RUSSIAN ALUMINIUM IN THE 21 CENTURY

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GLOBAL MARKET
GLOBAL PRIMARY ALUMINIUM PRODUCTION

2006
- Other: 16%
- CIS: 27%
- China: 13%
- Western Europe: 12%
- North America: 10%
Total: 33.9 mt

2016
- Other: 15%
- CIS: 34%
- China: 15%
- Western Europe: 8%
- North America: 10%
Total: 53.1 mt

Source: Brook Hunt, RUSAL estimates
GLOBAL PRIMARY ALUMINIUM CONSUMPTION

2006

33.9 mt

- 31% Other
- 24% CIS
- 21% China
- 3% Western Europe
- 3% North America

2016

52.9 mt

- 29% Other
- 33% CIS
- 18% China
- 4% Western Europe
- 16% North America

Source: Brook Hunt, RUSAL estimates
RUSSIAN ALUMINIUM
OVERVIEW
RUSSIA AT GLANCE

- Population – 142.9 mln.
- Area – 17.1 mln sq. km., 10 time zones
- Urbanization – 73%, (China – 42%)
  - Industry – 37%
  - Services – 58%
  - Agriculture – 5%
- GDP growth rate – 6.4 % (2005)
- Per capita aluminium consumption – 6.9 kg, (China – 5.4 kg)
RUSSIA’S CONSUMPTION HISTORY

Russian aluminium consumption (‘000 tonnes)
RUSSIAN ALUMINIUM INDUSTRY

- 11 smelters
- 27 extruders (56 extrusion presses)
- 6 wheel plants
- 3 can plants
- 25 cable plants
- 4 rolling mills
- 3 foil plants

A good size industry!
Main regions

- Samarskaya obl. – 180 tt
- Sverdlovskaya obl. – 180 tt
- Moscovskaya obl. – 100 tt

Total consumption – 760 000 tons

Source: Rusal estimates
PRIMARY ALUMINIUM CONSUMPTION BY END USE

Russian Consumption by Industry
- Electrical: 17%
- Packaging: 26%
- Transport: 9%
- Mechanical: 8%
- Other: 12%
- Construction: 28%

Western World Consumption by Industry
- Electrical: 9%
- Packaging: 18%
- Transport: 29%
- Mechanical: 8%
- Consumer: 9%
- Other: 6%
- Construction: 21%

Source: Brook Hunt, Rusal estimates/2005
RUSSIAN PRIMARY ALUMINIUM SALES

Total production – 3 760 000 tons

Source: Brook Hunt, Rusal estimates/2005
RUSSIAN PRIMARY ALUMINIUM SALES TO CIS

Total sales – 40 000 MT

Belorussia 35%
Ukraine 14%
Uzbekistan 8%
Armenia 7%
Kazakhstan 36%

Source: Rusal estimates
RUSSIAN CAN MARKET
CANS OUTPUT IN RUSSIA

- Most rapidly developing industry sector
- Currently ~50% of can stock being imported
- So opportunity for domestic producers
- Estimate that market has potential to double over coming 3-5 years
BUILDING THE MARKET FOR CANS

RUSAL supported a 5 years promo campaign (2000-2005) to stimulate development of the aluminium can market in Russia.
BUILDING THE MARKET FOR CANS

Can package share in Russian beer market:

Russia’s canned soft drink market dynamics:
BUILDING THE MARKET FOR CANS

RUSAL beer can market share

![Graph showing RUSAL beer can market share from 2002 to 2005. The graph indicates a significant increase in market share between the two years.](image-url)
RUSSIAN ALUMINIUM FOIL MARKET
In 2005 principal demand was generated by the plants in food and tobacco industry. Total consumption volume of these industries made up 62%.

Total production in 2005 – 56,6 kt.

The structure of aluminium foil consumption:
- Food: 33%
- Tobacco: 29%
- Pharmaceutical: 6%
- Household: 5%
- Commercial: 14%
- Other: 1%
- Packaging: 12%

Commercial: 14%
Packaging: 12%
Other: 1%
Food: 33%
Household: 5%
Pharmaceutical: 6%
Tobacco: 29%
FOIL CONSUMPTION BY SECTORS

Total consumption in 2005 – 50,1 kt.
RUSAL’S FOIL ASSETS

RUSAL SAYANAL
Located in the Republic of Khakasia, is the largest producer of foil and foil-based packing materials in Russia.

- More than 350 Russian enterprises use SAYANAL’s
- Foil in production
  - 65% of production is exported

ARMENAL Foil Mill
Located in Yerevan, Armenia, is one of the largest manufacturing facilities in Armenia and the sole company producing aluminium foil in the Caucasus and Central Asia.
RUSSIAN CABLE MARKET
CABLE MARKET

- Significant deterioration in generation and transmission facilities in Russia

- Federal Grid plans to spend US$12.7 billion to construct over 33,200 km of transmission lines of 220 kV and above in 2004-2013 period (in 2005 the company constructed only 563 km of those lines)
Podolsk, Saransk
In 2006 two new wire rod production mills 1200 ton capacity each were commissioned in Russia. VMS plant is to start full scale production in September 2006, Tsvetlit – in June – July 2006.

Uglich
Nexans is working on construction of its first cable plant in Russia (planned consumption is about 400 tons per month).

Kolchugino
Electrokabel have commissioned new equipment for production of medium and high voltage cables with polyethylene insulation.

Rybinsk
Rybinskkabel have opened a new facility for production of coated energy cable. Expected rate of aluminium consumption is 195 tons per month.

Perm
Kamkabel has completed its facility for medium voltage cable production (polyethylene coating).

Chuvashia
Tchuvashkabel has SAMP-2 project underway that is intended to expand the range of manufactured products, increase production capacity, and pave the way for further development.
RUSSIAN EXTRUSION MARKET
EXTRUSION MARKET

Number of plants – 27
Number of presses – 56

Capacity – optimal product mix (expert evaluation) – 185 000 MT

Equipment by manufactures

- Russian brands: 18%
- UBE (Japan): 13%
- Cometal (Italy): 7%
- MeiRuey (Taiwan): 7%
- Danieli Breda (Italy): 8%
- SMS Hasenklever (Germany): 6%
- Emuko SMS Schoemann (Germany): 5%
- Presezzi Extrusion S.R.L. (Italy): 5%
- N/A: 31%

Extrusions output growth forecast

- One of the most dynamical sectors in the Russian market
- Nearly all extruders are actively working commissioning new mills.
RUSSIAN TRANSPORT MARKET
TRANSPORT – CAR INDUSTRY

- Currently BMW, Ford, Renault, Kia, Hyundai, GM, Ssang Yong have assembly plants in Russia
- Toyota, VW & Nissan have announced plans to open assembly plants
- Chinese manufacturers view Russian market as one with a big potential.
- In H1-2006 Russia increased car production by 10.3%
RUSSIAN SECONDARY ALUMINIUM MARKET
RECYCLING

• Rusal is currently expanding secondary aluminium production with a corporate target to produce 400,000 tons/year of secondary aluminium.

• 3 casthouses using “re-melted metal” with a total capacity of 180,000 tons.

• Casthouses located in European part of Russia / Siberia.

• Output includes billets, Si alloys, secondary ingot.
RUSAL ROSTAR RECYCLING

• Every 2nd can in the world is produced from used aluminium cans
• Can recycling level is ~75-80% - it is the most recycled drinks container in the world
• UBC (used beverage cans) are also used by other industries – construction, automobile, etc.

RUSAL ROSTAR actively participate in organization of aluminium cans recycling in Russia. RUALTA company, found in 1997, is responsible for UBC collecting and recycling
• Operates Moscow and Moscow region
• Additionally some volumes come from Central region, Volga region and Tatarstan
• ~18% share of the Moscow UBC market
• Dealing with ~70 collecting points in Moscow
• Own separation and press equipment
RUSSIA TODAY

Russia now:

- The 14th economy in the world
- The highest GDP per capita in BRICs – about 50% higher than Brazil
- A country with huge potential!
RUSSIA TOMORROW

Russia by 2025:

• The 7th economy in the world

• The 4th largest car park in the world

• The major European market for durable goods

• GDP per capita 4.5 times higher than today
THANK YOU!

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