

YourTube

Technology Motion Knowledge

05•2012
№ 1 (08)

12 Qualitative changes at TMK's Romanian plants

28 Gazprom delegation visits AMERICA

38 Premium training for customers

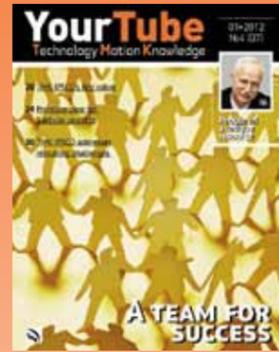


Dave Diederich:
Capital Projects
Transforming
TMK IPSCO



EFFICIENCY IN DETAILS

YourTube is targeted at three audience groups representing various countries and continents and is published in parallel in the Russian, Romanian and English languages. 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 Cover story**
Alexander Klachkov: "Every Small Detail Matters"
TMK's VP and Chief Engineer speaks about modernization of the company's plants and further efforts to improve efficiency and quality
- 8 Capital Projects Transforming TMK IPSCO**
David Diederich, VP and Chief Manufacturing Officer at TMK IPSCO, speaks about capital investment projects to increase efficiency, quality and competitiveness at TMK IPSCO.
- 12 Qualitative Growth**
Christian Drinciu, Deputy General Director of Operations at TMK-ARTOM / TMK-RESITA, tells how Romanian facilities pursue their plans to boost production volumes and efficiency
- 14 Markets**
Kazakhstan: Working Proactively
Kazakhstan's highly competitive market: TMK's success story
- 16 Business community**
Unconventional Reserves
Current global trends in power generation, shale play development prospects and cutting-edge drilling technology
- 18 Investments**
Cutting-edge Technology Only
TAGMET is about to complete construction of its EAF steelmaking complex
- 20 Heading for the Elite Segment**
TMK-ARTROM is about to complete construction of a finishing and storage shop
- 22 Priorities**
A New Field Services Work Culture
Sergei Rekin, General Director of TMK-Premium Service, speaks about the company's latest high tech developments
- 28 Our partners**
Gazprom Delegation Visits TMK IPSCO
Gazprom representatives visit TMK IPSCO's manufacturing facilities and the new R&D Center in Houston
- 32 Tube Inside a Tube for Gazprom**
The first VIT string is run at one of Gazprom's operations
- 34 "We Can Make a Breakthrough"**
Sinarsky Pipe Plant as the platform for stronger cooperation between TMK and Gazprom
- 36 Success in the Arctic**
An Arctic story in pictures: running a pipe string with TMK's premium connections
- 38 Premium Training**
TMK-Premium Service takes on a new role of training
- 40 Key Customer**
TMK develops its partnership with Severstal

YourTube
Technology Motion Knowledge

1 (08) MAY 2012

Incorporator:



Project manager:
Svetlana Bazylchik
BazylchikSl@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. F577-40128 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: Ivonne Baez (USA),
Andrei Butnaru (Romania), Anna Vasileva (Russia), Mikhail Cherkasov
(Russia), Adam Fuss (USA) Production Director: Oleg Merochkin Photo:
Russian Look/Picvario Color correction: Alexander Kiselev, Sergey Souslov



»» **TMK IPSCO BEGINS DEVELOPMENT OF CANADIAN FACILITY**

TMK IPSCO has begun development of a new pipe threading and service facility in Edmonton, Alberta, Canada. The state-of-the-art production equipment at the facility will thread a full range of ULTRA™ Premium Connections. In addition, the site will offer a full line of accessories, services and repairs. The facility is expected to begin operating in late 2012.

"This is a very exciting initiative for TMK IPSCO," said Piotr Galitzine, Chairman of TMK IPSCO. "This new facility will keep our company at the forefront of technology, expand our local presence, and enable us to better serve our very important Canadian oil and gas customers."

"This new facility is a testament to our company's innovation, growth, and commitment to our customers," said Vicki Avril, President and CEO of TMK IPSCO. "We will be bringing to Canada high-tech products; improved, localized services; and new jobs." ■

»» **NEW SUPER-CHROME PIPE FOR GAZPROM**

With a product specially developed for Gazprom, TMK is the first in Russia to produce casing made of super-chrome steel. The pipe is threaded with TMK GF premium connections.

A trial batch of grade L80 13Cr steel casing pipe with TMK GF premium connections produced at the Volzhsky Pipe Plant ensures the necessary steel properties and geometric fidelity of the pipe's parameters. Development and testing of the new product took place under supervision by Gazprom specialists who gave a positive assessment of the pipe quality. Pipe made from 13-Chrome steel has unique characteristics that allow it to be used in a variety of aggressive environments in the most difficult oil and gas fields, as well as a substitute for more expensive pipe made from stainless steel. ■

»» **LARGE DIAMETER PIPE FOR TURKMENISTAN**

TMK is in the process of shipping an order of longitudinally welded large diameter pipe (LDP) for use in transporting natural gas from Turkmenistan's largest gas field, the South Iolotan field. 12,000 tonnes of pipe have already been shipped.

To meet the customer's requirements, production of LDP with special characteristics—in particular more rigorous geometrical parameters and a defined bevel angle, as well as an increased level of corrosion-resistant coating — has been established at the Volzhsky Pipe Plant.

The South Iolotan field is the second largest in the world following the Pars gas field shared by Iran and Qatar. Natural gas reserves total approximately 21 trillion cubic meters. ■

»» **U.S. SENATOR BOB PORTMAN VISITS TMK IPSCO FACILITY IN BROOKFIELD**

On February 24, U.S. Senator Robert Portman of Ohio visited TMK IPSCO's facility in Brookfield, Ohio while traveling through the region. During his visit, Portman observed production of the company's ULTRA™ Premium Connections and spoke with employees about their jobs and the rebirth of manufacturing in the region.

Following his visit, Portman spoke with reporters about his impressions of the facility and its role in the region's economy.

"The plant took over a building that was not being used, another great example where natural gas is really helping us to get the economy back on track," Portman said. "It is a great example of what we can do if we actually start to develop our natural resources in this country." ■



»» Pictured (from left to right): Dave Diederich, Vice President and Chief Manufacturing Officer at TMK IPSCO; Ernie Sexton, plant manager at Brookfield; U.S. Senator Robert Portman of Ohio

»» **GROWTH CONTINUES**

TMK's operating results in 2011 met the company's expectations and were reflected in growth of overall shipments by 6.6 percent. The increase was mainly due to growth in the shipment of high-tech seamless products. The American division saw significant growth, with TMK IPSCO shipping 1,041 tonnes of pipe, 20.7 percent more than the previous year. Shipments of seamless products increased their share of total pipe products shipped. In particular, shipments of seamless OCTG pipes rose by 27.5 percent.

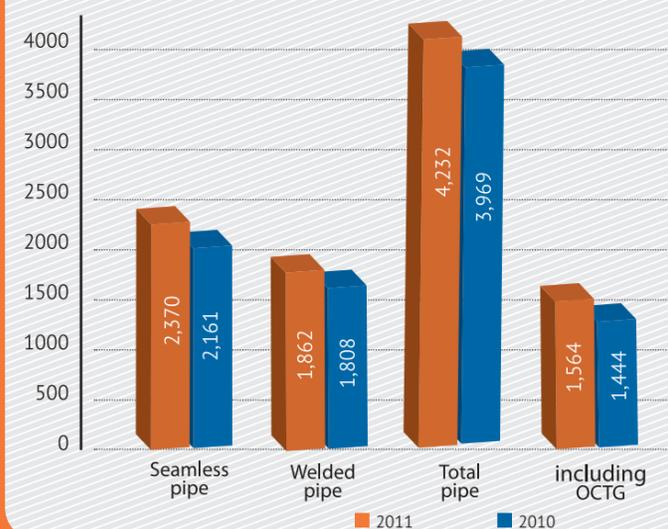
As before, demand for TMK's premium connections in Russia and North America grew. In 2011, TMK shipped 472,000 premium connections developed in the Russian (TMK family) and American (ULTRA™) divisions of the company, an 18.9 percent increase over 2010. Growth in shipments of threaded connections manufactured by TMK's Russian facilities was nearly 30 percent above the previous year.

All the company's major financial indicators show growth, reflecting successful operations. The growth was primarily driven by increased volumes, efficient pricing and an improved product mix. Proceeds from sales of seamless pipe, a key product type for TMK, amounted to 58 percent of total revenue. Profitability on sales of welded tubular products fell to 21 percent in comparison to 23 percent in 2010 due to unfavorable product mix changes. At the same time, profitability of sales of seamless pipe for the year increased from 26 percent to 28 percent.

TMK expects to maintain these positive trends in the market for pipe products in 2012 and expects a small increase in sales volume and further improvement in the product mix structure. Due to high oil prices, Russian oil companies' costs for hydrocarbon exploration and production continue to increase, which in turn will support demand for OCTG and line pipe. The forecast for the U.S. market is also positive. The development of large oilfields in the U.S., such as the Bakken, Eagle Ford and the Permian Basin, will help maintain high demand for pipe products. At the same time the company does not rule out a small reduction in LDP shipments in 2012. TMK also plans to retain its market share for industrial pipe. ■

Financial results for 2011, (in millions of \$)			
	2011	2010	Change, percent
REVENUE	6,754	5,579	+ 21
NET INCOME	385	104	+ 270
ADJUSTED EBITDA	1,050	942	+ 11
Adjusted EBITDA margin, percent	16	17	

Volumes of pipe products shipped (thousand tonnes)



»» **PREMIUM CLASS CERTIFICATE**

At the Oil States Industries international testing center (Aberdeen, UK) tubing and casing with TMK PF premium connections was certified in accordance with the ISO 13679 CAL IV standard. The testing qualification program was conducted by TMK-Premium Service, which presented grade L80 tubing threaded with TMK PF premium connections.

Certification in accordance with the ISO 13679 CAL IV serves as confirmation of the world quality level and reliability of TMK threads that are intended for complex hydrocarbon drilling and production conditions. It also gives customers the ability to acquire from a single supplier the necessary product for assembly of a pipe string. ■

ALEXANDER KLACHKOV: “EVERY SMALL DETAIL MATTERS”

Over the past several years, TMK has invested more than \$2.5 billion in the reconstruction of its manufacturing facilities. These investments have allowed the company to radically upgrade its facilities, and today they are among the world's most modern in terms of technology. TMK competes successfully with other leaders in the pipe industry – Tenaris and Vallourec Mannesmann – not only in terms of the volume of pipe sold but also in terms of quality. TMK Vice President and Chief Engineer, **Alexander Klachkov**, spoke with YourTube about how the company is improving the efficiency of its operations and about the transformations that lie ahead.

Mr. Klachkov, which projects will be implemented in the final stage of the strategic investment program?

Two of the largest projects are currently in the active stage of construction – the melt shop at TAGMET, which will have an annual billet capacity of 950,000 tonnes, and a high-tech seamless pipe production line with an FQM continuous rolling mill that will have an annual capacity of 600,000 tonnes. A result of implementing these projects will be that state-of-the-art technologies will be introduced, from steelmaking to the production of round billets to the manufacture of finished pipe in a wide range of steel grades, strength groups, diameters and wall thicknesses, as well as types of threaded connections.

At the same time, we are actively working to modernize technology and equipment used in finishing, inspection and testing of products to best meet our customers' requirements for quality pipe. For example, the finishing line for casing and plain-end pipe will be reconstructed at the Volzhsky Pipe Plant, along with the installation of nondestructive testing methods.

Production of longitudinally welded, large diameter pipe will be optimized in order to increase productivity and expand the assortment of large diameter pipe and comply with standards and customer specification requirements. Additional transport mechanisms have already been installed – mobile units for bevel processing – and we have begun modernizing the mill that produces longitudinally welded, heavy-walled pipe.

The service division is also being modernized. TMK Oilfield Services is building a line to apply internal anticorrosion coating on pipes used in oil pipelines. As part of our effort to rebuild drill pipe joint manufacturing, the Orsky Machine-Building Plant plans to introduce a new stamping line and the line for annealing of billets.

In order to improve the quality of oil country tubular goods, we are introducing new nondestructive testing methods and upgrading existing ones, new threading machines, a modern hydraulic press, hydraulic pipe testing, as well as new coupling and coupling sleeve equipment.



Is any additional production capacity being established at Sinarsky Pipe Plant?

We have several interesting projects there. Already this year, in Shop V-2, a section will be established to produce coiled tubing from carbon grade steel for industrial application. The plant is also successfully developing a new high-tech product, vacuum insulated tubing (VIT), which enjoys demand in difficult oil and gas producing conditions, including those found in the Far North. Last year a section to produce this type of pipe was commissioned,

and a trial order has already been delivered to the first customer, Gazprom. By 2014, we are planning to produce up to 20,000 meters of vacuum insulated tubing. At Sinarsky, a joint project with RUSNANO is also being implemented under the auspices of TMK-INOX, which involves the production of precision stainless steel pipe.

Are there plans to increase manufacturing capacity for premium products?

Yes, we do have such plans. Demand for premium products

is growing, and we have already secured orders for almost the entire year. TAGMET is actively working in this direction, producing about 3,000 tonnes of premium pipe each month, one of the best performance records among our plants. Last year, the Orsky Machine-Building Plant commissioned a line to thread casing with premium connections. Now we're planning to equip the threading area with a hydraulic press for testing. At the Volzhsky Pipe Plant we are modernizing the second casing line to increase produc-

tion of premium pipe, including heavy-walled pipe. It's possible that we will build a new premium line here if the market will behave as we expect. Moreover, TMK IPSCO is implementing a number of projects aimed at developing and expanding production capacity for pipes with ULTRA™ Premium Connections that are sought after for horizontal and directional drilling in gas fields.

What other investment projects are underway at the American and Romanian divisions?

TMK IPSCO's most important project is the R&D Center in Houston. The building has already been constructed, and acquisition and installation of lab equipment for testing is currently underway. This year, we are planning to begin using the center to its full capacity and obtain accreditation for the right to certify premium connections.

The European division is growing its share of high value-added product sales. Last year, a series of events began at TMK-ARTROM that is aimed at increasing production of industrial pipe made from alloy steel that is subject to quench and temper processes, as well as cold-deformed pipe. As part of this project, construction has started on a new line for pipe finishing, nondestructive testing, processing and storage of finished goods.

In general, the plant is undergoing dynamic development and is remaining competitive with respect to other pipe producers. By the way, there are eight such plants in Romania. TMK-RESITA is implementing a project to improve billet quality and move over to production of 200mm and 280mm rounds. Furthermore, in the near future, it will start a project to develop the scrap warehouse, which will ensure a stable supply for steelmaking.

To reduce environmental impact and conform to environmental legislation, the gas-cleaning unit is being upgraded at the plant.



How would you assess the results of the modernization? Have we begun to see the advantages yet?

Without a doubt. Let's take a look at the largest facilities. The electric arc furnace at Seversky Tube Works is working excellently, and its performance is among the best in Russia and indeed the world when compared to similar models. Since the beginning of the year the plant has been exceeding planned performance for billet production, and we hope that Seversky will reach 850,000 tonnes for the year. It should be noted that even with such high production volumes, the level of nonconforming product is no higher than 0.3 percent. This is below the norm, which is 0.66 percent. Performance on consumption indices is also optimal, which is currently at the level of 1.122 against a norm of 1.137, which is also an achievement. Half of the billets produced at Seversky go to the Sinarsky Pipe Plant under a cooperative agreement, and there they are very satisfied with the quality.

The PQF continuous rolling mill at TAGMET, another of our large

Capital projects will introduce cutting-edge technology at TMK's production facilities

projects, is currently operating at 80 percent capacity. This year we plan to produce 470,000 tonnes of pipe at this mill, which is very strong performance. It's quite obvious that the design capacity is calculated rather rigidly. With such a wide mix of pipe products that the PQF rolls – a diameter range from 73 mm to 273 mm – a design capacity of 600,000 tonnes is, indeed, very high. This year, we have identified a number of measures that will optimize the performance of the complex and improve its performance. This includes us considering the question of reconstructing existing

threading lines and increasing production capacity for couplings. We have also scheduled construction of a special line to finish plain-end pipe. In 2012, we will conduct another major overhaul of the PQF mill. We have already replaced a number of motors, and we will also install strengthened reducing gears.

What challenges are we encountering when mastering new equipment?

There are both technical and human challenges. For example, at the early stages of mastering the PQF mill we had difficulties because of some structural deficiencies in the equipment itself. There are very few three-roll rolling mills in the world, and in Russia, there is only one – at TAGMET. It is clear that equipment manufacturers are still gaining experience in designing these units, so there are still a few shortcomings. We eliminated most of them during the mill's commissioning.

But the technical aspect is less important than the need to ensure that the new production operations have service personnel with the necessary qualifications. Modern equipment is very complex, and its development makes use of the most advanced scientific and technological achievements. This means increased demands on the training levels of engineers, manufacturing and maintenance personnel. Training and skills development are the most important tasks that we are solving alongside the modernization of production. At each facility, therefore, we conduct training programs when introducing new equipment. In addition, the reconstruction process itself is planned so that specialists from different plants with similar equipment can be mutually trained. For example, the commissioning team for the PQF mill at TAGMET will be involved in building a similar complex at Seversky Tube works with an FQM mill. And vice versa – at Seversky they have solid experience operating electric arc furnaces and they, in turn, will help colleagues from Taganrog where such a furnace is currently under construction.

Have there been any challenges with retraining?

The difficulty is that we need to give people not only new knowledge but to change their attitude to work and the approaches they take in their work. The equipment is not only difficult, especially in terms of automation and hydraulics; it implies a very different work pace. One electric arc furnace at Seversky now produces more steel than four open-hearth furnaces combined. Whereas melting in an open-hearth furnace used to take 11 hours, now, with the electric arc furnace, it takes place every hour. This changes everything for the employees: the level of control is quite different and tests need to be taken more often.

How do the divisions work together when it comes to organizing integrated product deliveries?

Very effective cooperation has been developed. We are increasing the supply of pipe from our Russian and Romanian plants to America. At the same time we are increasing our share in the supply of pipe with higher added value. In addition to the green tube – i.e., without finishing – we are already supplying pipe for heat treatment; the next step will be cutting the threads. We are committed to delivering finished products with high added value – this is more efficient and more profitable.

TMK-ARTROM, which focuses on industrial pipe, supplies its products to the European and U.S. markets. Our Romanian colleagues have a huge advantage in that they are in the EU. Whereas we are confronted with a variety of protective measures such as quotas and tariffs, for them these problems do not exist.

When will all of the company's facilities begin following a single corporate style for product packaging and shipment?

This is a large-scale and long-term task whose main goal is not only recognition in the market but also the presentation of TMK manufacturing facilities around the world as a single company. Last

year, all our facilities began to move to unified requirements for product packaging. The labels on pipes have been standardized with the TMK logo and the logo of the manufacturing plant. We are still implementing uniform markings – a black pipe with orange protectors. By the latter half of the year our deliveries to the U.S., Russia and Romania will conform to common standards. Without a doubt this task will increase the responsibility of each facility to ensure product quality and meet customer expectations.

2012 has been announced as the year of increased operational efficiency and product quality at TMK. What tasks remain to be solved?

Now, when customer requirements are becoming stricter, quality is a determining factor when it comes to increasing competitiveness. Improvement of product quality has always been on the agenda. This work is ongoing, and it is complex. As for the technical base, the first step is the replacement of obsolete equipment, and we are almost finished. Without this work, we could not move on to the next level. The Mannesmann brothers patented the pilger seamless tube mill in 1891. These units worked with us at TAGMET until we installed the PQF. But pilger mills have already had their day; everything possible has already been "squeezed" from them.

The same goes for the open-hearth furnace, which was invented back in 1864. It was once cutting-edge technology, but now it no longer meets the requirements of modern manufacturing. In order to dramatically improve the production process, it is necessary to change the equipment itself and learn a new technology – continuous casting of steel. This is what we have done, having commissioned a melt shop at Seversky, and what we are now looking to do at TAGMET.

Now that we have upgraded production and introduced advanced equipment, our task is to continually hone and improve all processes to achieve the objectives announced for 2012.

How important is the "people factor" when it comes to the quality policy?

It is one of the key factors, because it is people – employees – who in fact put the company's possibilities into practice. You can install new equipment and train staff, but there will be no progress without employees' awareness of their personal responsibility for work efficiency and the fulfillment of requirements to ensure product quality, for compliance with rules and regulations on labor protection and industrial safety, and for reduction of negative environmental effects. It is no accident that we are introducing a new philosophy of quality in our teams, a philosophy which lies in the methodology of Lean Six Sigma. With its help, we are involving key employees in the process of continuous operational improvement, including the practice of lean manufacturing. TMK IPSCO has successfully applied this methodology. At the Russian plants, we have already completed 13 Lean Six Sigma projects with an anticipated savings of 400 million rubles. This year the new practice will be implemented at the Romanian facilities as well. For us, it is important that this methodology be an effective tool to improve production efficiency and at the same time teach specialists at all levels to show a personal interest in the continuous improvement of technical processes.

Now, when competition is getting stronger not only for product quantity but for product quality, we cannot have the mindset that there are small and insignificant details when it comes to the company's operations. We need to tighten up and use all our reserves in all directions. Alongside the technical change, we need to resolve issues of rational use of resources and equipment, tighten control at all stages of the process, and improve the processes of the corporate quality management system. This is also a culture of production, of how our pipes look, and of service. We now have the most important thing – a great technical and material base, specialists, and orders. So now the focus should be to hone in on the details, which will undoubtedly be reflected in improved business efficiency at TMK. ■



CAPITAL PROJECTS TRANSFORMING TMK IPSCO

When Dave Diederich assumed the role of Vice President and Chief Manufacturing Officer at TMK IPSCO in August 2011, he accepted responsibility for overseeing a number of capital investment projects underway at the company. YourTube spoke recently with him about some of the projects underway to increase efficiency, quality and competitiveness at TMK IPSCO.

What is the primary aim of TMK IPSCO's capital investment strategy?

Our overriding goal in implementing TMK IPSCO's strategic investment program encompasses a number of directions. First, many of the projects underway are aimed at bringing greater efficiency to our operations, both to the manufacturing side and to our supply chain. We ultimately are driving towards being the low cost supplier with excellent quality. The market is good right now but if it should go into a downturn the low cost supplier will still be successful. We are also looking to increase production capacity in order to gain market share and expand into new markets. This is particularly true with our high value-added line of ULTRA™

Premium Connections. Improving our research and development capabilities is another area we're working hard on, especially as we continue to bring innovative products and services to the market. Finally, improving the safety of our crews and making our operations more environmentally friendly are a key part of our strategy.

What are some of the investments TMK IPSCO has been making in its Premium division?

In March 2011, we commissioned a second thread line at the TMK Premium facility in Brookfield, Ohio, where we manufacture ULTRA™ connections. The addition of a second line brought a number of benefits, including doubled production capacity and

the ability to thread a wider range of product more efficiently, including the new ULTRA-QX™ Premium Connection, which is especially important in deeper and higher pressure drilling environments.

Prior to that, we had commissioned a line at the Brookfield facility to manufacture connections fittings and accessories for oil and gas exploration and recovery. The accessories business is crucial, as the float equipment and other tooling required in the wells require the same threading as the pipes with our premium threads. We are also expanding and upgrading our services business and facilities at our Houston Plant.

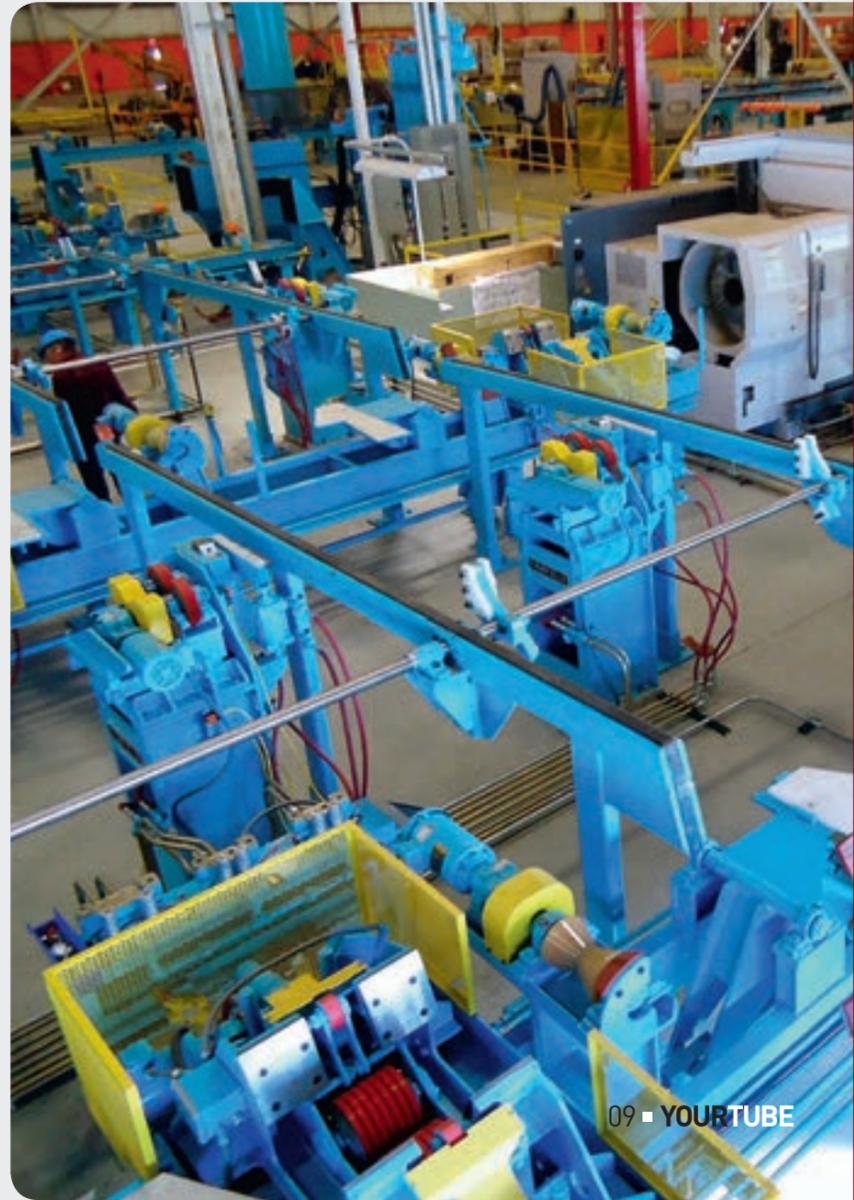
To serve our growing customer base in Canada, we are developing a new TMK Premium threading and

services facility in Edmonton, Alberta. This facility will thread the entire range of ULTRA™ products from 4 1/2 to 13 3/8 inches in diameter. If all goes according to schedule, we intend to have the facility up and running toward the end of this year.

The largest investment we are currently making in our premium business is at our Odessa facility (Texas). The Odessa facility had been grown from scratch over the years and was spread out over several sites within Odessa. We are implementing a project to bring the Odessa Plant into one modern facility to make it a much more efficient and safer operation. We want our facilities to be of such quality that our employees are proud of their plants and enjoy their day at the workplace.



We take each and every opportunity to make our plants even more effective, supply high quality products at competitive prices and guarantee a good return on investment



TMK IPSCO has also been making major investments in its welded pipe division. Can you discuss some of those projects?

Most of the work on the welded side is being completed at our facility in Wilder, Kentucky. The biggest two projects have been the addition of a thread shop, which was commissioned last September and is currently in the process of ramping up to full production, and the new slitting facility we began building late last year. In early 2011, we also added two new end facing machines and a Work in Progress (WIP) system. Both of those projects have led to big product quality improvements and improved operation efficiency. We have several other key projects in the works for the Wilder Plant.



Why have so many of the initial projects been in the welded division and in Wilder in particular?

Last year, our Wilder facility celebrated its 30th year of continuous operation, so as TMK IPSCO's oldest facility, it was due for some significant upgrades. With its strategic location near the Marcellus shale and the growing demand for welded pipe resulting from increased oil and gas production in eastern North America, it made sense for us to make these investments in the Wilder operations sooner rather

than later. Historically much of Wilder's production was that of green tube that had to be shipped to other sites to be finished before it could go to market. Wilder is our largest welded mill and makes key sizes that the other mills don't make. There is huge opportunity for Wilder to grow and be very profitable.

As for the projects themselves, the Wilder thread shop represents a major improvement for TMK IPSCO's operations as a whole. With the new threading facility on site in Wilder, we are able to ship ready pipe to our customers much more cost efficiently than was previously the case when threading was done at other TMK IPSCO facilities. The new slitter that we are building with Ferrous Metal Processing will be the largest in North America and will give us the ability to process master coils on site and take advantage of Ferrous' unique slitter arbor technology. This

will be a major step forward for the Wilder facility and mark a major improvement in the quality of our welded pipe manufacturing.

We also saw a key opportunity developing in the line pipe market and we have several projects aimed at making Wilder an efficient high quality producer of mid-size line pipe – 10", 12" and 16". We have in the works the addition of an accumulator that will increase productivity on the mill and improve its yield tremendously. All of these projects, the slitter, the facers and the accumulator will make the Wilder 16" Mill a very efficient and high volume low cost producer of Line pipe. We expect it to pay off handsomely.

Wilder has also been the focus of a new safety initiative at TMK IPSCO. Can you say a few words about that? Given the extent of the capital investment taking place in Wilder and

the big changes that our employees are seeing as a result, we have taken special care to emphasize the importance of safe operations. The investments themselves have already led to improved safety. For example, the robot on our thread line that handles couplings resolves a lot of the ergonomic issues that are a big concern when couplings are handled manually. It also places employees at a safer distance from moving machinery. So far, we're very happy with the robot, and we're looking to use robots in other operations at TMK IPSCO, like grinding upsets and scanning threaded pipe ends for high speed inspections.

Last year, we also launched a safety advocate program at Wilder that we hope will serve as a model that can be implemented at our other facilities. The main idea of the program is to involve all management-level employees in undertak-

ing regular site safety audits and engaging in safety contacts with personnel on the shop floor. Our eventual aim with this program is to have 100 percent of employees involved in at least one safety contact per quarter, which will provide them with a greater awareness of safety issues and better equip them to find solutions for problems.

Do any of TMK IPSCO's capital investments involve specialized training for employees?

Late last year TMK IPSCO's Operations launched the Capital Project Management System to serve our team in charge of implementing the company's capital investment projects. The overriding goal of the team and the new system is to deliver strategies and solutions that improve project management capabilities across TMK IPSCO. Through a newly-formed partnership with

Our investment program encompasses a number of directions: bringing greater efficiency to our operations, increasing production capacity, improving our R&D capabilities, improving the safety of our workers and reducing environmental impact

Xavier University in Cincinnati, Ohio, we are offering employees Project Management Certification Training. Later this spring, the Capital Project Management System will also be available online as an internal application and procedures manual.

We will also be upgrading and expanding our inspection capabilities across all of our facilities with new and improved types of NDT equipment. While we are doing this we will be training and improving the skills of our workforce in inspection techniques. I expect a lot of training to go on in this arena as we prepare and develop the new equipment.

Are any other projects planned? What is the general horizon for TMK IPSCO's capital investment program?

Aside from the major projects I discussed earlier, there are a number of other projects in place in our seamless division that are designed to remove manufacturing bottlenecks and improve the quality of steelmaking. These are still in the early stages and have a horizon of at least several more years. We're also making a number of investments related to pipe finishing at our facilities in Baytown, Texas; Catoosa, Oklahoma; and Koppel, Pennsylvania. These projects are designed to improve logistics within TMK IPSCO and to more efficiently process pipe imported from TMK's facilities in Russia and Romania. In terms of transforming TMK IPSCO, we have really just begun. We are looking for every opportunity to continue to improve the efficiency of our operations to be able to supply our customers a high quality product at a competitive price and to give our owners and investors a solid return on their investment. ■



QUALITATIVE GROWTH

TMK's Romanian manufacturing facilities are actively involved in a program to increase manufacturing volumes and efficiency. After a successful 2011, when these facilities increased production volumes and carried out important investment projects, 2012 will bring even bigger tasks to tackle. **Cristian Drinciu**, Deputy General Director of Operations at TMK-ARTROM and TMK-RESITA, talks about the goals for the year ahead.

In addition to further increasing production, we will concentrate our efforts on increasing production efficiency and improving the quality of our pipe. In order to achieve that, we have established some key areas for improvement. First, there is the development of a quality management system to decrease the volume of nonconforming products. Resource conservation and cost-cutting are an important area as well.

Another direction for improving efficiency is personnel training and

increasing the level of employees' involvement in all production processes.

Thirdly, there is improvement of product structure with increasing production volumes of high value-added pipe. Considering the demand in the North American market, which is our target in addition to Europe, we will increase production of pipe heat treated through quench and temper (Q&T). Last year TMK-ARTROM produced approximately 9,000 tonnes of such pipe. This year we plan to increase

this product's volume up to almost 11,000 tonnes. While the bulk of this product is meant for the American market, we have also started to produce heat treated tube for the European market. For instance, we are planning to produce around 1,000 tonnes of AC600D grade pipe. This is our registered trademark for special pilings used in Holland. In addition, we will increase the production of cold deformed pipe. This year we intend to produce 26,000 tonnes compared to 22,500 tonnes in 2011.

While we plan to maintain production of hydraulic cylinders, we expect to increase production of other types of mechanical tube, including precision pipe. Also, we plan to increase production of boiler tube and pipe for heat exchangers. This year's growth in production volume of heat treated and cold deformed pipe is expected to be at a maximum level given our existing heat treatment and nondestructive testing (NDT) capacities.

We are also implementing an investment program that was launched last year and includes upgrading and expanding Q&T, finishing and inspection capacities. This year our investment activities will be continued. The fulfillment of the investment program will allow for significantly increased production of more sophisticated products, improved product quality and optimized production flows.

MONITORING COSTS

One of our high priority tasks is cutting costs related to metal, gas and energy. At each shop of TMK-ARTROM and TMK-RESITA this task will remain a high priority along with achieving target production volumes and quality performance indicators. We have decreased the target costs of raw materials and energy resources at each shop compared to 2011. In order to minimize metal losses this year, we are taking measures to improve technological processes. This includes optimization of the thermal regime and drafting patterns of billets on the



Product quality requirements are getting stricter and stricter. Customers want to have perfect products, which forces us to adapt to the changes

EZTM mill and piercer, as well as optimization of semi-finished products' sizes and lengths at the cold-deformed shop No. 3 in order to decrease metal losses in the form of trimmings.

TMK-RESITA has been tasked with increasing the cycles of steel casting — up to 14 heats in a single cycle. In order to accomplish this, new isostatic refractories will be tested. In the fourth quarter we plan to introduce reladling technologies that are successfully being used at TMK's Russian plants. We intend to improve production planning in order to optimize loading of heating furnaces and furnaces for heat treatment with a reduction in natural gas waste. Moreover, we will continue to conduct internal audits in order to uncover any additional sources of metal and energy resources conservation at all shops, and we will monitor implementation of measures developed as a result of these actions. In 2012, we intend to introduce an energy management system in accordance with ISO 50001:2011 at both Romanian facilities.

TECHNOLOGY IMPROVEMENT

Requirements for product quality level are always increasing. Customers want to receive better products and we adapt to new

conditions. In order to comply with market realities, we have developed a number of measures to decrease internal quality losses and to improve claims procedures. For instance, TMK-ARTROM is taking measures to improve rolling technology of grades containing sulfur, especially for semi-finished products on cold processing. We also plan technical improvement of pipe production for hydraulic cylinders, which is the main product of the cold-deformed shop No. 3. We anticipate reconstructing the continuous caster at TMK-RESITA in order to ensure production of 280mm and 220mm round billets (instead of 250mm billets) using molds with 177mm and 350mm rounds. Moreover, we will improve steel casting technology through the introduction of automated control of the key parameters.

Having efficient process management — from planning, purchasing and quality control to product shipment — is an important condition for effective business performance. In 2012, to improve the management process, including improvement in accordance with customer requirements, we will develop and launch a corporate quality management system in the European division.

PEOPLE FACTOR

We understand very well that the employees at our facilities play an important role when it comes to issues of increased efficiency and quality of work. The "people factor" can play a determining role regardless what technology and equipment we have. That is why we are cultivating a new understanding of responsibility levels when it comes to our employees' work. We are also focused on their personal interest in improving production processes.

This year we plan to have educational programs that will help our employees master the quality management system. In addition, all employees will receive instructions on corrective and preventative actions. Plant managers and shops' managerial staff will attend training on market changes and methods of decreasing manufacturing costs. We will also conduct training on the energy management system in accordance with ISO 50001:2011.

Another important project to be carried out in 2012 is the introduction of Lean Six Sigma methodology, which is successfully utilized by TMK's American and Russian divisions. In 2012, using this methodology, we will conduct training for our personnel and will launch the first pilot project by the end of the year.

Part of this year's educational program is professional improvement and mastering of new technologies. For instance, we will conduct training for employees of the quality control department since new equipment for quality control was commissioned at TMK-ARTROM. In addition, employees working with the continuous caster will learn the reladling technology based on the experience of their Russian colleagues.

We are striving to use all resources in order to improve product quality and the efficiency of all the processes at our facilities. This will allow us to stay competitive in the market. ■

KAZAKHSTAN: WORKING PROACTIVELY



TMK is one of the top three pipe suppliers in Kazakhstan, a position it achieved largely thanks to the coordinated and efficient efforts of the TMK-Kazakhstan trading company. For nearly nine years TMK professionals have been successfully working with Kazakhstan's leading oil and gas companies. This has strengthened TMK's position on the country's highly competitive market.

Kazakhstan is one of the world's biggest oil producers, with annual oil production more than tripling in the past 10 years from 25 million tonnes to 80 million tonnes and annual gas production quadrupling from 10 billion cubic meters to 40 billion cubic meters. The rapid development of the oil and gas industry has made the country one of the three fastest growing economies of the decade along with Qatar and China (according to a rating published by Ernst&Young and Oxford Economics). Kazakhstan holds the world's ninth largest proven oil reserves at nearly 6 billion tonnes,

and probable oil reserves at fields in Kazakhstan's sector of the Caspian Sea alone top 17 billion tonnes. KazMunaiGaz, the national oil and gas company, is the industry leader in Kazakhstan. The country has created a favorable investment and business climate, and as a result has attracted foreign companies such as ExxonMobil, Total, Chevron, CNPC, Eni, and Shell, to name a few. Kazakhstan's rapidly growing economy generates strong demand for pipe products. As a result, TMK competes on the Kazakh market with local companies, Russian, Chinese, and Ukrainian producers, as well as companies from western Europe and as far away as Argentina. However, TMK-Kazakhstan CEO Sergei Martsev says the established reputation of TMK pipe as a high

quality product makes the company a strong competitor. "We are more than just a trading company; we represent one of the world's largest pipe producers, and the biggest producer in Russia," Martsev said. "Our reputation is valuable. For instance, the quality of product from China can be good or not so good, but TMK pipe is an established brand, like Swiss watches." TMK operates the TMK-Kaztrubprom plant in Kazakhstan, which produces production tubing and casing in diameters up to 168 mm for the oil and gas industry, including pipe with premium connections. TMK-Kazakhstan successfully markets this product and covers any shortages with product supplied directly from its Russian plants. TMK-Kazakh-



Effective logistics, guaranteed supplies under tight schedules, and a proper dialogue with customers are the key principles TMK-Kazakhstan relies upon

« Signing a contract with SMART-OIL

stan can therefore offer the broadest product assortment on the Kazakh market, supplying not only the upstream oil market, but also other industries, such as energy, construction, chemicals, and public utilities providers. The company is expanding business relations with companies such as Kazakhmys, TNK Kazkhrom, ENRC, KazStroiService, and others.

The company's reputation is built on both product quality and excellent customer service. TMK-Kazakhstan has established a network of warehouses in the cities of Astana, Atyrau, Aktobe, and Qyzylorda to ensure the most convenient delivery schedules and conditions. The warehouses maintain inventories of nearly 5,000 tonnes of all kinds of pipe so they can quickly fill customer orders.

"We even stay ahead of the game: our managers determine how much pipe our clients will need in the coming year. The pipe is delivered to warehouses ahead of time and can be delivered the next day once an order is received," Martsev said. TMK-Kazakhstan has established and honed its supply system over the years; at the client's request, company representa-

tives will deliver finished product to any destination, whether it is a field or warehouse, within 24 hours of receiving an order. Martsev said the company prides itself on its effective logistics, guaranteed fast delivery times, and its ability to establish rapport with customers.

The company plans to continue expanding its sales network in Kazakhstan, strengthening TMK's presence on that market, and building long-term relationships with customers, primarily in the oil and gas industry, meeting their needs as best as possible. ■

COMMENT



Sergei Martsev,
General Director
of TMK-Kazakhstan:

"TMK-Kaztrubprom received CT-KZ certification in February, allowing the company to compete with local producers and increase TMK sales in Kazakhstan. We can also offer companies working in Kazakhstan our own developments for oil and gas fields that are difficult to access — pipe with

premium connections produced by the TMK's Russian facilities and pipe with ULTRA™ Premium Connections produced by the American division. Active development is beginning at offshore fields, and premium products are needed for offshore drilling. This is a very complex and unique product. Not every pipe company can produce premium product and that fact that we can gives us an important advantage on the market."



UNCONVENTIONAL RESERVES

Two conferences took place earlier this year in Chicago and Houston to focus on positive trends facing the energy industry in the coming years, unconventional oil and gas reserves and advancing technologies. **Piotr Galitzine**, Chairman of TMK IPSCO, was a key speaker at each. During the conference in Houston he received AMM's Industry Ambassador/Advocate of the Year Award.

Two conferences devoted to energy issues recently took place at the University of Chicago's Harris School of Public Policy and featured Piotr Galitzine, Chairman of TMK IPSCO, as a key speaker. In January, Galitzine gave a presentation entitled "World Energy and the TMK Group" to a group of approximately 75 undergraduates, graduate students, faculty members and other parties with an interest in energy and finance-related issues. During his presentation, Galitzine highlighted TMK's growth as a global company and discussed how it was poised to take advantage of many of the challenging oil and gas projects currently underway in Russia and North America.

"Although drilling and extraction technologies keep improving and new unconventional deposits of

oil and gas continue to be discovered, it is becoming clear that 'peak oil' isn't happening any time soon," said Galitzine. "TMK continues to develop a number of premium-class products capable of withstanding the difficult conditions in these hydrocarbon-producing environments, from North America's oil and gas shale plays to upcoming projects on Russia's Arctic shelf."

During the other conference, called "Energy Forward 2012," the main question concerned the current uses and future prospects of shale gas, which is quickly becoming less and less expensive to extract. "Shale gas is winning converts across the U.S.," said Galitzine. "First, we are seeing shale gas make inroads into coal-fired electricity. Coal's share of electricity generation in the U.S. has decreased from 53 percent to 42 percent in 10 years. Second, we are

heartened by the discussion of compressed natural gas being used as a transportation fuel."

As Galitzine reminded attendees, President Obama recently cut the ribbon on a chain of CNG stations from Los Angeles to Salt Lake City, and T. Boone Pickens' company Clean Energy is building a set of tractor-trailer fueling stations from Texas to Georgia. "The cost of a converting a rig has dropped to \$5,000 and for a light passenger vehicle, it's less than half that," Galitzine explained. "At TMK IPSCO, we are studying the economics of modifying our modest truck fleet to have dual-fuel capabilities. Finally, in 2015-2016, the U.S. will begin exporting liquefied natural gas (LNG). This will be a totally new game, as permits pending to export LNG have increased from 2 percent of produced gas to 19 percent."

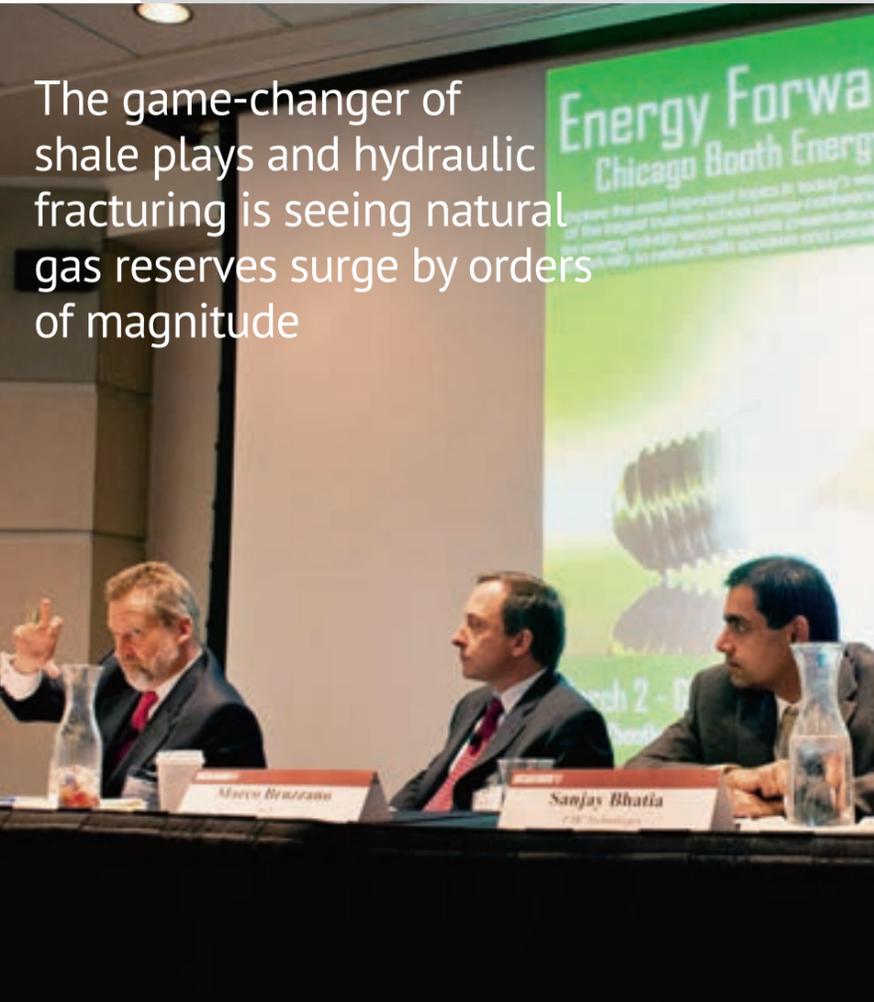
The panel discussion – The Future of Fossil Fuels – dealt with questions on energy-related policies and trends, commodity prices, shale gas development prospects, new technologies, and mergers and acquisitions. In addition to Galitzine, other panel participants were Rob Winner of Ungaretti & Harris, Sanjay Bhatia of FMC Technologies, Marco Bruzzano of DTE and Martin Brotschul of Deloitte.

With nearly 200 visitors, Energy Forward 2012 saw a number of industrial companies participate, including BASF, Invenergy, Acciona, Exelon, and DSM, among others.

INDUSTRY AMBASSADOR/ADVOCATE OF THE YEAR

In February, Piotr Galitzine took part in the 5th annual AMM [American Metal Market] Steel Tube & Pipe Conference in Houston, Texas. During his presentation, Galitzine focused on the positive trends facing the energy industry in the coming years, singling out unconventional oil and gas reserves and advancing technologies as providing particularly strong cause for optimism. "The game-changer of shale plays and hydraulic fracturing is seeing natural gas reserves surge not only in the U.S. but around the world, boosting estimated reserves by orders of magnitude in places as diverse as Poland, Argentina and China," Galitzine said. "As much oil and gas we thought we had until now, the unconventional plays have between 4.5 to 5 times more. This is world-shaking; it is going to set energy trade flows on their ear."

Along with vastly larger natural gas reserves that can be extracted economically as a result of advanced drilling and hydraulic fracturing technologies, Galitzine discussed the effect that downward pres-



The game-changer of shale plays and hydraulic fracturing is seeing natural gas reserves surge by orders of magnitude

sure on gas prices is having on the market and on innovation among energy consumers. "Given thermodynamics, the price of nature gas should be one sixth that of a barrel of oil," Galitzine said, noting that with oil at \$98 per barrel, natural gas should in theory be at \$16.50 per mmBtu instead of about \$2.50 per mmBtu. "But that should change. Whenever you have these kinds of low prices, smart people are going to figure out how to make money out of it, and smart people are beginning to do that," he said, noting the increased interest in converting coal-fired power plants and fleet vehicles to natural gas.

During the conference, Galitzine also received AMM's Industry Ambassador/Advocate of the Year Award for his efforts to promote international trade and cooperation in the industry. "I am far from being the only industry advocate," Galitzine said of his award. "I actually think that all of us in the business are advocates, bringing to others' attention the technologies that have been developed and the ways that they are improving the lives of others, both domestically and globally." ■

CUTTING-EDGE TECHNOLOGY ONLY

Implementation of TMK's strategic investment program is underway, and one of the most major projects currently going full steam ahead is the construction of an electric arc steel melting furnace (EAF) at TAGMET [Taganrog Metallurgical Works]. The company plans to launch the new electric steel melting shop as early as 2013.



The daunting task of modernizing TAGMET's steel melting capacity is approaching completion according to plan. Over the last several years, the plant has gradually been bringing new facilities online in the open-hearth shop, introducing state-of-the-art technologies. The first to be launched was a ladle furnace for steel. Next, the plant constructed, commissioned, and successfully incorporated a continuous-casting machine into the production process. In 2010, one more important assembly was included in the process chain: a vacuum degassing unit. The final — and perhaps most important — facility that figures in TAGMET's open-hearth shop upgrade project will be an electric arc steel melting furnace (EAF-150), which is now under construction. The implementation of this project heralds TAGMET's definitive transition from the obsolete open-hearth process to the electric smelting method of steel production. This will increase the facility's pipe shell capacity from 600,000 tonnes to 950,000 tonnes, as well as improving product quality and lowering production costs.

The investment project to construct this set of electric steel melting facilities got started in 2007. The global financial crisis had a negative impact on the project's timeline, but despite that, the work has never stopped. This project has been large-scale and technically challenging; one reason is that all the work is being done right next door to the open-hearth shop that is already in operation. Nonetheless, TAGMET's staff-based construction teams, as well as the construction contractors recruited for the project, have enough experience to bring it to successful fruition. They acquired that experience through the upgrade of TAGMET's pipe-rolling mill, which entailed adding a line with a PQF mill.

The current project involves installing the actual EAF-150 equipment in a building adjacent to the open-hearth shop, as well as constructing new process support facilities for the electric furnace on the plant's production floor: a water treatment unit and a lime burning section. In addition, the project includes upgrading the drop-hammer shop, the powder and iron alloys section, transportation facilities, communications, and other facilities. The plant is already laying

the necessary power supply networks for the new facilities. In order to secure the supply of oxygen and other process gases needed for the EAF processes, the gas supplier will build an air separation station in the immediate vicinity of the plant.

At this point, a roof has already been installed on the main building of the EAF. The main equipment for the electric furnace has already been manufactured by Germany's SMS DEMAG, and delivered to Taganrog; it is now awaiting the start of installation. The tracks for the steel, slag, and scrap cars are in place; cranes supplied by Danieli have been mounted; and the crew is now completing construction work on the main control room and the foundations for the primary equipment. Work is now actively underway on the power supply facilities, gas scrubbing system, water treatment unit, and scrap metal and iron alloys sections. The company is addressing an array of legal and financial issues having to do with building a 200 kV overhead high-voltage line 50 km long from Rostov-on-Don to Taganrog, which will supply electricity to the EAF.

As they carry out this project, the TAGMET team has been drawing on the experience of their colleagues at the Seversky Tube Works, where a state-of-the-art electric steel melting shop is already operating. The Seversky team's experience is being put to use in developing a staffing structure for TAGMET's future electric steel melting shop, as well as preparing technical personnel to work with the new equipment. Supervisors, technicians, and service staff from TAGMET's open-hearth shop will complete in-service training on the existing EAF at the Seversky Tube Works. Meanwhile, the smelters will also go through professional retraining at Taganrog Metallurgical College No. 25. ■



Mikhail Kravtsov,
TAGMET Deputy Technical
Director for Technical Upgrading:

“The launch of the EAF-150 will usher in a new era for the Taganrog steelmakers. Besides increasing the volume of steel output, the new equipment will further improve the quality of our products, minimize the amount of heavy physical labor, and reduce environmental impact. It will even transform our city itself. When you look at Taganrog from the sea, instead of the old smokestacks from the open-hearth shop, you will see the modern buildings of the electric steel melting shop.”

HEADING FOR THE ELITE SEGMENT



At TMK-ARTROM, one of TMK's two Romanian manufacturing facilities, the construction of the new WS Shop No. 4 for finishing and product storage is nearing an end. This project is being implemented under a program aimed at increasing the output of high valued-added products.

The target pursued by TMK-ARTROM is development of a product range whose market is occupied only by the elite segment of seamless pipe manufacturers, a product range that includes industrial use pipe that has been heat-treated, as well as cold-precision tubes.

The transition to production of more sophisticated products requires a range of investment activities that are currently being implemented at the plant. Some of the activities are related to the modernization and equip-

ping of existing production lines, but new production facilities will also be introduced. At Shop 1-ASSEL the company is planning to install an additional heat treat complex, which includes a reheat furnace with walking beams, as well as a quench and temper unit.

Several investment projects are planned related to both upgrading and increasing capacity of nondestructive testing, in particular ultrasonic testing (UT). Currently, the KARL DEUTSCH UT unit operates in the ASSEL shop. It allows for testing to be conducted on seamless pipe with a diameter range of 25–229 mm made of both carbon and alloy

steel on the basis of no more than two specifications.

Investment measures would include a planned modernization of the existing KARL DEUTSCH unit in order to provide additional control options to account for both standard and customer-specific requirements. In addition, at the ASSEL shop the finishing area will see the introduction of a pipe end-testing unit that utilizes magnetic particle inspection.

In 2011, the hot finished tube shop commissioned a new magnetic particle inspection unit to control the surface quality before cold drawing/rolling, which will greatly enhance the quality of the cold-deformed pipe produced.

To ensure the quality of pipe produced in the hot finished tube and cold deformed pipe shops, a contract was signed in early 2012 to supply a new ultrasonic testing unit for pipe diameter ranging from 15mm to 130 mm and wall thickness up to 16 mm. A result of this project is that it will be possible to include products requiring ultrasonic testing (e.g., boiler pipes and green tube for tubing) in the hot-finished shop's production program. This will also allow an increase in the cold deformed shop's production of pipe for boilers, heat exchangers and the automotive industry. It is planned that testing will also be carried out on the lower dimensional range of products manufactured at ASSEL. Commissioning of the unit is scheduled for later this year.

Ultrasonic equipment will be placed in the new shop No. 4, which is specifically designed for finishing and storage of pipe produced primarily in the hot finished tube and cold deformed pipe shops. Construction of the 4,400 square meter facility was started

in the second half of last year and is now nearing completion, with the building cranes installed and interior areas currently being prepared and fitted with electrical equipment. Completion of construction work is planned for the second half of 2012.

In addition to testing equipment, the finishing area will also feature an ecological lacquering machine to apply a layer of anti-corrosion protection on the outer surface of the pipe. It will also be equipped with a platform for labeling and packaging pipe. The second bay is intended for storage of finished products prior to shipment.

The implementation of the entire program will allow TMK-ARTROM to increase production of pipe with high added value, improve product quality and optimize production flows. ■



Capital investment projects will allow TMK-ARTROM to increase production of high value-added pipes

A NEW FIELD SERVICES WORK CULTURE

Oil and gas companies are more and more often choosing premium class equipment to construct their field facilities. Experts predict that production companies soon won't be able to do without it. The growing demand for premium products has not escaped the notice of TMK-Premium Service, one of the key players in this segment of the pipe market. TMK-Premium Service's general director, Sergei Rekin, tells YourTube about the company's latest high-tech developments, advancements in well construction supervising, and plans for the future.

Mr. Rekin, what results did you start off the new production year with?

There have been a lot of results, because the premium segment of TMK's business probably showed the most active growth. Not only did the volume of premium production increase, but its share of total shipment volume did too. In 2011, TMK shipped 472,000 premium connections through our Russian (TMK family) and American (ULTRA™) divisions. That's 18.9 percent more than in 2010. The company's Russian enterprises increased their shipping volume of premium threads by almost 30 percent. That included some types of products that we were supplying for the first time, which is a very big responsibility – and that's something to be proud of. For instance, at the end of last year, the Sinarsky Pipe Plant shipped a pilot batch of vacuum insulated tubing with premium connections to Gazprom for the Bovanenkovskoye oil gas condensate field on the Yamal Peninsula. No one in Russia had ever made this kind of pipe, which have enhanced insulation properties. The tests confirmed the high quality of our insulated tubes, and this year we are moving on to large-scale production.

Other major Russian oil and gas companies have also expressed interest in our new products. In 2012 we are planning to produce and ship about 9,000 linear meters of vacuum insulated tubing. I should mention that most of our premium products are replacing imports on the Russian market and measure up to their global counterparts in terms of quality. Our share of the Russian premium market segment is now about 70 percent. TMK IPSCO's enterprises in America, with their line of streamlined ULTRA™ Premium Connections, are growing their local market share just as steadily thanks to new non-traditional fields. They



We currently account for some 70 percent of the Russian premium segment

now account for roughly 30 percent of the market for premium connections used in the production of shale gas.

What other unique premium products did TMK introduce in 2011?

First of all, we offered martensitic grade steel pipes with chromium, which are used in highly corrosive environments containing hydrogen sulfide, carbon dioxide, and so forth. Our Russian plants have perfected Chrome 13 steel casing and tubing with TMK GF and TMK FMT premium connections. These products, like the vacuum insulated tubing, are replacing imports on the local market. We have delivered the first batches of the new corrosion-resistant pipes to Gazprom and Rosneft. And quite recently, in February, the

Volzhsky Pipe Plant shipped to Gazprom a pilot batch of a low-temperature version of our TMK PF threaded casing pipes made of Super Chrome steel alloyed with nickel and molybdenum. We also supplied Gazprom with special low-temperature tubing having TMK FMT threaded connections for the Bovanenkovo field. Besides that, these unique innovations also added to our TMK family line of premium threads: TMK CF, TMK CWB for casing, and TMK PF for tubing.

What's different about the latest-generation premium connections?

The new designs of threaded connections are special in that they can be used with the latest drilling and production technologies. The new threads have enhanced operational parameters and can be used in

super-deep wells, in horizontal sections, and for drilling with casing strings.

TMK CF connections withstand 100 percent of compression and tension, which means you can use them in any well, no matter how complex. This development, by the way, was strategically important: our competitors already had these kinds of products – VAM 21, and Tenaris Hydril. The unique design of the TMK CWB (an improved modification of the Buttress connections that are widely used by Russian companies) has also proven highly effective against strain and bending. What sets it apart is that it's more resistant to torque, its simplicity, and the fact that it can be twisted multiple times without losing its properties. It can be used in casing drilling, and in the production of shale gas and high-viscosity oil.

We focus on building up long-term business ties with our clients rather than one-time sales. Our role is not only that of an equipment supplier but also that of a partner of oil and gas companies

Sergei Rekin, General Director of TMK-Premium Service

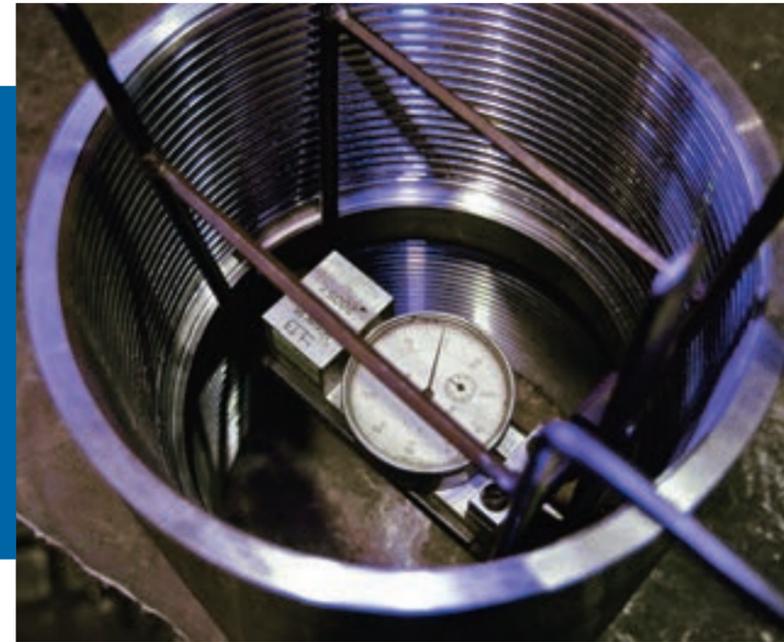
And then, finally, the TMK PF connection for oil-well tubing has outstanding seal protection from shocks on the pipe end and increased torque on the connection. This is our first connection to be certified under the ISO 13679 CAL IV standard and to gain access to foreign markets that require this qualification.

Why was it important to get that certification in particular?

The highest level of ISO 13679 certification – which is the fourth level, CAL IV – is the “entry ticket” into the pool of leading global suppliers of pipe products for both onshore and offshore projects that involve complex drilling and hydrocarbon production. We have already received that certification for the TMK PF and TMK-PF ET casing pipe connections, the TMK PF for oil-well tubing, and the ULTRA-QX™ (244.48 x 13.84) connection made by the company’s American division.

CAL IV tests are not only very complex – in terms of preliminary preparation (documentation, prototyping), in terms of procedures and in terms of the trials – but they are also costly. We are going through all that work because we realize that the expense will definitely pay for itself. Having that certificate raises the product to a new level, including in terms of price.

Right now, the main base for certifying our products to comply with international standards, including ISO 13679 CAL IV, is the Oil States international testing center in Aberdeen (UK). This year, TMK opened its own R&D center in Houston. At that center, we will be able to carry out development, testing, and – once the site is accredited – certification of our new products, which will significantly speed up the process from product creation to its promotion on the market.



How do new products get tested now?

Research, design, development, and moving the threaded connections into production – we do all that ourselves. We work with RosNITI [Russian Research Institute for the Tube and Pipe Industries], as well as specialized institutes like VNIIGAZ [All-Russian Scientific Research Institute for Natural Gas] and VNIITneft [All-Russian Scientific Research Institute for Petroleum Technology], which have the necessary equipment available. Usually we conduct a series of bench tests and field trials, including onsite testing at the client’s fields.

Last year, we successfully tested our products at complex oil and gas production facilities. At the White Cat offshore field in Vietnam, we tested oil-well tubing with TMK PF connections; at another offshore field, the White Tiger, we tested ULTRA FJ™ connections. Oil-well tubing with TMK FMT connections withstood a test at the Korchagin offshore field (Caspian Sea), which is operated by Lukoil-Nizhnevolskneft, and at the Bovanenkovo gas-condensate field operated by Gazprom Dobycha Nadym. We also tested oil-well tubing with TMK FMT connections, but those were made of steel with chromium; they passed a strength test at the Chkalovskoye field operated by Tomskneft (a Rosneft company). At Novatek’s Yurkharovskoye oil-gas-condensate field, we have already done two unique pipe runs. In both cases, we simultaneously ran casing pipe strings with TMK PF connections in the onshore and offshore zones (the Kara Sea floor) of the field.

Are TMK-Premium Service’s partners happy with your field service?

We’re not shooting for one-time sales. We’re trying to establish long-term relationships with our customers. We’re not just equipment suppliers for oil and gas companies – we’re partners. What

we offer is a comprehensive package. This means not only world-class pipes with premium threads, but also service that goes hand in hand with sales, including supervising the pipe run at the end user’s site. We oversee the whole process of consumer acceptance and explain the operating rules for our products. Our specialists are required to be present at the first run. Premium threads are a high-tech product and working with them requires specific knowledge. In order for the partner not to have any problems occur due to incorrect operation of this costly product, we train the service companies’ personnel, we make sure the product is being used correctly, and we check the parameters to guarantee proper maintenance.

We also make sure the well string is outfitted with the necessary equipment: adapters, joints, and other additional accessories. That equipment is provided by our licensed companies in TMK’s service division, as well as companies that partner with us under license. In other words, our consumer receives everything right away, and with guaranteed quality and follow-up service to boot. We can independently perform the whole set of services on a turnkey basis. For instance, last year our specialists worked with a service team from the Pipe Maintenance Division (TMK Oilfield Services) to independently run a tubing string with TMK FMT connections down a well at the West Salym oilfield for Salym Petroleum Development N.V. The run was monitored by our partner’s supervisors who, incidentally, approved the well on the first pressure test.

How is your license network developing?

Our opportunities to be an active participant in the service market largely depend on the number and level of our licensees, so we are constantly working in that direction. TMK-Premium Service licensees include both Russian and foreign companies that produce oil and gas equipment. For example, our U.S. licensee Ultra Premium Oilfield Services Ltd., cuts TMK PF, TMK GF, and TMK FMC threads to be used on well equipment for major oil service companies like Weatherford, Schlumberger, Halliburton, and Davis-Lynch; it also helps supply equipment with our threads to the Russian market, for projects operated by Gazprom, Novatek, and Lukoil. Another licensee in Canada, Topco, also cuts TMK threads and supplies oil-well equipment to the Russian market. We are planning to develop our license network further by covering Africa, the Middle East, and the Indonesian region (Indonesia, Malaysia, and Vietnam). I think we will succeed in building an international team to train our customers how to work with TMK premium threads. These specialists will be able to supervise pipe runs and provide technical support to customers in every corner of the world.

In 2011, TMK shipped 472,000 premium connections designed by the company's Russian (TMK family connections) and American (ULTRA™ family connections) divisions, representing 18.9 percent year-on-year growth

How do you interact with TMK IPSCO in the premium sector?

We are developing very effective cooperation in the premium division – including joint efforts by the Russian (TMK family) and American (ULTRA™) subdivisions – to promote premium products on the global market. We have granted licenses to TMK IPSCO for the TMK family of threaded connections. In turn, we are promoting ULTRA™ connections on the Russian market. We are now having our ULTRA™ threaded connections tested by the largest oil and gas companies in Russia, and the first ULTRA FJ™ streamlined casing pipes have already been shipped to LUKOIL and Gazprom. In addition, we have a joint program with TMK IPSCO to develop and test threaded connections, and we are working together to develop our license network.

What's your assessment of the demand for premium products – can companies really not do without them?

Most fields, especially onshore ones, are now being developed using "standard" equipment: it's much cheaper. However, hydrocarbon production is steadily moving to regions where petroleum can be effectively produced only with the use of advanced technologies. Companies that operate in complex geological and climatic conditions, including eastern Siberia and the Far North, are more and more often choosing to use premium products. We see this from the growing demand for our premium products on the part of our major oil and gas company partners: Gazprom, Novatek, Lukoil, Surgutneftegaz, Rosneft, and TNK-BP. In addition, experience shows that the use of premium pipes in the most critical areas of well drilling and infrastructure development is economically advantageous; it significantly increases operating efficiency and minimizes environmental risks.

As of today, we already have contracts for more than 100,000 tonnes of premium casing and tubing to

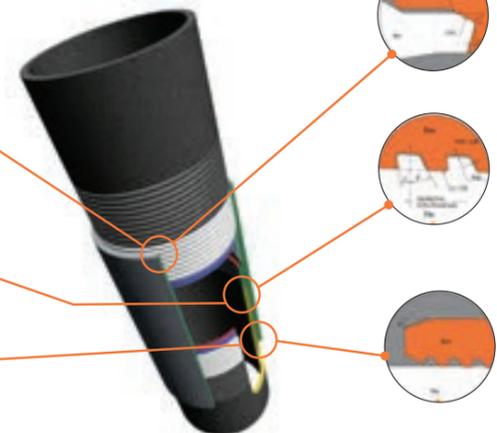


Application Field
 The high-performance TMK CWB connection designed for drilling casing and well casing of oil and gas fields. Main application: casing while drilling; shale wells; SAGD drilling.



New premium connections

Application Field
 TMK PF is a premium connection with extra gas tightness properties used for the construction and operation of directional and horizontal wells with corrosive environments.



be delivered in 2012. We are already accepting orders for next year as well.

So, plans for this year obviously include expanding the presence of TMK premium products on the global market?

Yes, our goal is to promote TMK products on international markets, as well as on CIS regional markets and in the main oil and gas producing regions, which often try to limit foreign manufacturers' access to their markets. As for the Russian market, we are planning to further develop our collaboration with Gazprom, Rosneft, and Lukoil on offshore projects.

To address these goals, we will continue working to certify our premium products to meet global standards, and to have them approved by major consumers. This includes testing our threaded connections for compliance with ISO 13679 CAL IV. Our new design for TMK CWB casing pipes will be tested for fatigue resistance to check its usability for drilling.

We will also continue actively conducting scientific research to develop new premium connections and technologies. One of our priorities is Super Chrome steel pipes. These will allow consumers to significantly extend the service life of wells under corrosive conditions. Last year, we went full steam ahead on developing lubricant-free technologies for premium pipe screwing; now the company's plants have to fully develop those technologies. Lubricant-free technologies substantially reduce the time needed to prepare pipe for downhole runs, by eliminating the task of washing the threads before applying thread jointing paste.

As we assess market development trends, we are always trying to stay one step ahead of the game. We offer new technical solutions, and along with them we offer a new philosophy of field operations, one that promotes the use of premium class oil and gas equipment. ■



GAZPROM DELEGATION VISITS TMK IPSCO

When TMK purchased the tubular assets of IPSCO four years ago, technology transfer and exchange of best business practices were seen as areas where the company's Russian and American divisions would both benefit tremendously. These benefits continue to be realized, with executives, managers, engineers and other specialists from both divisions regularly engaging their colleagues in close collaboration on a number of major initiatives. Aside from TMK's employees, however, one of the greatest beneficiaries of this ongoing exchange has been the company's customers.

One such customer is Gazprom, Russia's largest natural gas producer and a primary end user of pipe products manufactured by TMK. From January 15 to 21, a delegation from Gazprom travelled to the U.S. along with specialists from TMK-Premium Service. Following a series of meetings at TMK IPSCO's corporate office in Chicago, the delegation visited the company's new Research & Development Center and manufacturing facilities in and around Houston, Texas. Piotr Galitzine, Chairman of TMK IPSCO, accompanied the delegation for much of its visit, which included tours of the TMK



Gazprom's specialists were able to see TMK IPSCO's manufacturing facilities first hand. They were particularly interested in seeing the manufacturing process for ULTRA™ Premium Connections.

Premium threading and accessories facility in Houston and TMK IPSCO's pipe-processing and finishing facility in Baytown. "While they were here, Gazprom's specialists were able to see our manufacturing facilities first hand," said Galitzine. "Specifically, they wanted to see our manufacturing process for ULTRA™ Premium Connections, which they are very interested in using in some of their more difficult extraction projects." Sergei Rekin, General Director of TMK-Premium Service, accompanied the delegation for the duration of the trip. "Gazprom previously acquired integral-connection pipe only by importing it. But now



R&D CENTER IN HOUSTON

The new R&D center in Houston features state-of-the-art equipment, including two high-tech connection testers, a scanning electron microscope, collapse tester, tensile and fatigue testers, as well as equipment for a corrosion testing lab. The highly important work performed at the center covers all areas related to pipe design and inspection, including alloy design, welding, mechanical forming, connection integrity, non-destructive testing, and others. Finally, the center will also work to improve the quality of steelmaking itself, engaging in a wide range of metallurgical research involving both carbon- and micro-alloyed steel.

they will be able to purchase this product along with deliveries from TMK's Russian family of Premium Connections. Close cooperation has been established between the Russian and American divisions, and we are now developing production of ULTRA™ products in Russia at the Orsk Machine-Building Plant. This is also helping to develop the partnership with Gazprom.

One of Gazprom's most challenging projects is taking place in Nadym, an area in the Yamalo-Nenets Autonomous District of Russia's Far North that contains vast reserves of oil and natural gas. Russia's far northern and Arctic regions have often claimed to be the next frontier in hydrocarbon development.

"The area around Nadym is not only extreme, the gas located

there is in extreme formations," said Galitzine. "Gazprom Dobycha Nadym, Gazprom's local production subsidiary, has been tasked with bringing annual gas production up to 47 billion cubic meters within the next few years. In order to accomplish this, they will need our high-performing ULTRA Premium Connections."

Aside from premium connections that can withstand the pressure of these extreme gas formations, the production environmental also requires steel quality to be extremely high. During a visit to the company's recently-opened Research&Development Center in Houston, Gazprom specialists viewed the facilities where Russian and American colleagues have already begun working jointly to research and test new, higher quality steels.

"Because down-hole conditions are so sour and hostile to steel, Gazprom is already beginning to order increasing quantities of TMK's Cr 13 pipe for use in the Nadym area," said Galitzine. "They have already communicated that using these pipes, which are cast and rolled in Volzhsky and finished at the Orsk Machine-Building Plant, is the only way they can get the required amount of gas

The gas giant's experts noted the high level of technology and production at TMK IPSCO's facilities, as well as a thorough approach to everything associated with the manufacture of high-graded products



The new R&D center will focus on next generation premium products and will be capable of testing all kinds of premium connections

under budget given the drilling environment."

The opening of the company's new R&D Center will strengthen a collaborative relationship that has long existed with TMK.

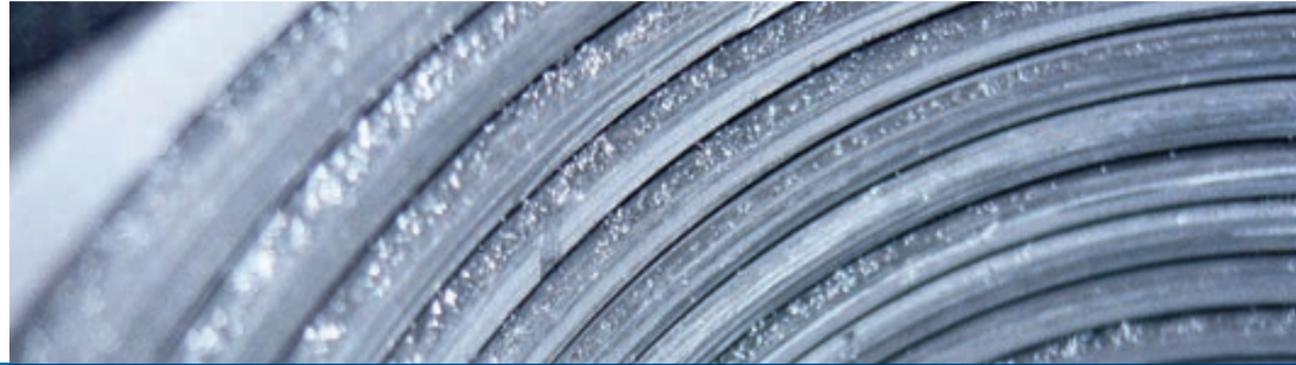
"The work done on new product and materials in the new R&D Center will complement the R&D work presently being done in Ros-NITI, where TMK's Cr 13 steel was developed," said Galitzine. "The

new R&D Center will concentrate on new generations and applications of premium connections, as well as testing of all the TMK Group's premium connections and development of new down-hole products."

The representatives from Gazprom highly appreciated the results of the visit and were satisfied with what they saw. According to Rekin, specialists from the gas

company took special note of the high level of technology and production cultural at TMK IPSCO facilities, as well as the thorough approach in everything related to the manufacturing of high-tech products.

"This visit will undoubtedly serve to further develop cooperation between our companies," said Rekin. ■



TUBE INSIDE A TUBE FOR GAZPROM

The first string of TMK vacuum insulated tubing (VIT) was successfully run downhole at Gazprom's Bovanenkovskoye oil gas condensate field. The development of this new product, the first of its kind manufactured in Russia, opens up new opportunities for TMK to collaborate not only with Gazprom, but with other major oil and gas production companies as well.

Vacuum insulated tubing – or thermocase, as it is also called – is a product that is unique on the market. TMK was the first company in Russia to commission the production of VIT at the Sinarsky Pipe Plant, tailoring it to the needs of Gazprom, with whom TMK

has been fruitfully working on a program to replace imports of high-tech products.

The first part of a pilot batch of VIT (total size: 722 linear meters) was sent in October 2011 to Gazprom Nadym Dobycha at its Bovanenkovskoye oil gas condensate field; the second part arrived in November. Upon arrival, specialists from the Sinarsky plant visited the field and monitored the product's transportation and unloading.

The first run of the new pipe down one of the Bovanenkovo wells (1,709 meters deep) took place in December 2011. The string was run by Gazprom Urengoy Underground Service, with the participation of representatives from the Sinarsky plant and TMK-Premium Service. «Our objective was to participate in the insulated tubing field tests,» says Ilya Chornykh, Deputy Manager of the Sinarsky Pipe Plant's Shop V-3 for new product types. «Since this was the first run of this kind of TMK pipe, it was necessary to be as careful as possible to observe all the process requirements.» The insulated tubing was used as the top section of the pipe string.



The lower section was also run with pipes made by the Sinarsky plant. According to Chornykh, these products were oil-well tubing with TMK FMT premium connections. The process of assembling the pipes and running the string downhole was incorporated into the regular workday. Experts from Gazprom VNIIGAZ confirmed the thermo-physical characteristics of the TMK insulated tubing in advance, making it possible to complete the assembly and all pre-run procedures on time.

“TMK has become a pioneer in the area of VIT production in Russia,” said Alexander Shiryayev, President



Running pipe strings at one of Gazprom's operations is a key milestone of ongoing strategic partnership between TMK and the Russian gas giant

& CEO of TMK. “The importance of this type of pipe for oil and gas companies is growing at the same past as growth in hydrocarbon production in harsh climatic conditions. The use of VIT in such fields allows for significant improvement in the energy efficiency of well development and for the security and environmental safety of production. The successful run of the first VIT produced for Gazprom is also an important step in the strategic partnership of our two companies.”

VIT is definitely an effective solution to the challenges of producing oil and gas in the harsh conditions of the Far North. The trouble is that with



no hard rock formations, permafrost soils around the well column gradually thaw during the process of gas and oil extraction, which involves temperatures of plus 40–50 °C. That, in turn, damages the pipe string, consequently making further production impossible.

VIT is pipe with enhanced heat retention properties and is designed in the form of a “tube within a tube,” i.e., a pipe of smaller diameter placed inside a pipe of larger diameter. The space between the pipes is filled with shielding insulation to minimize heat loss, then vacuum sealed. VIT helps prevent soil warming around the well and is designed to build up infrastructure in fields located in the harshest oil and gas production conditions, including permafrost areas.

This is why VIT is currently catching the interest of not only Gazprom, but of other major oil and gas companies as well. Now that it has made a successful first showing in a new segment of the business, TMK is planning to set up commercial production of VIT as soon as the end of 2012, with shipments to customers of about 9,000 linear meters. ■

VIT PRODUCTION

Insulated tubing is produced at the Sinarsky Pipe Plant, the TMK facility that is closest to the northern oil and gas production businesses of Gazprom, the product's main customer. Operations started in 2010, with the setup of a trial production line. Ramping up to production capacity to manufacture 114 mm to 245 mm diameter insulated oil-well tubing is slated for late 2012. The final phase of this project is to build a threading section, which will complete the production loop at Shop V-3.



“WE CAN MAKE A BREAKTHROUGH”

In late February, after successful field tests of vacuum insulated tubing (VIT) at the Bovanenkovskoye field, the Sinarsky Pipe Plant hosted representatives from Gazprom. Specialists from the gas company got a sense of the technical possibilities of expanding insulated tube production at the plant as part of the two companies' strategic collaboration.

The gas producers have already been working closely with the Sinarsky pipe technicians for about five years. Gazprom is interested in a broad range of pipe products to construct wells in the Far North. To ensure reliable gas production from underground formations, the companies are thoroughly examining the prospects of producing pipes, locks, collars, connections, and threads of particularly high strength and quality. Today, gas specialists are actively developing remote regions such as the Yamal Peninsula. The northern part of the Yamal-Nenets region presents special challenges in the near-surface zone. It is necessary to prevent permafrost formations from warming up during the production process, which is why sophisticated special-purpose pipe products are required. One of the most important projects of TMK's collaboration with Gazprom is the development of VIT

production at the Sinarsky plant. The gas company's interest in TMK's new products is confirmed by the fact that Gazprom representatives are playing a direct role in implementing this project. Since 2010, when the plant started setting up its insulated tubing line, Gazprom specialists have been paying regular visits to the company, with its representatives tracking the process of the new product's development, as well as expressing their own suggestions and recommendations. During the most recent visit, the delegation followed up on how previous decisions and arrangements were being put into practice, as well as work to set new objectives for the companies' cooperation. In addition to Gazprom representatives, the delegation included researchers from scientific research institutes – TyumenNIlgiprogaz (Tyumen Scientific Research Institute for Gas Industry Hydrotechnology), Gazprom VNIIGAZ, and RosNITI – as well as specialists from TMK-Premium Service and Trade House TMK.

At the VIT line, the Gazprom representatives got to see the equipment, manufacturing conditions, and quality control system

Sergei Chetverikov, Managing Director of the Sinarsky plant, presided over a conference at which attendees discussed the current results of insulated tubing production and operation. Vladimir Shtol, Deputy General Director of TyumenNIlgiprogaz, gave a presentation that clearly demonstrated the potential for using insulated tubing at Gazprom facilities. Dmitry Ovchinnikov Chief Engineer at Sinarsky, discussed the pilot batch of insulated pipe that the plant manufactured for Gazprom Dobycha Nadym, pipe which was run down a well at the Bovanenkovskoye oil gas condensate field. Igor Pyshmintsev, General Director of RosNITI, gave a talk on the special challenges involved in the design and development of insulated tubing production technologies.

Following the conference, Gazprom representatives gave high marks to the Sinarsky plant and TMK personnel who are carrying out the joint project, citing their innovative approach and professionalism.

During their visit, the guests saw how the new pipe is manufactured. At the VIT line, they got to see the equipment, manufacturing conditions, and quality control system.

“Every meeting between the management of Gazprom and our plant is a new step in the development of our collaboration,” said Chetverikov, commenting on the visit. “VIT is a unique product. We are the only ones in Russia producing it. The potential for our partnership is enormous. For Sinarsky, it means new technologies, jobs, and another level of technical development. We value these contacts very highly. We are doing very serious work in support of this collaboration: buying new equipment, developing technologies, etc. Our company is developing a productive alliance with RosNITI and TMK-Premium Service. Through our joint efforts, we can achieve a breakthrough in pipe production. What we're doing to introduce this unique technology is real modernization.” ■



Vsevolod Cherepanov,
Oil and Gas Condensate Production
Manager, Gazprom:

“Our collaboration is getting stronger year by year. First, the plant turned out a limited pilot batch of insulated oil-well tubing. They were successfully tested at our fields. In 2011, Gazprom had about 1,500 tonnes of pipe shipped on order. However, our needs are much greater now, so today we are addressing the issue of having the pipe supplied on a commercial scale. We are planning a significant increase in the volume of our purchase orders. The quality of the Sinarsky products is on a par with the best pipe in the world.”

our partners



SUCCESS IN THE ARCTIC



Novatek's Yurkharovskoye oil-gas-condensate field in the Arctic saw its second successful run of a casing pipe string with TMK PF premium connections. The first run of TMK premium pipes was done in June 2011. That was the first time anyone in Russia had worked on this type of well: the pipes were run to a depth of 5 km, from the coast of the Kara Sea to below the sea floor. The second run, in January 2012, was even more challenging: the pipes ran to a depth of 5,786 meters. About 3 km of that length went vertically down the onshore part of the well; the rest ran horizontally underwater. The work was done by Integra, a Russian drilling company, under the supervision of TMK-Premium Service. Before the start of the pipe run, TMK-Premium Service specialists gave the drilling teams an orientation on the sequence of operations needed to assemble the Volzhsky Pipe Plant's gas-tight TMK PF threaded connection, focusing on the unique features of the process. That connection is certified under the ISO 13679 CAL IV standard, which allows it to be used in offshore drilling.

Over the course of 69 hours, 497 pipes were run downhole; the pipe diameter was 244.5 mm, with wall thicknesses of 11.05 mm and 11.99 mm. Different grades of casing pipe – N 80, P 110, and Q 125 – were used in different parts of the string. The lower part of the string was made of highest-grade Q 125 pipe. The pipe string assembly process and downhole run were completed trouble-free and in full compliance with assigned specifications. ■



PREMIUM TRAINING

The steady development of the premium market segment and growing demand for TMK premium class products has prompted a decision by the management of TMK-Premium Service to independently train specialists to work with these high-tech products. This has taken the company's activity in a new direction: customer education.

Working with complex products like premium connections requires special professional training and specific knowledge. That goes for not only the manufacturers of those products, but for the consumers as well, i.e., the service and drilling company employees who directly work with the products in the field. Their ability to handle premium products affects the integrity of pipe strings made up with premium joints, which spells success or failure for the whole process of well construction and its future operation. It was mainly demand from drilling contractors who needed qualified training for their personnel that drove TMK-Premium Service to develop its special training program. The goal of the program is to teach consumers to work with TMK's premium products – the TMK family of threaded connections – in compliance with specified requirements for installing and running pipe strings.

Therefore, many TMK-Premium Service employees – some of whom are the actual developers of these premium connections – have entered a new stage in their professional development: they have become teachers.

THE TRAINING PROGRAM

The specialized course includes two parts: theoretical and practical. In the theoretical part, service company

employees learn about the purpose and design features of the connections, as well as the rules and requirements for inspecting, storing, and using them. The purpose of the theory section is to teach employees not only how to work with full awareness of the operating procedures for running premium pipe strings, but also how to make prompt decisions in a variety of emergency situations that may occur on drilling rigs.

The practical part involves working directly with models of premium connections. A series of models made of light alloys was specially manufactured for these classes. In addition, TMK is turning out another batch of models made of Plexiglas. These transparent mock-ups will make it easy to see and study the internal design features of various threaded connections. During the practical exercises, trainees work under the supervision of specialists to master the entire sequence of operations needed to prepare for assembly, as well as to check the geometric parameters of the thread, the make-up process, the integrity of the made-up connection, and the pipe string run.

Depending on the students' professional level and their experience working with premium connections, the program includes three levels of training that encompass 8, 16, and 40 hours, respectively. To help students better retain the information, classes include slide shows and video screenings of pipe strings being run into wells; the footage was taken by TMK-Premium Service employees during supervision of the company's

products at consumers' field sites. After students finish the continuing education course and pass a test, they are issued certificates.

FIRST CADRE

The first training cycle of the new program took place in December at the Moscow office of Schlumberger, a company that specializes in running downhole equipment. The students were eight company employees, including the head of the downhole equipment placement department, a chief specialist, a mechanic, a drilling technician, and electrical engineers. In other words, they were the very people who are directly involved with assembling and running pipe strings.

The Schlumberger specialists showed great interest in the subject matter, asked probing questions in class, and participated actively in discussions. To fully satisfy the audience's interest during discussions, teleconferences were set up on-the-spot so that students could interact with TMK-Premium Service specialists from relevant divisions, as well as the designers of the premium connections. What made the greatest impression on the students was the practical part. After they finished the program, the Schlumberger employees sent a letter of appreciation to TMK-Premium Service, and literally a month later they had a chance to put their knowledge to practical use.

The newly certified specialists completed a unique run of low-temperature casing pipes (produced by the Volzhsky Pipe Plant) at the Yurkharovskoye oil-gas-condensate field. The remarkable thing was that they did it independently: until then, the entire pipe run process at this field had always been strictly under the supervision of TMK-Premium Service.

The next continuing education group will be specialists from Gazprom Drilling. After training that

We teach our customers how to use TMK's premium products with due attention paid to requirements for running pipe strings

company's teams, TMK-Premium Service's employee-instructors plan to travel to Ufa Oil University, which sent them an application to have its students trained. Overall plans call for such seminars to be conducted on a regular basis – not only for various service companies and drilling contractors, but also for students at relevant colleges.

Another future possibility is to set up program training at one of TMK's production floors. This would help specialists develop the practical skills to make up premium connections using hydraulic tongs that feature the functionality of constructing make-up graphs.

"We've only just begun to bring our training program to life, but we've already received several applications from oil and gas companies," says Vladimir Churkin, service division head at TMK-Premium Service. "That confirms that what we're offering is in high demand. The first people we're going to train are drilling company employees, along with our license partners."

"When we review claims about the quality of TMK products, they show the main problem is that people are handling premium threads the same old way, without taking into account either the spinning speed, or the applied torque, or other specific parameters. The advantages are being lost due to the unskilled actions of drilling company workers. That is the gap that our training program is designed to fill. This initiative, along with onsite supervision of pipe runs by our technical specialists, will allow us to retain our clients and increase sales volumes, particularly in TMK's premium segment." ■





The basis of this partnership is, of course, the high quality of Severstal rolled metal products and the company's broad technical capabilities in manufacturing the most complex products

than 40,000 tonnes of such flat steel to the Volzhsky Pipe Plant for Gazprom projects.

"Severstal coil stock and flat products are definitely in demand by our Russian pipe plants," said Sergei Marchenko, Deputy General Director of Trade House TMK. "After all, Severstal products have long been known for their high quality, and the partnership between our companies is a constructive and mutually beneficial arrangement."

Participants in the recent steering group meeting have agreed to spend this year developing specifications for complex products designed for new Gazprom and oil company projects in which Volzhsky Pipe Plant has an interest (TransCanada, Lukoil-North Caspian, etc.). They reviewed the current product mix and companies' proposals for technical cooperation aimed at improving the already existing range of products and their fabrication characteristics (e.g., corrosion-resistant coating). They also discussed applications for these products in various environments and natural conditions. Finally, logistical issues and the quality level of supplied metal was also the subject of considerable attention.

"We considered several long-term plans and clearly defined what types of products will be in demand, as well as what quality requirements we will be asked to meet," said Dmitry Goroshkov, Sales and Marketing Director at Severstal. "If we meet those requirements and are commercially competitive, we can advance further in our collaboration with TMK, becoming TMK's main product supplier." ■

KEY CUSTOMER

In the past several years, the volume of Severstal rolled metal product deliveries to TMK manufacturing facilities has nearly doubled, and joint development of new product types as well as improvements in quality and service will determine how this promising partnership progresses further.

The first steering group meeting of the year between Severstal and TMK, its key client, has taken place in Cherepovets, revealing just how far both companies have come in their mutually beneficial partnership. Just three or four years ago, Severstal made up no more than 10 percent of all coil stock and flat products delivered to TMK plants. Today, the share attributable to Severstal has risen by 150 percent.

Such successful synergy is attributable in no small part to

the constructive relationship between the two companies, which have found a common language on production planning, product deliveries, and numerous other logistical details.

The basis of this partnership is, of course, the high quality of Severstal rolled metal products and the company's broad technical capabilities in manufacturing the most complex products. Generally speaking, the coil stock and flat products used to manufacture pipes for oil and gas export pipelines involve complex, safety-critical grades of steel, such as grade X80. Last year, Severstal delivered more



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, Verzhinina 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, Zavodskaya 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, Bldv. 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 Europe GmbH
Immermannstraße 65 c, 40210 Düsseldorf, Germany
Tel: +49 (0) 211/91348830
Fax: +49 (0) 211/15983882
E-mail: info@tmk-europe.com

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) 949-10-23,
Fax: +1 (281) 445-40-40

TMK IPSCO Canada Sales Office
150 6th Avenue SW #3000
Calgary, AB T2P 3Y7
Tel: +1 403-538-2182
Fax: +1 403-538-2183



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.

