JSC "OEMK" (Russia)

Oskol Electrometallurgical Steel Works

Company’s business profile

Sample PDF

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CONTENTS

1. General information .................................................................................................. 6

2. The enterprise structure, range of products ............................................................. 7

3. Production, tendencies of development .................................................................. 11

4. Sources and suppliers of raw materials ................................................................... 14

5. Domestic market ...................................................................................................... 16

6. Exports ..................................................................................................................... 19

7. Competitiveness ....................................................................................................... 22

8. Financial standing, production effectiveness ........................................................... 26

9. Ecology .................................................................................................................... 29

10. Privatization, pattern of ownership ....................................................................... 35

11. Pattern of costs, labor productivity, personnel, social obligations ......................... 36

12. Realised Projects .................................................................................................... 43

13. Development Program .......................................................................................... 50

Appendix 1: Exports by product in 2004-2013 .............................................................. 52
    Carbon steel billet .................................................................................................. 52
    Alloyed steel semis ............................................................................................... 54
    Carbon bars ......................................................................................................... 55
    Alloyed steel bars ................................................................................................. 56

Appendix 2: Mix of products of JSC «OEMK» ............................................................... 57

Appendix 3: Contact information ................................................................................. 58
List of Tables

Table 1: OEMK production of crude steel and rolled steel products in 1998-2013 and 1st half of 2014, kt
Table 2: The greatest domestic customers of OEMK’s products in 2007-2013, kt
Table 3: Income-losses report of OEMK for 1998-2013, mln Rubles
Table 4: Dynamics of the atmospheric emission of OEMK (by pollutant) in 2006-2013, kt
Table 5: Costs structure of "OEMK" in 2011-2013, Mln. Rubles
Table 6: Personnel and wages in 2000-2013
Table 7: Number of OEMK employees by category in 2008-2013
Table 8: Funding for social programs of OEMK in 2008-2013, mln rubles
Table 9: Basic capex projects of JSC OEMK in 2009-2015
Table 10: Volume of funds, invested by JSC OEMK for 2012-2013, mln rubles
ANNOTATION

This report (company business profile) is a description of one of the largest Russian steel - JSC "OEMK" of Metalloinvest.

The report consists of 13 sections, contains 58 pages and includes 3 applications and 10 tables.

The business is based on a portrait of a desk study. As information sources, data of Federal Service of State Statistics, the Federal Customs Service of Russia, official statistics of rail transport, annual and quarterly reports of companies, as well as internet-sites of company-producers.

The first section is an overview of the company.

In the second section presents data on the composition and powers of the company, its products range.

The third section gives an idea of the volume of production of products for various value added products and their dynamics, which are determined on the basis of trends.

The fourth section is devoted to sources of raw materials and suppliers, both domestic and foreign.

Marketing of products dedicated to the fifth section, with a separate delivery address for the domestic market and for export.

In the sixth section we consider the foreign activities of the company, data on exports.

In the seventh section we consider the foreign activities of the company, data on exports.

In the eighth section data on productivity, staffing, compensation can be found.

The ninth section is devoted to one of the most important areas of functioning of the production companies at this stage - environmental performance.

The privatization of the company, its progress, the formation of the shareholders and its impact on the company's activities in the tenth section. Data on the financial condition of the company during 1999-2013 are given in the eleventh section.

In the twelfth section we consider the implementation of planned projects for each of metallurgical conversion.

The thirteenth and final section is devoted to the program for the company.

The Appendices present information about the enlarged range of products, the geographical structure of exports of rolled steel by its kinds in 2004-2013 as well as address-phone book of the company.
1. General information

Oskol Electrometallurgical Steel Works (OEMK), located in Stary Oskol in the Belgorod region (near large iron ore resources producers in the area of a unique iron ore deposit – Kursk Magnetic Anomaly) is the youngest enterprise in list of the largest Russian steelmakers - commissioned in 1984. OEMK is modern DRI Works – unique in Russia blast furnace-free steelmaking production. The Works was constructed to obtain high-grade long-rolled products to replace imports.

The Works economic-geographic position is rather favourable: it is located in 22 km from Stary Oskol city in Belgorod region, nearby large iron ore mining-concentrating combines (Lebedinsky GOK, Mikhailovsky GOK).

The Works was constructed to satisfy the USSR demand for high-grade long-rolled products (to replace imports) on the base of introducing capacities on electro-steelmaking with continuous steel casting. Initial project provided for commissioning capacities of 3.5m tpy steel at the Works.

Key next-generation metallurgical production technology forms the basis of OEMK’s competitive advantage. Midrex DRI technology (direct iron reduction process) in conjunction with electric-arc smelting technology produces high quality metal, especially pure from harmful residual elements and impurities. These technologies provide the enterprise with metal products having novel consumer properties and engender steady demand on the market. OEMK is the Europe-biggest production complex of such type.

OEMK is the youngest Russian producer of special steels (depreciation of its capacities is 6.5% only). The Works is one of several Russian steelmakers, producing the whole volume of steel in EAF.

After launching a new 350 mm rolling mill in 2002 the Works became one of the main Russian producers of high-grade long-rolled products from structural, tool, bearing and spring steels.

In 2006, by the decision of the Annual General Meeting of Shareholders of JSC OEMK, authority of the sole executive body of the company were transferred to LLC "Management company "Metalloinvest".

Holding Company Metalloinvest is the sole shareholder of JSC OEMK.

Holding Company "Metalloinvest" includes the Mikhailovsky GOK, Lebedinsky GOK, Oskol Electrometallurgical Steel Works (OEMK) and JSC "Ural Steel". The main beneficiaries of the holding are Alisher Usmanov (48%), Vladimir Skoch’s companies (30%) and Farhad Moshiri (10%).
2. The enterprise structure, range of products

The bulk of OEMK productive facilities was supplied by leading world producers of equipment: German Lurgi, Krupp, Vacmetal, Midrex, Siemens, as well as Italian, French, Swedish and American companies. The Works is obvious leader in technological level in Russian ferrous metallurgy.

The enterprise structure includes:

**Pelletising plant** with capacity of XXm tpy (roasting facility Lurgi, Germany (since 1983), with caking area of 480 sq. m). The oxidized pellets have a size of 5-20 mm, the iron content of the pellets is not less than 67%, silica SiO$_2$ - not more than 3.3%, basicity (CaO/SiO$_2$) - not less than 0.4, the strength - not less than XX kg/pellet.

**DRI plant** with capacity of XXm tpy, including 4 Midrex DRI facilities (since 1984-1987), yielding 2 types of pre-reduced pellets: passivated (protected from secondary oxidation when transporting), for domestic and export sales, and non-passivated for use in own electro-steelmaking process. OEMK owns the passivation process know-how. Iron content in the pre-reduced pellets exceeds 90%.

**Electrosteel plant** yields structural, carbon, bearing, wire cord, springs, tools, rail and other alloyed steels. 4 German Krupp arc furnaces (EAF) XXt each, with transformers of 105 MVA at each, (since 1984-86) are served by XX radial continuous casters Nos. 1-4 (XXm tpy totally as of early 2012) of Russian manufacture (Yuzhno-Uralsky machine-building plant, since 1884-1986), one 6-strand concaster with capacity of XXmln tpy No. 6 (manufactured by Swiss firm Concast AG at a cost of $45 mln), 2 ladle-furnaces "Fuchs" (Germany) with capacity of XXmln tpy (since 1996) and one Danieli ladle-furnace with capacity of XXmln tpy (since 2009), as well as 5 facilities for the blow of steel with argon, including two Vacmetall (Germany) facilities (launched in 1984-1986), 2 Vacmetall facilities for portion degassing steel (since 1984-1985)), and a facility for circulation steel degassing of German SMS Mevac (UTsVS-No. 3) with capacity of XXtpy (launched in 2008).

Total capacity of the plant is XX3m tpy steel as of early 2013. The whole volume of steel is continuously cast, the semis are cooled in furnaces of regulated cooling, and then are cleaned at shot-throwers and abrasive-cleaning units.

All the productive facilities are in good standing and demonstrate high-reliable work.

Until the end of 2002, utilisation of capacities of the enterprise’s continuous casters was 65% only owing to the lack of small-section mill. Commissioning the 350mm mill allowed to expand range of products and to increase the caster utilization up to maximum level.
In 2003, in the electrosteel plant, at EAF No. 4, a gas-oxygen unit Pirejet of American firm Air Liquid was commissioned that allowed economizing power and decreasing smelting time.

In early 2004, a facility of electro-magnetic steel mixing of SMS Demag was commissioned at the reconstructed continuous caster No. 2 that allowed the Works to meet strict requirements of foreign clients, imposed on steel products.

In 2008, a gas-oxygen unit (of firm Air Liquid) was commissioned at EAF-2. In addition to two available ladle-furnaces, one more 2-position ladle-furnace (of Italian Danieli) with capacity of XXmln tpy was commissioned in the plant in early 2009 to expand output of high-grade steel for motor and pipe industries; launching the facility provides treatment of practically 100% of steel produced in 3 ladle furnaces. Besides, the circulation degassing facility (No. 3) of German SMS Mevac was commissioned in 2008 that allows treatment of 50% of steel produced at 3 degassing facilities.

**Rolling production** (total capacity of XXmln tpy includes XX mills (shops):

**No.1:** 8-stand heavy section/billet **XXmm mill** of SMS Schlieman-Demag (since 1986) with capacity of XXm tpy, the best mill of this type in Russian metallurgical sector and not needing modernisation. The mill has a blooming reversing stand 1000, two continuous 4-stand groups with vertical and horizontal rolls, shears and saws for hot cutting.

The mill is equipped with 3 continuous heating furnaces with walking beams, a furnace for homogenizing cast billet, 3 annealing furnaces for annealing hot-rolled steel “in situ” at the mill, and a finishing and inspection bay (in which abrasive finishing of billet is conducted, and rolled steel is subjected to ultrasonic and magnetic inspection for revealing surface and inner defects at facilities Dr. Foerster, Volna-7, Karl Deutsch. The existing Rolling Mill control system is entirely automated, which frees the operator from the need to interfere with the rolling process and minimizes the possibility of errors.

Warehouse facilities of the shop are presented by cast billet warehouse with capacity of 35 kt (each smelting lot is stored in individual cell, with the information available in special database that allows tracking the specification requirements, weight and storage point of each bundle), and intermediate rolled steel warehouse with capacity of 17 kt, controlled with the use of automatic control system, providing information on each order, lot, pallet (volume, place of storing, etc.).

**No.2:** The **XXmm small-section mill Siemens** with capacity of XXm tpy rolled steel (including XXkt shapes (in bars) and XXkt small sections (in bars and bundles) was commissioned in October 2002. The mill is equipped with sizing automatic devices for control of rolled steel geometry and surface defects, the finishing bay, including conveyor finishing units (abrasive-treating, polishing, etc.) with supersonic non-destructive testing unit, and after-mill inspection and finishing of bars, as well as a complex of facilities on thermo-treatment of rolled steel both at mill “in situ” (in 3 continuous furnaces) and outside the mill (annealing in two Ebner furnaces with protecting atmosphere).