

NLMK GROUP

Corporate Magazine

3, June 2013



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Corporate Magazine
No. 3, June 2013

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Feature Story
NLMK KALUGA LAUNCH



New Project
**DANSTEEL:
MAJOR ROLL-OUT**



One Day
**NLMK AS SEEN
BY A BELGIAN**



Travel
INDIA: A JOURNEY OF INNER DISCOVERY

NLMK AND SIEMENS IN THREE-YEAR COOPERATION AGREEMENT

NLMK Group and Siemens have signed a three-year agreement on technical cooperation for the supply of NLMK-produced steel products to the Germany-based company



The agreement was signed by representatives of the companies at an extended meeting of the Siemens Management Board held in Moscow.

Oleg Bagrin, NLMK Group President, said: "This agreement takes the strategic partnership between NLMK Group and Siemens that commenced in 2010 to a new level. We consider this agreement to show recognition of the quality of our products and to confirm our long-term commitment to expand cooperation in the future."

Siemens AG is a global powerhouse in electronics and electrical engineering. As part of the new stage of cooperation, NLMK will be able to supply up to 18,000 tonnes of NGO (non grain-oriented) steel, up to 15,000 tonnes of GO (grain-oriented) steel, and up to 30,000 tonnes of its thick plate per year. These steel products are planned for use in the manufacture of equipment for the electrical power industry, including electrical drives and transformers. ■

NEW APPOINTMENTS

NLMK appoints new Vice President for Investment Projects

NLMK is pleased to announce the appointment of Konstantin Lagutin to the newly-created position of Vice President for Investment Projects.

The main priorities for the new manager will include general coordination of the company's investment activities and preparation for the gradual roll-out of a corporate project management system, based on the best practices from Russia and the rest of the world. Mr Lagutin will also be supervising the implementation of NLMK Group's Development Programs, including at Stoilensky, NLMK's iron ore mining asset. ■

Profile



Konstantin Lagutin

Born in 1966. He has **over 20 years** of executive experience in the oil and mining industries. He was General Director at the Ryazan Oil Refinery Company,

First Deputy General Director of Belon, and **Head of the EvrazHolding Mining Division**. He has extensive experience in implementing major investment projects: **he managed the revamp** of the Ryazan Oil Refinery Company, **the construction of coal mines and plants** in Kuzbass, **the modernization** of Kachkanarsky Ore Mining and Processing Plant, **and the development of new iron ore and coal deposits**. He holds the **PMI Project Management Professional** credential. In 2003 he received **an MBA** from Duke University (USA) in General Management.

BY RAIL AND BY ROAD

It appears that NLMK's logistics department has found the perfect solution for moving goods around factory premises



▲ Titan can function either as a locomotive or a truck. It is a real boon for the steel company

In mid-May, tests on a mobile railcar mover, released by the US company Trackmobile Inc., began at the Novolipetsk plant. NLMK railway management representatives and logistics personnel of the Group's subsidiaries were able to learn about the features of the new railcar mover.

Company representatives from Trackmobile's official distributors in Russia demonstrated the new hybrid means of transportation.

"NLMK has experience using alternative means of traction," said Alexander Sapronov, NLMK Vice President for Logistics. "In particular, German-made

shunting vehicles have been operating for a few years and have performed well with small groupings of railway cars. That positive experience became the foundation for expanding the use of alternative means of traction."

Titan is a more powerful machine than a shunting vehicle and has a tractive force of about 3,000 tonnes. It is able to work in harsher conditions and combines the features of both a locomotive and an automobile.

The acquisition cost and operating costs of alternative means of traction are significantly lower than with domestic locomotives. At the same time, alternative means of traction create conditions for shortening the length of railway sidings and lowering maintenance costs. They do not require expensive railyards which you need in order to operate locomotives.

NLMK is the first company in the steel industry to use alternative means of traction. In the future, Titan is scheduled to be used to transport hot slag, in shunting during the unloading of raw materials from Blast Furnace No.6, and in loading molten crushed stone from hoppers and at other production sites. Stagdok will be the next site to test Titan. ■

Trackmobile Titan is
3 TIMES
more powerful than the average
shunting vehicle

“IT IS HARD TO CAST THE SKIN”

*At the end of May the first steel was produced at NLMK Kaluga. The plant will soon plan to sell the first batch of finished product in the form of rebar. NLMK Group dropped in on the opening and asked a few questions to the plant's General Manager **Sergey Shalyaev***

Sergey, please tell us a bit about this facility. What is it capable of?

NLMK Kaluga is a next-generation steelmaking enterprise. At the heart of our project lies the concept of a steelmaking mini mill, which means that it must be close to both the customer and the source of raw materials. As for production capacity, our steel output is 1.5 million tonnes a year and our rolling capacity is 900,000 tonnes of finished product a year.

Is this more or less when compared to other mini mills?

The output of the arc furnace alone with a capacity of 120 tonnes is 50% greater than its standard counterparts. At any rate, these days the winner in any market is not the biggest, but the one who is faster and more efficient. That's why we use the latest equipment which guarantees a high quality product, while at the same time minimizing wastage of raw materials and energy, and mitigating operational costs.

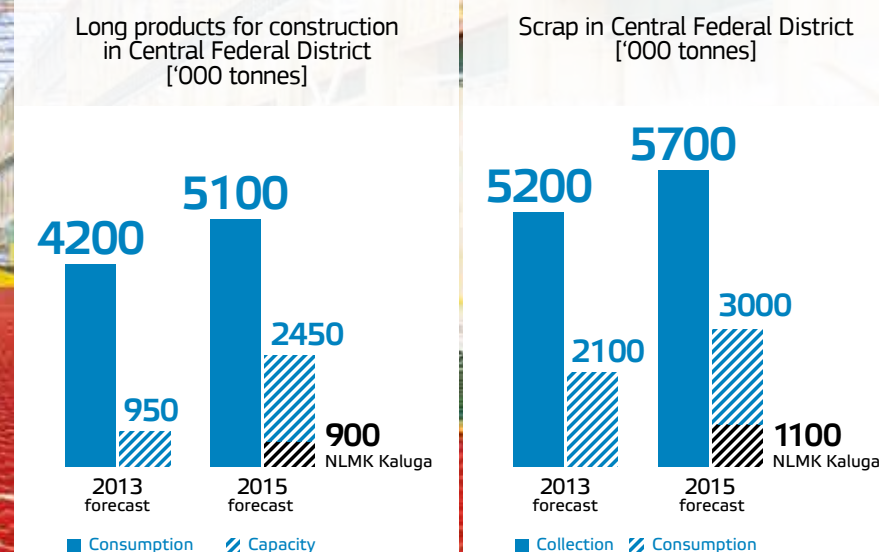
Favorable location

[distance from long product manufacturers to Moscow]



Design capacity
[m tpa]

steel 1.5
rolled products 0.9–1.5



The Central Federal District Market

The Central Federal District is one of the largest consumers of rolled steel for construction – up to 40%. There is a surplus of scrap in the region – around 2.7 million tonnes by 2015.

How does the technology of an EAF plant differ from traditional steel manufacturing?

Firstly, we use ferrous scrap in our process. Unlike integrated plants, we do not use iron ore, nor coke, nor pig iron. The use of mini mills as scrap recycling centers is an ecological triumph for the modern steel industry. We can compare the recycling of scrap to the recycling of paper: there was a good reason that as school kids we collected scrap metal and waste paper. Secondly, when building a mini mill, the initial investment per tonne of finished product is almost half that when building an integrated plant. Thirdly, the primary energy source for steel manufacturing is electricity.

And, of course, the finished products are different.

Yes. In our case, this is rebar and sections for the construction industry: rebar that is 10 to 40 mm in diameter, angles, and I-beams.

And how are things between you and NSMMZ? Is there competition within the Group?

The marketing policy will be decided by a single company: NLMK Russia Long; so it's not worth losing sleep over internal competition. The Ural plants will function in all markets because their product range is broader. Our primary challenge is to develop the Central Federal District market. As for scrap deliveries, NLMK Kaluga will obtain scrap from the central region – this includes Moscow and Moscow Region, while NSMMZ will focus, as it does now, on the Urals and Siberia.

Being within 100 kilometers of Moscow gives the plant a definite advantage, doesn't it?

The fact that we are located on the border between the Moscow and Kaluga Regions means that the plant is located in close proximity to the surplus scrap market, as well as to customers for finished product. This, in turn, lowers our expenditure on scrap iron and on transportation, which gives us the ability to react flexibly to consumer demand. In addition, the Moscow Region is traditionally very active in terms of construction. Therefore, we are

planning to continue to be in demand long into the future. That said, it is of course always important to carefully weigh up the need to retain our market advantages. By this, I mean that we cannot rest on our laurels, but must seek ways to improve production efficiency.

How do you plan to retain your efficiency if scrap prices increase?

We will look for a way to replace some of the scrap – up to 20%. We can use waste metal, briquettes, and pig iron from Novolipetsk. In the end, efficiency is all about being prepared for all possible events and being able to continue operating under all possible conditions.

And no doubt you've already worked out your development strategy?

We are planning to build a new mill, with an annual throughput volume of 600,000 tonnes of long products per year. The decision to build will be made after the plant is operating at target parameters. The rolling mill workshop has already been constructed with optional further development in mind.

NLMK Kaluga is the only large long product manufacturer in the Moscow region

Is it true that the technology used in the plant has reduced the facility's environmental impact?

Yes, our level of waste is a record low for steelmaking plants: less than one kilogram per tonne of steel. We have installed modern dust and gas cleaning systems, which are 99% efficient. Besides that, thanks to closed-loop water supply cycles, waste water discharge into the surrounding environment is completely impossible.

What is the most important thing for you at the moment?

Efficient production, which, apart from being prepared for changes in market conditions, literally means two things: modern technology, and qualified, motivated personnel.

High standards of corporate responsibility

+ a training center

1250
jobs

600 in service
companies

165 apartments built for
steelworkers' families

You already have the modern technology; how is it going with the staff? After all, Kaluga Region is hardly an industrial area, let alone a steelmaking one.

In total we will be hiring 1,250 employees – that's the entire workforce, including management. Of these, some of the technicians and workers have been invited from other steel companies and are highly qualified; plus, 550 personnel from the local labor market have been trained at NSMMZ and Novolipetsk training centers. In May the plant was granted a license to conduct training for fifty essential and support occupations, so we will be training personnel on site from now on.

How did you attract employees?

An experienced manager knows that a person is drawn to a job not to build the company's might, but to improve their own life and career. But if the worker is sure that strengthening the facility will improve their own life and career, they will do everything within their power. Our slogan for attracting new employees is "Choose a reliable profession with us." We guarantee people a long-term future, and tell them openly in the process that work in the modern economy is a bit like sailing in a dinghy across stormy waters. You can jump overboard and swim on your own, but that's more difficult. Intelligent people come together and build a boat that will allow them to save themselves and survive the storm now, and set a course for a better future afterward. And I ask my managers every day to keep in close contact with our people, to listen to them and to give advice to the young. As clichéd as it sounds, people really are a company's most valuable resource.

On the whole, what's the atmosphere like among the team?

In actual fact, everyone's eyes have lit up during this pre-launch period: a new plant, new professions, new technology. Foremen, workers, and technicians gather around the roaring electric furnace and wait impatiently while the long billets – illuminating everything around them – pass from a semi-liquid state into the hard form of the steel we are used to. All the onlookers hug each other

“All the onlookers hug each other like hunters who've caught an animal in their trap, celebrating a communal triumph over nature which not one of them could have managed on their own!”



◀ Sergey Shalyaev,
NLMK Kaluga
General Manager

like hunters who've caught an animal in their trap, celebrating a communal triumph over nature which not one of them could have managed on their own!

The pre-launch work must be very different from post-launch operations...

A plant is the child of a huge collective: designers, contractors, procurement services, vendors, investors and so on. Figuratively speaking, the child has been born and now he must live, grow, and learn to stand on his own two feet. It's a completely new situation, a new life. And so we must now pass from the building phase to the production phase, to a new life for which we built the plant in the first place. Yes, we'll have to change many things. The work will become more formalized and more meticulous. Do you remember how Kaa the python from the Kipling's *The Jungle Book* used to say, "It is hard to cast the skin"? Well, we too figuratively speaking, have to shed our skin now: to pass from the building phase to the production phase. We are already mastering SAP and acclimatizing people to new working methods that are in use throughout all the NLMK Group companies. Although my view is that managerial approaches at a large plant should be different from those at a mini mill, and we still have to figure out which approaches to management are worth borrowing from the plant and which from a smaller facility that has fewer managerial levels and a tighter interaction between workers, technicians, and managers.

What are the differences between these approaches?

The smaller the facility, the smaller the number of formal procedures. Decreasing the quantity of in-process paperwork to reduce the production preparation time and releasing line foremen to work with the team will be some of the more pressing challenges in the near future. I am sure that this approach is the right one. After all, melting and rolling steel is a team process, and therefore its result depends on how the team works together. ■

Yulia Taranova

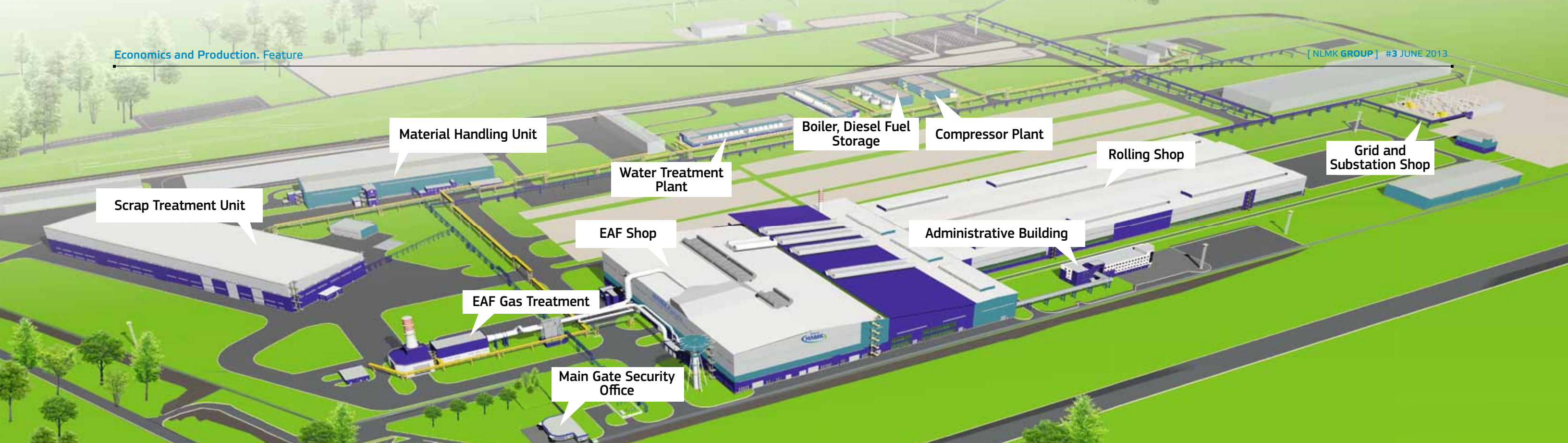
NLMK Kaluga Products [Stages I and II]

Billets **100–160 mm**

Rebar No. **10–40**

Angles No. **2.5–10**

I-beams No. **5–12**



Conservation of natural resources:

- production is based on processing recyclable materials – ferrous scrap;
- processing of waste into by-products;
- steelmaking slag is processed into crushed stone;
- the dust from the gas cleaning of the EAF Shop is processed into pellets;
- the lining waste is processed into refractory powders;
- graphite electrode waste is processed into carbon-bearing powder;
- ladle slag is used as a partial lime substitute for steel smelting in the EAF.



Ambient air protection:

- modern cleaning systems with a cleaning efficiency of at least 99%;
- an emissions level of less than 1 kg per tonne of steel.



Water protection:

- reduced natural water consumption through the use of storm and drainage water;
- closed cycle water supply prevents outflow of industrial wastes.



Facility advantages:

- recyclable materials processing and product distribution to Central Federal District;
- low transportation costs;
- a developed scrap collection network.



NLMK Kaluga exceeds the best international parameters:

- specific electricity use is lower by 5% (21 million kWh/year);
- specific gas consumption is lower by 5%;
- raw materials use efficiency is higher by 2% (1,000 tonnes of scrap per year).



Equipment:

- electric arc furnace (EAF-120 Ultimate: SIEMENS VAI, Austria);
- twin-stand ladle furnace (LF-120 SIEMENS VAI, Austria);
- continuous casting machine (CCM, SMS Meer, Italy);
- continuous rolling mill (SMS Meer, Italy).



EUROPEAN DECADENCE

Not yet fully recovered from the 2008–2009 global financial crisis, the euro zone has now inherited a debt crisis from its peripheral nations, which was exacerbated last year by falling demand. Judging by the forecasts, Europe's steelmakers will spend all year picking up the pieces...

Svetlana Solomatina

According to the European Steel Association Eurofer, the EU economy refuses to stabilize following last year's disastrous fourth quarter, when the euro zone's GDP fell by 0.7% against a background of slowing demand – both domestic and export. Even the more successful euro zone nations – Germany and France – saw a drop in their figures.

NO SIGN OF GROWTH

World Steel Association data shows that in April, EU countries decreased production to 14.1 million tonnes, down by 4.9% year-on-year. Hardest hit are the so-called integrated producers – facilities whose operations encompass the full cycle, from pig iron production to steel products. The reasons for this include low utilization rates, high production costs, lack of captive raw materials and, consequently, the need to import these at market rates. And all of this is happening against a backdrop of falling prices (around 5–6% in April–May), a reduction in purchases from key clients and pressure from cheap imports. ▶

◀ The so-called re-rollers are better off. These are manufacturing companies who produce finished steel from semi-finished products (slabs and billets) which are now cheap to procure. They have no structural issues to deal with and can cease production when client orders stop coming in.

Eurofer decreased its outlook for real and apparent steel consumption for the year; it is now 1.3 percentage points lower than it was in February. According to the renewed forecast by the steel manufacturers' association, real steel consumption could fall by 3.1%, while apparent consumption could fall by 2%.

NO ILLUSIONS

To add to all this, the association notes that European steel manufacturers are losing market share because imported rolled products have become more competitive. The Europeans' high production costs do not allow them to react quickly to worsening market conditions and, as a result, they are losing their share of the market to keen, more competitive companies. Based on this year's first quarter results, domestic market deliveries by European manufacturers fell by 9%.

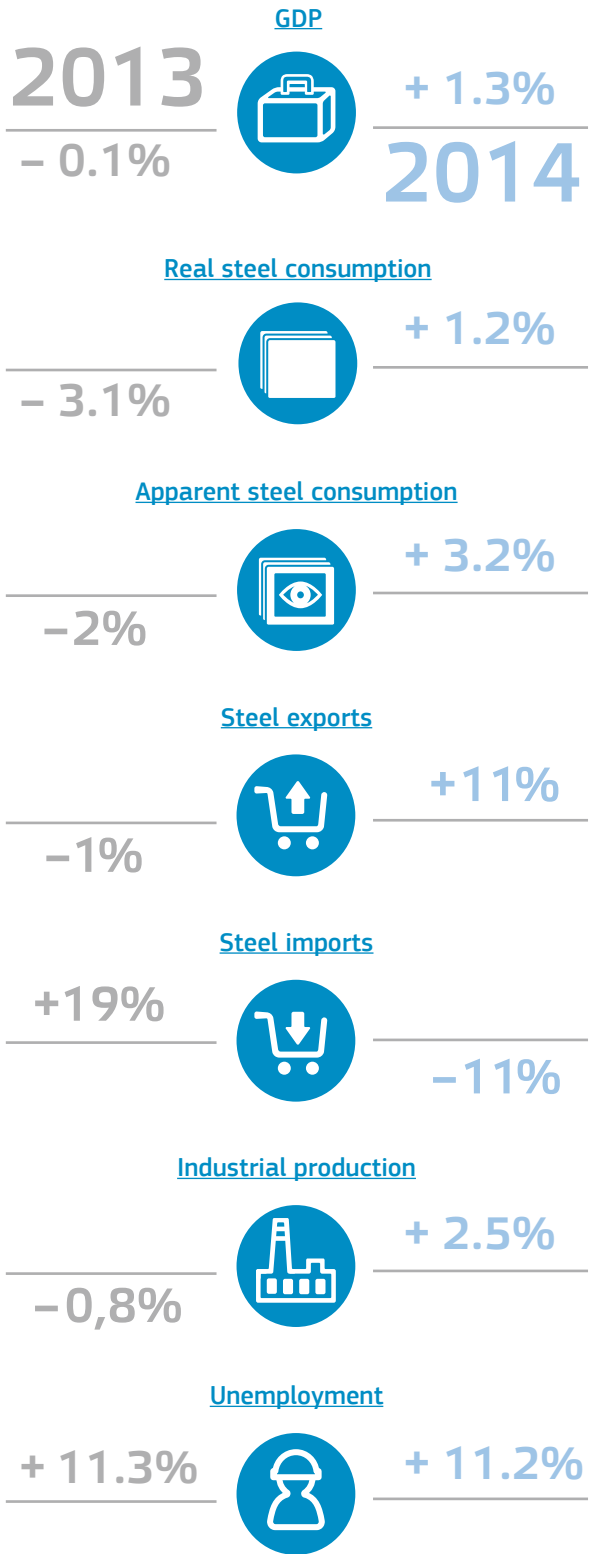
Nevertheless, Eurofer believes that Germany, the UK, and some other EU countries have a good chance of improving their position during the first half of the year, thanks to stable internal base indicators and an increase in exports.

However Germany itself is under no illusions. "I don't expect any major leaps," Mr. Kerkhoff, President of the German Steel Federation, told Reuters. Meanwhile, ThyssenKrupp, the country's largest steel manufacturer, warned that it does not expect renewed growth until next year.

According to the outlook from the European steel manufacturers' association, the sector experiencing the greatest drop in steel consumption will be the automotive industry, with a fall of 3.7%. This is the result of declining demand in the domestic market as a consequence of the sharp decrease in household earnings. The industry's share of total consumption is 18%.

Activity in the construction sector, which accounts for 35% of consumption, will fall 1.9%. However, it is worth noting that trends in the construction sector are currently showing regional variances: although demand is falling significantly in the south of Europe and Poland, the situation in the Northern European countries remains more or less stable. EU ▶

Europe, outlook by basic indicators



Source: Eurofer



drop in European steel imports in 2014

countries are implementing measures to cut budget deficits, leading to less investment in the main steel consuming sectors.

POLITICIANS APPLY PRESSURE

Steel consumption in 2013 could decrease by 3% from 142 million tonnes in 2012, suggests Eurofer in its forecast. In 2007, the European Union produced 230 million tonnes; since then, 20 million tonnes of capacity has been shut down. In Eurofer's view, a further 20 million tonnes of production capacity will be closed in the near future.

Overcapacity in Europe is currently a structural problem. Nonetheless, attempts by companies to shut down excess capacity in Belgium, France and Luxembourg are encountering powerful political opposition.

According to Reuters, in February the European Commission called on a company to delay shutting down its production facilities until a plan of measures to breathe new life into the industry had been adopted. The Commission is developing this plan and expects to present it by June. The French Minister for Industry and his colleagues from Belgium and Luxembourg supported the Commission's request.

The rate of decline in demand for steel is currently higher in Europe than it is elsewhere, while gas and electricity costs exceed the production costs faced by US companies multiple times over.

"If the cost structure is not radically corrected down in the next five years, then I see there being 50% less production here by 2030," Reuters quoted the CEO of Austria's Voestalpine Group, Wolfgang Eder, as saying.

BANKS OFFER COLD SHOULDER

Another big problem in the industry is obtaining finance. The banks' refusal to finance the steel sector has forced companies to seek alternative sources.

"Getting funds will be the main problem for steel companies in the next few years. Banks are trying to reduce their exposure...if not get out altogether," the Chairman of Trasteel told Reuters. "They have told us clearly they still like base metals and raw materials, but today steel is not sexy."

Italian steel maker Marcegaglia notes that for the moment the company continues to enjoy the banks' support, even though some of its clients are already suffering from the lack of financing.

Nevertheless, the immediate future does not seem hopeful.

A QUESTION OF TIME

Against a backdrop of falling demand and production capacity and the intensification of over-capacity problems, looms the issue of the so-called organized rationalization of European blast furnace and steelmaking capacities.

Production and capacity should correspond to market realities – all market players understand this.

In 2013, with a steel production capacity of 245 million tonnes, consumption stands at 140 million tonnes (as opposed to 220 million tonnes before the crisis). Of course this is a matter of political will in several European nations.

In any case, it is becoming a question of time: how long can European governments keep unprofitable facilities afloat, and do they have the means to carry on doing so? Furthermore, protectionism will hardly help here – the more so because "closing" the market to imported steel will cause its price to undermine the already weakening positions of European machinery exporters, as well as make infrastructure and construction investment costlier. In general, it seems that European steel manufacturers need to start preparing for hard times... ■

“Germany and the UK have a good chance of improving their position during the first half of the year

WHAT HAPPENED AT LA LOUVIÈRE?



Three questions for Alessandro Roggerini, HR Director at NLMK Europe

Alessandro Roggerini was delegated by NLMK's management team to conduct talks with NLMK La Louvière's social partners in Belgium. We

caught up with him to discuss the situation at the plant, and the employees' position.

Mr. Roggerini, tell us what has happened at the La Louvière plant?

"Since 2008, the European steel industry has been in a state of crisis. Many facilities have been shut down over the past 12 months; many companies in Europe are in the process of restructuring: Carsid and ArcelorMittal Liège in Belgium, Piombino in Italy, ArcelorMittal Florange in France...

Unfortunately, the crisis has also affected La Louvière: we came up against a sharp drop in demand, which resulted in significant economic losses. In order to find a way out of the ensuing situation, and return as quickly as possible to a break-even point, management was forced to undertake a full review of the plant's organization and develop a restructuring plan, which was presented to our social partners for consideration."

How did the negotiations go?

"At the beginning of October, based on the restructuring plan provided by the management, we started negotiations with our social partners. Our goal was to find a solution that would allow us to avoid closing the facility. More than ten meetings were held between company management and social partners. During the negotiations there were moments of conflict, with outbursts of dissatisfaction on the part of the workforce who did not understand that, without restructuring, the plant simply cannot survive in the market. The Duferco

Group, whose long products division occupies the same site as NLMK La Louvière's assets, encountered the same difficulties. This aggravated our situation: instead of 900 anxious workers we had to deal with 1,500, all of them afraid of losing their jobs. Finally, after four months of negotiations, we came up with a solution for NLMK La Louvière: a manufacturing and social plan which allowed us to preserve two thirds of jobs was approved by employees."

Can the workforce have confidence in its future?

"Yes! Thanks to this plan, we will be able to survive the crisis and maintain our place in the market until recovery begins. We will have to endure a difficult period in the market, but the restructuring plan we have worked out should allow NLMK La Louvière to recover its position

as a competitive and flexible manufacturer. Management, social partners and the workforce were faced with a difficult challenge, but thanks to a constructive dialog we

identified a solution that will guarantee the future of NLMK La Louvière. ■

Caroline Marlair, Communication Manager, NLMK Europe



THE LA LOUVIÈRE DEVELOPMENT PLAN

Actions which will enable NLMK La Louvière to break even by 2015:

- ~ adhering to a strategy of expanding its market presence with high value-added products;
- ~ adapting the plant's structure and costs to structural changes in the European market;
- ~ increasing flexibility and adapting our working method, so as to best meet the quality and service requirements in markets such as the car industry;
- ~ developing a five-year investment plan with the goal of improving quality, flexibility and environmental performance.



MAJOR ROLL-OUT

The construction of a new mill at DanSteel is one of the largest Russian investments ever made in Denmark

NLMK Group has invested more than EUR 120 million in the construction of a new rolling mill at the NLMK DanSteel A/S facility in Frederiksværk. Why make such a major investment during a crisis?

ON A VAST SCALE

Engineered by German company SMS Siemag AG, the new rolling mill can turn out thick plate up to 4 m wide and between 5 mm and 20 cm thick. Compared to older equipment acquired from the USA in the

1960s, the plate produced by the new rolling mill is not only higher quality but larger and thicker than before. These types of products are needed by European manufacturers in fast-growing sectors such as the energy industry and construction of off-shore wind turbines, gas and oil platforms, special purpose vessels and bridges.

In particular, the new rolling stand will allow DanSteel to supply wide thick plate to the market. This type of plate ensures greater stability for



windmill towers and oil and gas platforms, structures which are currently in active production around the world.

"Ten years ago, the Danes were worried about how long Russian investors would remain here and what their goals and intentions would be," explained the plant's Managing Director, Yury Tarasov, during the opening ceremony. "Time passed, the work has gone well, and these worries have gradually faded away. It became clear that NLMK Group is working hard to develop the plant, to increase its competitiveness and improve the range of products."

Steel has been manufactured in Frederiksværk since 1940. The presence of a qualified workforce was a very significant factor in the multi-million euro investment. The returns on such a sum will not be visible for months or maybe even years. However, as NLMK President Oleg Bagrin pointed out in an interview with the Danish newspaper *Berlingske Business*, modernization represents a strategic part of the tough struggle to survive in the European steel

Pia Olsen Dyhr, Danish Minister for Trade and Investment and Maxim Sokolov, Russian Minister of Transport, at the ceremonial opening of DanSteel's rolling mill

industry over the coming years. "It is vital. Otherwise, we would not have invested EUR 120 million. We did it because we felt that without it we would lose the market. This will make us stronger," Mr. Bagrin said about the investment in new equipment.

MINISTERIAL VISIT

The commencement of thick plate output at the new rolling mill was officially announced during a visit to DanSteel by Russian Minister of Transport Maxim Sokolov, who is also the Russian Chair of the Russian-Danish Economic Cooperation Council. "This gigantic, even by international standards, investment project is worth EUR 120 million," said Mr. Sokolov at the mill's opening ceremony. "The fact that is being implemented during this period of crisis shows that responsible, consistent investors realize their plans on the basis of long-term policy."

But not everything has been going so smoothly. Among the problems that the company has encountered in Denmark are the excessively high environmental taxes which it has borne for a number of years. Maxim Sokolov announced that

The new rolling mill weighs

1,000 TONNES



Danish officials had provided assurances that the issue of lowering NLMK's environmental tax burden would be resolved positively. "Charges to companies for nitrogen emissions have increased more than fivefold since 2012, which has a negative impact on the financial and economic model that underpins the project's business planning," said the Minister. "Our challenge was to secure for Russian investors the same conditions as in neighboring European countries, in particular Germany; and our Danish colleagues promised that the relevant decisions would soon be taken by the government and by parliament."

A LARGE AND COMPLICATED PROJECT

The new rolling mill turned out to be not only a significant investment but a complex technical project as well, as the new equipment had to take the place of the old. Laying the foundations and installing the

mill itself required labor equivalent to 400 workers toiling round the clock for almost three months. Experts from Germany, Italy, Belgium, Denmark and many other countries were involved in the project.

Planners worked to mitigate the new facility's environmental impact as much as possible. They succeeded in minimizing energy usage at each production stage. In addition, they installed new equipment to prepare and purify the process water.

The hot leveler, the roller table and the grinding shop all required upgrading, as did the automation and power supply systems, hydraulic drives, and IT infrastructure.

At the opening of the mill, Yury Tarasov expressed his gratitude to SMS Siemag technicians. According to Mr. Tarasov, this was the first time that they had managed a project of such complexity.

"They put in a huge amount of effort in collaboration with the DanSteel project

“Ten years ago, the Danes were worried about how long Russian investors would remain here



Yury Tarasov,
DanSteel Managing Director

development group under the leadership of Yuriy Bokachev and Allan Thomasen. They also successfully solved the problem of how to hand the project over smoothly, stage by stage, to our production team, headed by Kent Jørgensen. I am sure that they are destined to work on many more difficult and fascinating challenges."

AND WHAT ABOUT THE CRISIS?

"You may ask why we are building a new rolling mill now, when the steelmaking industry and the entire European economy are experiencing such difficulties," remarked Managing Director Yury Tarasov as he began his speech at the mill's opening

ceremony. "The answer is simple: if DanSteel wants to survive, we must upgrade our equipment, produce higher value added products, and expand our customer base."

Mr. Tarasov's optimism is reinforced by the position of the Group's President.

"If a company is merely 'average' it will lose out all the more in times of economic hardship," said Mr. Bagrin during his interview with *Berlingske Business*. "Previously, DanSteel was one of maybe twenty such 'average' European companies. Now, according to production figures, it is one of the best, and this is a huge advantage. This means that we will receive more orders. Our orders have already increased by 20%."

For his part, Igor Sarkits, CEO of NLMK Europe Plate, thinks that the plant will survive through exports: "This milestone development supports our strategy of capturing long-term growth in our key markets by expanding market share, introducing new products, making more efficient use of sales channels and marketing, in addition to building our capabilities. Given the current economic situation in Europe, the new rolling mill at NLMK DanSteel A/S gives us the opportunity to substantially increase our presence in export markets, including high growth ones." ■

Yulia Taranova



"WE NEED A NEW GENERATION OF LEADERS"

Participants in the *NLMK Group Leaders 2020* program ask questions to the management



▲ Vice President for Procurement Brijesh Garg explained his new projects in Russian, drawing thunderous applause

◀ Program participants came to their meeting with the management without wearing ties – as required by the Company President

the second half of the meeting the future leaders asked the senior managers questions on a variety of topics, starting from the outlook for the development of the grain-oriented steel market and the key indicator system, and ending with requests to share tips on personal efficiency and success.

At the end of May in Lipetsk, participants of the *NLMK Group Leaders 2020* program met one last time with the company's management. In order to address managers' questions and explain the Group's strategy for the years ahead, the meeting was attended by Company President Oleg Bagrin, NLMK Managing Director Sergey Filatov, Vice President of Finance Grigory Fedorishin, Vice President for Logistics Alexander Sapronov, Vice President for HR & Management System Stanislav Tsyrlin, and Vice President for Procurement Brijesh Garg.

Over the course of four hours, senior managers told program participants about the ongoing evolution of the management system and priority areas for development in the key areas of finance, logistics, procurement, and staff development. In

OPEN COLLAR

"The informal tone of the meeting that the Company President established by banning the wearing of ties was very important," remarked Vice President for HR & Management System, Stanislav Tsyrlin. "Everything was very constructive. As always at such events, the feedback was the touchstone and acid test. The fact that there were questions, so many that they even had to be cut short, suggests that the challenges facing the company had completely involved the audience. Also, the fact that our program provides such a stimulus for success demonstrates just how effective it is."

During the break, participants shared their impressions:

"I feel that our company really is changing," said Deputy Director of the NLMK Machine Assembly

Department and program participant Alexey Kosykh. "Stereotypical and conservative methods are giving way to innovative changes. The initiative delivery system, projects in the A3 format, work in cross-functional groups – all of this will stimulate ideas and develop lateral thinking among the workforce at all levels."

"For me the most important topic during the meeting was the issue of creating a corporate culture in the Group – an idea that could bring colleagues even closer together in the pursuit of our goals," said NLMK Logistics Specialist, Alexander Khudnev. "I admit it's not an easy challenge. But I am one hundred percent certain that the *NLMK Group Leaders 2020* project has meant that the company has taken one step closer toward this goal."

In his response, one of the program participants voiced a thought which, judging by the applause, was on the minds of all the young managers: "After each workshop and especially after the meetings with senior management, I was fired up to get to work – to make my contribution!"

NOT ONLY QUESTIONS

The importance of dialog between the current leadership and the next generation of leaders was emphasized by participants, organizers, and leaders.

"The chance to chat with such high-level managers so informally? You must admit that is pretty rare," said Stanislav Mischenko, Senior Information Support Specialist, Production Efficiency Growth Department. "And yet it's very important to form your own opinion about a person, to listen to what they say and how they say it. It might seem trivial – merely a changing of slides during a presentation. But when the Company President does it himself, whilst sharing the changes that are underway in the company, you realize that this is for real and here to stay."

"It was important for me to hear not only the questions that the participants asked the leadership, but also the answers," said Biana Feingersh, program curator and Director for New HR Projects. "By this I mean the concrete proposals for projects that have immediate impact for the company."

“The chance to chat with such high-level managers so informally? You must admit that is pretty rare

Concluding the meeting, NLMK President Oleg Bagrin remarked: "We cannot overstate the importance of the *NLMK Group Leaders 2020* project for the company. And today we have seen very real results. We created the program as a platform to prepare leaders, one that would allow us to ensure a transition in leadership at different levels between generations, while simultaneously preserving our best traditions and the continuity of knowledge and expertise. Today we need a new generation of leaders who are ready – in the light of the pressing need to increase efficiency in all business and production processes – to become the conduits for key changes and who are themselves capable of implementing these changes within the Company."

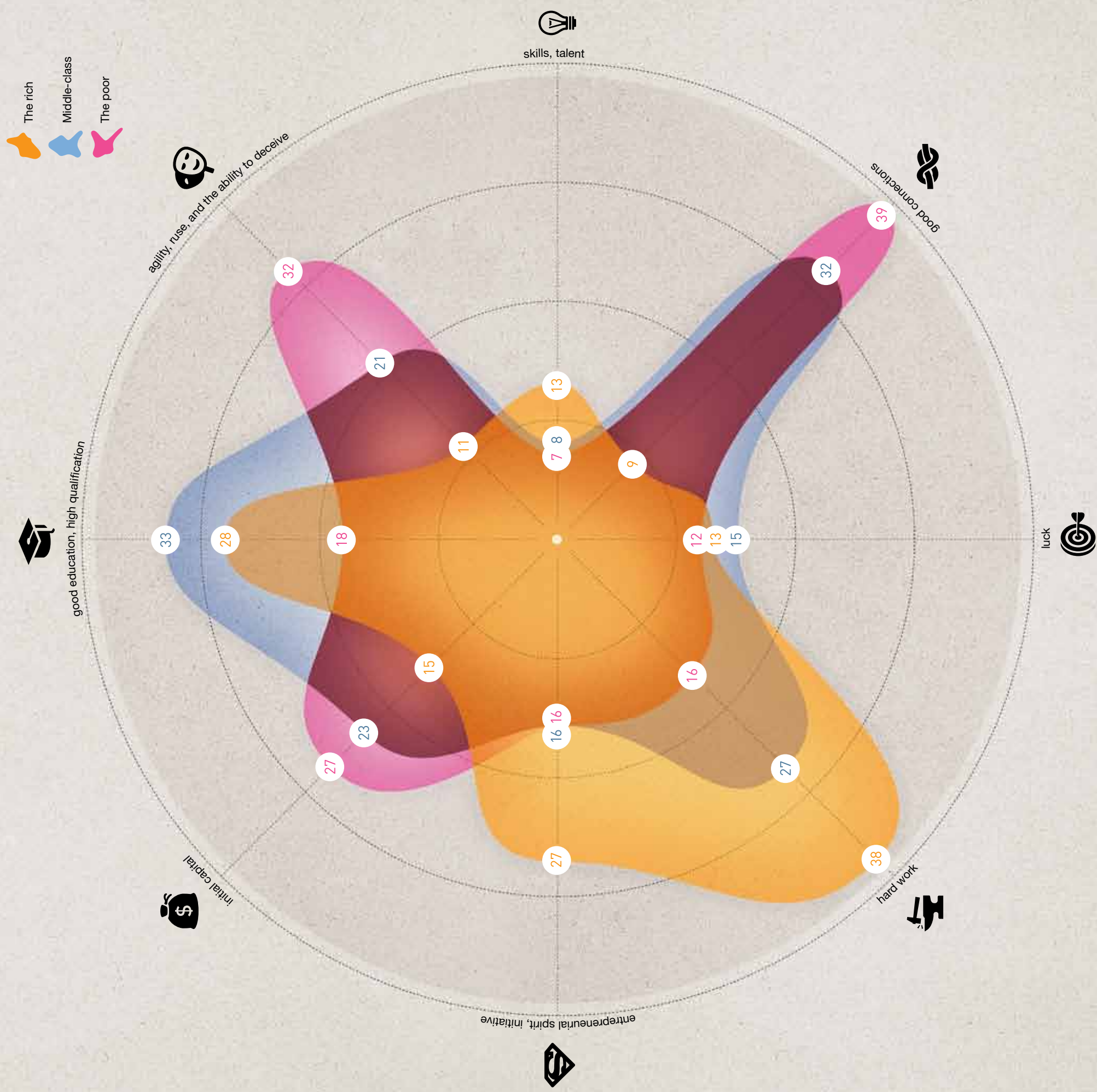
The meeting served as the culmination of the three-year-long *NLMK Group Leaders 2020* program, which seeks to form teams of competent managers-in-waiting who can effectively solve problems across different levels of the Group's companies. ■

Yulia Taranova

FORMULA FOR SUCCESS

People belonging to different social classes were asked the same question – What are the drivers of success?

As we can see from the answers, to be successful it's worth reconsidering one's approach to life



A CHALLENGING LEGACY

Rick Herman, NLMK Pennsylvania Director Environmental Control, talks about the company's environmental challenges and accomplishments

Before discussing the environmental program and the compliance status of the NLMK Farrell Plant with the applicable environmental regulations it is beneficial to understand a little history of the property that the facility is situated on.

The environmental condition of the land that the facility is situated on is of importance because of the history of the site and the potential for contamination to have occurred at the site over the years. Unlike building a new business on what would be viewed as a "greenfield" or an

environmentally clean site, NLMK Farrell is an existing facility located on approximately 350 acres of land located on the East side of the Shenango River in Farrell, Pennsylvania at a site where steelmaking operations have occurred since 1900. Operations at the site expanded from an initial bar plate operation to a fully integrated steelmaking operation that included open hearth furnaces, blast furnaces, basic oxygen furnaces, electric arc furnaces, pickle lines, galvanizing operations and hot and cold rolling mills.

WITHOUT CONTROLS

Since environmental regulations to regulate the generation and handling of solid wastes were not initially enacted until the mid-1960's and initial regulations to regulate operations in accordance with air and water regulations were not enacted until the 1970's, there were many years of steelmaking operations at the site that operated without environmental controls or concern for the environment. So the question can be asked as to what is the environmental condition of the property that the NLMK Farrell Plant is located on and is there a legacy of environmental issues left behind by others that NLMK Farrell must contend with.

Since the shutdown of the facility in 1992, then known as Sharon Steel Corporation, there have been several ownership changes that have occurred that resulted in several environmental investigations of the property prior to the purchase of the facility by NLMK. The most extensive investigation and clean up occurred with the purchase of the property by Caparo Steel Company (Caparo) in 1994. Caparo entered into a consent order and agreement with the Pennsylvania Department of Environmental Protection (PADEP - the state environmental regulatory agency), that required Caparo to address several environmental issues previously identified by the United States Environmental Protection Agency (USEPA - the federal environmental regulatory agency) as Areas of Concern and to conduct extensive environmental investigation and remediation activities.

In 1999, Duferco of Lugano, Switzerland (Duferco) entered into a lease agreement with Caparo for certain parcels of land and buildings and subsequently purchased all the land and buildings owned by Caparo. During this time, Duferco also contracted an environmental firm to conduct an environmental investigation of the property and entered into a consent order and agreement with the PADEP that granted Duferco a release of liability for any contamination discovered that it did not cause and that was not considered to be an immediate threat to human health and the environment.

THE NLMK ERA

As a result, when NLMK partnered with Duferco and ultimately completed purchase of the facility in July of 2011, renaming the facility NLMK Pennsylvania Corp, there had been extensive environmental investigation and clean-up activities conducted at the site to insure that NLMK was not purchasing a property with major environmental concerns.

It should be noted that there has been a substantial increase in wildlife within the facility boundary especially the area along the Shenango River. It is not

uncommon to see deer and turkey roaming the property as well as blue heron and an occasional bald eagle along the river bank. The increase in wildlife can be attributed to the reduced operations per acre of land area compared to years past as well as the extensive clean-up and remediation that has occurred at the site.

There is one environmental issue that remained onsite from the Sharon Steel operations that Caparo had not remediated and NLMK Farrell therefore agreed with the PADEP to address and that is the onsite consolidation of two "material" piles consisting of approximately 8,000 cubic yards of a mixture of coke breeze, scale and slag. The project is underway at this time and involves the excavation of an area for consolidation and capping of the two material piles. PADEP approval to manage the material piles onsite in lieu of transporting the materials to offsite landfill will result in a cost less than half of what it would have cost to transport the material to offsite landfill. The project will be completed before the end of this year.

Now that it is understood that there are no known major issues with the property we can turn our attention to current operations and the status of environmental compliance with environmental regulations.

NLMK Farrell is currently in compliance with all operating permits and regulatory requirements and this is a tribute to management and the hourly workforce working together to assure quality and environmental integrity in all aspects of its business.

Although there are numerous regulations that the facility must comply with the primary areas of compliance are governed by the Clean Air Act, the Clean Water Act, the Solid Waste Disposal Act, the Emergency Planning and Community Right to Know Act and the Toxic Substances Control Act.

asset capacity

1.81

m tpa
of hot rolled steel

NLMK Pennsylvania

10%

share in the cold rolled
high carbon steel market

NLMK Farrell is a major source (emits or has the potential to emit 100 tons per year or more of any air pollutant subject to regulation) for air permitting and operates under the terms and conditions of a Title V Air Operating Permit. A Title V air permit consolidates the facility's Clean Air Act requirements into one "enforcement" document enforceable by both the USEPA and the PADEP. The Title V permit contains numerous monitoring, recordkeeping, stack testing and reporting requirements and requires submission of an annual certification detailing whether or not the facility is complying with all the terms and conditions of the permit.

The Title V Permit requires the facility to generate an annual air emission report that details emissions emitted from the facility for the year and requires payment to the PADEP of fees associated with the emissions. NLMK Farrell paid approximately \$14,650.00 in emission fees for reporting year 2011. The emissions generated and fees paid were in compliance with the terms of the Title V Permit.

The Title V Permit is issued every five years with the current permit scheduled to expire on August 31, 2015. NLMK Farrell will submit a renewal application six to eighteen months in advance of the expiration date.

SHENANGO RIVER WATERS

Similar to the air permit, the facility water permit is issued every five years with the current permit being issued on September 21, 2010. The water permit is referred to as the National Pollutant Discharge Elimination System (NPDES) Permit and regulates the water discharges to the Shenango River.

NLMK Farrell has two internal sub-outfalls; the 60" Hot Strip Mill Water Recirculation System with an average discharge of 600 gallons per minute (gpm) and the Pickle Line Rinse Water Treatment Plant discharge with an average discharge of 50gpm. These sub-outfalls discharge to a common main outfall to the Shenango River. The NPDES Permit contains limits for certain parameters at each sub-outfall and the main outfall that the facility must monitor on either a daily or weekly basis and report on a monthly basis whether or not it is in compliance with the permit limits.

Approximately 8,500gpm of water is withdrawn from the Shenango River in support of operations with the majority of the water being used as non-contact water (does not come in contact with the product) to cool the 60" Hot Strip Mill Reheat Furnaces. This along with city water usage that enters the sewer results in approximately 9,000gpm of water being discharged out the main outfall to the river. This does not include storm water runoff that at times can amount to tens of thousands of additional gallons of water discharged out the main sewer during storm events. A

large volume of the storm water flow is attributed to runoff from City of Farrell property that discharges to the river through the facility's main sewer.

NLMK Farrell is currently in the process of installing a new cooling tower at the 60" Hot Strip Mill Water Recirculation System that will enable cooling of the entire system flow of 18,000gpm. The new cooling tower will replace an existing cooling tower that is only sized to cool 10,000gpm. Installation of the new cooling tower will be completed by the end of this year.

HAZARDOUS AND NON-HAZARDOUS WASTES

Despite the size of operations, NLMK Farrell is a small quantity generator (generates less than 1,000 kilograms of hazardous wastes in a month). The waste hydrochloric acid generated from the pickling operation would normally require management as a hazardous waste; however, NLMK Farrell is able to sell the material as ferrous chloride, a co-product. NLMK Farrell generates approximately 4,000,000 gallons of ferrous chloride per year. Managing and selling the material as ferrous chloride as opposed to management and disposal as a hazardous waste results in a substantial savings to the company.

Waste rolling oil and sludges are the primary non-hazardous wastes generated at the facility. Approximately 3,000,000 gallons of waste rolling oil is generated from cold rolling operations per year and trucked to offsite treatment facilities.

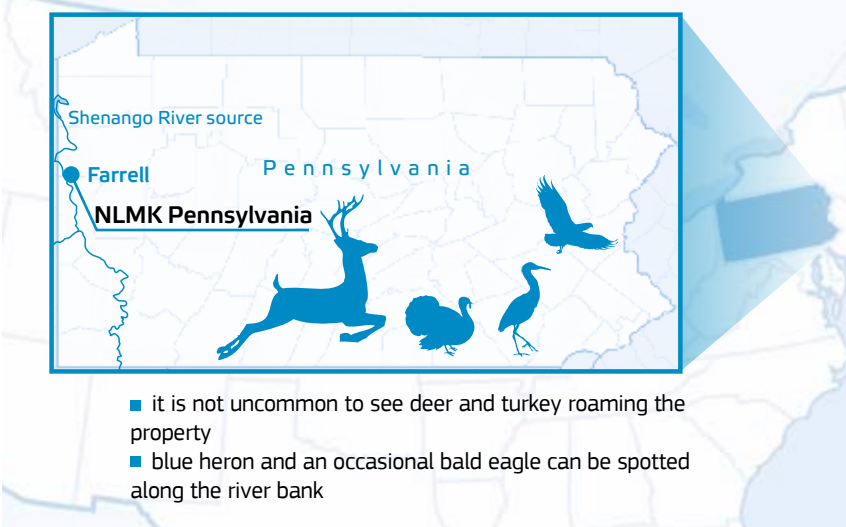
The primary source of sludge generation is from settling pits associated with the 60" Hot Strip Mill Water Recirculation System. The 60" Strip Hot Mill sludge along with other sludges generated throughout the plant are managed onsite at a mix pit operation prior to disposal to offsite landfill. The management of sludges onsite consists of dewatering the sludges by mixing with sawdust. Although, the sawdust has to be purchased, the cost to manage the sludges onsite prior to transportation to offsite landfill is substantially lower than the cost to truck the sludges directly to landfill where the sludges would have to go through a mixing/dewatering process prior to disposal.

NLMK generates and transports approximately 7,500 tons of sludge annually to landfill with approximately 6,000 tons of the total generated from the 60" Hot Strip Mill operation.

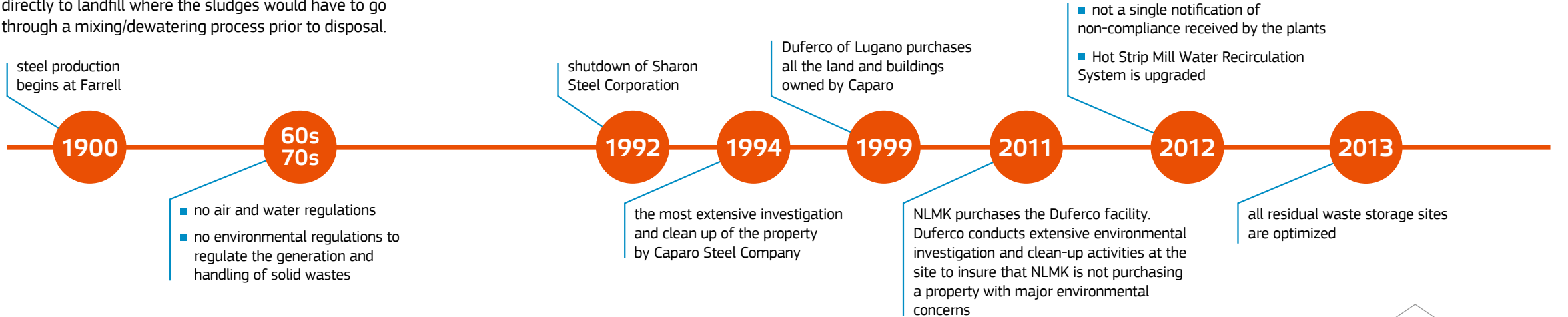
A SINGLE TEAM

The Environmental Department at NLMK Farrell is comprised of two salary personnel (a Director of Environmental Control and an Environmental Assistant) and two hourly Environmental Technicians. There are also hourly personnel at the 60" Hot Strip Mill with responsibilities for oversight and operation of the water recirculation system and hourly personnel at the Pickle Line with responsibilities for oversight and operation of the rinse water treatment system as well as the air pollution control equipment. Department and general plant maintenance personnel also support the in-field environmental program as necessary. The Director of Environmental control is responsible for the overall environmental compliance program at the facility.

In conclusion, there is much more that can be written with regard to the environmental program at NLMK Farrell and this presents just a snapshot of general information pertaining to the facility.



The management and employees of NLMK Farrell are to be commended for their efforts towards environmental compliance. It shall continually be the goal of NLMK Farrell to conduct operations in such a manner as to be fully cognizant to the environment and to increase employee awareness of environmental responsibilities and to strengthen and ensure the trust of the surrounding community. ■



"LIPETSK MUST BE A NICE PLACE TO LIVE!"

In April, Aurélie Coutiez, a student from Belgium who has been studying Russian since the age of 14, was doing an internship at NLMK. We asked her to share her impressions and to tell us about her visit to Lipetsk

While on a two-week internship at NLMK's offices in Moscow, I was offered the chance to visit the Lipetsk site for a couple of days to learn a bit more about the heart of the Group. This was too good an offer to turn down! On Monday April 1, I took a flight to Lipetsk from Domodedovo airport, and my tour began just an hour after I landed...

12:30 My plane lands on the runway of the nearly empty airport at Lipetsk. As soon as we get off the plane, the passengers are all led toward the airport building and then the exits. I quickly find the car which is waiting for me, and around 20 minutes later we arrive at the Hotel Metallurg. Sergei Razbirin, NLMK Deputy Press Secretary, meets me in the hallway and shows me to my room. I drop off my bag and we are ready to go.



13:10 We are on our way to NLMK's industrial plants. They are about 10 minutes from the hotel, not far at all. The car journey gives me a brief glimpse of the town of Lipetsk. I actually thought that the plants would be out of town and surrounded by fields, so it was quite a surprise to discover that they are really quite near the city center! It seems like the whole town was built around the factory.

13:20 We arrive at NLMK. My passport is given to the security desk so that they can sort out the pass that will later give me access to the plants. Yana Larina arrives. Sergei introduces her as the person who writes the company blogs and takes care of social media coverage for the Group.

13:30 The tour of the plants with Sergei and Yana starts. The car first drives us to Blast Furnace No. 6. On our way, Sergei explains the plant's general features to me and I share with him my knowledge of NLMK. I learn that the Lipetsk site covers 27 km² and that nearly half of its production is sold in Russia, while the rest is distributed in Europe.

We arrive at Blast Furnace No. 6. We get out of the car, put our helmets on and enter the plant. I am very glad to see a blast furnace up close, since NLMK closed down its last blast furnace in Belgium more than a year ago. I never had the chance to see it actually working and I had only seen pictures before. To see one for real is great!

After No. 6, we head toward the brand new Blast Furnace No. 7, nicknamed "Rossiyanka". This one was built last year and is the first to be built in the modern Russian era. Both the interior and the exterior look very different from No. 6. It looks, of course, more modern, cleaner, and you can no longer see the iron casting in progress, since the work is done underground. I am amazed by the size of the plant, by the huge area it covers as well as by its height. As we head off to another plant, Sergei continues his explanation of the processes that lead up to finished steel products. He also tells me that the NLMK Lipetsk site has six converters; the last of which was introduced in 2011.

14:05 We enter the "Lebedinoe Ozero" ("Swan Lake") park. This concept has been in existence at the site for 35 years, though it has been relocated and modernized many times through the years. The lake is now eco-friendly, using treated wastewater. Many species of birds are wandering by the waterside: geese, hens, ducks, and the like. Yana tells me that many more species can usually be seen, but because it is still cold outside, they are kept safe



inside shelters during the winter. We enter one of the shelters, which houses Black Swans (a very rare species from Australia), ostriches, peacocks, and other more ordinary birds. This lake must be beautiful and peaceful during the summer and I

am sure that many of the staff often go there to find some quiet and greenery. I imagine that this park would be an interesting place to visit with your family, to relax surrounded by nature. But of course, the main aim of having such a park inside NLMK's facilities is to demonstrate to investors and local residents that the Group cares about the environment and that nature and factories can easily coexist. Once the visit to the park is over, the car takes us to another facility. On our way, we see people waiting at a bus stop. Sergei tells me that the whole site occupies such a large area that it takes too long to walk from one part of the site to another, so internal bus routes have been set up for the staff to use. I think it's a great idea, but on the other hand, it is certainly a novelty for me; no factory in Belgium operates over such a huge area, so we do not have bus routes inside our factory sites.



► **14:30** We enter the Stan (Mill) 2000 hot-rolling mill. Everything is at a standstill because workers are transferring rolling mills. We are asked to wait about 10 minutes; production will start again once the transfer is finished. I am impressed by all these monstrous and massive machines, and by the men who work with them every day. It seems like everything could get out of control very quickly, but of course the staff are very well organized and each step of their work is known beforehand and meticulously managed. The rolling mill is started up; right before my eyes I see the cast iron becoming a sheet of steel under the pressure of the mills. I feel like I am experiencing the creation of something big!

During the visit, Sergei explains to me that NLMK Group produces transformer steel, which I already knew. However I did not know that no other steel company in Russia produces this type of steel. I also learn that the Lipetsk production site owns approximately 500 kilometers of railway, which is much more than all the Moscow metro lines put together! Sergei tells me how the gas generated during the blast furnace process in Blast Furnace No. 7 is reused in order to produce more energy (around 60% of its needs). The Lipetsk plant also produces its

own electricity, which represents 47% of the energy used. These initiatives are something quite new for the country, and really great from an environmental point of view!

◀ **14:45** We are inside the cold-rolling mill. Once again, I did not have the chance to visit working installations when I visited NLMK Belgium's plants so I am glad to have the opportunity to see this for real. Then we observe yet another transformation of the steel, through a process called "etching". After this step, the steel is subject to further treatments

depending on the client's needs, and it can also be painted. The majority of the production is mechanized and computerized, and we do not meet many workers on our way through this facility. The place is really quiet! There is no sound beyond a faint noise coming from the machines working; the ground is clean... the space looks nearly empty.

Further on we cross the packaging department; again, there is no one around but a woman operating a coil car. She is not the first woman I have seen in the plants today, so I asked my guides how many women work here. Yana tells me that women represent nearly a third of NLMK's 300,000-strong workforce at Lipetsk. Crane Machinist is one of the most common jobs that women do here, but a lot of them also work in the laboratories or as dispatchers. This is very strange to me! In Belgium, women do not usually work in factories, even as machinists. When I was at NLMK's plants in Belgium, I heard that there were a few women working there, and that it was quite a recent thing and really unusual, but I never happened to meet one. So it was at first strange to discover that it is common for women in Lipetsk to work at the factory. But I am sure that they are more than capable of carrying out their duties, and that the experience of working with men on a daily basis can be both positive and interesting. It probably helps to increase a certain kind of respect and to promote equality between the sexes. I hope so anyway.

Talking about the working conditions for company employees, Yana informs me that those who work at NLMK's plants are allowed to retire ten years before the usual retirement age because of the tough conditions they endure at work.

15:05 The tour of the plant is finished. A car is going to take me back to the hotel. Sergei, Yana and I agree to meet each other the following day at around 10 a.m. On Tuesday they want to introduce me to their press office and tell me more about their roles. Then Yana would like to interview me to find out what I think of Russia and NLMK Group and to take pictures of me at the facilities to be published in an article about my stay here in Lipetsk. We are also going to visit the town's museum which is dedicated to NLMK's history and production. We say goodbye to each other and we all go our separate ways.

15:45 After a short rest at the hotel, I decide to go out and take a look at the town, since I have some free time and the weather is lovely. Yana told me earlier in the day that Lipetsk is known in the area as "The Fountain Town" because of the huge number of fountains which adorn it; there are plenty of parks, as well. This is certainly the case: even though there is still snow lying in places and a lot of water everywhere because of the snow melting, I can see that the town has its own charm, and many attractive spots to visit. I am sure that during spring and summer it must be a nice place to live, with many green spaces, lakes and peaceful expanses for resting or walking. The entire town was built and thrives thanks to a steel company (the jobs of a third of the population of Lipetsk depend on the company), but really, it just looks like any other town in this part of Russia! ■



INDIA: A JOURNEY OF INNER DISCOVERY

NLMK chief translator
Elena Lukovenko
tells us why everyone
should spend some time
in India

For most Russians, the words “a trip to India” evoke images of beaches in Goa or, perhaps, the Taj Mahal in Agra. After all, these are the kinds of packages offered by travel agents.

Having visited about 20 countries, I didn't expect that India would be the one to leave such a lasting impression of otherness and uniqueness on me. On my first visit to India in 2009 I toured approximately 3,000 kilometers across the south of the peninsula by motorcycle and I completely fell in love with this wonderful country. I continue to return there every year, discovering new beauties and wonders for myself.

Through this story of my last trip, I would like to do my part to dismantle the existing stereotypes about India and set down what can be seen and felt there, if you only step off the beaten track.

VARANASI – THE SPIRITUAL CAPITAL

At first, my two photographer friends and I set out for Varanasi, a city on the river Ganges in the state of Uttar Pradesh. It is one of the oldest cities in the world and the most holy city of India – it holds the same significance for Hindus as the Vatican does for Catholics. At various periods in its history, the city was also called Benares or Kashi (“City of Life”). Hindu pilgrims arrive in Varanasi to wash away their sins in the holy waters of the Ganges, to pray for family and loved ones, or to cremate their departed relatives on a funeral pyre.

I instantly grasped that we had arrived in a truly magical place, permeated with a unique energy. Were it not for mobile phone company logos, it would be hard to know which century you inhabit in Varanasi. Before this, I had only experienced this feeling of “eternity” and “timelessness” in Jerusalem. Varanasi is a paradise for photographers due to its dazzlingly vivid colors, its chaos, ceaseless motion and ever-changing faces. However, this place is not for the faint of heart – the most arcane rituals connected to life and death are conducted here for everyone to see on the banks of the Ganges. And if we add to these the yelling of touts and street vendors, the stray dogs



◀ In Varanasi with a picture of Hanuman in the background. According to Hindu mythology, this simian god can fly, and possesses surprising strength

followed by their myriad puppies, the yogis sitting in the Lotus position, the boys with kites,

the buffalos brought for a wash, the omnipresent monkeys and the goats skipping everywhere – your head can easily begin to spin.

In 1897, Mark Twain, a famous admirer of India, said that Varanasi “is older than history, older than tradition, older even than legend, and looks twice as old as all of them put together.” It would be difficult to think of a more fitting description of this city. The historical part, the quarter on the bank of the Ganges, is densely built up with houses, Hindu temples and shops, with endless labyrinthine streets. All of Varanasi is situated on the western bank of the Ganges – there is not a single building on the eastern side, which is regarded as the “other world”, where Shiva sends the souls of the dead.

Varanasi has more than 100 ghats – broad steps that descend to the Ganges and which are used for ritual lavation or cremation; many of them are private.

The most interesting *ghat* is located in the Vishwanath temple. Every evening the Brahmins – Hindu priests – conduct the *Ganga Aarti* ritual here (*aarti* means “fire” in Sanskrit); the ritual is dedicated to the God Shiva, the Ganges divinity, Surya the god of the sun, Agni the god of fire, and to the entire universe.

This ritual has been taking place daily for many centuries already and it never fails to attract hundreds of people – tourists as well as locals. ▶

“
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▼ Tea house on the bank of the Ganges. It is said that tea has been prepared here for many centuries



◀ In the background you can see the ghats, or "steps" of Varanasi

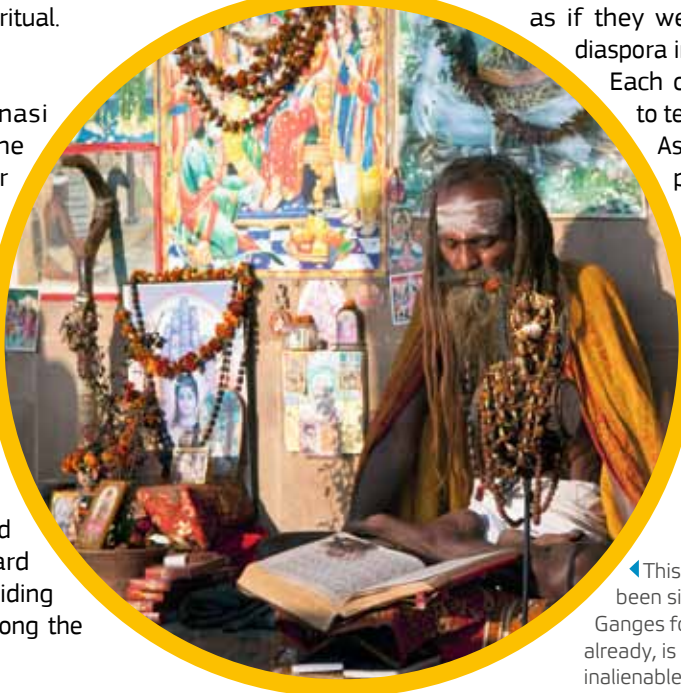
In northern India it is cold at night, and because of this we sat with our collars and hoods turned up. Varanasi in the morning was completely different. People had not yet invaded the riverside steps and the cows were still asleep somewhere among the alleys. The night wind had scattered the smell of manure, flowers and fires. In the thick fog it seemed as though boats were appearing from nowhere and vanishing into nothing. The city's red walls in the wavering morning lamplight seemed particularly majestic. On the way back the city was already beginning to wake and the pilgrims had begun to wash themselves and pray in the rays of the rising sun.

The ceremony lasts about an hour. Facing the Ganges, their backs to the city, four Brahmins take up special censers and intone mantras. Always in sync, they move rhythmically to their singing. They begin by burning incense, dousing the embankment in smoke which they scatter at the end with fans made of feathers. Then comes the turn of the spectators to bow to the river. Each person holds in their hands a cup of leaves filled with bright flowers with a candle in the middle. Afterwards, having made their request of the Ganges, they lower the cup to the water and the current carries away the little flames. Of course I couldn't resist either, and also made a wish.

We went to the Ganga Aarti every day. It was an incredibly beautiful and touching ritual.

THE GANGES AT DAWN

Another mandatory Varanasi experience is a trip along the Ganges at dawn. We set out for our meeting place long before the sun came up, assuming that the boatman with whom we'd made an agreement the day before was still asleep. We weren't wrong, either: he showed up after the third time we called, yawning and rubbing his eyes, but still carrying hot tea for us – a great example of Indian service! Having exchanged a few words, we climbed aboard a simple wooden vessel and, gliding easily along the water, sailed along the bank.



◀ This sadhu, who has been sitting beside the Ganges for many years already, is practically an inalienable part of the city



10 reasons to go to India

1 India is a huge country

Although a fifth of the size of Russia in terms of area, it has a population seven times greater. Every traveler can find something for him- or herself here: the north of the country has the Himalayas, the south has beaches, the west has desert, the east has ethnically unique tribes.

2 It's cheap

You can travel around India to fit your budget – either very cheaply or in absolute comfort. Whether you prefer a luxury hotel in a real palace or a smaller, humbler place to stay, the prices as a rule hardly hurt at all.

3 Hospitality

There is a saying in India: "Athithi Devo Bhava", which means "the Guest is God." Hindus consider it a huge honor to receive guests in their house, and will do whatever they can to please you. This is why "homestay" type hotels are growing in popularity in India – they allow tourists to live with a family for a fee. This includes a private room as well as the opportunity to socialize with the hosts and experience their way of life and traditions.

4 Life from the other side

I believe that everyone should visit India at least once in their life, to leave their comfort zone and see life from the other side. It's not always easy to deal with the culture shock, but in India the best method is to re-evaluate your own life and begin to value what you have.

5 Spiritual development and improved health

Whether you are interested in yoga, meditation, or the study of traditional forms of Indian dance, India offers opportunities for all of this, as well as cures and health treatments through traditional techniques at the Ayurvedic health resorts throughout the state of Kerala.

6 Tasty food

Since Indian cuisine uses a lot of spices, it takes some getting used to, but believe me, it's worth it! You will be amazed by its variety and the huge selection of tasty desserts.

7 History and architecture

Besides the Taj Mahal, one of the wonders of the world, India has a plethora of other impressive and remarkable buildings: Maharaja palaces and Portuguese forts, ancient Hindu temples and stately mosques, caves with cave paintings and jungle ruins.

8 Shopping

Naturally, like most women, I love shopping! In India it's very hard to not buy stuff, especially the lovely handicrafts: accessories, shawls, shoes, and home decorations. As a rule, these are made from natural materials and using techniques that have been passed down through generations of craftsmen.

9 Contact with nature

The national parks in the north and east of the country (where you can see tigers, elephants, rhinoceroses and flamingoes in their natural habitats), the golden beaches in Goa and Kerala, or the sandy dunes of the desolate Rajasthan are some of the many outdoor vacation possibilities in India.

10 Economic support

India is a poor country. By going there you support its economy. Thanks to you, many people in the tourism industry will be able to keep their jobs, providing their families with clothes and food.

► Procession of Krishnas, in which Russians also took part



◀ The newcomers at dawn



here. For their part, with their typically Hindu curiosity and friendliness, the people were happy to speak with me. An elderly man told me that he came to Varanasi with his wife because he was afraid that he would soon be too old for such a pilgrimage. A fruit vendor told me that he had spent his entire life sitting in one spot, selling fruit to pilgrims. He maintained that he wanted to die here because that would forever free his soul from sin and suffering. A *sadhu* – a kind of monk or ascetic, who spoke perfect English – was a PhD in physics before renouncing the world. He was certain that all the planet's people had lived in India during at least one of their past lives. At one temple I met a Brahmin who sits there and prays all day, every day, all year. You soon get the feeling that everything that is done and happens in Varanasi is done in the name of God.

KUMBH MELA: THE KARMIC FESTIVAL

I continued my photo-documentary of Hindu faith and spirituality at the Kumbh Mela festival, which was the main reason for my visit to India.

We encountered some adventures on the way there from Varanasi, since the highways were paralyzed with traffic and we were forced to spend many hours circumventing the jams by going through picturesque villages and flowering, mountain meadows. The petrol had almost run out and, as we began to earnestly consider clubbing together to buy a buffalo to act as a tow truck, we finally entered Allahabad.

Here, every twelve years, at the confluence of three of the most holy Hindu rivers – the Ganges, the Yamuna and the mythical Saraswati – the Kumbh Mela festival is held. The festival attracts millions of

pilgrims who believe that if they dip themselves in the holy waters they can unburden themselves of karma accumulated over many past lives. It is said in the Hindu holy scriptures that lavation on astrologically favorable days at the confluence of the holy rivers "erases" all sins and frees a person from the constantly repeating cycle of birth, illness, aging and death.

According to Hindu mythology, the Kumbh Mela festival acquired its name from a pot filled with the life-giving nectar that is the water of the Ganges river. The word "kumbh" in Sanskrit means pot or vessel; the word "mela" means festival.

Kumbh Mela is in some ways a melting pot of more than 8,000 religious groups and sects of India and other nations, which assemble to discuss religion and philosophy. The main participants are the so called *sadhus* – ascetics and hermits – who have renounced the material world and who acknowledge neither possessions nor comfort. Some of them hardly ever wear clothes, simply smearing themselves with ashes from fires, and live in Himalayan caves, jungles and ashrams, practice yoga, meditate, and pray for the sake of humanity. Hindus respect them very much, but also fear them. It is thought that they can perform miracles but

ALLAHABAD

VARANASI

▼ A view of the Sangam – the confluence of three rivers (Ganges, Yamuna, and the mythical Saraswati) near Allahabad



▼ The drying of the sari, one of the festival's most colorful sights



can also hex a person who has caused them harm. At the festival, the representatives of various branches of Hinduism live in tent camps, visit each other, and receive pilgrims who seek their blessing and advice. All for a small donation, of course. The *sadhus* themselves say that Kumbh Mela is the manifestation of human oneness and a means of passing the spiritual Vedic wisdom of Indian culture to the public at large.

Here, down by the Ganges, saints and sinners, mystics and students, beggars and senior managers all gather – this festival has even been called the largest meeting of people in the world. Pilgrims often come from very far away to dip themselves in the Ganges. They are dressed in their best and brightest outfits. For them, this is a symbol of the hope that tomorrow will be better than yesterday.

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This is a place
where you can see
true miracles,
like a wise man
lighting a fire with
a glance



▲ Sadhu smeared in ashes from a fire. Fire is sacred for them, and ashes represents the frailty of earthly existence

This year, Kumbh Mela was visited by about 100 million people. It is an untranslatable feeling – among a crowd of people heading slowly toward the *Sangam* to the accompaniment of prayers, flutes and drums, you feel like a drop in the ocean. Some older people could not make their own way and were being carried by their sons, right alongside mothers carrying their children. And all of this was in the name of faith and karma.

The festival is a concentration of Indian exotica. This is a place where you can see true miracles: here, one wise man lights a fire with a glance, there, another pierces various parts of his body with knives in the name of Shiva, without a drop of blood being spilt. Here is an ascetic who has spent more than 10 years standing up, and a representative of an ancient cult that for the purposes of meditation buries his head in the ground.

But what really amazed me was the organization on the part of the authorities and volunteers of this 40-day-long event. There was virtually no trash on the festival grounds; the police were incredibly polite and welcoming to everyone; and freely accessible food and clean water had been provided for the pilgrims. Perhaps organizers of large events here in Russia have something to learn from the Hindus.

I returned home tired, but with a mass of new impressions and a flash card brimming with photos. I am already planning my next expedition, this time to the Himalayas. ■

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