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# Copper Wire Rod Market Research in Russia

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## Annotation

The report is devoted to study of current standing of copper wire rod market in Russia and forecast of its development. The report is composed of 6 Sections, contains 78 Pages, including 41 Figures, 39 Tables and 2 Appendices. This work is a desk study. As information sources, we used data of Rosstat, Federal Customs Service of Russia, sectoral official Russian domestic railage statistics (of JSC RZhD), Association «Electrocable», sectoral and regional press, yearly and quarterly reports of companies, as well as web-sites of company-producers.

The first Section of the report is devoted to resources base and technologies of production of copper wire rod. The section includes information on the main kinds of the resources for manufacture of copper wire rod, presents data on volumes of its production, and describes technology of manufacture of copper wire rod, main productive facilities and their capacities at the greatest company-producers.

The second Section of the report is devoted to analysis of production of copper wire rod in Russia. It presents data on dynamics of manufacture (1991-2008) and pattern of production by the greatest enterprises, manufacturing the product (2004-2008).

The third Section of the report presents data on the greatest producers of copper wire rod in Russia, with data on mix and quality of manufactured products, volumes of production and development plans of the companies.

The fourth Section of the report is devoted to analysis of foreign trade operations of Russia in copper wire rod in 2002-2008. It presents dynamics of export and import of copper wire rod, volumes and directions of the supplies, data on levels of average annual contract export-import prices on copper wire rod in Russia.

The fifth Section of the report analyses consumption of copper wire rod in Russia. Calculation of apparent of consumption of copper wire rod in 2002-2008 is presented, as well as dynamics of manufacture of cable products in Russia, with description of the main company-consumers.

The sixth, final Section of the report presents forecast of development of Russian market of copper wire rod up to 2015, with analysis of impact of consequences of the global financial crisis on standing of the economy as a whole and the copper wire rod segment.



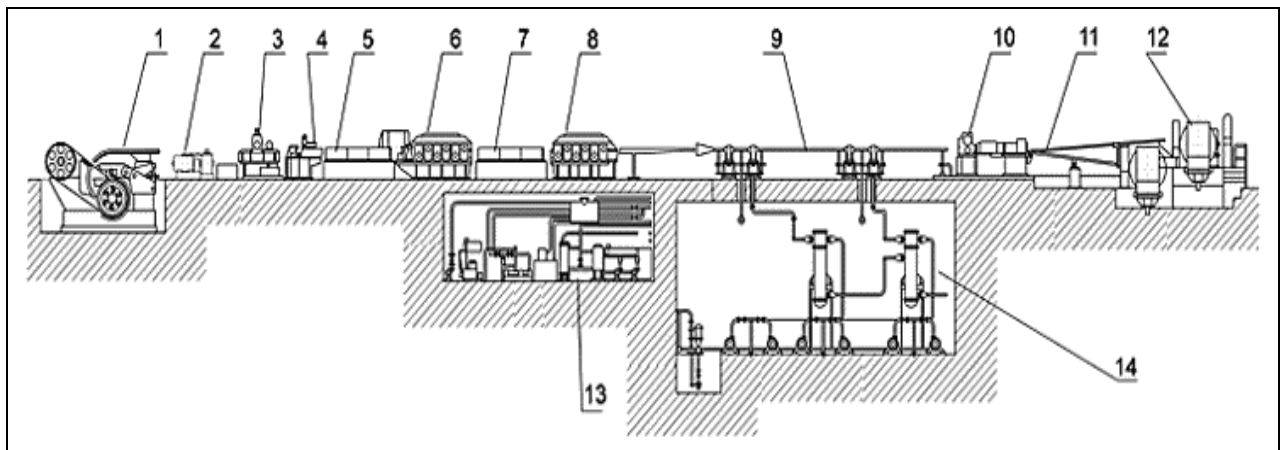
## 1.2. Technology and equipment for production of copper wire rod

By now all Russian producers of copper wire rod are equipped with productive facilities, applying continuous casting-rolling method. The process of production of copper wire rod includes the following key operations:

1. Feeding copper cathodes into shaft furnace and copper smelting.
2. Preparing copper to casting.
3. Concasting rectangular copper billet at a concaster.
4. Hot-rolling the billet at rolling mill.
5. Cooling and bright dipping of copper wire rod.
6. Coating the wire rod with conservation was cover.
7. Coiling (at coil-making machine) of finished wire rod into coils.
8. Weighting, packing storing and shipping of the finished products

In Figure 3 flow chart of continuous casting-rolling machine on production of copper wire rod is presented.

**Figure 3: Flow chart of facility on continuous casting and rolling of copper wire rod**



1 – rotary-type caster, 2 – rotary shears, 3 – straightening-drawing machine, 4 – peeling machine, 5 – ingot heating inductor, 6 – roughing mill group, 7 – intermediate heating inductor, 8 – finishing mill group, 9 – cooling line, 10 – dividing shears, 11 – coiler guide, 12 – coiler, 13 – oil-emulsion cellar, 14 – cooling line cellar

By now in Russia company-producers of copper wire rod use foreign equipment of various brands (Table 2), commissioned in 1990s and 2000s. The bulk of the equipment belongs to facilities, manufactured by Southwire (USA).



**Table 2: Capacities and equipment for production of copper wire rod by main company-producers in Russia**

<b>Producer of copper wire rod</b>	<b>Capacity of the facility, kt per year</b>	<b>The facility commissioned in</b>	<b>Producer of the facility</b>
LLC «Elkat»	150	1991	Southwire
CJSC «Transkat»	60	1995	Southwire
JSC «Rosskat»	79	1998	Southwire
CJSC «JV «Katur-Invest»	235	1999	Contirod
CJSC «NMZ»	92	2004	Southwire
CJSC «KMEZ»	100	2007	Southwire
CJSC «Tsvetlit»	10	2007	Upcast

*Source: InfoMine on the basis of analysis of company data*

Wire rod must demonstrate good plasticity and deformability, determining further drawing ability. Geometric characteristics of wire rod are also important, as well as smoothness of surface and lack of defects in cross-section. Wire rod of increased and common strength is manufactured. Diameter of wire rod ranges 5 to 9 mm. Wire rod is produced and supplied in coils (sometimes composed of 2 parts of wire rod). Before use, mechanical characteristics of wire rod are examined. Chemical composition of wire rod can also vary (see below description of the main producers).

## 2. Production of copper wire rod in Russia in 1991-2008

In the end of soviet era in the ex-USSR, above 50 cable plants consumed annually 500-650 kt of copper wire rod for production of all kinds of cable products.

The main producer of copper wire rod soviet era in the territory of Russia was plant «Kamcable» with capacity of 350 kt per year, which stopped the production in early 1990s.

**Total capacities** of Russian companies in 2005-2008 *exceed 600 kt*.

Currently operating enterprises in production of copper wire rod, as mentioned above, were launched after 1990. At present time, the main producers of copper wire rod are as follows:

- LLC «Elkat» (Moscow),
- CJSC «Kyshtym copper-electrolytic plant» (KMEZ, Chelyabinsk region),
- JSC «Rosskat» (Samara region),
- CJSC «Transkat» ( St.Petersburg),
- CJSC «JV «Katur-Invest» (Sverdlovsk region),
- CJSC «Novgorod metallurgical plant».

Besides, in latest years, small capacities on production of copper wire rod were created in JSC «Nalkat» (Kabardino-Balkaria), CJSC «Katel» (Tver' region) and CJSC «Tsvetlit» (Mordovia) – totally around 20 kt per year, for instance, JSC «Nalkat» in 2008 produced 9.5 kt.

LLC «Nizhny Novgorod copper company» (Dzerzhinsk) announced about creation of new capacities on production of copper wire rod. The company planned to invest 800 mln Rubles in the project. The production with capacity of 25 kt wire rod per year was planned to be launched in the end of 2010. As resources for production of wire rod, copper scrap was scheduled. However, at present time the project has been suspended.

*Invent Group* also announced plans on construction of a plant on production of aluminium and copper wire rod in Tatarstan by 2010.

Location of the main companies on production of wire rod is presented at the map (Figure 4). Producers of wire rod can be conventionally divided by distance from main consumers of the products. This geographic factor is of crucial importance, because, in conditions of small difference between prices on copper cathodes and wire rod, transport costs are of critical importance for the producers on the background of practically similar grade of copper wire rod of various producers. CJSC «Elkat», CJSC «Transkat», JSC «Rosskat», CJSC «NMZ» have favorable geographic location, nearby key customers, whereas CJSC «Katur-Invest» has the worst location.