

YourTube

Technology Motion Knowledge

09 ▪ 2017
№3 (29)

14 TMK IPSCO Plant
Restarting Events

18 The US Oil and
Gas Industry
Outlook

28 Innoprom-2017
Industrial Trade Fair



Piotr Galitzine:
“TMK IPSCO is
TMK’s advance
post in the
biggest OCTG
market”



TMK IPSCO on the RISE

TABLE OF CONTENTS



3 NEWS AND ANNOUNCEMENTS

6 MAP OF SUCCESS

TMK IPSCO sales are growing in 2017, as the U.S oil and gas industry is recovering in key production regions

8 TMK IPSCO ON THE RISE

Chairman and CEO Piotr Galitzine talks about the company's market share, best-selling products and long-term goals

10 TECHNICAL MODERNIZATION AT TMK IPSCO

Upgrading TMK IPSCO's production facilities

14 THEY ARE BACK!

With four mills back on track TMK IPSCO expects production growth and new jobs

18 THE US OIL AND GAS INDUSTRY OUTLOOK

How the American economy overcame an oil shortage and where the world market of hydrocarbons is heading

20 EVERY CUSTOMER COUNTS

TMK Industrial Solutions (TMK IS) markets and sells industrial pipe products in America

24 FOR SPECIAL PURPOSES

TMK is developing production of Vacuum Insulated Tubing (VIT) – a unique product already getting oil producers' attention

26 TMK IPSCO FIELD SERVICES

As the U.S. pipe market is recovering, TMK IPSCO Field Services is strengthening its client base in the oil and gas sector with on-call and on-site technical support at the highest level

28 A FORUM WITH JAPANESE FLAVOR

Smart manufacturing and global approach were the hottest topics at Innoprom-2017 – Russia's largest industrial expo

32 A GAME OF SOPHISTICATION

Golf is for life! TMK IPSCO's Mark Patton and Gary Durbin talk about their passion for the game after playing on the TMK team in Russia

34 Q&A

12 questions with Piotr Galitzine and Mike Christopher

News

»» HALF-YEAR RESULTS FOR TMK AND TMK IPSCO

TMK Group's overall performance numbers for the first half of 2017 showed an increase of over 4% in shipments and 27% in revenue compared to the same period of 2016. Sales of TMK UP premium connections have increased by almost 57% in the first six months of this year. Among the growth factors were a substantial increase in drilling activity in the United States in Q1 of 2017 combined with growing E&P spending in North America and TMK's strong position in the Russian OCTG market.

For TMK's American division, increased sales of welded pipe and stronger pricing led to improved results in Q2 2017, as compared to Q1 2017. Revenue in Q2 amounted to 232 million USD, and TMK IPSCO sold 158 thousand tons of pipe, a 23% increase compared to Q1. Gross profit margin for Q2 was 22%. ■

TMK's Shipments of tubular goods (thousands of tonnes)						
Production	Q2 2017	Q1 2017	Change	1H 2017	1H 2016	Change
Seamless Tube	687	658	4,4%	1346	1151	16,9%
Welded Tube	270	192	41,0%	462	585	(21,0%)
Total Pipe	957	850	12,6%	1808	1736	4,1%
Including OCTG	426	426	(0,1%)	852	645	32,1%

TMK's Financial performance (USD million)						
	Q2 2017	Q1 2017	Change	1H 2017	1H 2016	Change
REVENUE	1107	944	163	2050	1614	437
NET PROFIT	(19)	42	(61)	23	71	(47)
ADJUSTED EBITDA	134	142	(8)	275	269	6
Adjusted EBITDA margin (%)	12%	15%		13%	17%	

»» TMK IPSCO TO TAKE PART IN SPE THERMAL WELL INTEGRITY AND DESIGN SYMPOSIUM

TMK IPSCO is sending a delegation to SPE Thermal Well Integrity and Design Symposium, which will take place in Banff, Alberta, Canada, November 28-30 2017. The symposium will host members of the Society of Petroleum Engineers and experts in the thermal in-situ community. TMK IPSCO will be represented by Ryan Broussard, Alberto Matta and Nicholas Hagen. Kirill Marchenko and Alexander Belomestnov will attend from TMK.

Participants will share the latest in well design practices and well integrity solutions. The TMK IPSCO team will learn more about new technologies and improving the collective recovery, efficiency, longevity, and liability of existing and planned thermal wells by attending the conference.

Per the organizers, the upstream oil and gas industry is facing a new norm, and effective thermal well design and

integrity are becoming more critical. Technical decisions related to well design can impact project

economics, well integrity, and well longevity. Thermal well design and integrity provide operators with information that can help extend the life of a well and maximize recovery, reduce operating costs and prevent or mitigate harmful environmental impacts. It involves the appropriate application of technical, operational and organizational solutions to reduce the risk of wellbore failure. ■



Society of Petroleum Engineers



YourTube
Technology Motion Knowledge
№ 3 (29) September 2017

Chief Editor:
Andrey Posokhov

Executive Editor:
Maria Makovetskaya

Reporter and Editor:
Denis Serikov

Copy Editor:
Sergei Kalamysau

Editor's office address:
Russia, 105062, Moscow
Pokrovka Street, Bldg. 2a
Tel.: +7 (495) 775 7600
Fax: +7 (495) 775 7601
E-mail: mediacom@tmk-group.com

Founder:
MediaCom, LLC
Project manager:
Svetlana Bazylich

Printed at Infosight Polygraphic
Certificate of publication
No. FS77-40128 of June 11, 2010
Publication is registered with the
Federal Oversight Authority for
Communication, IT and Mass Media
16+

Any use of the materials without
the editor's consent is prohibited.

»» TMK IPSCO'S PLANT IN NEBRASKA RECEIVES PRESTIGIOUS AWARD

TMK IPSCO's Geneva, NE mill has been selected as a recipient of the **2017 SMA Don B. Daily Achievement in Safety Award**. The plant was selected by the Steel Manufacturers Association (SMA) for going 10 years without an Occupational Safety and Health Administration (OSHA) recordable incident. As experts point out, this is a significant and rare achievement in the steel industry, which places TMK IPSCO among a select group of SMA members. The prestigious award was presented on October 5, 2017 during the SMA Fall Safety Committee Meeting in Pittsburgh, PA. ■



»» NEW PRODUCTION RECORD

TMK IPSCO's **Brookfield, Ohio** plant has shown record numbers for April 2017. The mill produced 30,729 joints and shipped 13,556 tons. Overall Equipment Effectiveness (OEE) records were set on several thread types including BPN, BTC and SF. The Brookfield facility provides a line of

patented premium connections for deep, high pressure, horizontal / directional drilling and other challenging drilling and completion environments. The Ohio location also offers full support of the product line with accessories, technical support, field services and oilfield manufacturing. ■



»» GIVING BACK

Sinarsky Pipe Plant (SinTZ), Sinara Charity Foundation and SKB-Bank organized Rush for Good rally in Kamensk-Uralsky, Russia to help children with brain cancer. The 2nd annual event was attended by over 350 people, from kids riding scooters to professional athletes. Organizers transferred all collected funds to the local Center for Oncology and Hematology, which is saving children's lives.

Taganrog Metallurgical Plant (TAGMET) donated over 1 million rubles during the 10th Annual All-Russian charity Pod Flagom Dobra. The donation will be used to treat 20 small children who need expensive surgeries. Over the years, more than 40 million rubles have been contributed to the charity, which helped 505 children in Taganrog suffering from severe conditions. More than 10.5 million rubles were donated by TAGMET alone. ■

»» APPOINTMENTS



ANDRE WOLLMANN

Andre Wollmann has joined TMK IPSCO as Plant Manager in Koppel, PA. In this position, Andre will report to General Manager Mike Panzeri who is in charge of seamless operations at TMK IPSCO. Andre Wollmann will be responsible for all plant production operations, shipping/receiving and maintenance.

Andre has held several leadership positions in domestic melting/casting operations. Most recently, he was General Plant Manager at Gerdau Group. At Gerdau, he developed and promoted Continuous Improvement projects through the use of Six Sigma, PDCA Methodology and CAPEX opportunities.

Andre Wollmann holds a Master's of Science and a Bachelor's degree in Metallurgical Engineering. His production management experience along with strong emphasis on safety, quality, employee accountability and exceptional customer service will help create a strong team environment at the Koppel plant.



ALEKSEI STRUIN

Aleksei Struin has joined TMK IPSCO as Director of Quality-Import Programs. In this role, Aleksei will be responsible for leading quality efforts involving the performance of the material from TMK's Russian mills. Mike Green will continue with his responsibilities as Manager of Import Quality and report to Aleksei.

Aleksei comes from the Russian Research Institute of Tube and Pipe Industry (RosNITI), the R&D center of TMK's Russian division. He holds a Ph.D. degree in Technology (Metallography and Heat Treatment) from the Moscow Institute of Steel and Alloys. Aleksei has extensive experience in steel pipe production. Most recently, he provided research and technical support to TMK's strategic investment program.



CHAKEYLA MANUEL

Chakeyla Manuel has joined TMK IPSCO as Director of Health, Safety and Environment. In this position, Chakeyla will be responsible for leading HSE efforts within TMK IPSCO.

Chakeyla has held several leadership positions in HSE during her career. Most recently, she was Director of HSE, Transportation, Fleet at Weir Group. She developed and implemented the company's global HSE program, which resulted in a 35% reduction in injuries.

Chakeyla holds a Master's in Public Health: Occupational HSE Management and a Bachelor's degree in Mechanical Engineering Technology. Chakeyla's progressive leadership experience along with her strong credentials in global safety and environmental regulatory compliance will be essential to drive improvements in HSE and grow business for TMK IPSCO. ■

NOVEMBER

13-16 ADIPEC 2017: ABU DHABI PETROLEUM EXHIBITION & CONFERENCE, ABU DHABI, UAE

14-17 METAL-EXPO'2017, MOSCOW, RUSSIA



16-18 INTERNATIONAL METAL TECHNOLOGY TAIWAN 2017, TAIWAN

28-30 SPE THERMAL WELL INTEGRITY AND DESIGN SYMPOSIUM, BANFF, CANADA



DECEMBER

3-4 ANNUAL MEETING OF THE SME ARIZONA CONFERENCE, TUCSON, AZ

5-6 OIL & GAS SUPPLY CHAIN & PROCUREMENT, HOUSTON, TX



6-7 14TH INTERNATIONAL CONFERENCE ON ENERGY AND MATERIALS RESEARCH, DALLAS, TX

17-19 TUBE MIDDLE EAST, DUBAI, UAE

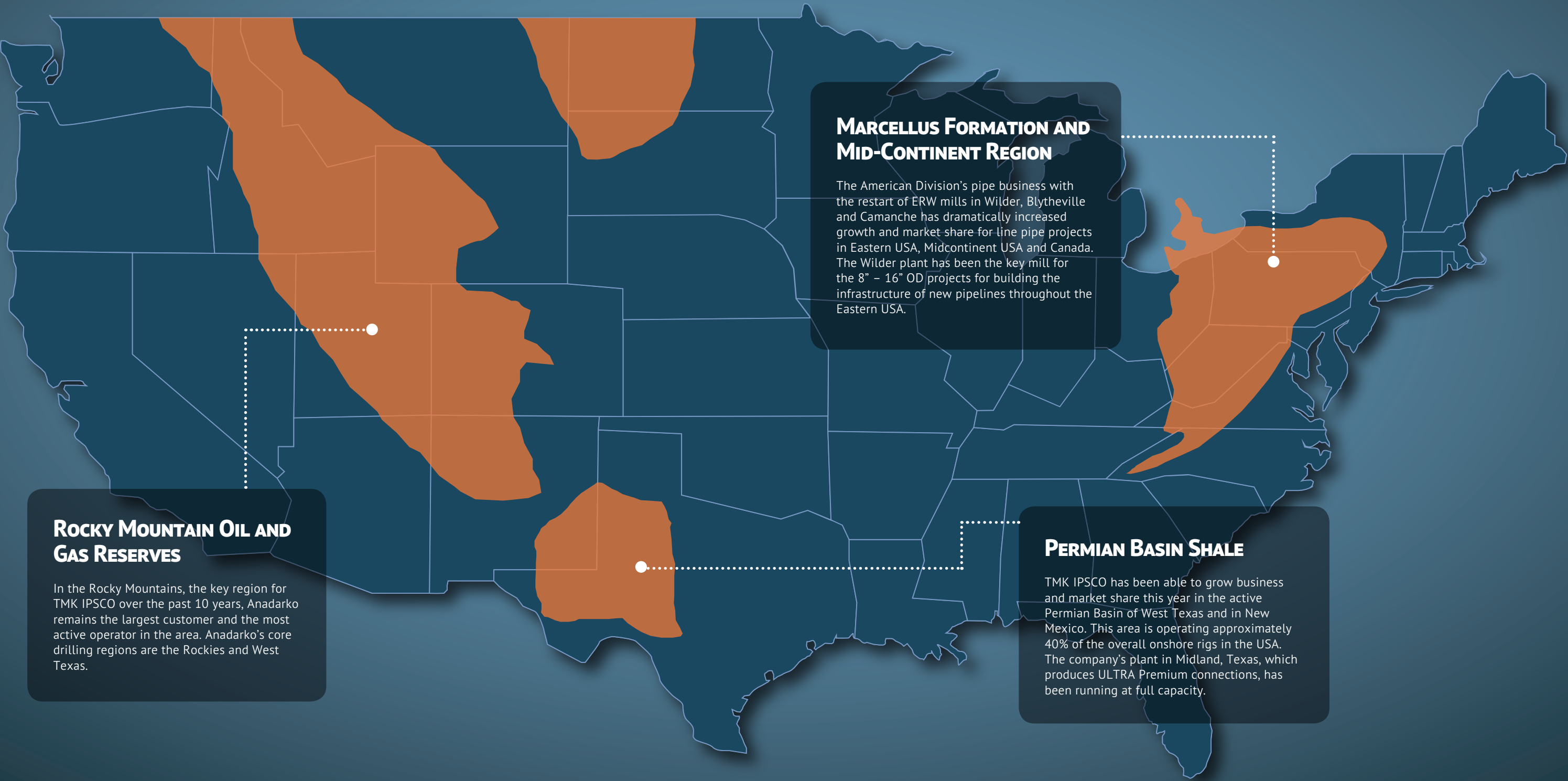


MAP OF SUCCESS

TMK IPSCO's sales dramatically improved in 2017 – they increased by almost 70 percent in the first five months of the year. TMK IPSCO's analysts registered much greater activity in the oil drilling market. While last year the U.S. OCTG market demand was at 2.2 million tons of steel pipe, it is estimated to more than double for 2017 and to rise to 5 million tons by the year's end.

"The industry has ramped up very quickly and is settling. Even though there could be a slight dip in business in Q4 due to about 5-7 percent reduction in oil and gas companies' CAPEX, we are expecting solid sales growth for the year," said Gary Durbin, Deputy Chief Commercial Officer at TMK IPSCO

For the remainder of the year, TMK IPSCO is projecting a 20 percent monthly production growth. July production output levels were over 75,000 tons. Analysts are citing strong ties with oil companies including robust customer base, loyal customers and great product range as contributing factors to the sales increases.



ROCKY MOUNTAIN OIL AND GAS RESERVES

In the Rocky Mountains, the key region for TMK IPSCO over the past 10 years, Anadarko remains the largest customer and the most active operator in the area. Anadarko's core drilling regions are the Rockies and West Texas.

MARCELLUS FORMATION AND MID-CONTINENT REGION

The American Division's pipe business with the restart of ERW mills in Wilder, Blytheville and Camanche has dramatically increased growth and market share for line pipe projects in Eastern USA, Midcontinent USA and Canada. The Wilder plant has been the key mill for the 8" – 16" OD projects for building the infrastructure of new pipelines throughout the Eastern USA.

PERMIAN BASIN SHALE

TMK IPSCO has been able to grow business and market share this year in the active Permian Basin of West Texas and in New Mexico. This area is operating approximately 40% of the overall onshore rigs in the USA. The company's plant in Midland, Texas, which produces ULTRA Premium connections, has been running at full capacity.

TMK IPSCO ON THE RISE

After a crisis that lasted almost two years, U.S. oil companies are waking up and boosting production in the Gulf. Pipe deliveries in America are following suit and rapidly growing. TMK's American division has restarted four of its mills this year and is posting increasing shipments. We sat down with TMK IPSCO's Chairman and CEO Piotr Galitzine to talk about the company's market share, best-selling products, as well as long-term goals and projections.

Mr. Galitzine, how would you define the role of TMK's American division as an integral part of the company? How important is TMK IPSCO in the overall TMK structure?

I think the uniqueness of TMK's American division is that it helps make the company truly global because of the size and importance of the North American market. The North American market is the most important market in the world for the oil industry, so the presence of one of the largest suppliers of tubular products is necessary here. In terms of the importance of TMK IPSCO to the bigger TMK Group, on a good year we are one quarter of the tonnage and one third of the profit. TMK IPSCO is the company's advance post in the biggest and most dynamic OCTG market in the world.

TMK IPSCO has recovered after a difficult period. How would you define the American division's market position now?

TMK IPSCO has become a lean, mean and hungry machine since the downturn. We will not forget the hard lessons that we learned during these last two years. At the same time, the economic recession showed the power of TMK as a

global company. TMK's geographic diversity allows it to be more stable and not too dependent on changes in the market demand. Today we are seeing a rapid growth in demand for pipe products and, at the same time, increased investment in the U.S. oil sector. In line with this trend, the OCTG market is expected to grow in the US in 2017: its demand for OCTG should exceed 5 million tons. This is a big jump from last year when OCTG production was at 2.3 million tons. The market revival particularly helped the American division, which was able to increase deliveries by 67% in the second half of 2016 and enter this year with positive sales dynamics. And we continue to gain strength.

What is the technical expertise of the American division and what are your main competitive advantages?

The technical expertise of the American division, without a doubt, is our extremely large and varied family of premium and semi-premium connections TMK UP ULTRA. They are designed for operation in wells with complex production conditions. The biggest advantage that we have now is that as part of the TMK Group we were able to take the reputation of IPSCO and build upon it. And we are also able to profit from TMK's reputation and underline, if you will, the global roots.

We offer not only products but unique technological solutions. The most important products that we have recently launched or are just about to launch are, without a doubt, the high torque family of connections; we took our most popular connections and beefed up their torque capabilities. Also, the TMK UP SXC – our expandable connections, which have already

THE ECONOMIC RECESSION SHOWED THE POWER OF TMK AS A GLOBAL COMPANY

been run in 4-5 wells in the Gulf of Mexico. And, of course, TMK UP ULTRA GX – our connections specifically for the steam-assisted gravity drainage (SAGD), for the oil sands of Canada and Russia. Interestingly enough, they can be used in deep waters as well. We began marketing TMK UP ULTRA GX premium connections just this year. They are used for extraction of highly-viscous oil. We also have promising new types of tubular products, which include corrosion-resistant 13% Cr steel pipe, VIT, pipe for sour service and Quantum Infinity sliding sleeve systems.

How strong is your customer base and what do you do to strengthen customer relations?

We have what we like to call legacy customers and legacy distributors. We have clients with ten, twenty and even thirty-year relationships. But we have been able to double the number of customers in the last year and a half by doing what we call our Regional Ranking and Market Segmentation project. We typically deal with 250 customers in a year, so this means we have identified another 250 customers! While our competitors were trying different approaches, we were able to attract not one, but several of the largest distributors in the industry. Such a bold strategy in times of crisis brought outstanding results. Approximately 21% of our total shipments in 2016 were to new customers, with whom TMK IPSCO previously did not work. We will continue to build on our success in the future, and expect about as many new customers in 2018.

What are the key development trends for TMK IPSCO? Where do you see your company's growth opportunities?

First of all, we are glad that our ERW plants, which were stopped during the economic downturn, are running again and that we are hiring production staff. TMK IPSCO is restoring its full product line – a variety of seamless and welded pipes that allows us to meet our customers' needs and expectations. The near-term key development trend for TMK IPSCO has to be more onshore shales, where the horizontals are getting longer and more complex. Some of our customers are drilling wells over 32,000 ft long, which is almost six miles. And this trend will continue.

For the longer term, we think, the main focus will be on re-fracking, which will allow wells to be re-fracked two, three or even four times in order to produce as much oil and gas as possible. In this context, equipment for well completion will be particularly important, and TMK has all the technologies for these needs as well.

Going way into the future, we think a big development trend is going to be the offshore frozen methanes, which can be found where the continental shelf falls off into the deep ocean. TMK IPSCO is preparing for long-term projects in this business and in this market, and we will continue to invest in R&D of high margin products.

TMK IPSCO IS
RESTORING ITS U.S.
PRODUCTION VOLUME

TECHNICAL MODERNIZATION AT TMK IPSCO (2008–2018)

- Upgrades of existing equipment
- New equipment

WILDER



Continuous caster

AMBRIDGE



Seamless mill



CATOOSA



Swedging unit



BAYTOWN



Heat Treatment area



BROOKFIELD



OCTG threading line #1

WILDER



End-facer

WILDER



Threaders

AMBRIDGE



Seamless mill



WILDER



Lab and testing equipment

2008



WILDER



ASTM finishing line

WILDER



Threading line

BLYTHEVILLE



Weld heat treatment unit

2009



BLYTHEVILLE



Threading line

2011



CAMANCHE



Hydrotester and NDT equipment

2012



ODESSA



New OCTG finishing line

R&D CENTER (HOUSTON)

Slitter

CAMANACHE

Welder



CATOOSA

Heat treatment equipment



WILDER

16" forming stands



WILDER

Accumulator for the ERW mill

KOPPEL

Q&T equipment



BAYTOWN

NDT equipment



BLYTHEVILLE

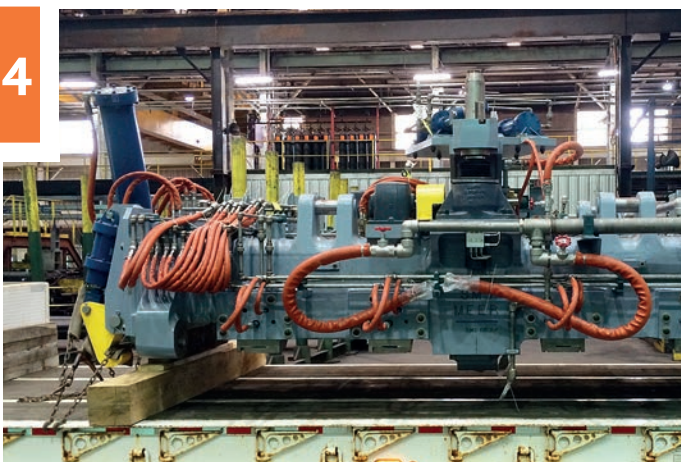
ERW mill



2013



2014



2015



2017

2018

R&D CENTER (HOUSTON)

Expansion of office space; set-up of a sales office



ODESSA

Threaders

EDMONTON

OCTG line

AMBRIDGE

Pipe geometry control system

WILDER

Replacement of the flying cutoff saw

AMBRIDGE

Seamless mill stand replacement

KOPPEL

UT inspection equipment

BAYTOWN

UT inspection equipment

WILDER

Coating line

KOPPEL

Furnace transformer



THEY ARE BACK

With four mills back on track, TMK IPSCO expects production growth and new jobs.

Among key factors for the business growth at TMK IPSCO are restarts at several plants which have become fully operational in the past several months. TMK IPSCO's Wilder, KY facility relaunched production in December 2016 and has been gaining strength. In March, the plant in Blytheville, AR resumed production, and both mills are currently operating with two shifts. In June, the Camanche, IA facility also resumed work. Finally, the Catoosa, OK plant got back into business early August.

The welded pipe plant in Wilder got its second wind right around Christmas time last year, after almost a year of staying idle. This particular TMK IPSCO plant has had a long history – over 200 years to be exact – and it was very symbolic for the company that it was coming back to life with 165 employees. TMK IPSCO had been thoroughly

preparing for the restart. As part of the preparation, management adopted upgrades to reduce costs and improve performance. One of the key solutions that was implemented – the Overall Equipment Effectiveness System (OEE) – allows to standardize performance metrics and identify areas that need to be improved.

The TMK IPSCO Kentucky plant was first opened even before the city of Wilder existed. It was originally born as Andrews Steel in the early 1800s, and the city was built around the mill only in 1935. During WW2, the plant was making shell casings for the army. In the past 40 years, the plant changed names and hands a few times before becoming a part of the current TMK IPSCO structure.

More than 100 guests and colleagues attended the Wilder PR event on Monday, July 17, including State Representative Dennis Keene, Mayor

TMK IPSCO PLANTS ARE ACTIVELY HIRING

« TMK IPSCO's
oldest ERW mill in
Wilder, KY

Stanley Turner and Director of USW District 8 Billy Thompson. Mayor Turner proclaimed July 17 as TMK IPSCO day in the city of Wilder, KY.

In March of 2017 another TMK IPSCO plant resumed operation. The facility in Blytheville produces OCTG and line pipe, as well as tubular goods for the construction industry and utilities. The Blytheville facility uses high frequency electric resistance welding and performs such finishing operations on the pipe as heat treatment, upsetting, and threading.

The first production crew was back at the plant as early as February of this year. The introduction of the second shift in May doubled production. Per the company management. Now there are more

TMK IPSCO - WILDER, KENTUCKY

The facility produces welded pipe ranging from 4 ½ to 16 inches in diameter for the oil and gas industry. Installed in 2011, 16-inch facing machines produce a higher-quality bevel on the standard and line pipe. The mill has its own casing thread line. It delivers products to customers in the Marcellus Shale region and other destinations.

PRODUCTION CAPACITY
600,000 SHORT TONS

than 160 employees working in Blytheville and the number may soon rise to 180.

Spirits were also high at the Camanche plant in Iowa where 100 employees marked their return to work in June. The rehire rate was



» TMK IPSCO Chairman and CEO
Piotr Galitzine at the Camanche plant



» TMK IPSCO – BLYTHEVILLE, ARKANSAS

Manufactures welded OCTG products for production and transmission of oil and natural gas, drill pipe, line pipe, plumbing pipe, and building & construction products. High frequency electric resistance welding is used. Performs threading, upsetting, and heat treat.

**PRODUCTION CAPACITY
250,000 SHORT TONS**



» Arkansas House of Representatives member Monte Hodges talks during the Catoosa plant relaunch

almost 85 percent, as mentioned by the TMK IPSCO executives. The celebration was accompanied by a ribbon-cutting ceremony and a tour of the plant for local politicians and the media.

The Catoosa plant restart was the most recent effort for TMK IPSCO to gain momentum and increase production. This also meant 168 new jobs for this Oklahoma community and about \$10 million in wages and benefits for employees.

» TMK IPSCO – CATOOSA, OKLAHOMA

The facility specializes in finishing operations on tubular products including threading, heat treat, swaging, normalizing, coating, quench and temper as well as various testing and inspection services.

**PRODUCTION CAPACITY
150,000 SHORT TONS**

THE NUMBER OF NEW JOBS CREATED IN 2017 HAS EXCEEDED 1,000 THUS FAR

This mill has strategic meaning to TMK as it does finishing operations on tubular products including heat-treatment and threading. The final product is sold to American customers for oil and gas production, such as shale gas extraction and horizontal oil drilling.

With all the positive signs throughout the year, TMK IPSCO looks to improve on its market share and profitability. The number of new jobs created in

2017 has exceeded 1,000 so far, and the company wants to move forward as a great and rewarding place to work for all of its American workers.



THE COMPANY WANTS TO MOVE FORWARD AS A GREAT AND REWARDING PLACE TO WORK FOR ALL OF ITS AMERICAN WORKERS

» A ribbon-cutting ceremony in Camanche, IA during the plant restart event

» TMK IPSCO – CAMANCHE, IOWA

The Camanche facility manufactures welded oil country tubular goods used for production and transmission of oil and natural gas, line pipe, plumbing pipe, and building & construction products. The mill uses high frequency electric resistance welding. It also has the capacity to thread all the pipe it produces.

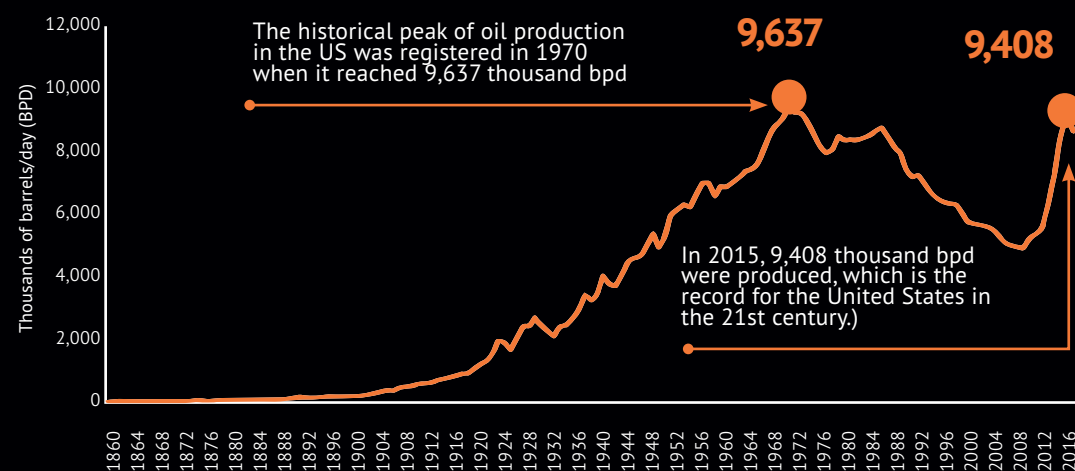
**PRODUCTION CAPACITY
250,000 SHORT TONS**



THE US OIL AND GAS INDUSTRY OUTLOOK

How the American economy overcame an oil shortage and where the world market of hydrocarbons is heading.

Oil production levels (US market)



Source: EIA.

THE US OIL AND GAS MARKET HAS MORE THAN 1,500 COMPANIES INVOLVED IN THE PRODUCTION OF HYDROCARBONS

Overall, the US oil and gas market has more than 1,500 companies involved in the production of hydrocarbons.

In the *Statistical Review of World Energy* June 2017, British Petroleum estimates that there were 543 million tons of oil produced in the United States in 2016. This makes the United States the world's third largest oil producer with a 12.4% share of the total volume. The USA has about 5.8 billion tons of oil in proven reserves (5.8% of the world totals) and is an undisputed leader in terms of oil consumption – 863 million tons at the end of 2016.

Last year, the United States produced 749 billion cubic meters of natural gas, which is more than any other country in the world. The United States accounts for about 21% of the world's natural gas production. As in the case with oil, the US is also the world's largest consumer of natural gas. In 2016, the volume of US consumption was at 778.6 billion cubic meters.

A significant percentage of the hydrocarbon reserves in the US is off-shore. But to date, the continental shelf provides only about 18% of oil and 4% of natural gas production. Out of 6.9 million square kilometers of the total shelf area, only 68 thousand are licensed, and extraction is conducted only on 18 thousand square km. At the same time, the overwhelming majority of the work zones, about 97%, are located in the Gulf of Mexico. The US oil and gas production in the Arctic is at an even lower level – it dropped by 68% from the record 2 million barrels per day registered in 1988. Currently, about 600 thousand barrels

per day are produced by the United States in the region. Active shelf development in the Arctic may be relevant in the future, but for now the main locomotive of the American oil production remains the shale sector. At present, over half of all oil produced in the United States falls on shale deposits.

According to the US Energy Information Agency and the Norwegian business intelligence firm Rystad Energy, first reserves of shale deposits were discovered and evaluated in the US in the early 2000s. Active development of oil shale started in 2011-2012 during high oil prices and continues to this day, despite the decline in prices. Since the start of the shale deposits development, the United States has managed to increase oil production by almost 63% and natural gas production by 22%, between 2000 and 2016. This allowed a significant reduction in US dependence on hydrocarbon imports and, at the same time, influenced the world energy market. More than half of all American oil is now extracted at four shale deposits: Permian Basin, Bakken, Eagle Ford, and Niobrara.

The US production increase came as a surprise for the entire world market. At the very beginning of the shale revolution, it was difficult to imagine commercially viable production. The catalyst for full-scale extraction of shale oil and gas was the invention of horizontal drilling and fracturing technologies that allow extracting hard-to-recover hydrocarbons from low-permeability shale formations. Oil shale is highly attractive for oil and gas developers as it allows a quick return on investments. A standard shale investment project

under favorable market conditions ensures a return within 3-5 years, while traditional oil and gas projects require financial planning for decades ahead. In addition, the short life cycle of unconventional hydrocarbon development allows for rapid iterative improvements.

Oil shale production, however, is expensive. Low oil prices call into question the effectiveness of shale projects, which threatens small and medium-sized companies. According to the Haynes and Boone law firm, during a significant drop in oil prices in 2015-2016 in North America, more than 200 oil companies went bankrupt, of which 51 operated in Texas, where the Permian Basin is located.

Since mid-2016, there has been a sharp recovery in drilling activity in North America. The number of active drilling rigs reached 949 units in August 2017, which is more than double the 2016 numbers for this time of year. In June, Spears & Associates projected that by the end of 2017 the average number of active rigs could near 900 units, and the number of new drilled wells could rise to 24.7 thousand. At the same time, the main increase is projected for horizontal wells.

The current market situation has a positive impact on pipe demand. In 2016, OCTG shipments in the US reached 2.3 million short tons. According to TMK and industry analysts, if the current growth rate continues, the market will reach 5 million short tons this year, which is an 117% increase compared to 2016. The 2018 levels are estimated at 5.4 million short tons, an 8% increase compared to 2017.

EVERY CUSTOMER COUNTS

..... Last year, TMK announced the launch of TMK Industrial Solutions (TMK IS) to sell its industrial pipe in the American market.

In six months of 2016, TMK IS secured orders for more than 28 thousand tons. This year, the company plans to increase its sales by 350%. Industrial steel pipe is used in chemical, petrochemical, food, and nuclear industries, as well as in the manufacture of steam boilers, bearings, parts and assemblies for various machines and mechanisms. This is one of the key TMK products; last year, the share of seamless industrial pipe in the company's portfolio was 14% while welded industrial products comprised 7%.

..... One of TMK's main production sites is an integrated industrial complex consisting of the TMK-ARTROM pipe mill and the TMK-RESITA metallurgical plant, both located in Romania. These enterprises are the core of TMK's European division, which also includes sales offices in Germany and Italy. In June 2016, the commercial services of the European division were expanded, and TMK IS was born.

So why is the European division responsible for selling products to the Americas when TMK has its own American division, TMK IPSCO? "The answer is quite simple," says Adrian Popescu, the head of the European Division. "TMK IPSCO serves primarily the oil and gas

industry, while the European division has accumulated vast experience in dealing with other industries, such as the automobile manufacturers." Just last year, TMK-ARTROM products passed qualification tests at Toyota. Currently, the Romanian plant is actively developing cooperation with Renault's Dacia and is involved with the Dacia Duster 2017 project.

"The concept of selling pipe to various industries is very different from marketing pipe specifically to the oil and gas sector," –explains

Popescu. "We often deal with a lot of orders that are small in volume but diverse in terms of pipe types and specifications. The task of the seller in this situation is to determine precise technical and commercial needs of each customer and to find the best solution. That's why we named ourselves Industrial Solutions."

For the European Division, the American market is hardly new – TMK-ARTROM first entered it 20 years ago. The plant's products are well known to large U.S. and Canadian

TMK IS OFFERS
PRODUCTS FROM
THE RUSSIAN,
ROMANIAN,
AND AMERICAN
PLANTS

distributors who work with customers in the manufacturing sector.

In addition to marketing its Romanian pipe, TMK IS also sells products from Russian (VTZ, SinTZ, TAGMET, STZ, TMK-INOX) and American (Ambridge, Koppel) plants of the TMK Group.

The CEO of TMK industrial Solutions is Mike Christopher, a seasoned professional with vast manufacturing experience in Japan, the U.S. and Europe. The main office is located in Houston, Texas, alongside TMK IPSCO and TMK's R&D Center, where technical customer support and field services are based.

"Customers welcomed our new company. Many saw it as another step towards meeting their needs," says Christopher. "The majority of them are familiar with the Russian and the European divisions and their products. But there are other companies looking for an opportunity to diversify their supply sources in tough market conditions. Every month we add new names to our portfolio."

» TMK IS led by Adrian Popescu (left) and Mike Christopher (center)

» TMK IS office occupies the 3rd floor of this building



TMK IS DELIVERS PRODUCTS TO MORE THAN 900 U.S. CITIES



Industrial Solutions is already working with 65 companies and delivers products to over 900 U.S. cities. In the first half of 2017, the company sold 45 thousand tons of tubular products while another 55 thousand tons are planned for the second half of the year. One of the reasons for such a growth in sales is commissioning of a new heat treatment facility at the TMK-ARTROM plant this fall. The new facility will allow more shipments of heat-treated seamless products to the U.S.

The motto of TMK Industrial Solutions is "Every customer counts". The team in Houston strives to do everything possible for its customers to understand what makes TMK the global market leader and how they can benefit from it.

» REFERENCE

TMK INDUSTRIAL SOLUTIONS PRODUCT LINE:

- Coupling stock
- Mechanical pipe
- I.D.-machined and O.D.-polished pipe for hydraulic cylinders
- Heavy-wall pipe and "green" tube
- Boiler pipe
- Pipe for heat exchangers and condensers
- High and low temperature nickel alloys
- Billets

TMK IS PROJECTS SALES OF 100 THOUSAND TONS OF TUBULAR PRODUCTS IN 2017



FOR SPECIAL PURPOSES

TMK is developing the production of Vacuum Insulated Tubing (VIT) – a unique product that only a few companies in the world manufacture in industrial quantities. The oil industry is showing an active interest in VIT, and TMK can bring a lot to the table.

TMK first began producing this product at the Sinarsky Pipe Plant back in 2010 in cooperation with several Russian companies including Gazprom, RosNITi, the Institute of Natural Gas and Gas Technologies – Gazprom VNIIGAZ, and TMK-Premium Service. Already in 2011, the first well involving VIT was successfully completed at the Bovanenkovskoye

field on the Yamal Peninsula. Two years later, corrosion-resistant 13% Cr steel VIT was tested at the site.

By now, TMK has mastered VIT production in various designs, sizes and purposes. Vacuum insulated tubing can be used to extract oil and gas in permafrost areas to prevent spreading of soil and, consequently,

VIT production site at SinTZ

to prevent destruction of the entire infrastructure of a well. VIT is also used in SAGD applications where temperatures reach 350°C.

Since 2016, a new design has been mastered – VIT Light in a vacuum-free version, with shield thermal

insulation in the inter-tube space, in 3 1/2" and 6 5/8" sizes. This product is used at oil fields for transporting fluids with temperatures up to 180°C.

VIT Light was first used in the second half of 2016 at Tyumenneftegaz (TNG) with positive results. The test was followed by a three-year contract with TNG signed at the end of last year. This year, an experimental batch of new types of VIT with TMK UP premium connections was delivered to Rosneft-Vankor for operation at the Vankor field.

Recently, the volume and geography of VIT shipments have increased significantly. While more than 46,000 feet of VIT were shipped last year, in the first half of 2017 alone TMK delivered 52,500 feet. The volume of VIT shipments between 2011 and the first half of 2017 totaled more than 160,000 feet. VIT is used by Gazprom, Rosneft, Messoyakhaneftegaz, and LUKOIL. However, Russian companies are not the only ones needing VIT. Oil and gas producers from North and South America, as well as from the Middle East, are showing interest in the product.

With projects being launched in the north of Eastern Siberia and with active offshore Arctic drilling, the consumption of VIT can increase by two or three times, according to



SinTZ Managing Director Vyacheslav Gagarinov (left) inspecting new equipment

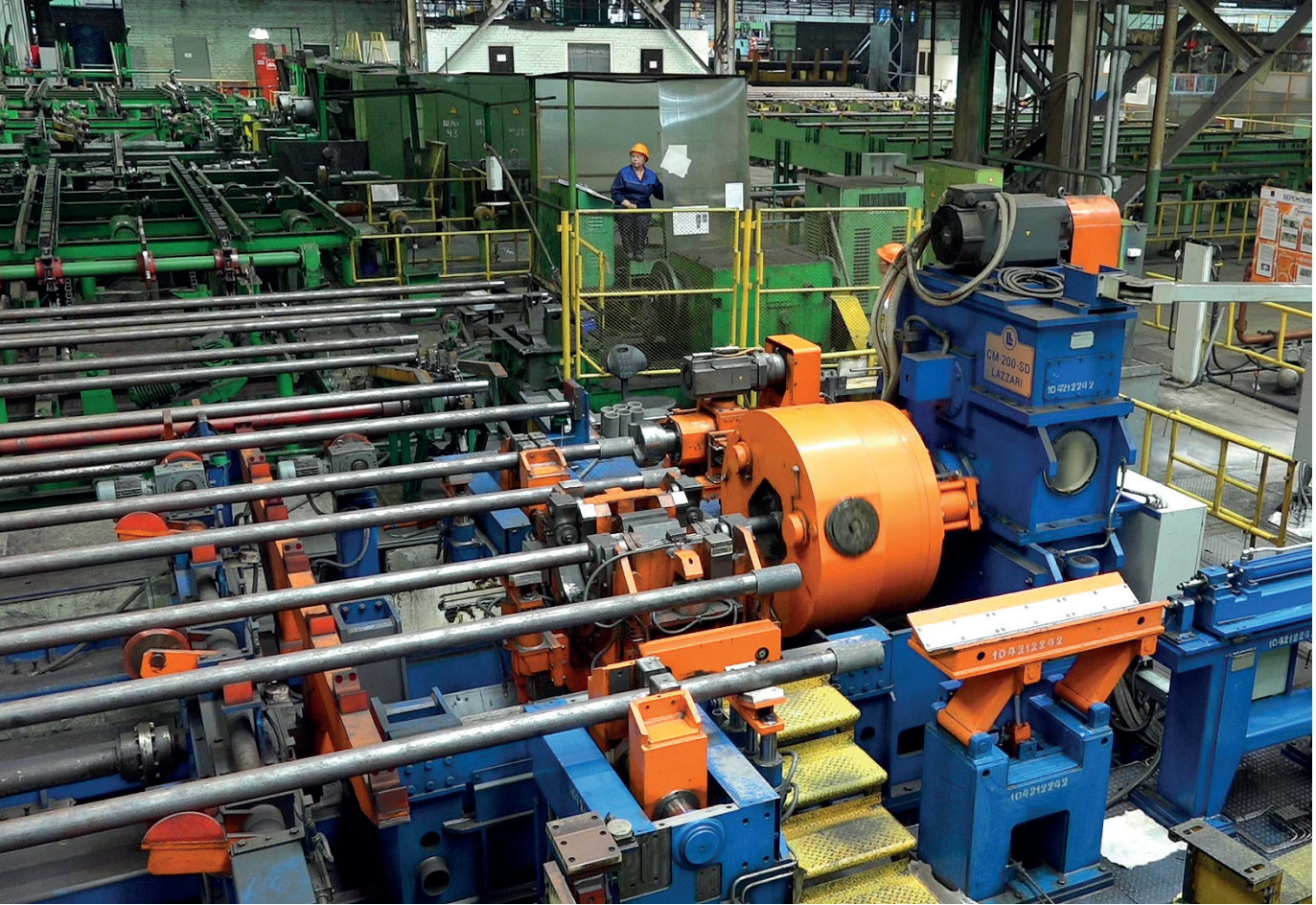
TMK. "The expansion of oil and gas companies into the Arctic needs advanced technical solutions from the pipe industry as well," says Kirill Marchenko, Director of Global Product Development at TMK. "Our vacuum insulated tubing meets these requirements, including serving production of high-viscosity oil. They can be used not only by gas companies but also by oil producers. We consider this direction to be very promising."

According to Vyacheslav Gagarinov, managing director of SinTZ, new welding stations with induction units for weld heat treatment were commissioned at the VIT area of the OCTG shop in June. The stations will improve the structure and properties of the welded seam. Also, an additional vacuum station with the equipment for heating pipes during vacuum evacuation

REFERENCE

Vacuum Insulated Tubing (VIT) consists of two pipes, with one of them placed inside the other. Pipes are connected by welding, and the inter-pipe space is filled with screen insulation and can be evacuated. This design provides very low thermal conductivity and a long service life of up to 30 years. VIT is designed for operation as an upper section of an oil or gas production string.

was launched in a trial mode. The station allows processing up to six pipes simultaneously. "We pay special attention to the product quality," says Gagarinov. "We implement a multistage quality control of welded joints, which impacts functionality and reliability of the entire product. For surface defects we use the magnetic particle inspection and for internal defects we utilize the radiographic inspection."



TMK IPSCO FIELD SERVICES

As the U.S. pipe market is recovering, TMK IPSCO Field Services is strengthening its customer base in the oil and gas sector with on-call and on-site technical support at the highest level

TMK IPSCO prides itself on a loyal and robust customer base, which has been expanding with increasing sales across the United States lately. One of the most essential links in the company's supply chain is Field Services, a unit of the TMK IPSCO Customer Support Department, – a

team of highly skilled specialists who know just about every detail about each product that comes out of the 12 TMK IPSCO production plants.

TMK IPSCO Field Services provides advanced customer service and technical assistance to customers

ranging from consultations to emergency response with immediate on-site repairs.

“In Field Services, we send personnel to operating rigs to assure proper running of our premium and semi-premium connections and to address

TMK IPSCO FIELD SERVICES WERE ESTABLISHED IN 2008 IN HOUSTON

TMK IPSCO FIELD SERVICES

Customer Support Hotline:
1-866-PIPE123 (1-866-747-3123)
fieldservices@tmk-ipSCO.com

any issues that arise relating to TMK UP ULTRA premium and semi-premium connections. We assure that these personnel are trained specialists for our connections,” says Ryan Chadwick, Vice President and General Counsel at TMK IPSCO who oversees the work of the TMK IPSCO Customer Support Department.

To maximize efficiency, the company has developed a network of partners staffed with certified technicians and other specialists in the target markets. Their around-the-clock availability minimizes response time, as they are able to get to work sites within hours. Timing is essential for the oil and gas sector – especially when an issue on an operating rig requires immediate attention.

“Overall, we currently have six companies that provide field services for us in America. Most of these partners are in Texas – Midland-Odessa area, Houston, Dallas... Others cover Louisiana and Ohio. Additionally, there is a company that services the Canadian market and there is one for South American customers. All of our partners are trained and certified by us,” explains Ian Carrillo, TMK IPSCO Customer Support Manager, who is actively involved in field services.

“Our job is to make sure that our products are used the way they were designed to be used. Through our services, we make sure that they are both installed and used properly,” adds James Pittinger, Training and Technical Support Manager with decades of field service experience. James has been working at TMK IPSCO for the past 7 years and helped to build the efficient field services system from the ground up. Prior to training technicians and certifying them for on-site inspections and repairs in the United States, he managed a multi-national work force involved in OCTG installation in the Caspian Sea, as well as teams in pre-war Syria and in Qatar.



TMK IPSCO provides advanced customer service and technical assistance

Currently, James provides technical support relating to field service to customers, the TMK IPSCO engineering group, and the TMK IPSCO quality assurance group. One of James' main jobs is to provide advanced technical training to field services personnel. The training program has been revamped in the past 7 months; so far this year the team has trained crews in the Houston area, in Midland-Odessa and in Oklahoma. A trip to Canada for training is in the works.

Since 2008, a strong field service component has been present at TMK IPSCO, and the area of service coverage has been expanding. The ways for customers to reach specialists have been growing as well. “We have hotlines for just about any problem that may occur. Existing customers can contact us or they can contact our partner support companies. We are trying to make our service as convenient as possible. There is a hotline for Field Services and also a hotline to any technical issues that our customers may have – we can help resolve problems in regards to sales or get an engineer on the line, if required,” says Ian Carrillo.

When offered to compare its work to car business, the Field Services team accepts the analogy: “If we were a reputable auto dealer, we would want to offer not only to sell our cars but also to repair them promptly and professionally. So, we are similar in that sense. We need to keep our customers satisfied when they buy and use our connectors and provide top-notch service.”

DIRECT QUOTE



IAN CARRILLO,
TMK IPSCO
Customer
Support
Manager:

“If we were a reputable auto dealer, we would want to offer not only to sell our cars but also to repair them promptly and professionally. So, we are similar in that sense. We need to keep our customers satisfied when they buy and use our connectors and provide top-notch service.”

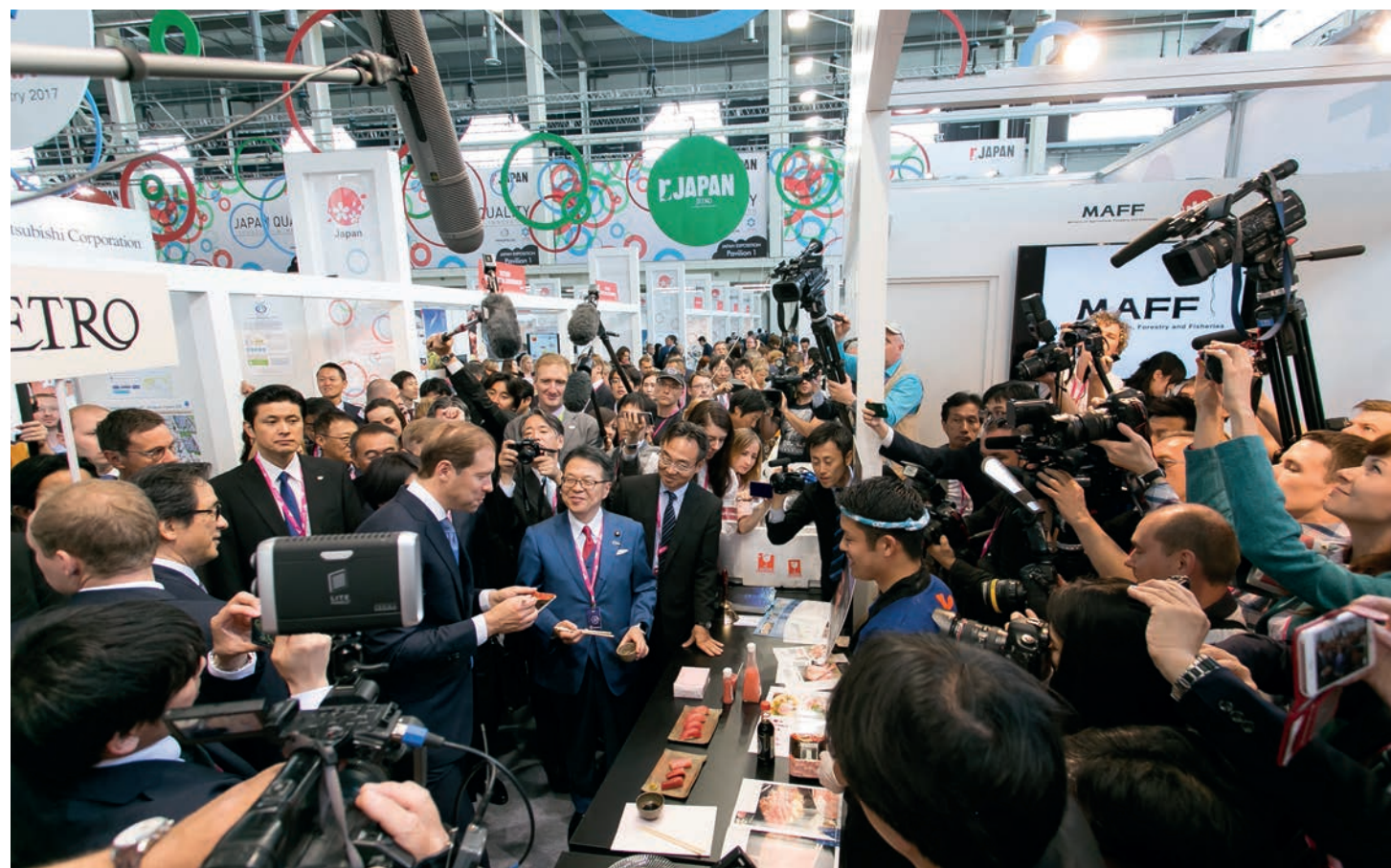


PHOTO COURTESY: INNOPROM-2017 PRESS CENTER

A FORUM WITH JAPANESE FLAVOR

Smart manufacturing and a global approach were the hottest topics at Innoprom-2017 – Russia’s largest industrial expo.

The 8th annual international gathering, Innoprom-2017 brought together more than 600 delegates from 20 countries to discuss innovative technologies in metallurgy, industrial automation, power engineering, mechanical engineering and other industries. TMK’s team showcased latest products and projects in Yekaterinburg, July 10-13.

The main focus of the business program at Innoprom-2017 was on

smart manufacturing. Participants from Italy, Switzerland, Sweden, India, Denmark, Turkey, Japan, the Czech Republic, the United Arab Emirates, Iran, South Africa, Belarus, China, France, Liechtenstein, Great Britain, Finland, and Russia discussed digital transformation and the fourth industrial revolution and featured their best products. FANUC Robotics, Rostec, Yamazaki Mazak, Volvo Trucks, SAP, Siemens, Schwabe, Kaspersky Lab, and TMK were the

Delegates from Japan treat Russia’s Minister of Industry and Trade Denis Manturov to national cuisine

center of attention inside their pavilions.

TMK’s presentation was not only informative but also visually impressive and technologically advanced – with large LED screens, interactive panels, virtual reality (VR) elements, and QR codes. VR glasses opened an amazing panoramic view of the Yekaterinburg Arena, one of the FIFA World Cup 2018 locations, now being upgraded with TMK’s help.

Facts & Figures:



50 THOUSAND SQ. M.
OF EXHIBITION SPACE



600 COMPANIES



DELEGATIONS FROM 95 COUNTRIES



50,194
UNIQUE VISITORS



MORE THAN 300
REGISTERED MEDIA

The company stand was visited not only by top Russian officials but also by such dignitaries as the Minister of Economy, Industry and Trade of Japan Hiroshige Seko and the Chairman of the Board of FANUC Yoshiharu Inaba.

The industrial part of the forum featured a special exhibition on metalworking with more than ten sessions devoted to digitalization of production, additive technologies

TMK’S PRESENTATION WAS INFORMATIVE, VISUALLY IMPRESSIVE AND TECHNOLOGICALLY ADVANCED

In addition, the Forum of Component Manufacturers: Machine Tools and Investment Machinery and Financial and Industrial Forum were held for local and international participants.

TMK representatives were, as always, active at Innoprom. The Chairman of the Boards of Directors of TMK and the Sinara Group Dmitry Pumpyanskiy moderated a conference called

Standardization and Conformity Assessment as Tools for Enhancing the Export Capacity of Russian Industry. He also met with the Strategic Council for Investments in New Industry and the Coordinating Council of the Russian Union of Industrialists and Entrepreneurs for the Urals Federal District. Other members of the TMK delegation took part in many of the Forum’s events.

Over four days, more than 20

TMK and Sinara Group stand





agreements and 100 memorandums on cooperation were signed. Among other things, TMK reached an agreement with Russia's Sberbank on electronic document management. Now four Russian TMK plants will work with Sberbank through a digital office. Electronic documentation will reduce time spent working with documents and accounts and reduce paper document turnover.

TMK and the All-Russian Scientific

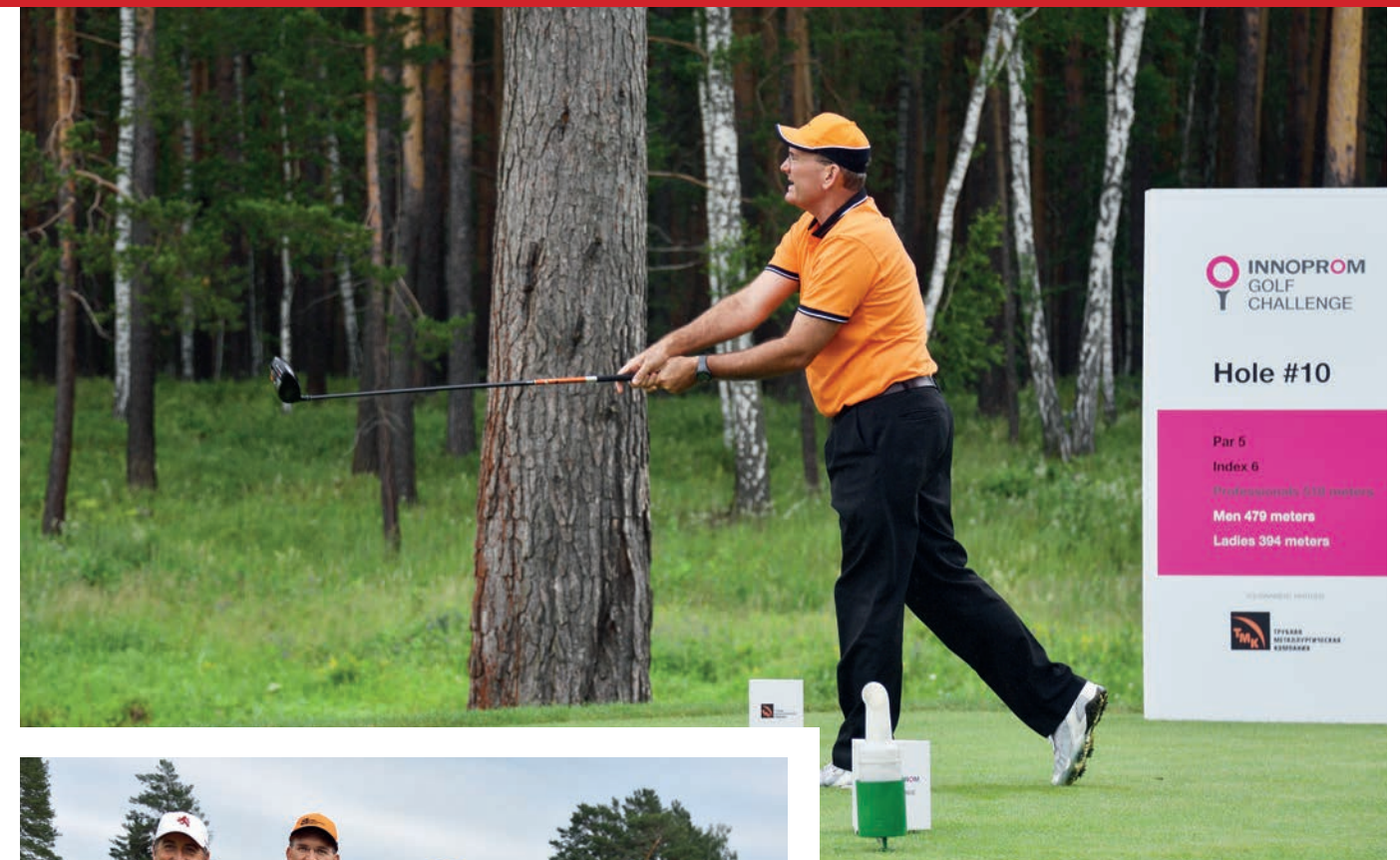
Research Institute of Metallurgical Engineering (VNIIMETMASH) signed a memorandum of intent. The parties agreed on cooperation in the repair, modernization and supply of modern process equipment for the Russian TMK plants and for the Romanian enterprise TMK-RESITA.

🚩 Anatoly Chubais, Chairman of the Executive Board, RUSNANO Corporation, visits TMK and Sinara Group exposition

In addition to its business mission, Innoprom is also a platform for cultural exchanges. This year, Japan served as General Partner and prepared a special treat. Next to advanced industrial robotics and medical equipment, the Japanese served tea, cooked traditional Japanese cuisine, and even held master classes on how to choose and cut raw fish.

Recreational activities included a boxing tournament and Innoprom Golf Challenge. The Challenge gathered more than 250 business and political leaders from 50 countries who enjoyed the informal setting for their talks. Guests of honor included Minister of Industry of the Russian Federation Denis Manturov, the Minister of Industry, Trade and Tourism of Bahrain Zayed Rashid Al-

🚩 3D technologies – the essential part of a modern expo



🚩 Total golf course area: 147 hectares

🚩 The TMK team at the tournament

Zayani, the Minister of Industry of the Republic of Belarus Vitaly Vovk, the Chairman of the Board of Directors of RMK Igor Altushkin, and the Chairman of the Board of Directors of TMK and the Sinara Group Dmitry Pumpyanskiy.

TMK was represented by the American division – Deputy Chief Commercial Officer Gary Durbin, General Manager for Business Planning, Forecasting, Imports and Logistics Mark Patton, and Jessica Durbin, who was awarded a special prize for the best shot among women.



A GAME OF SOPHISTICATION

Golf is often called the game of elegance, confidence and competence. TMK IPSCO has its own stars of the game, with decades of experience and many tournament wins. General Manager for Business Planning, Forecasting, Imports and Logistics Mark Patton and Deputy Chief Commercial Officer Gary Durbin have recently returned from Russia where they were part of TMK’s team during Innoprom Golf Challenge tournament. Mark and Gary answered our questions and shared their love for golf in an exclusive interview to YourTube.

“GOLF IS LIKE FISHING – YOU GET TO SPEND A LOT OF TIME OUTDOORS.” MARK PATTON

“The game is special to me due to the memories I have with my father who has passed away. It was a joy to compete with my father both as a teammate and as the competitor,” Mark Patton starts telling his story. “My father was good. I saw how he practiced and played. I was eight when I first tried.” Mark goes on telling how he could not hit the ball right because he is left-handed. His father taught him to hit from the right side and became his first coach. But he really got into golf much later, already in high school.

“I wanted to play better and better. And I wanted to win,” he says. During the first tournament Mark needed 92 shots to get through the field and the last one he completed with just 76. It was a major achievement. For Mark, golf is a mix of talent and persistence. Talent can help you get to a certain level but after that you need a good



Mark Patton

coach. And you need time to mature and get better.

Mark’s first tournament wins came when he was already in college. He did not play for any team but participated in individual tournaments. It was a great activity. “Golf is like fishing – you get to spend a lot of time outdoors,” says Patton. To Mark, golf is all about interacting with people as well. “I have made very close friendships where golf has been an integral part of getting to know others in a very close and intimate way,” he explains. And then he adds that golf is always

a challenge. All golf courses are different. You learn every time and you get better, and that’s the beauty of it.

“I typically have a group from TMK-IPSCO that I play with on Saturdays. I have a few awards from the past in both individual and team tournaments,” he says. Mark is not a member of any club at the moment. When he had children, he began participating in less tournaments. But playing for fun is very rewarding to Patton: “I get to coach my kids, just like my father was my coach long time ago.”

“GOLF IS A GAME YOU NEVER MASTER AND ALWAYS WORK ON ALL ASPECTS OF THE GAME” GARY DURBIN

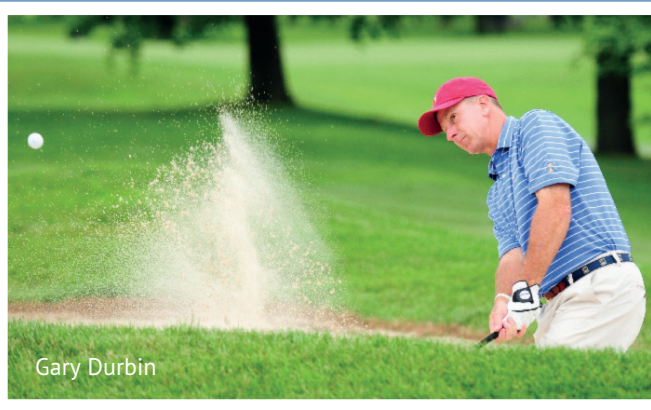
“My father introduced me to golf when I was seven. He was a football coach. I started playing with him and soon I was doing well,” says Gary Durbin. By the age of twelve he was getting his first tournament wins. As a junior golfer, he was successful enough to earn a scholarship to Penn State University. “I was captain of the team my senior year and earned the All-American award for my performance.”

When Gary graduated, he had to make a tough choice – whether to go pro or to pursue a career in metallurgy. Gary accepted an offer from the National Metallurgical Company and went to Pittsburgh. “I decided to devote my life to the steel industry, says Durbin. However,

he continued to play in tournaments around Houston and even national competitions, not as often, about several times a year.

Gary says he plays with friends, family and even his customers. “Golf is a game you never master and always work on all aspects of the game,” he says. “I have been playing golf for over 50 years. And I can play against young players. They are stronger physically, but I am more mature and wiser. So it levels our chances.” Gary won many tournaments including the Houston City Amateur 3 times. The last victory was particularly important. It was only a month after his father passed away. Gary’s father was very proud of his son’s achievements in golf, so the win was very symbolic.

Gary says golf helps him to travel. This year he visited Yekaterinburg



Gary Durbin

and played for TMK during Innoprom-2017 expo. “The golf course there is championship caliber and in great shape. The event has been professionally run and a great opportunity to promote golf in Russia,” says Durbin. He adds that Russians are good in hockey and that hockey players can quickly learn to play golf. “So, if Russia continues to promote this sport, in about 10-20 years there will be a whole generation of Russian golfers.”

GARY DURBIN’S ACHIEVEMENTS IN GOLF:

- 1979.....College All American – Penn State University
- 1979.....Nittany Lion Collegiate
- 1979.....All East Selection NCAA’s
- 1989, 1991.....Houston City Amateur
- 1989, 1991.....US Amateur
- 1988, 1990, 2001.....Champions Golf Club
- 1999.....Champions Cup
- 2011.....Medalist Golf Association
- 2013, 2015.....Texas State Four-Ball
- 2013.....Houston Senior City Amateur
- 2015.....Champions Golf Club Senior
- 2017.....USGA Senior Amateur

MARK PATTON’S ACHIEVEMENTS IN GOLF:

- 1991.....US Public Links Amateur Championship (USGA)
- 1996.....Hide-A-Way Lake Golf Club
- 2011.....Holly Lake Ranch Golf Club



MARK PATTON



How important is golf to you? The game has taught me several things about competition and working hard. I have used these lessons in both my personal and professional life.

What advice would you give to those who want to succeed? Have control over your emotions and remain focused on each shot as it comes.

Which golf player do you admire (from past or/and present)? Jack Nicklaus, as he is the best to have played the game. But I admire my father more than any golfer.

Where would you wish to play golf? I would want to play “The Masters – Augusta, Georgia”. It is the Masters.

GARY DURBIN



How important is golf to you? To play golf at a high level is very similar to business; it teaches you discipline, hard work to be successful, good decision making, goal oriented.

What advice would you give to those who want to succeed? Receive good instruction, be patient and play with friends.

Which golf player do you admire (from past or/and present)? Arnold Palmer.

Where would you wish to play golf? Ireland would be great to play due to the historically in golf and the wonderful golf courses.



PIOTR GALITZINE,
TMK IPSCO CEO

1. Three espressos and a swim, followed by a tour of the garden.
2. I believe in family and God. As for work, when you are giving as much as you think possible, that's when your craftsmanship starts to grow.
3. Winston Churchill, Hannibal. My ancestors. Saint John of Shanghai and San Francisco, whom I met as a boy.
4. Sport: I used to race motorcycles, now I bicycle. Hunting, especially with a bow. Fishing with the grandchildren. Painting and sculpting.
5. The presidents of Russia and the USA.
6. Coyote America, by Dan Flores.
7. Octopus on the grill. Actually, anything on the grill from quail to bear, especially if I've harvested it.
8. Alaska: once you're there, you realize that you have always wanted to be there. It looks exactly like Russia's Kamchatka Peninsula
9. Peru's Machu Picchu and Sacsayhuaman. Russia's Lake Baikal and Kamchatka. The Grand Canyon, Bryce, Zion and Arches Parks in America's West. The Barrier reef in Belize.
10. Paris, London and New York; they define the planet.
11. I would encourage the pharma industry to invent a pill that would make us allergic to violence.
12. Hard-charging. Honest. Honorable.

Q&A



MIKE CHRISTOPHER,
CEO, TMK-Industrial Solutions LLC

1. How does your workday typically begin?
2. Do you have any professional superstitions or superstitious beliefs?
3. Who in the past or present particularly inspires you?
4. What are your favorite habits or rituals?
5. Who would you invite to a dinner party?
6. What is the last book that excited you?
7. What is your favorite dish or cuisine?
8. What is your most memorable recent experience?
9. What is the most interesting place in the world that you've visited?
10. What is your favorite city, and why?
11. If you were given the chance to change just one thing in this world, what would it be?
12. What does TMK mean to you? Describe it in just three words.

1. Coffee and Daily Booking Report
2. Don't tell anyone until we get the purchase order or contract signed.
3. My fellow team members teach me new things daily.
4. Finding the hidden strengths in my team by challenging them every day.
5. Successful entrepreneurs. How do they spend their leisure time outside of work.
6. "Good to Great" by Jim Collins
7. An American beef Ribeye steak with garlic mashed potatoes, grilled asparagus, and a nice Cab wine
8. Hearing my granddaughter say "Grandpa!"
9. The Great Wall
10. Rome. Stunning art and architecture.
11. Live by the Golden Rule- "do unto others as you would have them do unto you!"
12. Life, Love, Challenging