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# NLMK GROUP

NLMK Group Corporate Magazine

№3 (51) July–September 2015



## Our people are our strength

*NLMK Group is the leader in corporate education  
among Russian steel companies*

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## Dear colleagues,

In July, NLMK Group's Management Board approved the HR Strategy for the next two years. It was developed with due regard to the goals set by NLMK Group's Strategy 2017 and the volatile economic situation. Today, as never before, the company's success depends on its employees' personal performance and ability to tackle challenging tasks. Therefore, the development of the talent management system is at the core of our new HR Strategy.

Identifying, developing and promoting talented employees have been a priority for NLMK Group for several years now. We train our own staff starting from their school years and continuously improve their knowledge. Tens of thousands of employees do retraining, study for a second qualification, and improve their skills. Approximately 90% of them go to the Group's Corporate Training Center.

NLMK companies' HR departments identify employees with the greatest potential by assessing their performance and competence and running programs such as NLMK Group Leaders. We watch closely the career path of young leaders and support them in their professional development. Over the years, the program has helped over 40 employees get appointed to management positions. Today, graduates of NLMK Group Leaders supervise some of the key areas such as Sintering and Blast Furnace Plant and Repair Complex at the Lipetsk site, Corporate Finance and Controlling in the Group's Finance Unit, and so on.

The future evolution of the talent management system will focus on the following three areas:

**The first is scaling up of the system** to make sure all the employees at all NLMK companies can benefit from the emerging career opportunities. Online interaction with HR training and development departments will be the key lever to lift communication barriers. Information systems will help employees plan their careers, take advantage of training programs, and assess their competencies and potential. They will get more opportunities to grow together with NLMK, become leaders in their professional fields, and get recognition.

**The second is development of career planning tools.** An overview of possible career paths for all the positions at all NLMK Group's companies – from a blue-collar worker to general director – will be added to the electronic systems.



The conditions for promotion will depend solely on the employee's professional achievements and potential. This way, we will help each and every employee unlock their true potential, striving to nurture new managers within the Group and build a talent pool of capable and motivated leaders.

**The third is development of a training and professional education system.** In a high-tech company like NLMK, it is hard to overestimate the value of “knowledge capital” – collective experience and expertise. The company must develop itself as a learning organization, ensuring knowledge accumulation and sharing, and supporting its expert communities to encourage teamwork, generate ideas and launch initiatives. The future Corporate University of NLMK will serve as the base for development and implementation of common standards and training programs for professionals and managers of all levels. We will be able to codify unique practices and knowledge that support NLMK's leadership in the market. Many of these practices form the foundation of NLMK Production System.

I hope that the development of the talent management system will help us approach the target that is obvious yet hard to reach for many companies – having qualified, motivated and enthusiastic employees in each position. The system we are currently building will help identify and retain people with the greatest personal and professional growth potential, as well as foster the culture of equal opportunity.

**Oleg Bagrin**  
NLMK Group President

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## The Ambassador of Luxembourg visits NLMK

*In July, a delegation headed by H.E. Pierre Ferring, the Ambassador of the Grand-Duchy of Luxembourg to the Russian Federation, paid a working visit to Novolipetsk.*

During the meeting with NLMK management, members of the delegation discussed prospects for further cooperation among engineering companies from Luxembourg in implementing performance improvement innovations at the Lipetsk site.

The delegation, which also included representatives of Luxembourg-based Paul Wurth S.A., noted high economic and technological potential of Novolipetsk, which produces 20% of all Russian steel. Paul Wurth S.A.

and NLMK have enjoyed 45 years of fruitful cooperation, which gained new momentum with the implementation of a large-scale technical upgrade program.

One of the largest projects implemented by Paul Wurth S.A. at the Lipetsk site was the construction of blast furnace No. 7 completed in 2011. The project was based on the best available environmental technologies – highly efficient dust collection systems, closed loop water cycle, and maximum use of by-products to generate power required in production.



## NLMK Group launches a green energy facility

*NLMK Group has successfully completed hot testing and launched commercial operation of a new green energy facility, top-pressure recovery turbine (TRT), at the Lipetsk site.*



The facility generates energy using excess blast furnace gas pressure. Blast furnace gas produced in the process of making pig iron in Novolipetsk blast furnaces is also fed to the combined heat power plant and the recovery cogeneration plant for captive energy generation.

One more TRT is currently under construction and scheduled to be launched in 2016. The total installed capacity of the two turbines is 28 MW. The TRT facility will use gas produced by blast furnaces No. 6 and No. 7. The project will help increase Novolipetsk's energy self-sufficiency from 54% to 56% and reduce the amount of purchased power by 200 million kWh a year (approximately 6% of the total power purchased).

Total investment in the two TRTs is estimated at 1.9 billion rubles.

"The new facility is a green energy project, since we use secondary resources rather than burning fuel to generate energy," said Alexander Starchenko, NLMK Vice President for Energy. "That's why, along with the reduction of our energy costs by 6%, this project will also improve our environmental footprint."

Over the last three years, NLMK Group has implemented a number of large investment projects aimed at improving the energy efficiency of operations and increasing the share of electric power generated from by-products. In particular, a new 150 MW recovery cogeneration plant was constructed at the Lipetsk site, including a cutting-edge electric air-blowing station to meet the needs of blast furnaces 6 and 7. A state-of-the-art air separation unit with a capacity of 34,000 cubic meters of oxygen per hour has also been built at Novolipetsk, while VIZ-Steel launched an air separation unit to produce nitrogen with a capacity of 8,000 cubic meters per hour.

## NLMK Group increases supply of grain-oriented steel for Siemens

*NLMK Group started to supply grain-oriented steel to Siemens's enterprise in Voronezh. The steel will be used to produce magnetic core sheets for power transformers.*

The first two shipments of NLMK's grain-oriented steel were delivered to Voronezh-based Siemens Transformers in June and July. NLMK plans monthly supplies in the longer term.

"NLMK is one of the global leaders in manufacturing such high-tech steel products as grain-oriented steel," said Ilya Gushchin, NLMK Group Vice President for Sales. "The quality and reliability of NLMK's steel have made us one of the key suppliers of rolled products for top global electrical engineering companies both in Russia and abroad."

NLMK Group has been supplying thick plates and isotropic and

anisotropic electrical steel to Siemens plants since 2010. NLMK's rolled products are used in the production of wind turbines, offshore converter platforms, electric traction motors, and power transformers. Grain-oriented steel is currently supplied to Siemens companies in Germany, Austria, Hungary, UAE, Brazil, Columbia, and Mexico. In 2014, the total volume of grain-oriented steel supplied to Siemens plants amounted to 6,100 metric tons.

Grain-oriented steel is produced at NLMK Group's Lipetsk site and at VIZ-Steel. In 2014, Novolipetsk produced almost 90,000 metric tons and VIZ-Steel – 172,000 metric tons of grain-oriented steel.



NLMK Group has been supplying thick plates and isotropic and anisotropic electrical steel to Siemens plants since 2010



# Our people are our strength

NLMK Group is the leader in corporate education among Russian steel companies. The long-term investment program, international educational practices, and cooperation with leading Russian universities are the fruit of the company's successful development and a source of great opportunities for high-potential employees.

—  
Yulia Taranova



Continuous professional training for our employees is one of the key processes in our management system

**T**he system of career growth and professional development for NLMK Group's personnel is based on global best practices in vocational education and includes identification, assessment, targeted development, and motivation of employees. Along with other HR initiatives implemented in the company, this system is considered to be one of the best in Russia.



*NLMK started to apply the methodology of WorldSkills Russia (WSR) in its professional development programs in 2015*

## SYSTEMATIC APPROACH

In July 2015, NLMK Group was ranked first among Russian steel companies for personnel development by RBC. The ranking was calculated based on such metrics as employee training costs, the payroll, the number of trained or re-trained employees, availability of a corporate training center, and support for educational institutions. Moreover, Novolipetsk's project titled *System-*

*Based Opportunities for Professional Development and Career Growth for NLMK Personnel* received the second prize in this year's All-Russian Competition of Employers' Best Practices in Human Capital Development "Creating Future."

It took years to build NLMK Group's personnel professional training system. Today, it comprises onboarding and tutoring programs, career guidance programs for high school students, scholarships in leading universities, a program based on the Austrian dual education system, talent pipeline development

initiatives, and individual training programs for high-potential employees. NLMK Group spent 171 million rubles on HR development in 2014. Over the year, 36,000 people – more than half of NLMK Group's employees – did retraining, obtained a second qualification or improved their skills in the framework of the corporate personnel training initiative.

"Continuous professional training for our employees is one of the key processes in our management system," says Vice President for Human Resources and Management System Stanislav Tsyrlin. "Achievement of the company's strategic goals depends on that system. Introduction of new equipment and technology in the production process requires employees with a high proficiency level, which cannot be guaranteed by basic education alone. Therefore, one of our system's main advantages is that we tailor our programs to specific manufacturing conditions and focus on employee training in view of the changing environment."

In July 2015, NLMK Group was ranked first among Russian steel companies for personnel development





NLMK Group's companies hold annual professional excellence competitions: *Best in Profession, Foreman of the Year, and Engineer of the Year*

#### YOUNG AND PROMISING

NLMK Group's companies offer a special selection of programs for employees under 35. Recent university graduates who choose NLMK as their first place of employment receive a so-called allowance – a bonus that depends on the academic level. They also get compensation during the first three years to reach the established guaranteed salary level so that they could have a head start in their career. Every new employee automatically gets enrolled in the onboarding program: under supervision of an experienced mentor, he or she learns safety basics and masters the key professional skills.

Recently employed young professionals with a university degree can sign up for the *Young Specialist* program. In addition to development of business skills, the program offers an opportunity to become one of the few high-potential employees with individual development plans and get selected for the talent pool for management positions.

"NLMK works consistently to support young employees and give them a head start in their career," says Head of HR Professional Development Department at NLMK Vladimir Savorona. "This also includes competitions and educational programs of different levels and in different areas, career and succession planning, and management of high-potential employees."

In addition, after the first year of employment, young specialists can participate in the annual *Young Leader* competition held by most Russia-based companies of the Group. It is designed to help employees unlock their leadership potential and build a talent pool of managers of all levels. Winners of the competition automatically get shortlisted among high-potential employees, enjoy career growth privileges, and get an opportunity to participate in the company's social programs on special terms.

"The *Young Leader* competition will provide high-potential employees with ample opportunity for self-fulfillment and further career growth," asserts Director of HR and Social Issues at Stoilensky Roman Velikansky.

*NLMK Group Leaders* program, a corporate alternative to the MBA degree, designed to train future top managers, can be the next step in a young professional's career. During a year-long course, program participants study strategy, economics, finance, and project management, while developing their skills in making business presentations, time management and interpersonal communication. In the course of the training, the HR Department prepares individual development plans for future graduates. As long as participants demonstrate adequate involvement in the program and maximum commitment, they have a chance to earn a positive reputation and get promoted to top management positions later. Only four years after the program's launch, 60% of its

participants have already advanced in their career paths.

As a rule, all participants of the programs for young professionals get included in the Group's talent pool, which implies a high probability of promotion in the next five to ten years. Members of the talent pool get annual training in accordance with their personal development plans, whether or not they take part in any other programs or competitions for employees.

In the context of the talent pipeline program, participants attend targeted classes and workshops on specific topics. On-the-job training for the prospective promotion is supervised by the manager holding the position that the trainee is supposed to eventually get. This way, employees in the talent pipeline study all the aspects of manager work and apply the knowledge gained when they later perform relevant functions on their own. The share of the talent pipeline in new appointments to management positions has been stable at 94% for two years now.

"The key purpose of the talent pipeline program is to ensure management succession in the company," Stanislav Tsyrlin says. "Therefore, available positions must be backed up by high-potential candidates. This task overlaps with the talent identification and development program, yet the objectives are different. In the first case, we aim to ensure management succession, and in the second case, to develop talent."

In 2013, the career growth and professional development system was expanded by the individual career planning option for high-potential employees under 35. A dedicated program of development initiatives for NLMK's young high-potential employees until 2017 was developed for this purpose. The program includes group study in classes and workshops, combined with individual projects, on-the-job training opportunities, and challenging tasks. A special emphasis is placed on individual employee development plans, including short and long-term career prospects as well as personal development needs.

#### WORLD-CLASS PRODUCTION ELITE

Programs for young employees are a major but not the only priority of the company's HR strategy. Professional development programs for experienced employees, training in related occupations, and professional excellence competitions are of great importance as well. Tens of thousands of employees participate in these programs each year.

NLMK Group's companies hold annual professional excellence competitions: *Best in Profession, Foreman of the Year, and Engineer of the Year*. They help unlock employees' scientific and



NLMK employees are specialized in 544 professions



About 4000 NLMK Group employees participate in professional competitions throughout the year



In the last two years, NLMK invested over 60 million rubles in vocational training and higher education



technical potential and give them an opportunity to demonstrate their professional level.

"Multiple victories in regional and federal competitions confirm the high professional level of our workers," Stanislav Tsyrlin says. "For instance, our drivers took five out of six awards in the all-Russian competition *Best in Profession 2014*, and the mechatronics engineering team won the second prize in the all-Russian competition *WorldSkills*, so we seriously thought about fighting for a place on the national team to compete internationally."

*WorldSkills International* is a non-for-profit association aspiring to raise the status of blue-collar jobs and develop vocational education by organizing professional excellence competitions. NLMK started to apply the methodology of *WorldSkills Russia (WSR)* in its professional development programs in 2015.





One of NLMK's thirty-seven professional excellence competitions will be held this year based on WSR's methodology

At the end of 2014, NLMK entered into a collaboration agreement with the WSR movement, operating under the aegis of the Ministry of Education and Science of the Russian Federation, the Ministry of Labor and Social Protection of the Russian Federation, and the Agency for Strategic Initiatives. One of the agreement's targets is to introduce up-to-date international standards of professional development and retraining in the company. One of NLMK's thirty-seven professional excellence competitions – the one among electrogas welding operators – will be held this year based on WSR's methodology.

"The WorldSkills methodology imposes more stringent requirements to participants, corresponding to the world-class professional profile," says NLMK's Acting Director of HR and General Matters Alexander Tonkikh. "Along with the integration of the WSR methodology into our employee professional training system, the agreement envisages collaboration with the aim to develop innovative educational technologies at NLMK's partner educational institutions."

#### AUSTRIAN APPROACH AND INVESTMENT IN EDUCATION

The dual professional education system is widely used in other countries. Austrian enterprises are believed to be the founders of that system. The key principle of this approach is that students learn theory in the classroom and then practice their skills on the shopfloor.

"NLMK Group was one the first steel companies in Russia to initiate alignment of schools and universities' curricula with contemporary requirements," says Vice President for Human Resources and Management System Stanislav Tsyrlin. "To develop the dual educational system, we apply the relevant experience of leading European manufacturers, particularly major steel companies from Austria

and Germany. The new educational format will help us train qualified professionals, not only proficient in theory but also possessing the right practical skills and work experience."

The dual educational system is currently in use at Novolipetsk, Stoilensky, and VIZ-Steel to train students of partner educational institutions.

"Our collaboration with state educational institutions is a good example of social partnership," says Director of HR and Social Issues at Stoilensky Roman Velikansky. "Vocational schools obtain additional funding and the company receives well-trained graduates, willing to find a job that matches their qualification."

Thanks to the collaboration with partner schools and universities actively supported by NLMK, Lipetsk Region became the winner in the competition of regional education development programs, with its holistic program titled *Modernization of Vocational Education in Lipetsk Region*. Moreover, NLMK supported the *Talent for Regions* project developed by Lipetsk State Technical University for 2013–2015 and focused on training of highly qualified professionals.

In addition to blue-collar staff training in vocational schools, the Group also funds integrated career guidance activities with students from high schools and universities.

For instance, high school graduates can take part in programs such as *NLMK Student* and *Stoilensky Student* that involve competition for scholarships in leading Russian universities and guaranteed employment with the company. In addition, students of Lipetsk State Technical University with excellent grades can apply for the NLMK Scholarship and receive an additional allowance from the company.

NLMK arranges weekly plant tours for high school students and during school breaks, seniors can attend a course titled *Holidays Online: Metallurgy for Fun* that involves computer-aided modeling of metallurgical processes. The career guidance program for high school students also includes NLMK's specialized classes with advanced

physics and mathematics studies, extra training in physics, classes at the Young Metal Worker School and professional excellence schools, activities in specialized clubs at technical creativity centers, contests and subject-specific academic competitions. Over ten thousand high school students participate in career guidance events organized by NLMK each year.

In the last two years, NLMK invested over 60 million rubles in vocational training and higher education. The majority of this amount was spent on additional training courses for students, personal scholarships, as well as bonuses for students and professors.

The company provides full or partial scholarships for school, university, and graduate students who win the competition. Moreover, NLMK guarantees that employees called up for military service get their job back and receive extra pay after the military discharge.

"People are the company's key value," Stanislav Tsyrlin says. "Establishing an integrated HR training and development system is among NLMK Group's strategic priorities. Achievement of the company's strategic goals requires high-quality effort and skilled performance from employees. Therefore, the key objective in 2015 is to develop and implement a career management system, integrating all the initiatives related to training, development, and promotion of NLMK employees; train employees in safety basics; and develop an e-learning system." ☺

Our collaboration with state educational institutions is a good example of social partnership



**Alexander Umanets,**  
Director of HR and Social Issues,  
Altai-Koks:

NLMK Group, which includes Altai-Koks, is successfully implementing a project focused on HR process standardization, including collaboration with partner educational institutions. Building a long-term talent pipeline for blue-collar positions has always been an important issue for us. The new career guidance program in collaboration with Zаринский Polytechnic School scheduled for implementation in 2015 will help us streamline joint educational initiatives and expand their scope. We are deploying a common educational environment between Altai-Koks and Zаринский School. We monitor opportunities for utilizing currently idle process equipment in the School's training activities. In 2016, we are planning to purchase laboratory complexes to help train students for the job of an instrumentation and automation technician. In turn, our blue-collar workers can use the School to get advanced training and retraining. Besides, we have developed a list of additional qualifications for

the basic professional curriculum together with the School's teachers, which means students will have an opportunity to obtain one or two additional qualifications. Moreover, third-year students who have been successful in theoretical studies and practice will be studying a related occupation at the plant on behalf of the employer. For example, machinery mechanics are supposed to get the qualification of sling operator during the second year and then either one of the two during the third year – machinery mechanic for combined steam and gas equipment or electrogas welding operator. This way, at the end we have a professional with three occupations and real onboarding experience during the on-the-job training.

Our objectives in addition to cooperation with partner schools and universities include another six workstreams: on-the-job training of blue-collar workers, management talent pool development, health and safety training for the personnel, regular monitoring of the social situation among employees, as well as comprehensive efforts to fill vacancies with qualified professionals. The plant employs all kinds of professional training methods. About two thousand people go through training, retraining, and advanced training each year, which is more than half of our employees.



**Alexander Tonkikh,**  
Acting Director of HR and General  
Matters, Novolipetsk:

*Our young employees' increasing interest in professional development stems from the efficient continuous training system deployed at Novolipetsk and aimed at motivating them to relentlessly improve their performance.*

*Comprehensive support to young employees is one of our HR priorities. Our aim is to create favorable conditions for young people to unlock their talent and make a career, as well as to help them solve their life issues.*

*Each year, the Company hires more than a thousand skilled young people, who then become staff members or enter the talent pool of managers and qualified professionals.*

*Novolipetsk is implementing an action plan of initiatives focused on motivating employees to achieve high performance, creating the right environment for professional development, providing career growth opportunities to the best employees first, and attracting young talent and experienced professionals.*



**Roman Velikansky,**  
Director of HR and Social Issues,  
Stoilensky:

*The future development path for the Group's companies is outlined in Strategy 2017. Undoubtedly, employees are the core and one of the most important components of the strategy, and we are going to actively develop their potential. What do we mean by that? Firstly, cooperation with educational institutions and career guidance for high school and university students; and secondly, on-the-job training, onboarding, advanced training and development, and talent pooling. Another priority is high-potential employees. All this will support the progress made earlier and make it possible for us to proceed with new projects. And we do have plenty of initiatives that we plan to deliver. Giving employees an opportunity to make a statement, attract their managers' attention, and prove their merits – this is what we tell our managers to work on. This is done by implementing HR initiatives, including the Young Professional program, the talent pipeline, the onboarding system, and corporate contests. For instance, the Young Leader contest at Stoilensky provides the plant's promising employees with an opportunity to show their best, unlock their strengths, and prove their ability*

*to assume responsibility, achieve goals and be leaders when performing their job tasks. The task of the HR function is to identify such employees – including by holding contests – and provide them with career growth and development opportunities. Our company needs young and active employees capable of effectively performing tasks and delivering on the company's objectives.*



**Natalya Malyukova,**  
Director of HR and General Matters,  
NLMK Kaluga:

*Two years ago, one of our company's key problems was the churn of qualified staff moving to Moscow (because of Kaluga's close proximity to the capital) and the intense competition with the nearby facilities in the Vorsino industrial park – there are about twenty of them, including enterprises co-funded by large foreign investors. We have studied both collective agreements of other NLMK Group companies and the region's best practices that can be used in the local context and with the available budget, and now we are adjusting them to our needs and adopting them. We have launched a program that gives scholarships to talented blue-collar workers willing to get higher technical education (as long as the company benefits from that). We understand though that we will be able to take advantage*

*of the employee's knowledge only in four or five years from now. Employees need continuous development. An electrician with a university degree and background in electric work or an engineer who used to work as a repair mechanic and possesses hands-on experience will be invaluable in the future. Also, for over three years now we have been supporting target group graduates of basic, secondary, and higher vocational education institutions.*



**Andrei Velikarov,**  
Head of HR, NLMK Russia Long:

*Our plants are not merely production facilities but rather a huge knowledge and expertise base. NLMK Russia Long launched a project this year titled Corporate Teacher. The project encompasses several enterprises: NSMMZ sites in Revda, Nizhniye Sergi and Berezovsky, InTekhRemont, and NLMK Metalware. Our personnel training center built a team of corporate teachers from the plants' employees. They had to learn how to hold workshops, draw up tests, and develop business games and business cases on their own. Specific subjects were selected for the project's participants to cover in their personal training programs. Each of the participants is an excellent practicing professional, an expert in the relevant field. They know exactly what they are talking about and understand all the details of their job. Now each of them*

*has an opportunity to communicate this to others. The training programs developed by the corporate teachers are cross-functional: they can be applied across all occupations both in rolling mills and EAF shops, which is especially important for our division. For instance, Senior Technology Engineer Olga Bogdanova has developed a training program for EAF shop workers titled Fundamentals of Metallurgy. In addition to the EAF process, the course covers the basic oxygen and open hearth processes. Personnel Development Expert Elena Reutova is working on a project called Methods and Techniques for On-the-Job Training as Part of Professional Education. Our corporate teachers will soon start teaching their classes using their own programs.*



**Oleg Ishchenko,**  
HR and PR Director, VIZ-Steel:

*NLMK Group's multi-tiered system helps effectively create a talent pool both within the company and beyond. VIZ-Steel is successfully running programs focused on developing the talent pipeline, conducting employee assessment, and improving the mentorship system. We are carrying out projects aimed at identifying high-potential employees and supporting young professionals. We provide our employees with opportunities to undergo training and retraining, study related occupations, and develop their*

*skills in 66 jobs and professions. Up to 90% of our employees participate in corporate educational programs each year. Moreover, our collaboration with partner schools and universities has reached a new level. The introduction of dual system elements in two of our partner educational institutions will enable us to train highly qualified professionals ready to start working at VIZ-Steel, and make sure they meet the needs of the contemporary manufacturing environment as perfectly as possible.*



**OUR PLANTS  
ARE NOT MERELY  
PRODUCTION  
FACILITIES BUT  
RATHER A HUGE  
KNOWLEDGE AND  
EXPERTISE BASE**





NLMK Europe experts at the Cold Rolling Shop

During the training, we focused on the “new interpretation” of known approaches to improving operational efficiency in NLMK Group

# Balanced approach



Employees of NLMK Group’s European operations attended a training course on NLMK Production System and its tools at the Lipetsk site.

Yulia Taranova

The training course for NLMK Clabecq and NLMK Verona employees consisted of two parts: first, the participants analyzed the situation at their home plants and then had an intensive training at the Lipetsk site. The aim of the course was to merge together known approaches and practices of the NLMK Production System and use them consistently across the Group to achieve its strategic goals.

“During the training, we focused on the “new interpretation” of known approaches in NLMK Group and practical tips for application of specific tools instead of describing the “theory” of conventional methods to improve operational efficiency,” says Head of Production System Development Department Ekaterina Eletina. “We tried to achieve the best possible balance between the theory – an overview of production system principles – and practice, in particular self-guided application of new knowledge and demonstration of how the system works directly in production shops.”

The Verona and Clabecq operations already apply some lean production tools, and their employees have an idea of best practices in performance improvement. Nevertheless, to ensure a comprehensive system approach to operational efficiency improvement, both European sites decided to introduce the NLMK Production System at their facilities in the shortest time possible.

“This was not the first training of this format that we held,” Ekaterina says. “Employees of the Group’s Russian operations had gone through the same training procedure, and specialists from NLMK La Louviere completed this course as well a month ago. Our target is to align approaches at all the sites and eventually build a common system to facilitate achievement of NLMK Group’s strategic goals.”

Managers and experts of the Cold Rolling and Coating Shop, Hot Rolling Shop, Repair Complex Directorate, Planning and Analytical Department, and Rolling Production Directorate of NLMK took an active part in the training of their European colleagues. Thanks to that, the trainees had an opportunity to get a first-hand account of the transformations that occurred in departments after the implementation of the NLMK Production System.

We expect that similar training sessions will be held on a regular basis as the Production System is being scaled up across all operations and functions of the Group. 🌐

Our target is to align approaches at all Group sites

**Roberto Boero,**  
NLMK Europe:

*I believe that the balanced approach to training applied by our colleagues at NLMK is especially efficient. We started with a theoretical overview of Production System’s principles and tools and went on straight to the demonstration of how these principles are applied in all production areas that we managed to visit during our three-day trip to Lipetsk. We developed a comprehensive understanding of how the tools used at NLMK work in practice and now we are ready to implement them. I think that the Strip Division needs to start with implementation of such tools as charting and control charts, as well as the tools similar to those we apply in this or that way at the facilities in Verona and Clabecq, in particular A3, the initiative system, and 6S.*

**Francesco Crivellente,**  
NLMK Verona:

*We had a chance to witness the effectiveness of the NLMK Production System during our visit to the Lipetsk site. After learning the theoretical part in the classroom, it was interesting to see how it all works in the real production process.*

**Antonio Rinaldi,**  
NLMK Verona:

*It was a pleasant surprise to learn that in spite of the giant size and the great number of employees at the plant, NLMK involves all levels of managers and blue-collar staff in continuous improvement processes. I was also impressed by the broad product mix manufactured at NLMK.*



# World record

Each year, NLMK Kaluga, a new generation EAF mill and the youngest company within NLMK Group, hits new all-time highs in development rates. This year, the mill set a new cast sequence record, which is consistent with global best practices, passed the milestone of two million metric tons of steel, and achieved certification to supply products to EU countries.

Yulia Taranova

NLMK Kaluga's production capacities in steel and long steel products are 1.5 million metric tons of steel and 0.9 million metric tons of long steel a year. This June, the mill set a cast sequence record – 112 heats per one tundish over 77 hours of cast. This is one the best global indicators for mini-mills for this class of furnaces.

The mill produced its first million metric tons of steel a year after the official launch, and the millionth metric ton of rolled products in March 2015.

## SUSTAINABLE CONSUMPTION

Cast sequence is one of the factors which have an impact on consumption of charge and refractory materials, and overall process stability.

"Increasing the cast sequence is an important element of our operational improvement program, and achieving a new record is yet another proof of the high professional level of NLMK Kaluga employees and their aspiration to achieve the common goals," said Alexander Buraev, Director for Long Products and Metalware at NLMK Group.

The production line of the EAF shop at NLMK Kaluga is equipped with metallurgical equipment from

## HOW IT ALL HAPPENED

**Sergey Ivanitsa,**  
NLMK Kaluga Manufacturing  
Manager, speaks about the launch  
of the mill and achieved results

*All great deeds are only done if the will of the management goes along with the aspirations of a highly professional team. This was the case with the birth of NLMK Kaluga. Several outstanding events happened in late spring and early summer of 2013: on May 23, production of hot rolled steel was launched and the first casting operation was performed to deliver finished products in the EAF shop, and on June 10, 2013, the first product was manufactured in the mill.*

*All the parties to the process, in particular the teams of NLMK Kaluga, Ukrgipromet, Chelyabgipromet, GAMMA, and subcontractors, were highly professional, which made the successful launch of the mill possible.*

*Over these two years, the personnel of the EAF shop together with all other units have achieved the level of global best practices in terms of consumption of refractory materials, additives, scrap, electric power, electrodes, and sequence steel casting using continuous casting machine.*

*Thanks to efficient organization and well-coordinated operation of the equipment, the mill produced its first million metric tons of steel in August 2014, a year after the official opening of the mill, and the millionth metric ton of rolled products in March 2015.*

*Although NLMK Kaluga is the youngest company within the Group, we have a lot to be proud of!*



NLMK Kaluga production line is equipped with metallurgical equipment from leading global manufacturers



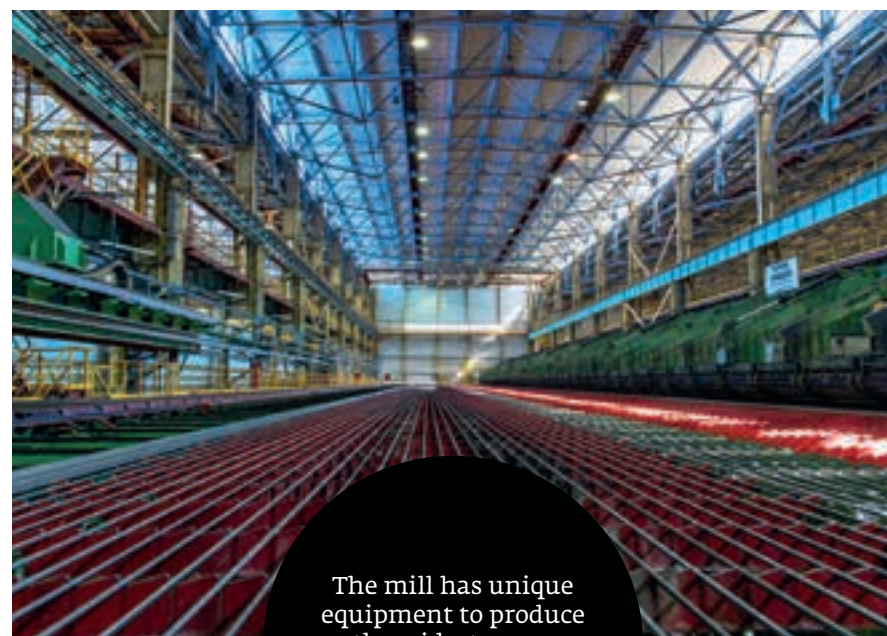
Rebar produced by NLMK Kaluga is certified for export to European countries

leading global manufacturers to ensure highly efficient use of energy and resources. For example, during the record-setting cast sequence, the specific energy consumption by the arc furnace was 354.1 kWh per metric ton of billets, which is in line with global best practices.

#### ULTIMATE TECHNOLOGY

Optimization of the arc furnace's operating mode enabled the plant to achieve record-breaking results.

NLMK Kaluga's electric arc furnace is based on a unique technology – Ultimate. Given the high specific



The mill has unique equipment to produce the widest range of premium-quality long steel products

electrical capacity (over 1.0 MVA/t), this technology allows one charge operation mode.

This is not the only unique technology applied at the mill. An eight strand continuous casting machine can operate without stopping for changeover, increasing the yield to 99%. NLMK Kaluga was the first plant in Russia to employ this technology.

#### DESTINATION EUROPE

NLMK Kaluga produces a wide range of long steel products and sections for construction purposes. The mill has unique equipment to produce the widest range of premium-quality long steel products for construction purposes.

"Over the two years of the mill's operation, the EAF shop has successfully launched the production of the entire range of continuous casting products, while the rolling shop has expanded the range of rebar and angle bar by ten items," said Sergey Ivanitsa.

As of today, rebar produced by NLMK Kaluga is certified for

export to European countries. Rebar was certified to DIN 488, a national standard of Germany, by the Technical University of Munich.

The certificate allows NLMK Kaluga to supply rebar not only to construction companies in Germany, but also to other European countries until 2020. "The certificate confirms the high quality level of NLMK Kaluga products and opens new opportunities for the company to expand its market," said Alexander Buraev, Director for Long Products and Metalware at NLMK Group.

"We are happy that our products are highly valued at the international level," said Sergey Shalyaev. "The credit for this achievement goes to the entire team of the mill. We hope that European construction companies will appreciate the high quality of our rebar."

NLMK Kaluga was launched in July 2013. Investment in the construction of the mill totaled 38 billion rubles, with 7.5 billion spent on state-of-the-art environmental technologies. ☺



An eight strand continuous casting machine can operate without stopping for changeover

# Under control

NLMK Group's Director for Internal Control and Risk Management Eugene Ovcharov speaks about the company's key risks, the Code of Corporate Conduct, and the work of cross-functional professionals – the Group's auditors.

Yana Larina

#### Eugene, please tell us about your team. What is its role within the company?

The key functions of our department are risk management, internal control, and internal audit. We identify, classify, and manage potential risks affecting the company in all areas of its activity. This helps keep the company competitive and protected from all kinds of losses and damages. Moreover, our service is responsible for internal control covering key business processes to improve the company's performance and consequently, enhance its appeal to investors.

#### IDENTIFY, ANALYZE, RECOMMEND What about the company's risks – is that classified information?

No, quite the opposite – we disclose this information to the public. Nowadays, everyone speaks openly about the risks: this way, our investors and shareholders can tell that the company management is aware of all the risks and strives to mitigate them.

#### What are the key internal risks affecting NLMK Group?

These risks are relevant not only for our Group but for any industrial company in general. First of all, of course, we consider production-related risks: equipment reliability, timely repairs, maintenance schedule, and so on. Another category includes credit risks, arising when a supplier fails to fulfill their obligations in time, and in that case the company may incur losses. Another type of risk critical in the current circumstances is the currency risk since the US dollar and euro exchange rate fluctuations have a direct impact on the company's profitability. The list of relevant risks also includes investment risks related to project implementation, the risk of fraud, industrial safety risks, and many others.

There is a new type of risk facing Russian enterprises that has emerged recently, namely the risk of sanctions. It is no secret that many types of materials and equipment are sourced



THE CREDIT  
POLICY IS  
A NEW SET  
OF RULES FOR  
NLMK GROUP  
REGARDING  
CREDIT LIMITS



Nowadays,  
everyone speaks  
openly about the  
risks



from abroad. Consequently, restrictions resulting from sanctions also pose a risk. The key is to be prepared for such situations and have a solution at hand. For this reason, our Procurement function has thoroughly analyzed all the aspects critical to NLMK Group and now, in my opinion, we have sound insurance against such risks.

**How many risks is NLMK Group exposed to?**

At the moment, we are continuously monitoring 181 risks.

**Who is your customer for risk identification: your own department or other business units?**

Each business unit is a risk owner. And naturally, every department, every function leader is responsible for their job. So, most of the time, company departments are the customers, and we serve as assistants. Our department is a navigator that knows how to identify risks and how to measure them, and we

monitor these activities. We also take the initiative very often. Analyzing risks is not the only thing that we do; we also recommend ways to avoid them, and sometimes we build our own new systems to prevent risks.

**Do you conduct internal investigations to identify new risks?**

Of course we do. It is a basic standard in risk management. Risks must be identified annually. We have a corporate risk management system, and we stay directly in touch with over 100 representatives from all divisions and all functions to identify risks affecting NLMK Group. Once a year we do an enormous job. For this purpose, we send out enquiries at the beginning of the year and then collect feedback

to build a long list of risks, which we analyze to avoid duplicating and select the risks with potential losses exceeding 500 million rubles. We include them

We are going to draw up a “guarantee matrix” for the entire NLMK Group

The company is currently working on its Code of Corporate Conduct

in the risk matrix and present the information to the Management Board of NLMK Group.

**You said all the divisions – does that include foreign operations of NLMK Group as well?**

Yes, we build a global risk matrix, taking into account all our sites without exception. This year, we added data on foreign facilities to the risk register. These companies are part of an important process chain, so we do take the risks of foreign assets into account.

**RULES FOR EVERYONE**

**Speaking about compliance in each company and in each department, do you have any plans to develop common rules that would apply to every single one of the Group's entities?**

The company is currently working on its Code of Corporate Conduct, and our department is in charge of that task. The Code is ultimately a set of rules that regulate relationships between employees, third parties, subsidiaries, shareholders and top managers, and so on. This year, we intend to issue all the relevant documents, including the Code of Corporate Conduct, the Anti-Corruption Policy, and a number of other documents.

**How do employees learn about that?**

We have added an anti-corruption



NLMK Group auditors at a training session

page with all relevant contact data and the hotline number to the websites of NLMK Group and the Lipetsk site. The contacts include phone numbers and an e-mail available 24 hours a day to those who wish to share information on imminent or past corruption events. Messages can be anonymous. We hope this will become an efficient feedback channel for our function to collect information from employees. We guarantee that all the messages will be processed.

**How do you control major tenders and company suppliers?**

Already now we are working hard to counteract mala fide suppliers. We

have launched two global regulations – on contractor qualifications and on the tendering procedure.

**What kind of document are the Regulations on Contractor Qualifications?**

Any supplier starting to work with our company must pass a number of control steps to become our partner. We have to analyze its activities with respect to various parameters: security, financial stability, technical equipment, experience, as well as compliance with safety, environmental, and other types of requirements. Based on this information, we will eventually be able to reduce the number of suppliers, leaving only the most reliable and trusted ones. Once we have such a short list of vendors for each category, we will make sure our partners get their invitations to tender. This approach will help NLMK Group's companies make new plans and implement new business processes confidently and without risk. In a certain sense, this will make our company invincible.

**You have issued a new document titled Credit Policy. What is it about?**

The Credit Policy is a new set of rules



for NLMK Group regarding credit limits offered to our partners. For instance, when our company makes a down payment to a contractor, it assumes a credit risk – that is, there is a risk we pay the money but never get the service. Nowadays, all the banks and some businesses analyze credit profiles of their partners, applying a certain decision-making process. Based on this assessment, companies either assume risks or they do not. This is the principle that our credit policy is based on.

#### ON IMPLEMENTATION OF STRATEGY 2017

#### What are your objectives in the context of Strategy 2017?

Our target is to finish what we started. As for new projects,



NLMK's internal audit policy helps keep the company competitive



**WE HAVE ADDED AN ANTI-CORRUPTION PAGE TO THE GROUP WEBSITE**

in the next two years we are going to analyze all business processes in the company and draw up a “guarantee matrix” for the entire NLMK Group.

#### What will it look like?

Actually, this is common practice – it is just that not all companies go as far as to build an optimal “guarantee matrix.” There are basic functional areas in a company, and each of them is exposed to operational risks such as fraud, inefficient decisions, errors in reporting, and loss of assets. These are the four key issues that controllers consider. This information is recorded in the “guarantee matrix”. Next, special controls are developed for that system – in particular, activities and measures

to reduce the probability of risk events. Afterwards, internal auditors check the management’s progress implementing the approved controls. The result is the guarantee of an efficient internal control system at NLMK Group for three processes – risk identification, control, and audit.

#### What was wrong before?

Each top manager had their own understanding of common risks and controls. Auditors would come and look at separate segments of business processes, but there was no big picture – no document to reflect the current status in all the areas including sales, procurement, investment, repairs, and accounting; whereas the new approach is a comprehensive “one-page” solution. ☺

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