

## EAST GOES WEST

-The Internationalization of Eastern Enterprises

Ed.by Kari Liuhto

# THE WAY OF SIBIRSKY ALUMINUM

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## 1. Introduction

Aluminum is one of the major commodities widely used by different industries. Its special features, especially conjunction of lightness and durability, provide the metal a bright future in new millennium. London Metal Exchange (LME), which is the world's premier non-ferrous metals market, characterizes aluminum in the following manner:

*Despite being the most prolific metal on earth, aluminum only began to be used extensively once an inexpensive method for distilling it by means of electrolytic reduction was discovered in the mid 19<sup>th</sup> century. It is extremely light, pliable, has high conductivity and is resistant to rust. Little wonder then that it has become the most extensively used metal and more recently the largest contract traded on the LME.*

Many countries smelt aluminum, and Russia is the second largest producer of this metal after the USA. Leading companies in aluminum industry are highly internationalized, due to the following two main reasons. Firstly, natural aluminum ores in some countries, for example the USA and Russia, did not conform the needs of aluminum smelters. Secondly, some aluminum consuming countries, for example Japan, have not got primary aluminum production at all or have insufficient volume of the production, for example the European Union.

In Russia, smelting is a profitable business, and almost all produced aluminum is exported. Recently, several large mergers have happened in the Russian industry. These mergers made only two giants instead of dozen smelters. This case study is devoted to one of the main initiator of the large merger – Sibirsky Aluminum.

The article is divided in three main parts. In the first chapter, a brief overview of the company is presented. The second one describes the development of the company with special focus on internationalization. The case ends with the analysis of the company's internationalization.

## 2. COMPANY'S PROFILE

Sibirsky Aluminum Company is one of the leading aluminum companies in Russia. It managed to become the first Russian vertically integrated company providing within its framework a complete industrial cycle - from production of alumina to output of semi-finished and finished products and their sales. The company is deeply involved in international transactions: it imports almost all required raw materials and exports more than half of its production.

The formation of Sibirsky Aluminum was initiated in 1998 on the basis of the Sayansk Aluminum Smelter. The company grew up extremely fast through mergers and acquisitions. By 2000, it consisted of the following enterprises (see Table 1).

**Table 1. Enterprises with Total Production Capacities**

<b>Enterprise</b>	<b>Production</b>	<b>Capacity</b>
Nikolayev Alumina Plant	- Alumina	1 300 000 tons
	- Primary aluminum	400 000 tons
Sayansk Aluminum Smelter	- Wrought and foundry alloys	80 000 tons
	- Rolled products	600 000 tons
Samara Metallurgical Plant	- Extruded products	200 000 tons
	- Forged products	3 000 tons
Dmitrov Aluminum Rolling Mill	- Foil and flexible packaging	45 000 tons
	- Secondary aluminum	12 600 tons
Sayan Foil Mill		
Kanaker Aluminum Plant		
ROSTAR Plant	- Cans and components	1,5 billion pcs.
Resal Secondary Plant	- Secondary aluminum	12 600 tons

Source: official website of Sibirsky Aluminum Company, [www.sibal.ru](http://www.sibal.ru)

Successful management of these enterprises provides company with considerable revenues. In a few years, Sibirsky Aluminum became a member of so-called "billionaire club" (see Table 2).

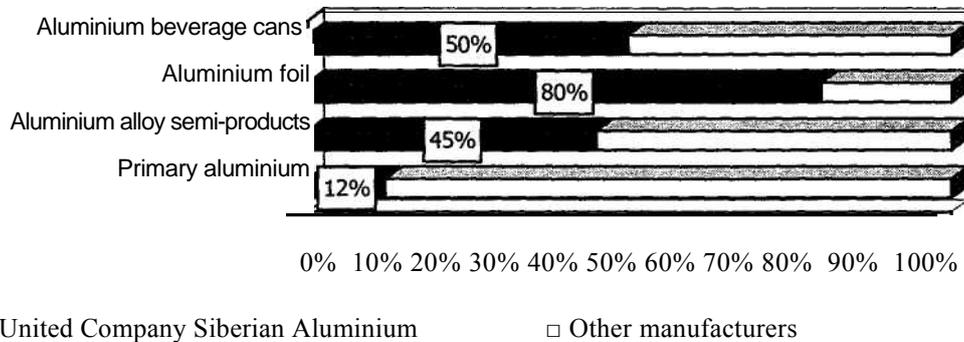
**Table 2. Sibirsky Aluminum's Performance in 2000**

Net assets, USD million	802
Net sales, USD million	1431
Net profit, USD million	302
Personnel, persons	25000

Source: Sibirsky Aluminum 2000

The company is the leader on the major aluminum related markets in Russia (see Table 3).

**Table 3. Sibirsky Aluminum's Share in the Total Production in Russia**



International operations constitute a foundation of stable sustainable development. The company exports up to 90% of smelted aluminum and a bulk of other production to over 30 countries, including Japan, China, the USA, the UK, and Germany, through a worldwide network of trading offices, representatives and agents. The company owns trading offices in Germany, the USA, the UK, and China. And a number of trading offices is to be open in the nearest future.

## 2.1. Legal Note

Russian business environment (for example high taxes and poor laws) makes companies to function in a peculiar way. So due to number of reasons, Sibirsky Aluminum cannot form a legal organizational entity. Formally, there are a number of companies<sup>1</sup> that account for different business directions of Sibirsky Aluminum Group, the main of which is Open Joint-Stock Company "United Company Siberian Aluminum" (UCSA).

<sup>1</sup> Owners of these smaller companies are, in turn, unknown companies registered in offshore havens, like Cyprus.

UCSA owns all assets of former Sayansk Aluminum Smelter, Sayan Foil Mill and Samara Metallurgical Plant and accounts for the primary aluminum, foil, and rolled product business of Sibirsky Aluminum Company.

In this case, it will be used a wider meaning of "*Sibirsky Aluminum Company*" or "*Sibirsky Aluminum*". Each of them includes only aluminum-related companies united under the *Sibirsky Aluminum* brand.

## **2.2. Proto-History**

The natural core of the whole group is the Sayansk smelter; so the history of Sibirsky Aluminum Group starts with the smelter launch. Sayansk smelter (initially four pot rooms with a rated capacity of 215 000 tons) was put in operation in 1985; became the most modern aluminum production plant in Russia.

### Sayansk Aluminum Smelter

Sayansk Aluminum Smelter, the leading enterprise of the Sibirsky Aluminum Company, produces more than 11% of primary aluminum in Russia. Its design incorporated the very latest equipment and technology for every stage of aluminum production, including automated production processes and advanced equipment for the protection of the environment.

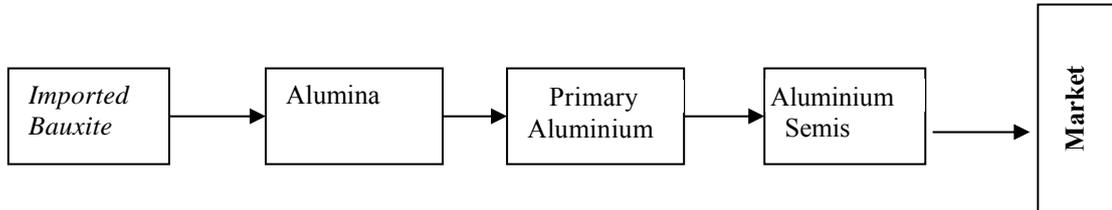
The Sayansk Aluminum Smelter is located in the Republic of Khakassia, 50 km from the efficient and powerful Sayano-Shushensk hydroelectric power plant, which is part of the Siberian electricity distribution grid known for its high reliability and flexibility. Production of aluminum demands a heavy and constant supply of electric power and co-operation with the hydroelectric power plant provides the necessary conditions for the reliable and stable operation of the Sayansk Smelter.

Since 1985, it has been the most environmentally friendly smelter on the territory of the ex-USSR. The leading scientific institutions are involved in systematic regional ecological monitoring. The monitoring data shows that concentration of contaminants in the atmosphere, soil, and water is several times less than required threshold limit for concentration in Russia.

The plant's quality supervision system is ISO 9001 certified.

During the Soviet period, almost all production was consumed within the USSR. The smelter - as well as other large enterprises - was constructed to work in a

technological chain, which consisted of production facilities from all over ex-USSR. In general, the technological chain of aluminum industry can be divided into the following interdependent segments:



The technological chain of the Sayansk smelter included Sayano-Shushensk hydro power plant (electricity), Pavlodar, Achinsk and Nikolayev alumina plants (alumina made of imported bauxite), Samara metallurgical plant (aluminum semimanufactures), and consumers (mainly military enterprises). The chain was broken in 1991, because of the collapse of the USSR. It was hard times for Russian aluminum industry. In regards to Sibirsky Aluminum Company, two out of three its major suppliers - Pavlodar and Nikolayev alumina plants - became foreign companies. It meant, that the company had to:

- pay for supplied alumina with hard currency (as Russian ruble was too weak even in the CIS to satisfy refineries' needs)
- pay customs duties for imported alumina
- increase payments for railway transportation (as international tariff is higher than domestic one for the same distance).

The fore part of the chain was in trouble as well. Primary aluminum consumers, mainly military enterprises, cut off their own production, and hence, their aluminum purchases.

On the one hand, the destruction of the socialist system caused a lot of difficulties with purchases of the raw materials and sales of the production. On the other hand, this collapse provided the smelter with possible solution - free access to foreign market. The switch to export-import activity constituted a distinctive fact in the development of Russian aluminum smelters in general and Sayansk smelter in particular, which influenced strongly both the aluminum market situation and the Russian aluminum industry.

### 3. STEEP ROADS OF INTERNATIONALIZATION

The inclusion of Russian aluminum producers into the world market was not smooth. The primary aluminum was in strong demand on the world market. In comparison with foreign manufacturers, Russian aluminum producers had valuable competitive advantages - ten-fold lower labor and energy costs. At the moment, these costs constitute up to 50% and sometimes even more in the price of aluminum of the western smelters.

Above-mentioned advantages let the ex-USSR smelters intensified aluminum sales in the early 1990s. Large additional supply of the production de-stabilized the world market substantially. The aluminum overflow caused rapid growth of the metal stocks in London Metal Exchange; and the price went down. Aluminum quoted USD 2546 per ton in 1988, and it crashed to USD 1040 per ton in November 1993, the historically lowest for a decade. The market recovered only after collective work of major aluminum producing and consuming countries. In 1993, European coordination council in collaboration with Russia, Norway, Canada, the USA and Australia signed the Memorandum of Understanding concerning reduction of the primary aluminum production.

But old "Soviet" management teams were not ready to radical changes in sales policy and Russian smelters actually penetrated into the world market under the supervision of new owners, who gained control during privatization of the early 1990s. So global traders came in power on Russian smelters and directed the product flows by the simplest way of *tolling agreement*<sup>2</sup>.

Tolling agreements were quite typical in the world aluminum industry in general, but in Russia it had some peculiar features. The smelters only kept on aluminum production; and global traders enjoyed hyper profit comparing with average

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<sup>2</sup> Tolling agreement (Agreement for custom manufacturing) - an agreement to process a specified amount of alumina into aluminium at a particular aluminium plant. From the economic point of view tolling agreement was an export of services (smelting of aluminium) not goods, hence, the agreement was not imposed with value added tax.

brokerage's margin. In the mean time, the smelters were gradually destroying without required modernization and planned repair.

The situation was crucial for the aluminum producers and could be changed only by insiders. In 1994, new team of managers came to Sayansk smelter. Thanks to shortages in Russian legislation, these people finally became the owners of the smelter instead of the traders. The new owners decided to create an aluminum company being able to compete successfully with leading western counterparts.

The first step to the target was to enhance export-import operations in addition to tolling scheme. So tolling agreements were revised and their conditions changed for more smelter-oriented ones (without trader's hyper margin). Sayansk smelter entered the next stage in its history.

Then, the managers restructured the production of aluminum and changed the style of management. Since that time, divisional management model has been applied on Sibirsky Aluminum. The innovations let the company to increase quantity of I produced aluminum rapidly (see Table 4).

**Table 4. Sayansk Smelter Primary Aluminum Production**

Year	1990	1996	1999
Aluminum production, 1000	233.2	327.7	396

Besides quantitative growth, Sibirsky Aluminum started direct investments. In 1995, Sayan Foil Mill was launched. It became the unique production complex where liquid aluminum came directly to the mill, to be transformed into foil. The mill made products of high quality and reasonable price, and it soon became the leader on the Russian market and exported foil to many countries. The price was the main competitive advantage of the mill on the foreign markets.

#### Savan Foil Mill

The Sayan Foil Mill was built in accordance with the agreement between the Sayansk Aluminum Smelter, the construction company FATA-HUNTER (Italy) and Reynolds Metals Company (the USA), the world leader in foil and flexible packaging production. The manufacturing facilities of the mill were put into operation in 1995.

The plant is the most technologically advanced foil rolling mill in Europe providing a complete production cycle from aluminum coils to foil and a wide range of flexible packaging. its annual production capacity is 45 000 tons of foil and flexible packaging.

Liquid aluminum produced by Sayansk Aluminum Smelter and scrap from the mill own production are principal raw materials. All materials used in the production are required to pass quality control and a variety of laboratory tests.

The plant's quality supervision system is ISO 9001 certified.

Launch of Sayan Mill influenced future development of Sibirsky Aluminum significantly. The influence was not strictly financial (as 25 000 tons of foil and plates did not play leading role in the corporation financial flows), but rather the strategic one. Sayan Mill was the first nexus of technological chain attached to Sayansk smelter. One might argue that successful cooperation of the complex predetermined the direction of the company development.

Two years after, the mill run-up was rather calm in Sibirsky Aluminum's internationalization history. The company improved the quality of the production and accumulated resources for future expansion. The efforts were focused on internal problems and struggle with competitors.

### **3.1. Sibirsky Aluminum Company**

The "Sibirsky Aluminum Company" trademark appeared in 1997 together with the presentation of the company strategy. Sibirsky Aluminum became one of the first Russian companies that had a strategic plan of development and actually tried to implement this plan.

The strategy targeted reviving of the destructed technological chain. In other words, it was a growth strategy of vertical integration. The complex of Sayansk smelter and Sayan foil, with the smelter as a natural core, had to become the base for further development.

The strategy was in a lay with the strategies of the world aluminum companies, including:

- Alcoa<sup>3</sup> (the USA, annual turnover in 1998 - USD 15,3 bn)
- Pechiney<sup>4</sup> (France, annual turnover in 1998 - USD 9,8 bn)
- Alcan (Canada, annual turnover in 1998 - USD 7,8 bn)
- Reynolds Metals (the USA, annual turnover in 1998 - USD 5,8 bn)
- Hydro Aluminum (Norway, annual turnover in 1998 - USD 3,7 bn)

Source: websites of the companies

These companies include in their structure all stages of aluminum industry: bauxite mining, alumina refinery, primary aluminum production, semis, ingots, can stock, foil, packing production, and others. Some of them (Alcan and Hydro) include even own electricity generating capacities.

Sayansk Smelter had already had the foil mill in its structure; Sibirsky Aluminum continued its forward integration to upper stages of technological chain. In 1998, Sibirsky Aluminum Company acquired the largest aluminum processing enterprise in Russia - Samara Metallurgical Plant (SMP).

#### Samara Metallurgical Plant (SMP)

SMP, founded in 1960, is one of European major manufacturers of aluminium alloy semi-finished products. SMP is the largest producer and exporter of aluminum semis in CIS countries. Its rated capacity exceeds 800 000 tons of aluminum alloy semis annually (nowadays, less than 20% of the capacity used).

The plant incorporates a number of facilities:

- casting facilities (production of ingots, slabs, billets, and foundry alloys)
- rolling mills (sheet, plate, coil, including beverage and food can stock)
- extrusion facilities (bars, pipes, panels, and shapes)
- forged products (forging for the aerospace, marine and transport industries)

Products of SMP are manufactured out of all aluminum alloys and comply with domestic and international standards, as well as with customer-specified technical parameters.

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<sup>3</sup>Alcoa and Reynolds Metals merged in 2000.

<sup>4</sup>Including non-aluminium businesses.

In 2000, the quality supervision system for SMP was certified by Bureau Veritas to be in compliance with the ISO 9002 standard. Moreover, Samara Metallurgical Plant is the only Russian aluminum enterprise certified as an approved supplier by Det Norske Veritas (DNV) and Lloyd's Register. According to the international rules, the quality of international purchases should be approved by these organizations.

This acquisition made Sibirsky Aluminum the largest producer of aluminum semi-alloys in the CIS. But the company invested a lot in its new plant until Samara metallurgical plant became profitable. Stable shipments of raw materials and financial support create one of the most successful enterprises in the Samara region.

SMP had a daughter company *Resal*, which was automatically taken over by Sibirsky Aluminum. *Resal* smelted secondary aluminum from aluminum scrap, chips and other waste, produced at the enterprises of Sibirsky Aluminum. About 50% of *Resal* smelter belonged to SMP. Another co-owner of the smelter has been a world leading company in secondary aluminum - Spanish *Remetall*.

*Resal* is almost unique plant in Russian business reality, as almost all non-ferrous metal scrap has been exported from Russia without any work out. *Resal* is an economically profitable enterprise with a rate of return of about 25%. The rated capacity of the smelter is about 12 000 tons of secondary aluminum; annual turnover is about USD 15 million.<sup>5</sup> *Resal* is probably the most internationalized enterprise in Sibirsky Aluminum Group - all 100% *Resal* production is exported. The key market of *Resal* aluminum is Panama, where the majority of enterprises working over Russian secondary aluminum are located.

### **3.2. Domestication of the World Market**

There was no special strategy for international activities, though the company was highly internationalized - it already exported almost all its production and imported almost all raw materials. On the whole, Sibirsky Aluminum exported more than 80% of smelted primary aluminum, about 70% of foil, 75% of SMP's production

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<sup>5</sup> Estimate based on Sibirsky Aluminium data.

(including 100% of *Resal's* secondary aluminum). Geographical structure of exports consisted of countries all around the world. About 60% of the company's production went to the Asian region, and the rest to the USA and Europe.

However, the company's corporate strategy even suggested the company is turn to domestic market, in order to stimulate internal demand. But it was just a PR action, and instead of the turn to the domestic market, the company added foreign direct investments (FDI) to the sphere of its international activity. Sibirsky Aluminum activity on the FDI can be naturally divided in two categories: (1) direct investments in fore part of the technological chain and (2) direct investments in back part of the technological chain.

**Forward integration:** Sibirsky Aluminum had two enterprises in fore part of the chain - Russian Sayan Foil Mill and Samara Metallurgical Plant. By 1999, Sibirsky Aluminum bought ROSTAR plant and Dmitrov Mill, and one year after controlling interest (74%) in Kanaker Aluminum Plant (Armenia) at a privatization auction.

ROSTAR Plant became the first Russian enterprise to start the production of aluminum beverage cans. The production and quality supervision system of the ROSTAR plant complies with the ISO 9002 quality standard, which is confirmed by the Certificate of TUV Company, Germany. The customers of the plant are the largest producers of alcoholic and non-alcoholic beverages in Russia, Poland and other countries.

Dmitrov Aluminum Rolling Mill was one of the major Russian producers of flat-rolled products, food cans, litho plates, caps for bottles, and various flexible packaging.

Kanaker Aluminum Plant was a relatively small enterprise. In the 1980s, the plant produced about 25 000 tons of foil and 50 000 tons of semis annually; and it was enough to be the leading company on the USSR foil market.

The purchasing of Kanaker plant was the first foreign direct investment of Sibirsky Aluminum. Since 1995, Kanaker Plant was displaced from the market with new Sayan Foil Mill. Nowadays, both of them are supposed to function together on the domestic and foreign markets under Sibirsky Aluminum's supervision. In 2002, after

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<sup>6</sup> The data on the company's export flows may be not quite accurate since it is based on secondary information.

the modernization of Kanaker plant, its annual turnover would be about USD 7 million.

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In early 2000, Sibirsky Aluminum announced plans to purchase Kovohute Bridlicna AS, a debt-ridden Czech sheet metal and aluminum foil producer. Bridlicna was the largest domestic producer of aluminum sheets and packaging for the food, tobacco and pharmaceutical industries and was considered as a leader on the powder metallurgy market. The specialists considered that the Czech enterprise was well-equipped. It could be easily included in the technological chain of the Sibirsky Aluminum. Kovohute's customers, including Philip Morris, Danone, Nestle, and Ford, became interested in this company. According to some sources from the Czech Republic, the Kovohute was on the edge of bankruptcy. In the end of 2000, French Pechiney declared the wish to buy the Czech enterprise.

The penetration into the East European market could be the next step in the company's internationalization. But this specific deal was not executed because of different factors, including the counterwork of the Czech company's management.

**Backward integration:** The back part of technological chain was the most complicated direction in the company's development. The Russian aluminum industry lacked of bauxite and alumina. Sibirsky Aluminum's rival company - Siberian-Ural Aluminum Company - practically monopolized all the Russian bauxite deposits, and rest aluminum smelters were forced to import raw materials. Raw material strategy is oriented strictly outside Russia. In other words, Sibirsky Aluminum had to internationalize through direct investments into alumina refineries and bauxite mines or at least had to sign long-term contracts with them.

Only two stages (bauxite and alumina) precede primary aluminum, and it was a sound idea to integrate with both. The closest to smelting stage in aluminum industrial chain is alumina refining. At this stage, the company achieved the better results, and its respective activity influenced Russian (and even world) aluminum industry significantly.

In order to have better understanding of Russian alumina market, one has to take under consideration the following facts. There were 4 alumina refineries in the USSR: Nikolayev, Alumina Plant (in the Ukraine), Pavlodar Aluminum Plant (in Kazakhstan), Achinsk Alumina Plant and Bogoslovsk Alumina Plant (in Russia). After the USSR's disruption, the Russian aluminum industry had to import about 60% of alumina required.

Only two large refineries are situated in Russia. One of them is the Bogoslovsk Plant, which belongs to SUAL - a unique Russian company, which has its own bauxite mines and even sells raw materials to other smelters. The other Russian refinery - Achinsk Alumina Plant - was under control of Krasnoyarsk and Bratsk smelters (about 800 000 tons of primary aluminum per annum each). To cover all their needs, these two smelters consumed also the bulk of production from the Ukrainian refinery - Nikolayev Alumina Plant.

Sibirsky Aluminum in its turn participated in "successful collaboration" with Kazakh refinery - Pavlodar Aluminum Plant. "Successful collaboration" is a rather vogue notion widely used in PR campaigns of Sibirsky Aluminum. Besides Pavlodar Plant, this notion was used with regard to Tajik Aluminum Smelter (Tajikistan). It is difficult to say what it specifically meant. De facto, these companies went in line with Sibirsky Aluminum and they might be affiliated in a future.

Under the circumstances, Sibirsky Aluminum purchased the controlling stake (68%) in Nikolayev Alumina Plant in 2000 at privatization auction held in the Ukraine. Nikolayev Alumina Plant was smoothly included in the technological chain of the Sibirsky Aluminum. Guinean SBK satisfied more than 50% of the plant needs in bauxite. Sayansk and Tajik smelters consumed about 30% of alumina produced by Nikolayev Plant.

#### Nikolayev Alumina Plant

The Nikolayev Alumina Plant was built in 1980 near the city of Nikolayev on the coast of the Black Sea. The plant rated capacity is one million tons of alumina per year. The plant consists of Dneprobug Sea Port, Alumina Production Plant, spare part production workshop and social objects (hotel, swimming pool and others). Personnel size is about 6400 persons.

Plant construction was realized in collaboration with Pechiney S.A. (France). Modern technology in alumina production saves electricity on one hand; on the other hand, it provides the highest quality alumina production in the CIS countries.

The Plant can use imported bauxite only. Guinea, Australia, Jamaica, Guyana, and Italy are the possible countries of bauxite origin. The key consumers of Nikolayev Alumina Plant are the largest Russian aluminum smelters (Sayansk, Krasnoyarsk, Bratsk, Volgograd) and Tajik aluminum smelter.

The purchase of the plant became the most important investment in the history of Sibirsky Aluminum. So far, it happened to be one of the largest deals in the ex-USSR. The company paid about USD 100 million for the plant. It also has to satisfy special conditions set by the Ukrainian government - extra investments in new aluminum plant construction. Meanwhile, potential benefits of this purchase are very impressive indeed. Sibirsky Aluminum became an aluminum company relied entirely on its own alumina. The other benefit was the possibility to influence its major competitors -Krasnoyarsk and in a less degree Bratsk smelters.

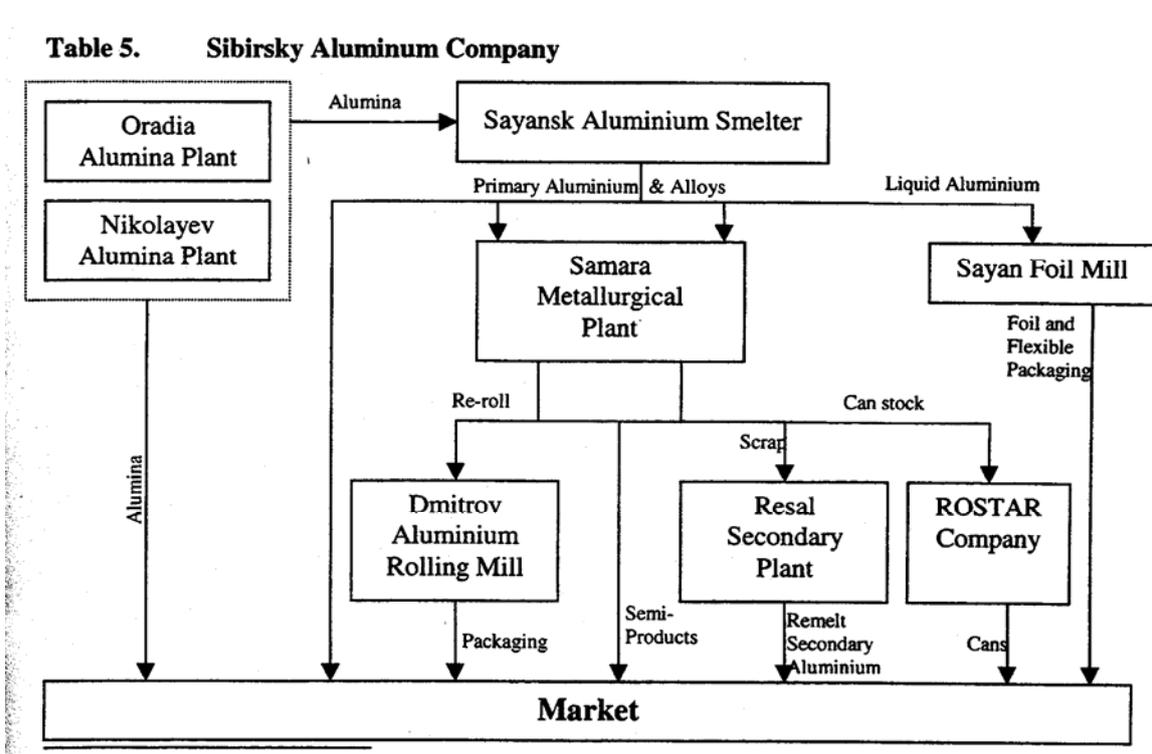
In 2000, Sibirsky Aluminum announced plans to buy out Romanian ALOR Oradia. Its design capacity was 240 000 tons of alumina per annum, but this would be raised to 320 000-330 000 tons after comparatively small investment of about USD 5 million. The plant used local raw materials and catered the production to local consumers. Domestic Dobresti Mine supplied bauxite; and alumina was sent to Romania's two aluminum smelters in Slatina. In November, Sibirsky Aluminum re-launched the Oradia alumina refinery, which did not work for more than eighteen months. It is supposed to deliver alumina to Russian smelters.

The alumina refining on Nikolayev plant and Oradia required stable shipments of bauxite. Bauxite mining is the very first stage of aluminum industrial chain. The company marked the place of its particular interest - Guinea and Jamaica. This announcement determined the nearest vector of the company movement. The main obstacle on this direction was the fact that the majority shares of all Guinean and Jamaican mines belonged to the state. Nevertheless, in mid-2000 the talks between Sibirsky Aluminum management and officials of Jamaica and Guinea took place. Both parties reported about the success of the talks and it seemed to follow some

further mutual activity. Nowadays, Sibirsky Aluminum signed long-term contracts for aluminum shipments from both Guinea and Jamaica.

In November 2000, Sibirsky Aluminum declared that the Guinean government and Sibirsky Aluminum were about to give control over Ste des Bauxites de Kindia (SBK)<sup>7</sup>. It could become one of the most important stages in the development of the company since SBK was established primarily to supply bauxite to the former Soviet Union. The Soviet technical assistance was a matter of the past, and the government looked for a mining contractor to restructure the operation. SBK supplied to the Ukraine (Nikolayev Alumina Plant) and other markets, producing 1,3Mt last year<sup>8</sup>.

Having bought the number of enterprises, Sibirsky Aluminum achieved its target to build vertically integrated company and it set a new target. Sibirsky aluminum tried to create a new holding on the base of the major Russian aluminum smelters. The holding named Russian Aluminum was announced in April 2000 (see Table 5).



<sup>7</sup> Source: RosBusinessConsulting, www.rbc.ru, 29.11.2000.

<sup>8</sup> SBK was one of the three largest bauxite miners in Guinea. Guinea is the second largest bauxite exporter in the world - 15.6 million tons of bauxite in 1999 (International Trade Center, ' <http://www.intracen.org>).

### 3.3. Russian Aluminum Company

The most significant Sibirsky Aluminum Company's project is the merger into new holding named Russian Aluminum. The following enterprises are supposed to be joined in the holding:

- Sibirsky Aluminum assets
- Krasnoyarsk Aluminum smelter
- Bratsk Aluminum smelter
- Achinsk Alumina plant

The new holding is to become one of the largest aluminum corporations in the world after Alcoa-Reynolds and Alcan-Alusuisse (if anti-monopoly authorities approve the latter). These newly created companies define modern tendencies in the world aluminum industry. Aluminum companies try to cut off their production costs. If the production technology has no potential for cost reduction, then the companies promote efficiency growth through the economy of scale, in other words, via mergers and acquisitions. Nowadays, monopoly exists in many countries, for example, Pechiney in France, Norsk Hydro in Norway; a number of companies control more than a half of domestic market, for example, Alcoa-Reynolds in the USA, Alcan in Canada.

**Table 6. Top 8 Companies in Primary Aluminum Industry**

<i>Company</i>	<i>Country</i>	<i>Capacity in 1999 1000 tons</i>	<i>Aluminum Production in 1999 1000 tons</i>	<i>Capitalization USD million</i>	<i>Capitalization/Production USD/ton</i>
Alcoa/Reynolds	the USA	4 256	3 800	21 624	5 691
Russian Aluminum*	Russia	2 050	2 050	8000	3 902
Alcan/Alusuisse	Canada	1915	1744	9 522	5 460
Billiton PLC	the UK	886	890	7 782	8 744
Pechiney	France	828	827	2 712	3 279
Norsk Hydro	Norway	745	749	10 166**	13 573**
Comalco Ltd	Australia	659	654	3 149***	4 815***
SUAL	Russia	570	559	n/a	n/a

Comments: \* - expert estimates  
 \*\* - including non-aluminum business  
 \*\*\* - the price of acquisition by Rio Tinto in July 2000

Source: Bloomberg, Financial Times

Aforementioned mergers (Alcoa-Reynolds and Alcan-Alusuisse) took place in 1999-2000 and they were the largest mergers in the aluminum industry. Russian companies followed the leaders. In 2000, two mergers in Russian aluminum industry were announced almost simultaneously. Their names are Russian Aluminum and Sibir-Ural Aluminum Company (SUAL), which also would be among the largest companies in the world (see Table 6). These companies represent almost the whole Russian aluminum industry.

Russian Aluminum is the second largest aluminum company by the production capacity and the third largest by the capitalization (Norsk Hydro has larger capitalization, but it includes also not aluminum related businesses, like electric power generating, production of fertilizer and smelting of magnesium). The owners of the new holding are Sibirsky Aluminum and Sibneft<sup>9</sup> with equal shares in it. The deal might be assessed as a great achievement for Sibirsky Aluminum, as it smelts only about 20% of overall primary metal production of the holding. No doubt, Sibirsky Aluminum succeeded, thanks to its strategy implementation, particularly concerning Nikolayev Alumina Plant.

Legally, a lot of companies exist under informal umbrella of Russian Aluminum Company (as in case of its predecessor Sibirsky Aluminum). The management of the latter already had plans to put all assets in one company, but due to some reasons it did not happen. Now, Russian Aluminum wants to be transparent. The main reason behind this step is the wish to raise funds through emissions of American Depository Receipts (ADR) and sale of shares internationally.

Nowadays, Russian Aluminum is to receive the approval of anti-monopolistic authorities to become officially registered corporation. It will be rather hard, as the company will control about 70% of primary aluminum produced in Russia. The company hopes to receive the approval because of two reasons: firstly, almost all melted aluminum is exported, so there is very modest domestic competition; secondly, the monopoly law permits creating of giant companies, if the merger strengthens the position of the whole country. If the company succeeds in its business,

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Sibneft is one of the leading oil producing companies in Russia.

it will become the third biggest Russian company after Gazprom on natural gas business and Lukoil on oil business that strongly influences a world commodity market.

#### 4. INTERNATIONALIZATION ANALYSIS

The overview of the company development provides an opportunity to suggest different hypotheses about the nature of Sibirsky Aluminum internationalization -whether it belongs to stage model, or FDI theory, or network perspective of internationalization. Generally, the company history can be divided into several important periods in accordance with major events and the level of international activity (see Table 7).

**Table 7. Development of Sibirsky Aluminum Company**

	<i>Period</i>	<i>Internationalization stage</i>	<i>Operation</i>	<i>International activity</i>
	1985		<i>Construction of Sayansk Aluminum Plant</i>	<i>Constructed in collaboration with Kloeckner and KHD</i>
1.	1985-1991	No regular export activities	Only import of bauxite	Minimal international activity
2.	1991-1995	Export via traders	Tolling scheme	World market through global traders
3.	1996-present time	Establishment of overseas sales subsidiaries	Conjunction of tolling schemes with export-import activity	All around the world, focused on the EU, Japan, China, and the USA
	1997		<i>Strategy of vertical integration</i>	
4.	1997-present time	Overseas production units	FDI as a part of vertical integration strategy	The CIS, Central and Eastern European countries, Guinea, and Jamaica
	2000		<i>Initiating of a new holding named Russian Aluminum</i>	

The first look at the table gives an impression that the company internationalized gradually from occasional export activity during the Soviet era to transnational corporation, which integrated in its structure own production facilities abroad -Nikolayev Alumina Plant, Oradia, and Kanaker Aluminum Plant. Although this impression seems to be quite true in general, it would be too deterministic way of thinking. On every stage during every period, a lot of factors influenced the company.

Sayansk smelter did not operate in foreign markets at all during the Soviet period. Even imports of bauxite went through state authorities, which commanded the enterprise. After the USSR's collapse, the smelter really had a little choice between

two alternatives - either to internationalize or to die. So it had to begin operations abroad.

The penetration into the international market was not smooth. Global traders took control over the ex-USSR aluminum industry, and the latter was embedded into international technological chain that started in Australian or Guinean bauxite mines and ended in European airplane producers and other end-users. The smelter had a dual position. On one hand, it was a great leap in its internationalization - the smelter's partners were firms from all around the globe. On the other hand, the smelter position hardly changed when compared to the Soviet period, as it still did not choose its partners. From this point of view, Sayansk smelter just biased towards internationalization, only its owners became firms registered abroad. So this period, the first step to the world market might be called "quasi-internationalization".

"Real" company internationalization started after obtaining of independence thanks to aforementioned reasons. In 1996, Sayansk smelter made its first own steps on the market and again faced to the same formula of 1991 - "internationalize or die". Russian consumers were not able to buy aluminum at market prices; refineries did not accept payments for alumina in rubles. At this stage, interpersonal relationships between the smelter managers and potential partners played an important role. During the tolling period, the managers had set connections with their partners within the technological chain, and they used these relationships. In other words, this stage can be referred as the network perspective model of internationalization.

Russian smelters produced aluminum with much lower costs than their western competitors. Sibirsky Aluminum was not bound to seek aluminum end-users, as aluminum is traded in London Metal Exchange and some others major commodity exchanges. The company from Siberia exported almost all smelted aluminum and soon became profitable enough for both its repair/modernization and further growth. In a short period of time, Sayansk smelter (Sibirsky Aluminum since 1998) switched from independent traders to the trading subsidiaries abroad. By the year 2000, there were trading offices in Germany, the USA, the UK and China; several new offices are to be open in near future. In few years, Sibirsky aluminum came through two first stages of internationalization to an idea of FDI.

The implementation of FDI was in line with the company growth strategy presented in 1997. The first FDI of Sibirsky Aluminum was in the form of the chain - Armenian *Kanaker Aluminum Plant*. The backward direction of vertical integration strategy was targeted strictly on foreign companies. But it would be wrong to argue that Sibirsky Aluminum invested abroad because of developing internationalization within stage or network perspective models. Acquisitions of foreign suppliers were inevitable measures since there were no independent refineries or bauxite mines in Russia.

The takeover of Nikolayev Alumina Plant was the largest and the most important FDI in the history of Sibirsky Aluminum. But this acquisition still did not result primarily from internationalization vision. Sibirsky Aluminum was the only major smelter in Russia without its own alumina production. The refinery purchase was a matter of surviving: either Sibirsky Aluminum would develop further, or it would be merged with another, larger aluminum company.

Romanian ALOR Oradia followed Nikolayev Plant in line of the company takeovers. However, Sibirsky Aluminum had already been self-sufficient with alumina, and Oradia had never been a part of the company technological chain. Hence, the acquisition of Oradia refinery was a straight consequence of internationalization. Oradia was the first FDI made out of the CIS besides trade subsidiaries. Unfortunately, the results of this iteration can be seen only in future.

The next natural stage in the company development should have been direct investments in production facilities in more remote countries, but so far it did not happen. In 2000, Sibirsky Aluminum and another Russian company established Russian Aluminum, and the new company itself is seemed to be strong enough to influence the market situation in its favor.

On the international arena, Russian Aluminum continues the policy of Sibirsky Aluminum but in a larger scale. The company is the major seller on the market of the primary aluminum, though it produces only about 10% of the world's annual primary aluminum production. The point is that about 16 million tons of 20 million of aluminum smelted in the world annually are consumed within vertically integrated

companies. Usually, the companies sell end products like foil, cans, and other products. So two million tons of primary aluminum smelted by the Russian holding forms about 50% of aluminum sold on the market.

The announced geographical structure of Russian Aluminum's exports in 2001 is directed towards Asia: about 30% to Japan and Korea, 20% to China. Europe purchases about 25% of the company's exported production, American countries -almost the same quantity. Russian aluminum tries to switch to sales to end-users and regional traders, instead of global traders. The following companies are among the importers VAW, Toyota, Mitsubishi, LG, Samsung and other worldwide famous firms. The share of global traders declined to less than 20%.

Russian Aluminum inherited from Sibirsky Aluminum's participation in Sea Launch international project - the project of a spacecraft-launching ocean-based platform. The platform is built with a wide use of aluminum. The project can supply Russian Aluminum with orders for considerable amounts of aluminum end-products for years.

One of Russian Aluminum key obstacles is a shortage of raw materials. Nowadays, Russian Aluminum lacks about 700 000 tons of alumina per annum. There is no doubt that the company is eager to become self-sufficient with raw materials. Possible points of interest for the company's FDI are refineries in the CIS and Eastern Europe and/or bauxite mines with alumina plants in Guinea, Jamaica, Guyana, and Sardinia (Italy). It aims to become self-sufficient with alumina and bauxite by 2007. Yet, unfortunately for the company, Russian Aluminum lost tender for Azerbaijan alumina plant in 2000.

Further development of Russian Aluminum might be related with closer collaboration with French Pechiney. In October 2000, Pechiney initiated its representatives' visit to Russian Aluminum. Pechiney's interest to Russian Aluminum is not fortuitous. French company previously took part in construction of many USSR aluminum-related sites, including Nikolayev Alumina Plant and Kanaker Aluminum Plant.

After the meeting, the companies did not make any official declarations, and aluminum market experts made several hypotheses about their mutual plans. Pechiney

can look for aluminum producers to place its orders there, since its own capacities are overloaded. Another idea concerns mutual long-term activity in the sphere of aircraft and spacecraft aluminum components. At the same time, Pechiney is a possible investor in Sayansk Smelter capacity's extension. There are plans to build more pot rooms in Sayansk Smelter to increase its capacity from 400 000 to 650 000 tons of primary aluminum per annum.

The boldest assumption relates to a possible merger of the companies in terms of competitive straggle against Alcoa. The merger would be an alternative to a failed triple Alcan-Pechiney-Alusuisse (APA) alliance, prohibited by the European Commission. At the same time, the integration of Pechiney and Russian Aluminum is hardly possible in general, and it is absolutely impossible at least till Russian Aluminum is an opaque company.

## 5. Summary

Sibirsky Aluminum is a highly internationalized company, which strongly depends upon its activity abroad. The company's internationalization is based on a stage model of internationalization, and given historic perspective underlines this accordance.

The company moved from tolling schemes to more advanced independent export-import activity. Proto-stage of the company's internationalization was an import of raw materials. Then, the company was forced to penetrate into the world market with exports, since the domestic demand collapsed. In early 2000, it imported almost all its bauxite, thus, it exports almost all its production.

Sibirsky Aluminum development was realized in line with the company's strategy of vertical integration. From the very appearance of its brand name in 1998, the company keeps to its strategy target - to create well-balanced vertically integrated aluminum holding, which includes all stages of aluminum production cycle from bauxite mining to aircraft component construction.

In the year 2000, the strategic target was about to be achieved, when *Nikolaev Alumina Plant* was plugged in Sibirsky Aluminum. Besides providing the smelter with raw material, the acquisition was the sign of the company's moving from export-import activity to FDI. Sibirsky Aluminum Company is still tightly bounded with international market, as weak Russian market consumes only 10% of smelted primary aluminum.

The next stage of Sibirsky Aluminum Company development was the idea to create a holding on the base of major Russian smelters. The formation of Russian Aluminum holding was announced in 2000. The holding is to become the second larger company on the world aluminum market after the US based Alcoa. The merger has to be approved by Russian anti-monopolistic authorities.

The company investment policy has not been specially oriented to the foreign market. Sibirsky Aluminum internationalization goes in accordance with its vertical integration strategy. It does not care much where the firm, which the company intends

to purchase, is situated. Sibirsky Aluminum invests in both Russian and foreign companies. However, it can be distinguished gradual movement from the CIS countries to Eastern Europe, and nowadays, the company negotiates acquisitions in countries, like Guinea and Jamaica.

There have already been appeared ideas about the future development of the company. Some experts on aluminum market speculated that in 2-3 years Russian Aluminum could merge with French Pechiney to create Trans-European aluminum company.

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