JSC "Evraz – United ZSMK" (Russia)
Zapadno-Sibirskiy Integrated Iron-and-Steel Works
Company’s business profile

Moscow
December, 2014
CONTENTS

1. General Information ........................................................................................................... 5
2. The enterprise structure, capacities, range of products .................................................. 8
3. Production, tendencies of development ........................................................................... 12
4. Sources and Suppliers of Raw Materials ......................................................................... 21
5. Sales, Domestic Market ................................................................................................... 26
6. Exports .............................................................................................................................. 32
7. Competitiveness and Production Effectiveness .................................................................. 39
8. Financial Standing ............................................................................................................. 47
9. Environmental Measures ................................................................................................ 52
10. Privatization and Pattern of Ownership .......................................................................... 59
11. Pattern of Costs, Labor Productivity, Personnel, Social Obligations .............................. 61
12. Realised Projects ............................................................................................................. 68
13. Program for Development ............................................................................................... 81
Appendix 1: Exports of ZSMK in 2004-2013 ....................................................................... 84
   Semis ................................................................................................................................. 84
   Wire rod ............................................................................................................................. 85
   Bar ....................................................................................................................................... 86
   Heavy Sections .................................................................................................................. 87
Appendix 2: Exports of NKMK in 2004-2013 ......................................................................... 88
   Semis ................................................................................................................................. 88
   HR flat product .................................................................................................................. 89
Appendix 3: Mix of Products ................................................................................................. 90
   Roughed semis .................................................................................................................. 90
   HR billet ............................................................................................................................ 90
   Long products ................................................................................................................... 90
   Hot-rolled flats .................................................................................................................. 92
   Pipes electro-welded 3-7 m long from carbon and low-carbon steel ......................... 92
Appendix 4: Contact information ......................................................................................... 93
List of Tables

Table 1: Production volumes of United ZSMK by product in 1998-2013 and H1 2014, kt
Table 2: Production volumes of NKMK by product in 1998-2010, kt
Table 3: Key suppliers of raw materials to ZSMK in 2003-2013 (kt)
Table 4: ZSMK’s Exports for 1998-2013, kt
Table 5: Income-losses report of ZSMK in 1998-2013, mln Rubles
Table 6: Income-losses report of NKMK in 2004-2010, mln Rubles
Table 7: Plan of Environmental Measures of JSC «ZSMK» for 2013-2017
Table 8: Pattern of costs of ZSMK in 1999-2013, mln Rubles
Table 9: ZSMK personnel and wages in 1998-2013
Table 10: Personnel and wages at NKMK in 1998-2010
Table 11: The total investment of JSC «ZSMK» in 2010-2014, mln rubles
Table 12: Volumes and directions of capital investments in the United ZSMK in 2012-2014, mln rubles

List of Figures

Figure 1: Geographic Pattern of Domestic Sales of JSC ZSMK in 2010-2013, %
Figure 2: Sectoral Pattern of Domestic Sales of JSC ZSMK in 2012-2013, %
ANNOTATION

This report (company business profile) is a description of one of the largest Russian steel - JSC “Evraz - United ZSMK” (Zapadno-Sibirskiy Iron-and-Steel Works).

The report consists of 13 sections, contains 94 pages and includes 4 applications 2 Figures and 12 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 repots 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 competence of the company, which determine its competitiveness.

Data on productivity, staffing, compensation can be found in the eighth section.

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

On July 1, 2011, EVRAZ has merged JSC West-Siberian SteelWorks and JSC Novokuznetsk SteelWorks. The united enterprise has been named: Open Joint Stock Company EVRAZ West Siberian SteelWorks. Abbreviated corporate name: JSC EVRAZ ZSMK.

The decision was taken at an extraordinary general meeting of shareholders of JSC Evraz ZSMK on April 7, 2011.

Aggregate combined capacities of the company are XX mln t iron, XX mln t of steel, more than XX mln t rolled steel per year.

Currently, the enterprise consists of 2 manufacturing sites - ZSMK (structural rolled steel site) and NKMK (rail rolled steel site).

The share of the Works is around 11% of Russia's total output of finished rolled steel. In 2013, the Works produced XX mln t steel, being the 4th greatest producer in Russia.

Both enterprises, which became parts of the JSC Evraz ZSMK, previously were Integrated Iron-and-Steel Works. Both enterprises are located in Novokuznetsk, Kemerovo region.

ZSMK was sufficiently modern enterprise with complete metallurgical cycle, equipped with high-productive units of large unit capacities, but NKMK was one of the oldest SteelWorks in Russia (the first iron in the company was produced in 1932).

JSC ZSMK (or ZSMK, Zapadno-Sibirsky (West Siberian) Integrated Iron-and-Steel Works), commissioned in 1964, was designated to satisfy demand for small sections and wire in Siberia and Far East. ZSMK is the largest steel mill in the Siberian region and the eastern-most steel mill in the Russian Federation. It occupies an area of over 3,000 hectares and is located 25 kilometers from the city of Novokuznetsk, in the Kemerovo region. Since commissioning ZSMK was a sort of “experimental laboratory of ferrous metallurgy” for testing and introducing modern technologies and unique facilities, including dry quenching coke, casting through slide gate, obtaining pure iron oxide.

In technological and construction level, steelmaking production of ZSMK is one of the best in Russia.

The Works produces billet for re-rolling and bar, being leading Russian rebar producer (the Works is the main Russian producer of low-alloyed steel rebar and heat-strengthened steel rebar). ZSMK produces 10% of Russian crude steel, and is a leading manufacturer of rebar, wire rod and low-carbon wire for ferroconcrete.

Among the Works consumers are above 250 domestic and around 170 CIS companies. Steady growing domestic demand for building steel products – by 10-12% in latest years – provides good sales of the Works products (notice that actual launching programs with state support on bank crediting purchase of houses and apartments by people can raise rate of the growth up to 15% yearly).

Kuznetsk SteelWorks until recently was a full-cycle integrated steelmaking enterprise, one of the leading manufacturers of steel and rolled steel in the country.
Currently, the company has eliminated blast furnace production, cookery, stopped open hearth furnaces, and steel is melted in electric furnaces only. Some rolled steel capacities were also stopped, and the decision was taken on specialization of the Works in the production of rail rolled steel.

Former NKMK is Russia's largest manufacturer of various types of rails and with Evraz NTMK is the major supplier of rails for JSC Russian Railways. The share of the Works is around 70% of total rail production in Russia. JSC “Evraz ZSMK” in terms of production of rail products is among the top five largest world producers. Evraz ZSMK (ex. NKMK) produces high-grade rails of high linearity and, since 2013, up to 100 m long. The Works uses an unique technology of detecting defects, including three testing phase, which ensures maximum compliance of rails produced with international quality standards.

Management company of ZSMK is LLC EvrazHolding (the Works is a part of Evraz Group S.A.).

At extra-ordinary shareholder meeting of ZSMK on 7 April 2011 the shareholders approved merger with JSC NKMK. After the reorganization, the united company was found on July 1, 2011, named JSC "Evraz-United West-Siberian Integrated Iron and Steel Works" (JSC Evraz ZSMK).

The merger of ZSMK and NKMK is a reasonable step within the operating development strategy for steelmaking assets of Evraz. This step will facilitate management and control and uniforming standards in fields of occupational and industrial safety, logistics, marketing and purchasing activity social policy and human resources within the single Integrated Works.

In 2013, JSC Evraz ZSMK completed upgrading its rail-and-structural mill and introduced production of 100-m rails (at NKMK site), being high-competitive at world market. Besides, the company intends to implement a number of large projects to introduce new processes in steelmaking, to expand mix of rolled steel products for building and equip blast furnaces with pulverized coal injection plants (ZSMK site).
2. The enterprise structure, capacities, range of products

The enterprise structure includes:

**Sintering plant**, with capacity of 8 XX tpy sinter (3 sintering facilities of 300, 300 and 336 sq. m, respectively).

The production includes shop of lime roasting shop (capacity of XX tpy, launched in 1968, includes 12 shaft furnaces) and a sintering shop (built to design of Mekhanobr Institute (St. Petersburg)), composed of 3 subdivisions: crushing-sorting, sintering and pump-slime (launched in 1964-1967).

The production provides the Works’ blast furnace shop with sinter of constant chemistry and required strength, caked of fine-milled concentrate with the use of milled lime as intensifier. The production pioneered technology of charge caking in high layer in Russia. The sinter of ZSMK is one of top-3 in grade in Russia.

**Coal-tar chemical (coke-chemical) plant** - LLC EvrazCoke-Siberia branch of JSC EVRAZ ZSMK, with total capacity of XX m tpy coke (6 coke-oven batteries (30-41.6 cub. m in volume, and a dry quenching coke facility). The plant includes now 7 technological and 3 repair shops: coal-preparation, coal-washing (capacity of XX mln tpy), a coke shop (5 coke-oven batteries of total capacity of XX mln t per year (as of 1.06.2014), a shop of chemical capture, shops of petrol rectifying, tar-processing shop, phthalate anhydride shop, power-facility repair shop and two specialized service and repair shops.

The Site-2 (NKMK) coke production included two coke-oven batteries number 3 and number 4 (commissioned in 1933 and 1934) of total production capacity of 830 kt per year. By now the production has been closed (since June 1, 2014) in connection with unprofitability of the production and obsolete equipment.

ZSMK coke (obtained from high-grade low-ash coking coals of Kuzbass) is recognized the best in Russia, it is well-saleable both at domestic and world market. The production has been certified in accordance with ISO 9002-2000 International Standard.

**Blast furnace shop (launched in 1964):** includes 3 blast furnaces (No. 1 of 3000 cub. m each, with design capacity of XX m tpy, No. 2 of 2000 cub. m and capacity of XX m tpy, No. 3 – of 3000 cub. m with design capacity of 2.2m each), total capacity on iron output is XX tpy. The furnaces are the greatest in capacity and the most-automated in Russia. The shop introduced technology of smelting with combined the blow “natural gas – oxygen”, as well as waste-free technology of blast furnace production with processing all the wastes to obtain slag and broken stone for building.

The shop includes also a charge-feeding device, casters, bay of refractory mass preparation and depot for ladle repair. The bulk of iron produced is processed in steelmaking production of ZSMK.

In July 2014, Evraz ZSMK launched pilot operation facilities for pulverized coal injection (PCI) in BF №1 and №2. The production capacity of the facilities is
160 t/h pulverized coal or around 1.3 mln tpy. Investments of EVRAZ in the project amounted to a little over 7 billion rubles. In the first half of September 2014, PCI facility was introduced at blast furnace №3.

**Steelmaking production (created in 1985, total capacity of 8 mln tpy).**

ZSMK produces steel in two BOF - oxygen-converter plants (total capacity of 9m tpy), including 5 converters, 5 ladle-furnaces (including the 5th - 140-t 2-position ladle-furnace of VAI Fuchs (Germany) since April 2005), a 8-strand continuous-square billet caster "Danielli" (Italy) with capacity of 1.28m tpy (after reconstruction in 2002), designated for production of square billet 150x150mm (in February 2004, the caster reached the design capacity), a 2-strand continuous-slabbing caster with capacity of XX mln tpy since November 2005, and EAF-2 (Site-2 – NKMK). Total capacity of the production is XX mln tpy steel.

Besides, the production structure includes a charge-preparation shop and a drop hammer shop.

**BOF plant No. 1** (capacity of 3.5 mln tpy): 3 145-t converters, commissioned in 1969 and reconstructed in 1980, and 3 ladle-furnaces. In 2001, BOF No. 3 was radically reconstructed (including installing a new drive and a boiler-utilizer).

**BOF plant No. 2** (capacity of 4.5 mln tpy): 2 300-t converters (operating since 1974), the 8-strand continuous-square billet caster (XX mln tpy, launched in 1995, reconstructed in 2002), the 2-strand continuous-slabbing caster with capacity of XX mln tpy, 2 ladle-furnaces.

In the production, a technology of smelting steel from charge with increased scrap content (up to 100%) has been introduced. Besides, the Works pioneered in the world in conducting torch concrete spraying when relining BOC, that allowed to reach service life of lining of above 1200 smeltings (up to 3000 smeltings in some cases).

**EAF Plant № 2 (Site-2 NKMK),** with capacity of XX mln t per year, was commissioned in 1981, consists of two electric furnaces of nominal capacity of 100 tons with transformers with capacity of 83 and 95 MVA. The reconstruction was carried out at the electric furnaces in 2002 (№ 2) and 2003 (№ 1).

The Plant has 2 four-strand blooming concasters, with total capacity of XX mln t per year (CCM № 1 was commissioned in 1989, and the number 2 - in 1990), degasser (commissioned in 2008), 2 units LF (commissioned in 2003-2006). Thus, all of EAF steel is cast by concasters.

The Plant produces carbon and alloyed steels.

Besides, the Works manufactures electric steel (in a small electric arc furnace) for casting – capacity of XX ktpy) in framework of the **Casting shop.**

**Rolling production**

**Site-1-ZSMK (total design capacity of XX tpy)**

Rolling equipment, available at the Works, includes:

- a 1250mm blooming mill with a continuous-billet mill (since 1969, reconstructed in 1990), capacity of XX tpy;
- a 16-stand medium section 450mm mill (since 1976), capacity of XX tpy;