes. High-performance purification systems are an integral part of the technology. One example is the modernization of gas purification in the EAF at TMK-RESITA in Romania, along with the construction of gas purification unit in the electric arc furnace at Seversky.

A number of projects are aimed at rational water use and minimizing the impact on water bodies. Water recycling is a must when modernizing production processes, as reuse of water within the “clean” and “dirty” working cycles not only reduces the discharge of pollutants into water bodies, but it also reduces the amount of fresh water consumed. The “dirty” and “clean” water cycles were engineered as new equipment was introduced at Seversky, Sinarsky, Volzhsky and TAGMET.

What environmental tasks have yet to be resolved?

Despite the fact that in the last three years investment in environ-

mental protection has amounted to about RUB 1.3 billion and that more than 50 projects have been implemented, we still have tasks to be solved in the next few years. We need to rebuild the waterworks at the Sinarsky Pipe Plant, build a system to treat chemically polluted wastewaters, and recultivate the slag disposal areas at TAGMET. At Volzhsky we need to construct a landfill to store wastes of 3-4-5 hazard classes. And, of course, we need to react in a timely manner to changing regulatory requirements. Meeting the requirements of environmental legislation and environmental risk management are necessary when it comes to ensuring stable business. ■

ECO MODERNIZATION

As TMK's facilities modernize, advanced technologies are coming in to replace outdated production processes. Technological retooling not only improves product quality, but helps reduce negative impact on the environment.

The development of production processes aimed at improving the quality of life is an objective threat to nature and to human life itself. The environmental factor in global production now plays a leading role, and the problem of reducing negative environmental impact is becoming more urgent. Modern business is seeking to follow the rules of balance in nature by introducing advanced technologies that minimize environmental impact.

The investment program that TMK has been implementing since 2004 covers all technologies used by the company to produce intermediate products, and seamless and welded tubes. These investments have resulted in the large-scale retooling of outdated manufacturing and the introduction of new equipment and technologies. The aim of this modernization is to ensure the production of high-quality innovative products, as well as cleaner production and the preservation of a favorable environment in the regions where the company operates.

At the moment, there are two major facilities in the active phase of construction – a 135 tonne electric arc furnace (EAF) at the Taganrog Metallurgical Works (TAGMET) and a high-tech pipe production line added to the FQM continuous pipe-rolling mill

The project of upgrading the steel production process at Seversky won an award for Best Environmental Project of the Year

at the Seversky Tube Works. These projects will be the logical conclusion of a large-scale investment program. At the same time, the launch of the electric furnace at TAGMET will mark the final transition to the electric age of steel production – the most state-of-the-art method in the metallurgical industry.

The traditional open-hearth method of steel production, though still used in metallurgy, does not meet present-day challenges. It does not have the reserves to improve product quality, and the human factor plays a big role in the process. In addition, open-hearth furnaces are a significant source of emissions of pollutants into the atmosphere. Open-hearth furnaces at present cannot meet today's increasingly stringent environmental requirements.

At the present stage of metallurgical industry development, the electric arc furnace is one of the major components of steelmaking. It enables the production of a range of grades—ordinary carbon steel, as well as low-alloy and high-alloy varieties. The electric arc furnace smelts an intermediate product, which is then processed in a degasser and a ladle furnace unit before being poured onto a continuous casting machine.

The company's enterprises have done a lot of work to set up high-tech electric steel production. The Volzhsky Pipe Plant has upgraded two continuous casting machines and an electric arc furnace, and TMK-RESITA has brought online a new degasser and a continuous casting machine. Seversky has built a new electric steel mill, which includes an electric arc furnace and (for post-smelting processing) a ladle furnace, degasser, and a continuous casting machine.

These upgrades have marked a qualitatively new stage in the life of the enterprise and have significantly improved the current environmental situation. Thanks to the replacement of outdated facilities



TAGMET is currently nearing completion of the construction of an electric arc furnace in its new Electric Steel Production Division building



like open-hearth furnaces, and the use of molds and perlite-graphite mixtures, waste emissions per tonne of steel at the enterprise's upgraded facilities have been reduced, and the air—both inside the plant and in the city—has become much cleaner.

Modern energy-efficient solutions that have been incorporated in all of the upgrade projects are also yielding perceptible results: since 2009, even as its production volumes have increased, Seversky has significantly reduced its consumption of thermal energy and water for industrial needs.

Metallurgy is a very water-intensive process, so reducing water consumption is an important require-

ment in terms of environmental efficiency. With improved treatment facilities and the introduction of nine additional process cycles, Seversky has significantly reduced its water consumption. Since 2009, the uptake of water for industrial needs has decreased by 7 percent, and usage for drinking water has dropped 20 percent. Meanwhile, wastewater discharge has decreased by 20 percent (from 13.78 million cubic meters in 2009 to 10.99 million in 2011).

An energy-saving program is underway at Seversky through 2020. According to calculations, energy consumption may be reduced 25-30 percent by the target date. Particular attention is being paid to

analyzing the performance of the electric arc furnace, because it determines the power consumed by electric steel production. Special electric arc furnace operating modes have been developed to reduce power consumption without compromising productivity.

Along with the radical upgrade of its metallurgical production, Seversky has achieved impressive results in waste handling: up to 96 percent of its total volume of generated waste is recycled or repurposed. The portion of waste that is not recyclable is housed in two slurry pits. Most metallurgical waste is slag. Therefore, in the 1990s Seversky built a special crushing and sorting system for slag processing.

Its personnel have been working to dispose of this by-product, of which more than 2 million tonnes have accumulated over 70 years of open-hearth production. At present, they have processed almost the entire amount: about 700 tonnes remain to be disposed of. Processing slag is not a profit-making process: all the material produced is earmarked for road construction, or is used to build infrastructure around oil wells and transportation paths in oil fields.

Over the past few years Seversky's work on environmental protection has received many awards. In particular, the project of upgrading the steel production process at the Seversky Tube Works, completed in 2008, was the winner of the Russian Ministry of Natural Resources award for Best Environmental Project of the Year in the category Environmental Efficiency of the Economy.

The construction of a continuous casting machine and a degasser, which have greatly improved the quality of intermediate pipe products, are the first important steps in the development of high-tech steel production at TAGMET. At present, the plant is nearing completion of the construction of an EAF in its new electric steel production division building.

Next year, a bright arc between the metal and the electrode in the furnace's work space, operating at a temperature of 1,600 degrees Celsius, will effectively melt the metal. For the plant, this means launching the production of new steel grades (including high-quality alloys), improving the final product, and also enhancing the level of industrial safety. After commissioning the EAF-150 and decommissioning the three open-hearth furnaces, TAGMET will reduce total emissions of air pollutants by a projected 55 percent. ■

BLOWING THE DUST OFF TMK-RESITA

The fall season at TMK-RESITA this year started with the planned “vacation.” Production was stopped for one month to implement one of the most significant investment projects – the upgrade of the gas treatment system. The start-up of the upgraded system marked a milestone not just for plant’s employees, but for all residents of the town situated on the Barzava River.

When CS Resita was acquired by TMK in 2004, the plant was on the verge of an environmental disaster. Outdated steelmaking equipment did not comply with environmental regulations. Just like other industrial plants in the area, CS Resita was unable to meet its air emissions targets leading to complaints from local residents. Environmental protection agencies were threatening to shut down the plant if the problem remained unresolved. That is why when acquiring the plant TMK made a commitment not only to make it competitive again by introducing new technologies and increasing production capacities, but also to launch an environmental improvement program that would bring the plant in line with regulatory requirements.

Activities under the privatization deal became only the first step in the massive investment program that TMK has been successfully implementing since 2004 at all of its facilities, including TMK-RESITA. Work began almost immediately, when in 2005 a new gas treatment system was installed. The new system complied with all the requirements and standards of the European Union, which led to an immediate improvement of all the environmental indicators at the plant prior to Romania’s accession to the E.U. Current emissions are well below mandated levels.

The European Commission closely monitored the compliance of the plant’s owners with their investment commitments. Starting in 2007, constant work has been carried out to increase output at new production facilities. A new continuous caster with a design capacity of 450,000 tonnes

was launched in 2007, with subsequent planned upgrades in 2008 and 2009. In 2008, a vacuum-degassing unit was started up. This ambitious effort to upgrade production facilities at TMK-RESITA resulted in an ahead-of-schedule implementation of all the investment commitments by TMK and in closing the privatization contract in 2007.

Two 500-tonne cranes lifted and installed a new exhaust hood weighing 130 tonnes above the furnace

These modifications transformed the 240 year-old plant into a modern industrial facility that meets the most stringent European and international standards. The products are certified to Romanian and international standards, including TUV and DNV. Work on increasing output and improving quality has not stopped. By upgrading the electric arc furnace in 2011, its capacity increased to 110 tonnes and allowed it to be better aligned with the continuous caster. Output has been growing every year. While in 2010 the output of billets from the continuous caster was 268,000 tonnes (67 percent higher than in 2009), by 2011 it has grown to 319,000 tonnes (a 19 percent increase). In 2012, it is projected to reach 370,000 tonnes.

Introduction of new technologies and growth of production at TMK-RESITA revealed certain bottlenecks in the operation of environmental protection equipment. The existing gas treatment system began to lag behind increased output volumes. The number of instances of uncontrolled

dust emissions increased. According to Cristianu Drincu, Deputy General Director for Operations at TMK-ARTROM/TMK-RESITA, management started looking at different options for resolving the problem. In 2011, a new project was launched to increase the efficiency of the gas treatment system and to reduce emissions at the electric arc furnace shop.

“The gas treatment system had to be adapted to particular specifications in 2005, and certain errors were made, which undermined its efficiency in the long run. The project was very complex requiring the development of new methods, which would take into account the fact that the plant had practically merged with the surrounding town,” explained Cristianu Drincu. “However, compliance with environmental regulations has always remained a priority for us, so we decided to proceed with the project.”

Certain activities were carried out in 2011. It should be noted that the project is not limited to upgrading the existing filter. During the first phase of the project all roads and open areas adjacent to the electric arc furnace shop were repaved. Due to heavy traffic these areas have always been a significant source of dust. The old smoke stack was demolished by a directed explosion in order to limit emissions from the slag area. Also, new sock filters for the gas treatment system were installed, increasing their coverage area, primary gas duct at the electric arc furnace was upgraded and a booster ventilator was installed at the exhaust duct of the ladle.

For the second phase of the upgrading project TMK-RESITA signed a contract with Italian company AEROMECANICA STRANICH S.p.A. to design and install new equipment. An agreement was signed for the technical review of supporting structures at the electric arc furnace shop in order to install the new hood, and new supporting structures were fabricated.

September 2012 marked the beginning of the last phase of the project.

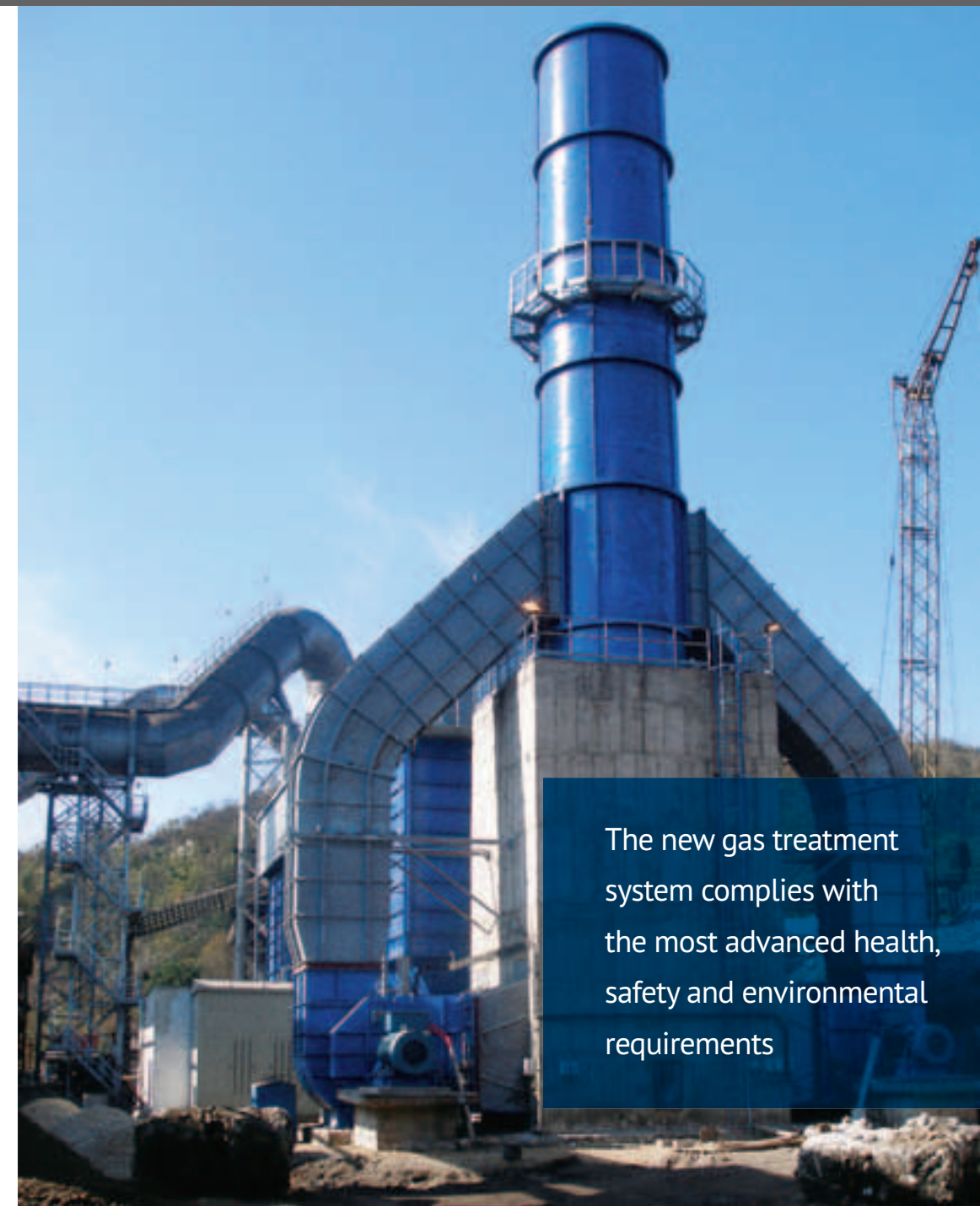
In early September, plant employees and local residents witnessed two 500-tonne cranes lifted and installed a new exhaust hood weighing 130 tonnes above the furnace.

“The new exhaust hood covers an area of approximately 700 square meters, making the filtration system far more effective,” explains Gabriel Belutse, engineer at TMK-RESITA.

After all major equipment had been installed, work continued throughout the month on other smaller activities, which were part of the upgrade project. The improved sock filter increased its capacity

by 40 percent. An additional exhaust fan was installed to improve the volume of captured and filtered gases. The network of gas ducts and emission capturing equipment were all replaced on the ladle.

“The plant resumed its operations by the end of September, while testing of the new gas treatment system continued. The system complies with the most advanced health, safety and environmental requirements. We are confident that this new system will ensure that air quality issues in Resita will become a thing of the past,” noted Cristianu Drincu. ■



The new gas treatment system complies with the most advanced health, safety and environmental requirements

GOING BEYOND THE STANDARDS

Environmental protection efforts at TMK IPSCO are multifaceted in that they are aimed not only at compliance with rigorous regulatory requirements and tough internal standards, but also at reducing TMK IPSCO's carbon footprint and saving the company money through the conservation of raw materials and recycling of waste products generated by manufacturing processes.

Carl Raycroft, Director of Environment, Health, Safety and Security (EHSS) at TMK IPSCO, spoke recently with YourTube about the company's current work in the area of environmental protection and future initiatives.



What are some of the steps that TMK IPSCO has been taking to ensure that its manufacturing operations have minimal effect on the environment?

One of TMK IPSCO's core values is Safety & Sustainability, which directly influences how our operations are carried out. Each operations management team has been challenged not only to implement programs that are required in order to maintain compliance with strict U.S. environmental regulations but also to adhere to internal standards that go beyond mere compliance.

The company's EHS (Environment, Health and Safety) management teams meet regularly to share best practices on waste reduction efforts and recycling projects. These teams are also working to get our facilities registered under the ISO 14001 Environmental Management System Standard. Currently, three of our plants are registered, and the other facilities are at various stages in their preparation for registration.

Are there any specific monitoring or record-keeping systems in place with regard to environmental incidents?

TMK IPSCO uses an integrated management system software tool called Intelix Technologies, which is designed for web-based reporting of all environmental incidents. The company has developed a hierarchy of environmental incidents, which, depending on their level of severity, require reporting to various levels of the management team up to and including TMK IPSCO's CEO and COO. TMK IPSCO's facilities operate under strict operating permits from the U.S. Environmental Protection Agency (EPA) and various state-level regulatory authorities where our facilities are located. Facilities utilize Intelix to maintain a compliance calendar for specific permit requirements and to track required tasks related to each permit.

TMK IPSCO is carrying out a number of large capital investment projects

at several of its facilities. To what extent were environmental considerations taken into account when these projects were designed?

A thorough environmental review is part of the stage gate process for every capital project. This means that a project or any part of a project cannot go forward unless it passes this review. As with all gates in the CAPEX project approval process, the environmental review is a critical review point for the project.

How often are environmental audits performed at TMK IPSCO?

TMK IPSCO's facilities maintain a strict schedule with regard to both external and internal audits. Some of these audits take place annually, while others occur every three or five years depending on their specific requirements.

What are some examples of specific environmental projects undertaken by TMK IPSCO in recent years?

In just the last year, TMK IPSCO has implemented a number of successful projects at its facilities. In Blytheville, Arkansas, we completed a waste reduction project whereby the team installed a water evaporator unit to eliminate the offsite disposal of contaminated waste water. This project will reduce annual disposal costs by \$250,000.

As with many manufacturing operations, controlling fugitive dust from roads is a concern for TMK IPSCO as well. Several of our facilities have



“

Each operations management team has been challenged not only to implement programs that are required in order to maintain compliance with strict U.S. environmental regulations but also to adhere to internal standards that go beyond mere compliance

undertaken projects in this area. At our facility in Wilder, Kentucky, the team made improvements to the storm water drainage system and roadways in order to control dust. Landscaping was also added throughout plant to improve vegetative growth and green spaces, which goes a long way toward controlling dust. At Geneva, Nebraska, areas for truck loading and coil storage were paved, which helps to control dust surrounding the facility.

Finally, in Ambridge, Pennsylvania, projects have been initiated to add baghouse operations on the hot mill in order to control fugitive dust from the seamless pipe production operations.

At our plant in Koppel, Pennsylvania, we recently completed an EAF (electric arc furnace) water model study. The study identifies a plan to improve the effectiveness of the EAF baghouse capture zone.

How is waste disposed of or recycled at TMK IPSCO facilities?

At our facility in Ambridge, we have installed a slag management unit to

allow proper storage and segregation of slag. This ensures proper protection of storm water runoff and recycling of some slag material.

TMK IPSCO is currently in the process of implementing a waste tracking and reduction project that will require all waste streams to be tracked through the point of disposal. This project will focus on benchmarking wastes for purposes of recycling and reducing environmental impact.

Controlling emissions and dust, as well as properly disposing of or recycling waste products are obviously a key part of any manufacturer's environmental efforts. What are some other less obvious considerations?

Several of our operations are located close to residential areas, which means that reducing noise levels as much as possible is a big concern for us. To minimize noise from some of our plants, we are upgrading walls and insulation in the mill building. We are also adding sound absorbing mats at exits from

our building to prevent noise from spreading to neighbors. To maintain our good neighbor program with the residential community, we will hold meetings with community leaders to address any concerns related to noise.

What are some future initiatives that have been planned with regard to environmental protection?

The company recently created a cross-functional environmental sustainability "Green" team to identify areas where we could make improvements across the company. Led by Tom Fidler, TMK IPSCO's Director of Continuous Improvement, this team has set several key goals for the year, including reduction of energy usage across the company, reduction of travel through greater use of IT, and conversion of vehicles to natural gas fuel whenever possible. We are also looking at ways to generate revenue streams by recycling materials that are currently disposed of as waste. ■

WTO: WHAT HAVE WE GOTTEN INTO?

Text: **Dmitry Lyakhovskiy**,
Chief Editor of Metal Supply and Sales,
for YourTube

The expectation that barriers to export market entry will lessen due to Russia’s joining the World Trade Organization (WTO) does not correspond to reality. On the other hand, increased competition from foreign suppliers in Russia’s domestic market is quite possible. Let us look at export and import – two key business units within the WTO.



Major investment and introduction of new production capacity over the past 10 years have allowed Russian pipe companies to significantly increase product quality and expand exports from 15 to 85 countries. At the same time, while exporting their products, companies are faced with tariff and non-tariff

protective measures in foreign markets, which serve to limit these companies’ potential. After joining the WTO, pipe manufacturers have the opportunity to make use of WTO resources against such discriminatory practices, but doing so is not that easy. Russia has obtained the right to dispute measures that are discriminatory in relation to its domestic

Elvira Nabiullina, Russia’s Minister of Economic Development, and WTO Director-General Pascal Lamy at a ceremony marking agreement on Russia’s entry into the WTO on December 16, 2011 in Geneva

companies and measures that create unjustified trade barriers with the WTO Dispute Settlement Body. Yet the process of submitting and reviewing disputes at the Dispute



Settlement body is extremely complicated and lengthy. The main difficulty is that the right of access to this Body belongs only to countries, since the WTO is an organization with countries as members rather than companies. The process of conflict resolution in the trade organization is multidimensional, with countries facing both judicial and political consequences as a result of any action. This essentially means that protecting business interest within WTO dispute resolution procedures is problematic to a certain degree.

In the European Union there are currently two measures directed at Russian tubular products. These measures are being implemented using the method of energy corrections, as Russia is a country with non-market economy. The EU has set antidumping duties on seamless and welded pipe produced by Russian plants. These duties amount to 27.2 percent and 16.8 percent, respectively, which significantly

limits opportunities to ship Russian-manufactured pipe to EU markets. Antidumping measures for seamless pipe are in effect until December 2013, after which there is a high probability that implementation of these measures will be extended for another five years.

Transition to market pricing based on global prices for energy products and freight transport services will, of course, lead to increased costs for Russian companies and cost growth of metallurgical products

manufactured in Russia (see table – comparative evaluation of positive effects and risks). It is true that WTO membership provides a number of opportunities for its members and their businesses, and if these opportunities are approached with skill, it is possible to achieve great benefits. But it would be naïve to believe that immediately after joining the global trade club Russian businesses will automatically receive benefits. Such an outcome requires systematic and dedicated work. ■

»» POTENTIAL IMPACT OF RUSSIA'S WTO MEMBERSHIP ON THE STEEL INDUSTRY		
	Positive Effects	Potential Risks
Agreement on quotas for steel products imported into the EU	Termination of the Agreement on Trade in Steel Products between Russia and the EU will create new opportunities for export growth	Potential risk of protective actions by the EU against Russian steel imports
Utilization of WTO mechanisms to resolve trade disputes	New opportunity to appeal unjustified protective actions against Russian imports	Potential risk of new protective actions by the U.S. against Russian hot-rolled steel in place of the existing agreement
Changes to existing import and export duties	New opportunity for Russia to increase import duties on goods, which are currently taxed at a 0 percent rate, up to higher levels corresponding to new binding obligations. Fewer risks of Russia introducing customs duties on steel products being exported	In relation to the steel industry, customs duties will be lowered, thus decreasing tariff protection for Russian manufacturers
Inflow of foreign capital	Accelerated development and growth in demand for steel products among certain industrial sectors	Growth in import of finished goods made from steel
Increase in tariffs charged by natural monopolies	Accelerated introduction of energy-efficient technologies and growth in productivity at Russian plants	Increased manufacturing costs for Russian products

Source: OAO MMK

RUSSIAN PIPE FOR THE CELESTIAL EMPIRE

TMK's presence in China – the world's largest steel producer and a major exporter of seamless and welded pipe – is a testament to the effective work of the local representative office of Trade House TMK. Many local customers are increasingly looking to use TMK pipe in their projects, both in China and abroad.

» ADHERENCE TO TRADITION AS A GUARANTEE OF SUCCESS

This huge and densely populated country is one of the world's greatest civilizations with a 5,000 year-old history of artistic and philosophical development. Interwoven traditions of Confucianism, Taoism and Buddhism have always served as the basis for the development of national identity and science. For instance, one of the most famous Chinese inventions—gunpowder—was discovered by Taoist monks searching for the elixir of life.

Rapid economic expansion of the last few decades is viewed within China as a continuation of traditions dating back thousands of years that allowed the Chinese to efficiently use their existing natural and human resources.

» EMPHASIS ON ADVANCED TECHNOLOGIES

Against the backdrop of growing domestic production of primary steel (from 495 million to almost 700 million tonnes per year), China is going through a build-up in manufacturing of tubular products. In just the first eight months of 2012, Chinese manufacturers produced 18.194 million tonnes of seamless pipe and over 30 million tonnes of welded pipe. Roughly 15-20 percent of production is meant for export. Due to the large number of local pipe manufacturers that dominate the Chinese market, as well as the entire Asia-Pacific region, it is practically impossible to sell standard tubular goods. However, a growing number of environmentally challenging oilfields is driving up demand for high-performance products. TMK management decided to target this market segment when

For the past 15 years the Chinese economy has been growing at impressive rates averaging more than 9 percent per year

opening its representative office in China.

The Trade House TMK office, which opened in May 2005, is currently located in northeastern Beijing, just a few steps away from the Russian Embassy and the main offices of major Chinese oil

For the past 15 years the Chinese economy has been growing at impressive rates, averaging more than 9 percent per year. And although growth has recently slowed down, the economy of the Middle Kingdom continues to expand in all directions. Growing demand for energy supports that conclusion. Since the early 1960s, oil consumption in China

has increased 25-fold. Continuous exploration and search for new fields is driving demand for OCTG, especially the premium products designed for challenging environments. Moreover, Beijing is planning to double its oil and gas pipeline network to 150,000 kilometers by 2015 in order to meet growing domestic demand for hydrocarbons. This environment is creating steady demand for line pipe.

» Head of TMK's representative office in China Mikhail Kasyanenko (on the right) with his colleagues

and gas companies, such as CNPC, CNOOC, PETRO CHINA and SINOPEC. The office primarily serves to promote high-performance TMK products for the local market, as well as the supply of raw materials for TMK plants.

The China National Petroleum Corporation (CNPC), the country's main producer and supplier of hydrocarbons, was viewed from the start as the primary potential partner. CNPC operates pipelines that supply 70 percent of crude oil and 90 percent of natural gas to the domestic market. It also has projects in Azerbaijan, Peru, Venezuela, Oman, Sudan, Turkmenistan and many other countries.

In September 2008, TMK signed its first contract with CNPC to supply 5,000 tonnes of OCTG (16" x 0.492, 0.560 and 0.630 produced at Volzhsky Pipe Plant). The shipment was intended for CNPC's Longgang gas field and became the first instance of Russian pipe being sold

on the Chinese market in at least 15 years.

The following year TMK supplied even more OCTG to develop and operate that particular field. Having established a working relationship with CNPC, at the end of 2011 TMK was able to secure a contract to supply 30,000 tonnes of pipe for CNPC's South Iolotan project in Turkmenistan. TMK is working to secure additional orders related to the continuing development of this project, including the construction of three gas treatment plants and an infield pipeline network.

As of today, TMK remains the only Russian company that plays an active role on the Chinese tubular market

Furthermore, negotiations are ongoing to participate in other CNPC projects in Amu Darya basin, as well as the 3rd phase of Central Asia pipeline (Beineu-Shymkent).



SPECIALIZED APPLICATIONS

As of today, TMK remains the only Russian company that plays an active role on the Chinese tubular market. "Continuous market monitoring and analysis, as well as our experience and confidence in the quality of our products, allow us to sign new contracts and count on future orders despite fierce competition and government support for domestic manufacturers," says Mikhail Kasyanenko, Director of Trade House TMK's representative office in China.

Currently, office employees are working to promote Russian and American premium products used for shale gas production. It should be noted that in developing new technologies for shale gas fields Chinese state-owned corporations are actively seeking the cooperation of foreign companies. "We are very interested in such projects," says Mikhail Kasyanenko, "and we have already held meetings and negotiations with CNOOC, providing a presentation on TMK

products for off-shore gas fields. CNOOC promised to provide a list of their technical requirements shortly." According to Mikhail Kasyanenko, more meetings are planned with private Chinese companies interested in developing shale gas fields.

In addition to strengthening its positions in the Chinese oil and gas sector, TMK is also planning to supply pipe for specialized applications and for other industrial sectors. One of the areas with the highest demand potential is nuclear energy, where annual demand for imported pipe is approximately 40,000 tonnes. As a result, Trade House TMK's office in Beijing is actively developing relationships with major Russian companies working on nuclear-related projects abroad. For example, Atomstroyexport jointly with China's Jiangsu Nuclear Power Corporation will construct two units of the Tianwan nuclear power plant, while Ro-



satom has an ongoing partnership with China's State Nuclear Power Technology Company in the area of civilian nuclear energy. ■

THE GREAT WALL OF CHINA

This greatest preserved architectural monument is literally translated from the Chinese as "the long wall of 10,000 Li", Li being the unit of measurement equal to approximately 500 meters. However, the real length of the wall, including all of its branches, far exceeds 5,000 km and is 8,851.8 km, to be exact. It stretches through northern China and passes through Badaling in the vicinity of Beijing. The construction, which began as a project to demarcate the borders of the Chinese civilization and to protect it from foreign invasions, lasted more than 500 years. Watch towers were built along the entire length of the wall, with fortresses guarding major passages. A fifth of the entire Chinese population, or approximately 1 million people, was involved in the construction of the wall. It is interesting that wall's blocks were cemented with a mixture of glutinous rice and slaked lime. Contrary to a popular myth, the Great Wall of China is not visible to the naked eye from the orbital space station. However, it is visible on satellite images. The average height of the wall is 6.6 meters, but in some sections it reaches 10 meters. In 1987, UNESCO designated the Great Wall of China as a World Heritage site.

PREMIUM-CLASS COMPANY

TMK-Premium Service, a company that has pioneered and helped to shape the Russian market for premium tubular products, recently celebrated its fifth anniversary. Owing to successful development of the premium business lines, TMK now offers the global market a wide range of premium connections—TMK Premium and ULTRA™ Premium—which are manufactured by both the company's Russian and American divisions.

TMK's PREMIUM BUSINESS FIRST APPEARED IN THE EARLY 2000s when a division was established at Taganrog Metallurgical Works (TAGMET) to develop new types of connections. In Taganrog the first premium connection casing—TMK FMC—was developed and placed into production. Previously Russian oil and gas companies could only import pipe with premium connections from abroad.

TMK-Premium Service is the first Russian company capable of providing comprehensive premium product supply and service solutions

Over time TMK's line of premium connections expanded significantly to encompass nearly the entire range of oil and gas pipe products that are manufactured by the company. TMK's second-generation premium connections are used not only on casing (TMK FMC, TMK GF, TMK PF, TMK CWB), but also on the tubing (TMK FMT, TMK PF) and



**Alexander Shiryaev,
CEO, TMK:**

The separation of the premium business and combining it with the service business five years ago has allowed TMK to strengthen its position in Russia's market and enter the pool of leading global suppliers of high-tech tubular products. As we were five years ago, TMK is the only Russian manufacturer of OCTG carrying its own design of premium connection. Experts at TMK-Premium Service know the needs of oil and gas companies and talk to them in the same language, offering

precisely the premium products that are needed in each situation. The resulting strong demand for premium connections provides a steady stream of orders for high-tech pipe products and allows the company to confidently develop and plan for years to come.

KEY PROJECTS



» **Yurkharov oil and gas condensate field on the Arctic shelf (NOVATEK), 2011**

TMK-Premium Service ran a TMK PF threaded N-80, P-110 and Q-125 casing string (diameter – 244.48 mm, wall thickness – 11.05 and 11.99 mm). It was the first time a string had ever been run in Russia both through the onshore (vertical) and offshore (horizontal) sections of the well. Total depth was 5,602 meters.



» **White Cat oil and gas field on the Vietnamese shelf (Vietsovpetro), 2011**

TMK-Premium Service supervised the process of running a TMK PF threaded P-110 casing string (diameter – 244.48 mm, wall thickness – 13.84 mm) from the TAM DAO-01 rig. It took 4,174 meters to reach the hole bottom.



» **Korchagin oil and gas condensate field in the Caspian Sea (LUKOIL), 2010**

A TMK FMT threaded N80Q tubing string (diameter - 88.9 mm, wall thickness - 6.45 mm) was run into a well (comprising a vertical and a horizontal section) over 2,500 meters deep. This was the first time for Russia-made tubing to service an offshore well.

» INFORMATION

TMK-Premium Service is an expert in developing premium connections, providing technical sales support and boosting sales through a network of licensees as well as offering a wide range of services. Premium connections are universally acknowledged for their high tensile strength under critical high pressure conditions coupled with tensile stress and high temperature exposure. This makes them appropriate for use in severe oil and gas drilling environments.

drill pipe (TMK TDS). At this stage TMK-Premium Service specialists are developing third-generation connections, which will provide absolute strength and gas-tightness of pipe strings under compression, tension and bending.

As work with high-tech pipe products requires special knowledge and skills, there is a need to develop the oilfield services business. Experts at TMK-Premium Service train drilling crews on methods of working with premium products, and they supervise the process of assembling and running the pipe string. They are also involved in the manufacture and supply of non-standard equipment and related materials. Finally, they participate in designing and repairing complex wells. Thus, TMK-Premium Service is the first Russian company capable of providing comprehensive premium product supply and service solutions.

TMK received a new impetus to develop its premium business when it acquired the company's American division in 2008, which develops its own family of premium connections under the ULTRA brand. A synergistic effect was obtained, as TMK began supplying TMK family premium connections to the U.S. market, and ULTRA Premium Con-

nections to Russia. A logical extension of this activity was the beginning of pipe production with ULTRA connections at the Orsk Machine-Building Plant, which is part of TMK's Oilfield Services division.

To promote the supply of premium products to Russian and international markets TMK-Premium Service formed a network of licensees, which currently numbers more than 20 companies. Companies from Russia, Canada, Indonesia, Africa, the Middle East and other oil and gas producing regions around the world are licensed to thread TMK connections.

In expanding supplies to the world's leading oil and gas companies, TMK-Premium Service certifies that premium products meet international standards by conducting testing at the largest research centers around the world. TMK premium connections have been successfully tested in a number of Russian centers (VNIIGAZ, VNIITNEFT, VNIIBT), as well as in the Oil States Industries international certification center in Aberdeen, Scotland, which has certified them under the ISO 13679 CAL IV standard. This certification allows TMK connections to be used in the most complex offshore hydrocarbon production projects. ■



RUSSIAN INVESTMENTS FIND A SUCCESS IN ROMANIA

The 30th anniversary of Romania's TMK-ARTROM is a huge event for all of Slatina, a fact attested to by those who have sent their congratulations to Europe's largest pipe manufacturer. Well-wishers included everyone from Romanian Prime Minister Victor Ponta to ordinary residents. As part of the celebrations an ambitious cultural project that had received support from TMK – Collection of Cantemir Manuscripts – was presented to the Romanian government.

Several days before the anniversary celebration a huge tent with a corporate logo appeared in front of TMK-ARTROM along with stands, seating, and multiple video screens to broadcast films about TMK and TMK-ARTROM. It was in this tent on a sunny Saturday, September 22, that Adrian Popescu, President & CEO of TMK's European Division, opened the event.

"Today, we celebrate not only the 30th anniversary of the plant, which throughout history has had its ups and downs, but we celebrate the 10th anniversary of TMK's presence in Slatina. During these 10 years, together with our colleagues from TMK, we have managed to turn the

plant into the largest pipe producer in Europe".

Popescu stressed that the single manufacturing complex, which includes TMK-ARTROM and TMK-RESITA (acquired by TMK in 2004), is able to produce everything from raw materials to high quality finished goods.

"In terms of numbers, our achievements have meant more than 2,000 jobs, \$140 million in technology investments, and \$85 million in the capital investments", said Mr. Popescu. "The result has been that our consolidated annual turnover is more than \$500 million".

Following Popescu's introduction, a number of distinguished guests offered their congratulations, including Norica Nicolai, Chair of

the Committee on Russian Relations in the European Parliament, who stated that "the history of TMK-ARTROM demonstrates the effectiveness of Russian capital investment in Romania, which has brought obvious benefit to local residents".

SPEAKING A SINGLE LANGUAGE

A pleasant surprise came to guests when Dmitry Pumpyanskiy, Chairman of TMK's Board of Directors, gave his congratulatory message in Romanian, which was taken as a sign of great respect to the plant's employees, Romanian metallurgists and the Romanian people as a whole.

"Achieving TMK-ARTROM's strong performance is made possible by the unique experience of cooperation between Romanian and Russian

experts", said Pumpyanskiy. "The combination of financial strength, technological capabilities and the expertise of TMK's Romanian colleagues has led to progressive development and the manufacture of high quality products, which are certified under international standards and recognized by the most demanding customers".

The Chairman of TMK's Board of Directors thanked the Romanian government and regional authorities for their constructive cooperation, and gave the plant a memorable gift – a sculpture that symbolizes the creative professionalism of TMK-ARTROM's management and employees.

In turn, Romanian Prime Minister Victor Ponta thanked TMK "for the confidence it has had and continues to have in Romania, for its investment, but, most of all, for the 2,000 families who have a place to work today and in the future". Ponta added that he would like to see other Russian investors like TMK invest in Romania.

INTO THE FUTURE WITH MEMORIES OF THE PAST

The congratulatory part of the event culminated in the presentation of an ambitious cultural project – the Collection of Cantemir Manuscripts – which was supported by TMK and carried out by the Paul Tudor Cultural Foundation, Europe's



The history of TMK-ARTROM is one of the most brilliant examples of how one plant's reconstruction has turned into a real success story for Romanian manufacturing

Minister Victor Ponta greeted plant workers with a large bouquet of flowers and a song in honor of the anniversary.

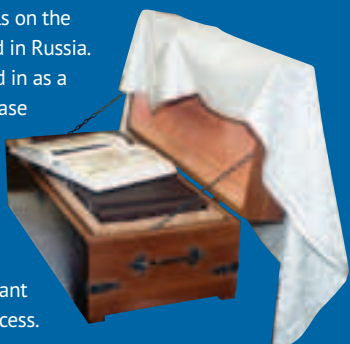
Following the official visit, the doors of the plant were opened to hundreds of Slatina residents for tours that were conducted by employees. Guests were also able to see an exhibition of artwork created by the children of TMK-ARTROM employees. In memory of the anniversary, open house guests were given flags, balloons, T-shirts and caps with the company logo. A fireworks display capped off the day's celebrations. ■

»» COLLECTION OF CANTEMIR MANUSCRIPTS

Dimitrie Cantemir was an academic and political figure of the 18th century, as well as one of the most influential thinkers in Romanian history. He spoke 12 languages, including Greek, Persian, Arabic and Latin. He was a member of the Berlin Academy of Sciences and was honored with the titles Prince of Moldavia, Prince of the Russian Empire and Prince of the Holy Roman Empire. He is often called the most educated prince of the last millennium.

Apart from Russia and Romania, Cantemir's manuscripts are also held in the U.S., Germany, England, the Vatican, France, Syria, Turkey, Lebanon, Ukraine and Moldova. For many years, three Romanians—Constantin Barbu, Ion Deaconescu and Paul Tudor, a writer, professor

and businessman, respectively—have tried to bring to Romania high resolution color copies of approximately 15,000 of the total 75,000 pages of documentary materials on the Cantemir dynasty held in Russia. TMK-ARTROM stepped in as a sponsor in the last phase of the project. The project also received support from the Russian Embassy in Romania, which made a significant contribution to its success.



A QUANTUM LEAP

TMK-INOX has launched a new production line for stainless welded precision pipe. The addition of welded stainless products to its line of special-purpose pipe makes TMK's offering in this segment even more attractive.

Pipe made of stainless steels and alloys are an expensive and prestigious segment. These products are used in the high-tech and energy sectors, the nuclear industry, and aircraft manufacturing, and have very strict tolerances in terms of size, shape, chemical composition, and mechanical properties. Until recently, Russian manufacturers significantly lagged behind foreign competitors in this segment; the domestic market was represented mainly by imported stainless steel products.

Two years ago, in order to solidify its standing and then take a leading position in this promising segment, TMK made the production and sales of stainless pipe products into a specialized independent business. The end of 2010 marked the start of TMK-INOX, a joint venture with RUSNANO under which production of seamless stainless steel precision pipe began. The main innovation was the use of nanotechnology

Two years ago, TMK made the production and sales of stainless pipe products into a specialized independent business

in processing of metal for these new-generation pipe.

The second stage in the development of precision stainless pipe production began in September of this year, with the opening of a new production floor at TMK-INOX dedicated to welded products. Given the importance of this event for the company and for the market as a whole, the grand opening ceremony of the new floor was attended by leaders of the region—Sverdlovsk Governor Yevgeny Kuivashev and Vladislav Pinayev, Minister of Industry and Science for Sverdlovsk Oblast. Attending on behalf of

We have made a serious bid to break into a new market niche of special-purpose pipe.
Alexander Shiryaev



TMK were CEO Alexander Shiryaev, Sinarsky Pipe Plant Managing Director Sergei Chetverikov, and TMK-INOX General Director Leonid Marchenko.

The new floor has two pipe welding lines made by the Italian firm OLIMPIA 80, one of the leading manufacturers of equipment for the production of welded pipe. The T3035s line produces pipes with diameters from 8 mm to 33 mm and wall thickness from 0.5 mm to 3 mm, and the T70/120 line is for pipe with diameters of 25 mm to 114 mm and wall thickness from 1 to 5 mm. Both lines use the TIG (Tungsten Inert Gas) welding method in their production process, and also handle

monitoring of joint integrity, as well as grinding, sizing, measured cutting, and labeling. In addition, the T3035s line has laser welding equipment made by the German company ROFIN, which makes it possible to triple that line's speed efficiency.

As part of the further development of the welded stainless steel floor, the company is planning to bring online a state-of-the-art high-efficiency unit for slitting large rolls of stainless strip.

The new production floor for welded stainless steel pipe can produce high-quality products that are in demand in the automotive industry and the food, energy and construction sectors. These

products meet relevant worldwide standards and the DIN 17457-11850, ASTM A249, A269, A270, and NFA 49147-49249 standards.

After the equipment on the floor ramps up to full capacity, the project envisions the production of 10,000 tonnes per year of high-tech welded pipe made of stainless steels and alloys. This new production floor will create more than 50 jobs.

"The opening of the new floor is the second developmental stage in the production of precision stainless pipe under the one-of-a-kind TMK-INOX project. Two years ago, when we began to produce seamless stainless pipe using nanotechnology, we made a serious bid to break into a new market niche of special-purpose pipe. Now that we have incorporated the production of welded stainless products, we are ready to offer consumers a wide range of innovative products in this segment and thereby strengthen our position. Thanks to the implementation of the TMK-INOX joint venture with RUSNANO, Russia now has a real chance to replace imports in the market of specialized pipe for the nuclear industry, aerospace, high-tech industry," said TMK CEO Alexander Shiryaev. ■

SUMMARY

TMK-INOX a joint venture between TMK and RUSNANO, was created in 2009 on the premises of Tube Drawing Shop No. 3 at the Sinarsky Pipe Plant. The purpose of the project is to set up high-efficiency production of special-purpose pipe — seamless and welded precision pipe made of stainless varieties of steel with controlled nanostructure and improved properties. Improvements in terms of strength, ductility, corrosion resistance, precision, geometric parameters, and surface quality are achieved by modifying the structure of steels and alloys on the nano-level, while reducing overall production costs. The total project budget up to 2017 is RUB 3.75 million, including investments from RUSNANO in the amount of RUB 1,298,500.



UNDERWATER TREASURES OF NAUTILUS

TMK unloaded a batch of seamless line pipe for a unique offshore project to mine fields of massive sulfides in the bottom sediments of the Bismarck Sea (Papua New Guinea). This project to dig up volcanic by-products from the seabed for subsequent extraction of copper, gold, silver, and other metals is the first of its kind in the world.

Nautilus Minerals, which commissioned TMK to manufacture pipe, is a pioneer in mining deep-sea stocks of massive sulfides. The Solwara 1 project being developed by the company involves extraction of raw materials at a depth of 1,600 meters. It is expected that this will be the first project of its kind in the world.

Massive sulfides are the product of volcanic activity and contain compounds that include copper, zinc, gold, silver and other metals in concentrations suitable for industrial processing. Volcanic formations on the seabed, which are also called black and white “smokers”, spew

lava, which solidifies at it cools, forming sediments rich in mineral resources.

The Solwara 1 field reserves contain about 7 percent copper. Compare this to surface copper mines, where the copper content in the rock now averages 0.6 percent. In addition, a high content of gold—more than 20 grams per tonne—has been discovered at certain sites in the field. In 2011, Nautilus Minerals took a research team to the Bismarck Sea, resulting in more precise estimates of mineral reserves in the seabed. Identified silver reserves were 5 grams per tonne of rock, and the content of zinc in the massive sulfides of Solwara 1 was determined

DEEP-SEA RESEARCHERS

Nautilus Minerals is a Canadian company with a market cap of about 450 million Canadian dollars. It is a world leader in the field of searching for and studying mineral resources for subsequent development. Its main shareholders are Metalloinvest (21.0 percent), Anglo American (11.1 percent), MB Holdings (9.98 percent), and Teck Resources (5.4 percent). The company's offices are located in Toronto (Canada) and Brisbane (Australia).

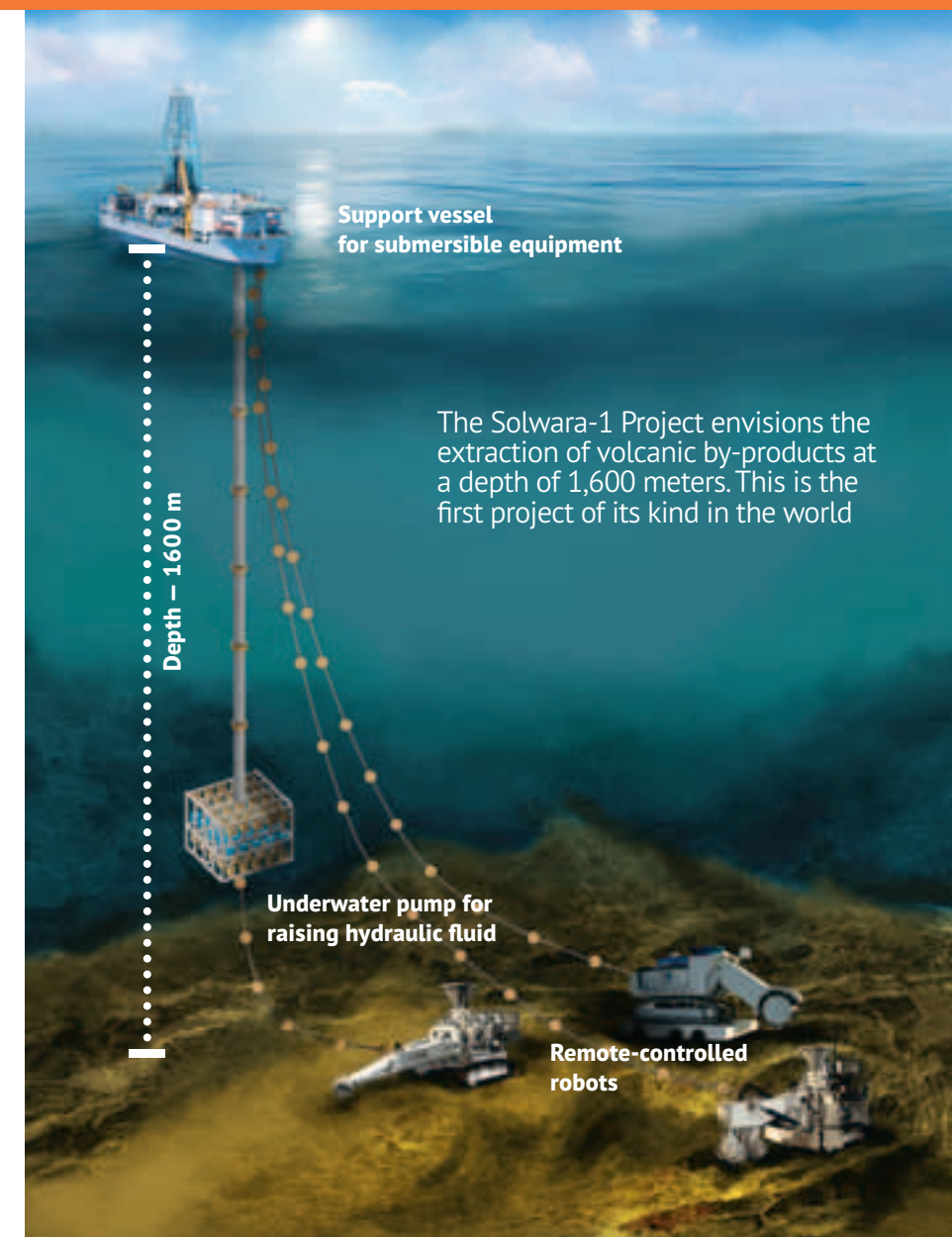
Nautilus Minerals has been operating in the territorial waters of Papua New Guinea since 1997, when it secured its first license to study massive sulfides in the bottom sediments. The company started implementing its drilling program in 2010. Its purpose is in-depth study of resources and geotechnical parameters for the Solwara 1 project, as well as exploratory drilling in other promising sections in the Bismarck Sea that are under lease to the company.

Nautilus signed its first lease agreement for mineral extraction from the seabed with the government of Papua New Guinea in January 2011. The leased block is a region approximately 59 square kilometers in area, 30 kilometers off the coast of New Ireland, where Nautilus plans to extract massive sulfides at a depth of about 1,600 meters. The initial term of the lease agreement is 20 years. The project passed an expert review conducted by the Papua New Guinea Ministry of Environmental Protection in December 2009.

Nautilus Minerals has also earmarked about 600,000 square kilometers of sites in the territorial waters of Fiji, Tonga, Vanuatu, the Solomon Islands, New Zealand, and the Eastern Pacific where the company is conducting research or has applied for leases. The company has reserved some of the most promising areas for future projects. Previous research has uncovered 19 mineralized seabed systems in the Bismarck Sea, and 16 in Tonga.

to be 0.4 percent. Drilling also revealed previously unknown deposits (now called Solwara 12), located 25 kilometers northwest of Solwara 1.

At present, a mineralized zone approximately 1.3 kilometers long, and up to 200 meters wide and 19 meters thick, has been earmarked for the Solwara 1 Project. Nautilus Minerals has already started construction of three remote-controlled machines that will crush and collect sediments. Then, according to the project plan, mineralized mass in the form of a hydraulic mixture will be transported by pipeline to a vessel, where it will be dehydrated, and then transported by barge to shore for further enrichment. Nautilus Minerals plans to extract approximately 1.3 million tonnes of material from the field annually. The start of mineral production from the Bismarck seabed is planned for 2013.



TMK first produced X80 high-strength seamless line pipe for the Nautilus Minerals Project

Pipe for Nautilus Minerals were produced at the Volzhsky Pipe Plant. Volzhsky is Russia's first certified producer of X80Q0 high-strength seamless line pipe (compliant with API Spec. 5L/ISO 3183), which is intended for the construction of offshore subsea pipelines. TMK products were delivered to General Marine Contractors (Houston, Texas) for welding and assembly of the pipeline system.

“TMK was the first to produce X80 strength seamless line pipe. Such products had never been manufactured in Russia before. This creates favorable conditions for the company's successful participation in tenders for the supply of equipment for the most complex marine projects”, said TMK CEO Alexander Shiryaev. “Delivery of our products for deep-sea mining in the Bismarck Sea bolsters TMK's reputation as a global supplier of high-quality steel pipe and enables us to expand the market for products and take our position in the market of equipment suppliers for such projects”. ■

SURVIVAL STRATEGY

The Seventh International Steel Tube and Pipe Conference took place at the end of September in Düsseldorf, Germany. What will European Union countries do to survive in difficult economic circumstances? How will European tube and pipe market participants adjust their development strategies in a tough market situation? These are the questions that brought this year's forum attendees together.

The Steel Tube and Pipe Conference, organized for the seventh year in a row by the Metal Bulletin news service, draws the largest pipe market players every year—not only from the European Union, but from North America and the Middle East as well. This forum is a venue for exchanging information on the sector's most recent developments and prospects for further advancement. The main topic at this year's meeting was the Euro zone crisis and the prospects of the tube and pipe sector in difficult economic conditions.

EUROPE BRACES FOR LOSSES

The European metals market is running into many problems, including surplus production capacity. Overall capacity in the EU metals sector is about 210 million tonnes per year,

while demand varies within the range of 150-160 million tonnes under normal market conditions. The current uncertainty due to the Euro zone debt crisis, as well as high prices on raw materials markets and the dominant position of China in metals production and consumption, are aggravating the situation as they become substantial factors in unstable domestic demand.

In the conference's opening speech, Frank Harms, Managing Director of the German Steel Tube Association, expressed the general uneasiness with the current situation. Citing analysts at UniCredit Bank and IKB Deutsche Industriebank AG, he painted a disquieting picture of the near future: such sectors as automobile manufacturing, construction, machine building, and energy will experience difficulties throughout Europe. These segments have been trending negative since the recent crisis of 2009. For example, the volume of the pipe market for auto manufactur-

ing in the European Union has fallen by 45%. The situation has stabilized somewhat since 2009, but it has not yet fully regained its 2008 levels in terms of either prices or volumes. Harms is certain that the situation will not drastically change in the short term.

Other market participants agree. They also agree that each of the players must work out a strategy to survive today's tough situation. Metal industry company representatives who spoke at the conference expressed their opinions on this score. "We go where our customers are", said Cristiano Rocchi of the Marcegaglia Group, which is making capital investments based on the current market situation, in particular in a new pipe-rolling production floor in China, as well as in a pipe plant in Poland. Those countries show promise for positive growth in upcoming years.

Wolfgang Eder, President of EU-ROFER (the European Association of Steel Producers) called on European

The European metal industry must concentrate on high-end steel products

politicians to develop a plan for cutting back production capacities in the EU's metal industry to bring them in line with current demand.

NO RUN-OF-THE-MILL PRODUCTS

Most attendees believe that there is only one way for Europe's metals industry to develop further — by focusing on high-quality steel products and phasing out the manufacture of most ordinary products.

The EU is a leader in research and development, technology, and services when it comes to high-quality metal products for the automotive industry and engineering innovations. These are the areas where European industry can compete on a global scale. European tube and pipe market players therefore see the necessity of continued investment even in hard times. Despite the weakness of the EU construction market, which requires European producers to depend on external markets like North America, these products can also be competitive.

A promising direction for the tube and pipe business is products for hydrocarbon production and transport. Oil and gas pipes are in demand on the global market, which makes this segment attractive for producers.

POSITIVE TREND FOR TMK

TMK is placing its bets on high-technology premium products. Josef Marous, President of the company's European Division, gave a presentation entitled "The World Market of Pipe Production: A Positive Forecast for Future Growth", which sparked particular interest among partici-

pants. Among those invited to the panel were Frank Harms, Managing Director of the German Steel Tube Association; Bulent Demircioglu, Board Chairman of the Borusan Group and President of the Turkish Steel Exporters Association; and Harald Stolten, Managing Director of EUROPIPE.

In his talk, Marous commented that in the coming years, the main work in oil production will be performed in fields where drilling conditions are challenging. Oil reserves that used to be considered unsuitable for development may now become productive thanks to new technologies, particularly horizontal drilling, which allows penetration of hitherto inaccessible sections. As a result, major oil and gas companies will need much greater quantities of seamless pipe with premium connections.

"One horizontal well will require a total of 190 tonnes of pipe, whereas right now, a vertical well needs only 45 tonnes", said Marous.

The president of TMK's European Division went into detail about

the company's latest developments and achievements in the premium segment. He talked about the TMK and TMK IPSCO family of premium connections, among which the TMK PF, TMK PF ET, and ULTRA-QX connections have been certified at the CAL IV level. Marous also presented new products that the company has launched: thermal-insulated lift tubes, which make it possible to avoid ground warming around the well casing, and corrosion-resistant pipe with high chromium content. His presentation showcased a number of projects in which TMK has participated through pipe product deliveries and supervision of downhole pipe runnings — at the Korchagin field (Lukoil) in the Caspian Sea and the Yurkharovskoye field (Novatek) in the Arctic Circle.

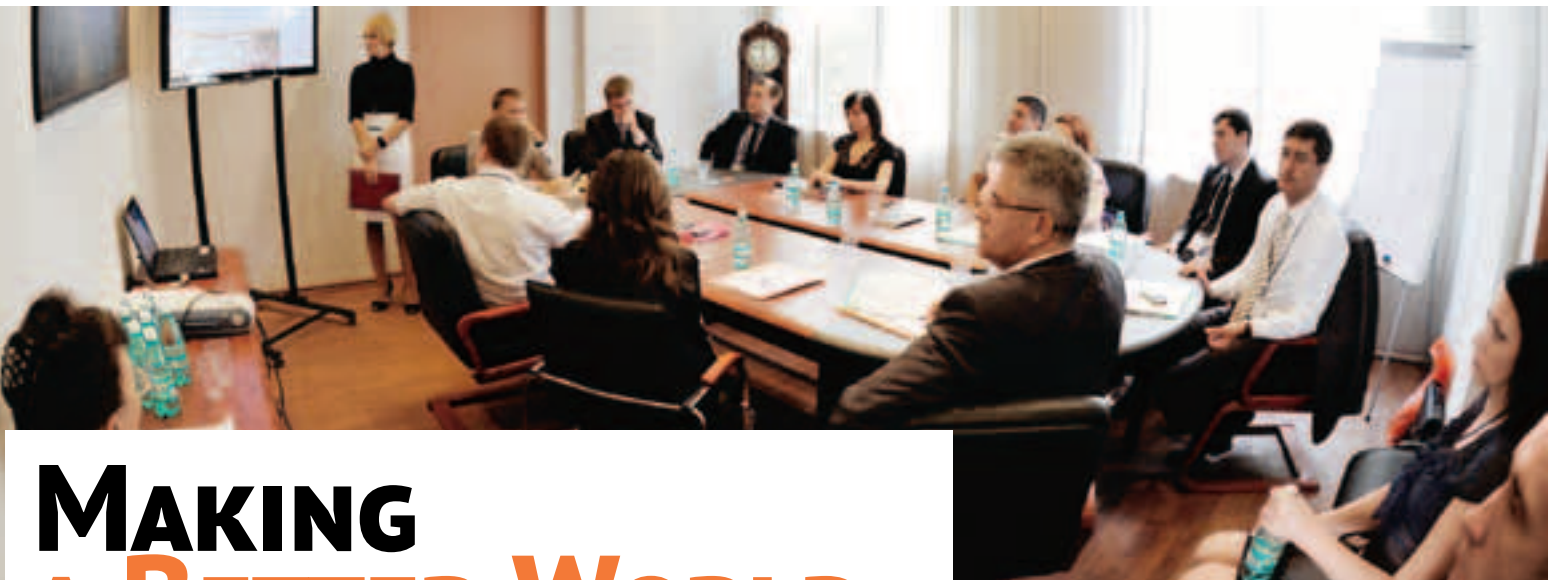
Attendees gave high marks to the TMK presentation, commenting on the "positive tone" of the talk.

"The future development plans of oil and gas companies give us reason to continue investing in the manufacture of premium class products for the oil and gas sector, as well as in research and development of new products", said Marous. TMK's positive expectations are in line with analysts' forecasts. In the long term, the current worldwide economic situation is expected to improve, and industries like auto manufacturing, oil and gas production, and energy are expected to develop. ■



METAL BULLETIN

International news service that includes a weekly magazine (published since 1913) and an Internet portal that posts real-time news about the metal industry market. For over 13 years, the company has been organizing specialized meetings, forums, and conferences for representatives of that sector



MAKING A BETTER WORLD

The Scientific-Practical Youth Conference in Sochi gave more than 100 TMK specialists the chance to talk about their new endeavors, get support in putting them into practice, and see themselves as contributing to the development of their facilities. The company itself has something to gain as well: dozens of new ideas with proven effectiveness, and a qualitatively enhanced level of employees who are ready to tackle their objectives creatively and approach problems with the big picture in mind.

These meetings, which have taken place at the company's Bourgas resort for years, are becoming a real youth forum for the company. Here, the most talented employees among those just beginning their careers get to know their colleagues and managers, share their scientific innovations, discuss the growth prospects of TMK facilities, and also get the chance to fulfill their creative potential. Attending this year's forum for the first time were representatives of TMK's Romanian plants.

The main attraction among the events of early October was the Scientific-Practical Youth Conference. This year, there were 11 sections showcasing over 100 research projects, which were rated by juries on such criteria as relevance, innovative spirit, and practical value. Many of the developments presented at the conference have already been incorporated into the production line and yielded concrete results. For instance, the Volzhsky Pipe

Plant has started monitoring production processes with the use of web technologies, increasing labor productivity. The Sinarsky Pipe Plant and the Seversky Tube Works are successfully working to turn their enterprises' waste into revenues. Seversky environmental specialists have figured out how to use the dust from their arc steel furnace to produce cement, and their colleagues from Sinarsky have proposed to reprocess greasy slag to extract the raw iron ore from it.

"It's nice to see young kids with a twinkle in their eyes, kids who want to work, think, and change the world for the better", said Evgeny Shifrin, Director of TMK's Technology Directorate, summing up the conference. "All of the projects are very high-quality, all of them are relevant: dozens of proposals have been put into practice, with hundreds of millions of rubles saved. The company's management realizes that investing in intellect is the most profitable way, because the return is big. And we are going to continue this work".

Conference jury members stressed that the level of competition among participants has been getting more intense every year: the quality of presentations is growing, and the number of good ideas is as well. This means that the company's current corporate training programs, the mentorship of senior specialists, and the opportunity for junior specialists to quickly launch their ideas into production are yielding perceptible results.

For their part, the young specialists acknowledged that at the conference they felt a keener sense of involvement in the big company, as well as pride in the attention paid to their new endeavors. It is especially important that all of the proposals presented at the conference were passed on to TMK technical specialists for further development, which will involve the participation of the young specialists themselves. For many of them, this stage will lead to interesting new on-the-job experiences, and may affect their career growth. ■



Trade House TMK (Head Office), Moscow

40-2a, Pokrovka Str., Moscow 105062, Russia
Tel: +7 (495) 775 7600
Tel/Fax: +7 (495) 775 7602
E-mail: tmk@tmk-group.com

Trade House TMK, Volzhsky

6, Avtodoroga 7 Str., Volzhskiy, Volgograd region, 404119, Russia
Tel: +7 (8443) 22-27-77, 55-18-29
Tel/Fax: +7 (8443) 25-35-57

Trade House TMK, Polevskoy

7, Vershinina Str., Polevskoy, the Sverdlovsk region, 623388, Russia
Tel: +7 (34350) 3-21-05, 3-32-75
Tel/Fax: +7 (34350) 3-56-98

Trade House TMK, Kamensk-Uralsky

1, Zavodskoi proezd Rd., Kamensk-Ural'skiy, Sverdlovsk region, 623401, Russia
Tel: +7 (3439) 36-37-19, 36-30-01
Tel/Fax: +7 (3439) 36-35-59

Trade House TMK, Taganrog

1, Zavodskay Str., Taganrog, Rostov region, 347928, Russia
Tel: +7 (8634) 65-03-58, (8634) 32-42-02
Tel/Fax: +7 (8634) 32-42-08

Trade House TMK, Azerbaijan

22, Karabakha Str., Baku, AZ1008, Azerbaijan
Tel/Fax: + 994 (12) 496-19-18
E-mail: baku@tmk-group.com

Trade House TMK, Turkmenistan

29, Arshabil chaeli Str., "Nebitshi" hotel, 1939, Ashgabat, Turkmenistan
Tel/Fax: +993 (12) 48-87-98
E-mail: ashgabat@tmk-group.com

Trade House TMK, Uzbekistan

24, Oybek koch, Tashkent sh., Uzbekiston, 100015
Tel/Fax: +998 71 281-46-13, +998 71 281-46-14
E-mail: Uzbekistan@tmk-group.com

TOO TMK-Kazakhstan

38/1, office # 5, Zheltocsan Str., Astana, 010000, Kazakhstan
Tel/Fax: +7 (7172) 31-56-08, 31-08-02
E-mail: info@tmck.kz

Trade House TMK, China

APT19 I, NO.48 Dongzhimenwai Str., Dongcheng District, Beijing, China ZIP: 100027
Tel: +86 (10) 84-54-95-81, +86 (10) 84-54-95-82
Tel/Fax: +86 (10) 84-54-95-80
E-mail: beijing@tmk-group.com

Trade House TMK, Singapore

10 Anson Road #33-06A International Plaza, Singapore 079903
Tel: +65 (622) 33-015
Tel/Fax: +65 (622) 33-512
E-mail: singapore@tmk-group.com

Trade House TMK, South Africa

1st Floor, Convention Tower, Cnr. Heerengracht Str. & Coen Steytler Ave. Foreshore, Cape Town 8001, South Africa
Tel: + 27 21 403-63-78
Tel/Fax: + 27 21 403-63-01
E-mail: info@tmkafrica.com

TMK Global AG

2, Blvd. Du Theatre, CH-1211 Geneva, CP 5019, Switzerland
Tel: +41 (22) 818-64-66
Fax: + 41 (22) 818-64-60
E-mail: info@tmk-global.net

TMK-ARTROM Sales Office

str. Draganesti 30, Slatina, Olt, 230119, Romania
Tel: +40 249/430054,
GSM: +40 372/498263
Fax: +40 249/434330
E-mail: office.slatina@tmk-artrom.eu

TMK Europe GmbH

Immermannstraße 65 c, 40210 Düsseldorf, Germany
Tel: +49 (0) 211/91348830
Fax: +49 (0) 211/15983882
E-mail: info@tmk-europe.eu

TMK Italia s.r.l.

Piazza degli Affari, 12, 23900 Lecco, Italy
Tel/Fax: +39 (0341) 36-51-51, +39 (0341) 36-00-44
E-mail: info@tmk-italia.eu

TMK Middle East

P.O. Box 293534 Office 118, Block 5EA, Dubai Airport Free Zone
Dubai, United Arab Emirates
Tel: +971 (4) 609-11-30
Fax: +971 (4) 609-11-40

TMK IPSCO

2650 Warrenville Road, Suite 700 Downers Grove, IL 60515, USA
Tel: +1 (630) 874-0078
Fax: +1 (630) 874-6431
Toll Free: 1-866-654-0078 (U.S. and Canada)

TMK IPSCO U.S. Sales Office and Research & Development Center

10120 Houston Oaks Drive Houston, TX 77064
Tel: +1 (281) 949-1023,
Fax: +1 (281) 445-4040

TMK IPSCO Canada Sales Office

150 6th Avenue SW #3000 Calgary, AB T2P 3Y7
Tel: +1 (403)-538-2182
Fax: +1 (403)-538-2183