

'Steeling the show': Russian steel sector overview

Whilst many marvel at the economic miracle that appears to be propelling China from a communist backwater into a leading global powerhouse, Russia has been trying to achieve its own economic transformation. History has not been kind to the country, which has seen constant upheavals that continue even today. However, it is the changes introduced by Gorbachev's perestroika in the late 1980s that have helped shaped the economic and social fabric of the country today.

BY* KIRILL OSYATINSKI & CAROLINE COURONNE

Russia's industrial structure harks back to the days of early communism, which was keen to industrialise a country, which had been held back by Tsars and an antiquated feudal system. Under communism a system of central planning was developed whereby a series of five year plans were implemented and at massive human cost.

Ferrous metallurgy in the Soviet Union was a showpiece of centralised planning. The industry was vital in supporting the Soviets massive heavy industrial developments and led the world in output throughout the 1970s and 1980s. However, by the late 1980s, starved of investment and reliant on obsolete technology, Soviet metallurgy could no longer keep pace with the demands of domestic industry, nor compete on foreign markets. Following the collapse of the Soviet Union and the overall economic decline that followed, the steel industry was one of the worst hit areas. Between 1991 and 1994 output of rolled steel plunged over 40% from 55Mt to 35Mt and by 1996 only 50% of Russia's steel production capacity was still in use. The overall economy



19th Century poet Aleksandr Pushkin reminds Russians of their past

suffered similarly with GDP falling 43% between 1991 and 1999.

Although the shock therapy that accompanied the switch to a capitalist free market was intense, it was the economic meltdown of 1998 that created the necessary stick needed to reform much of the nation's economy. Heavily dependent on raw materials, the Asian crisis of 1997 rapidly spread to Russia forcing down demand for oil and foreign investors took flight. Coupled with the government's default on \$40bn of ruble bonds, the local currency fell 75%. The crisis highlighted areas where the government and industry had failed to reform; areas such as the legal framework, the continuing existence of an unsustainable military might and even the failure of companies to pay each other and exposed an unworkable dependence on a barter economy. All of these factors plus many more forced the government to implement changes commensurate with an economy as large and diverse as Russia's.

Several factors have helped expedite the country's emergence from the hole it had plunged into in 1998. First and luckily, the price of oil rose significantly on the back of



Ferrous metallurgy is one of the pillars of the Russian economy

the Asian recovery, which boosted export earnings enormously. Second, the country worked meticulously with the IMF to ensure a workable restructuring of debt. Third, payment discipline amongst companies has significantly improved and corporate responsibility and accountability have become the norm rather than the exception. For example, in 1998 it was estimated that 50% of business transactions were paid via barter; a figure, which had dropped to 15% by 2001 and thus encouraging trade development. Nevertheless, the ownership structures of the businesses emerging from the vast rounds of privatisations in the early nineties remain opaque and controversial, though the Kremlin has recently taken steps to clear this murky pond.

Possibly the most important improvement since 1998 has been the political stability that has been epitomised by Putin's government. His strong and often bullying style, has helped the government push through a wealth of reforms that have brought factors such as land, labour, corporate governance and

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RUSSIA

'Severgal' a 75:25 joint venture between Severstal and Arcelor respectively will produce 400kt/ly of automotive quality galvanised strip starting Q305

Formerly equipped with outdated technology and a fast ageing industrial tool, Russia's steel industry was in trouble. The steep rise in metal prices and the vacuum created by the demand from China and an increase in the Russian domestic market provided the remedy.

BY* KIRILL OSYATINSKI &
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Rising from the rust: efforts at building a modern Russian steel industry

Russia has not exactly been known in recent years for the cutting edge of its production technologies or for the quality of its industrial tool and its vast old steel works displayed decrepitude on a grand scale. After decades of strictly volumes-oriented production and low levels of investment, the steel industry was left in a dire condition following the demise of the Soviet Union. Dubious privatisation processes, doubts over the ownership structures and conflicts over access to raw materials and markets did not help the industry either, and by the early 1990s, the state of the industry was critical. A remedy, however, came in the form of a steep rise in metal prices and the market vacuum created by an unquenchable demand from China alongside the sharp increase in the Russian domestic market following the net improvement in the country's economic situation. These combined factors have worked miracles. Fifteen years on and the Russian steel industry is rediscovering some of its original glory and back are the days where the steel factory worker is a hero for the nation, alongside the meriting rural worker, the cosmonaut, the scientist and the soldier. Although most of these professions now play a negligible part in Russian growth and wealth, the steel industry is again a major pillar. This is also partly due to recent changes in ownership structures and the consolidation movement that has allowed a formidable effort of capital expenses to upgrade and modernise.

Today, alongside the traditional blast furnaces, one can also see modern hot and cold rolling mills, galvanising lines and an increasing number of electric arc furnaces, continuous casters and other key production equipments that defy the image of an outdated industry. The strong presence of the world's leading production equipment manufacturers, from SMS Demag through to VAI-Fuchs, Danieli or SMS Meer is in itself a testimony of how the Russian steel sector has undertaken its reform.

This, however, is making life difficult for Russian equipment makers, who have found themselves competing head to head with the best in the world, without most of the credentials required to provide world-class standards of quality and services. A handful has managed to survive until now and beginning to look ahead with a dose of reasoned optimism.

Such a company, with its equipment present in most of Russia's steel mills, is Ormeto-YUMZ, a large engineering firm and equipment maker that used to provide equipment across the former Soviet Union and its satellite countries. After a decade of struggles, the company is today back on its feet and has managed to develop partnerships with western firms like Danieli for the construction of a continuous caster for Mechel, Russia's fifth largest steelmaker in 2004. A new 6-strand continuous casting machine and an upgraded '250-1' rolling mill were launched in June 2004, thanks to the efficient combination of Danieli's engineering and Ormeto-



Continuous casting at 54% in 2003 remains well below the world average

DRI technology provides technical efficiency and ecological benefits



YUMZ's cheap resources and solid manufacturing base in the Urals. Such successful co-operations are the way forward according to Mr. Sergey Tchevchov, Ormeto-Yumz's President: "We have to be realistic facing our domestic market. The expectations of Russian steelmakers can only be fulfilled by the right mix of global expertise and local presence for swift services. Alone, we can't provide it all. Meanwhile, western equipment makers are well advised to take advantage of the experience, manufacturing capabilities and market knowledge of local players." The company has also struck co-operation agreements with SMS Demag for the construction of a continuous caster for Ural Steel.

The industry is more demanding than ever and local equipment makers have had to restrict themselves to market segments where they can maintain an edge, even if this is only price-based. Equipment manufacturers have understood the need to combine their efforts. The creation of Soyuzmetmash, the Union of Metallurgical Machinery Makers, responds to this need. The organisation is responsible for establishing consortiums and promoting a cooperative approach to answer the needs of the Russian metallurgical industry. Mr Kuznetsov, its general director, underlines that: "United, the machinery makers can present credible offers to the steel industry's needs, while on a stand alone basis, they hardly weigh for anything. As a common front, these companies represent a real wealth of

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experience and also an interesting option for foreign equipment makers willing to manufacture some of their equipments in Russia. International co-operation will increasingly be a necessity and Russian companies will therefore be increasingly in demand as local partners for metallurgical projects.”

Meanwhile, the appetite of the industry for state-of-the-art solutions and equipment is limitless. Besides attempting to climb the value added ladder for its products and steering away from basic commodity products, a stronger drive for corporate responsibility and alignment with the global industry's best practices also underline the quest for improved production standards.

Gazmetall, founded in 2001, is the governing organisation and sole executive body for Lebedinsky Mining and Dressing Plant (LGOK) and Oskol Elektrometallurgical Plant (OEMK). Mr Maxim Gubiev, Deputy Director General for Economics and Finance, points out that the objective of Gazmetall is not to manage LGOK and OEMK who already have excellent specialists but rather to provide them with strategic development and corporate financing. “Cutting corners isn't the most successful strategy. We have to increase the share of highly technological production to realise a high value added cost in our exports, so we are stimulating and supporting the use of new technologies and increasing quality. We must also strive for higher ecological and social standards and reach a balance between economic development and environmental protection. This will enable us to maintain our position on world markets. Russian metallurgical companies have to comply with the rules of fair competition if we wish to concentrate on the long term export deals.”

And, putting his money where his mouth is, he continues: “We are going to invest over \$1bn in new technologies and equipment for the entire group over the next five years and at the end of this modernisation process we will enter foreign markets via an IPO. I believe that raw material prices will keep on increasing in the future and therefore because of our extensive natural assets we are in a very advantageous position”.



As close as it gets to Electric Arc Furnace pouring

Most of the latest advances in iron and steel making are applied in the Russian industry. Direct Reduced Iron (DRI) is, for instance, used by Oskol Elektrometallurgical plant, thanks to Midrex technology. To maximise the efficiency of the use of DRI, Hot Briquetted Iron (HBI) technology has also developed alongside and further capacities are being mulled.

Gazmetall's Mr Gubiev mentions his satisfaction with DRI technologies and explains that the construction of a second Hot Briquetted Iron plant worth \$300M is currently on the way. “Eventually we will build a third HBI plant. This goes along with our plan of increasing production. Currently we produce 21.5Mt of iron ore per year but we would rather supply our foreign markets with HBI and DRI products rather than just raw materials. Our strategy is to keep increasing production volume and to use the latest technological innovations in order to serve our customers better. When looking at the West, I believe that the whole attitude towards Russia should be changed. During the last 80 years almost everyone in the West has forgotten about the economic power of Russia, and I believe Russia is regaining its formerly great position now and is a country on the rise.”

Lebedinsky Mining and Dressing Plant (LGOK) founded in 1967 and located in Belgorod region in Southern Russia, is the biggest iron ore extraction plant in Russia. The plant produces high quality iron ore material for ferrous metallurgy. LGOK is the only producer of HBI in Russia. HBI unit was built in 1999 using Midrex technology. The HBI plant construction was a big step towards turning a raw material plant into a plant with a complete

cycle from iron ore mining to competitive metallised product output.

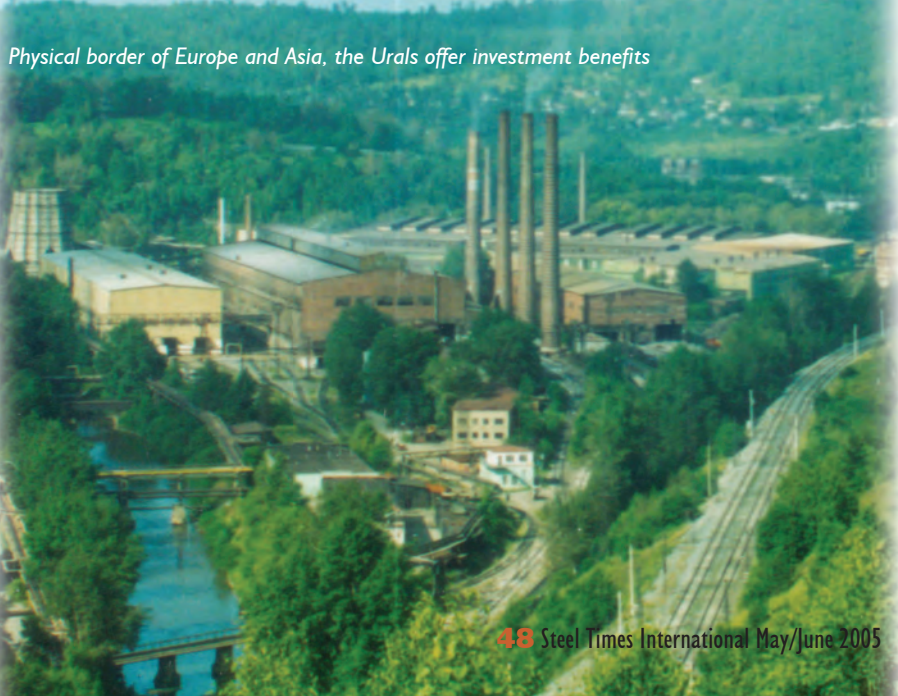
HBI is a new product in Russia. Unlike scrap, which is used today as the principal raw material for electric furnace steelmaking worldwide, HBI doesn't contain any harmful impurities, which worsen steel quality. The product, so called sponge iron has Fe content of more than 83% and carbon content about 1%, the metallisation is more than 92%. The interaction of reformed gas and fluxed pellets takes place in the shaft furnace. The material is continuously unloaded from the furnace at the temperature more than 700°C and pressed in briquettes of about 550grams. LGOK briquettes reach the highest level of metallisation of 94.99%.

Oskol Elektrometallurgical Plant (OEMK) is the only one among the major steel producers using the technology of direct iron reduction. Its Midrex direct reduction plant was put into operation in 1983.

OEMK has four Electric Arc Furnaces from Krupp, each with a capacity of 150t. There are plans to install another EAF. There are two rolling mills, a larger size unit (75-190mm) and smaller size unit (12-75mm). The main customers of the plant are the ball-bearing makers, automakers, pipe makers using and equipment manufacturers.

Concentration and new co-operation projects in the sector have stimulated major investments. In the new partnership between Ural Steel and Chelyabinsk Tube Rolling Plant (CHTPZ), a key element that will sustain the success of CHTPZ to bid for the jumbo pipeline projects on the Russian horizon will be, alongside securing a supply of semis from Ural Steel, the significant increase in capacity.

Aside from securing critical raw materials, Ural Steel's General Director, Mr Efindeev, outlines the targets set out in the new partnership agreement with CHTPZ Group: “We want to satisfy the growing market demand for large diameter pipes and the joint development and promotion of new types of pipes. Our main customers are Transneft and Gazprom who are both participating in major pipeline projects in Northern Europe, the Eastern Russia and China. We are going to invest \$200M into our joint project, which will include a new Electric Arc Furnace, a



Physical border of Europe and Asia, the Urals offer investment benefits

The latest technology and equipment such as VAI Fuchs and SMS Demag are now common place in Russia





Aim at Success



“Maxi-group” – is a rapidly developing Russian company. Its main goal is manufacturing of products satisfying the highest international quality standards. For this purpose Nizhneserginsky Hardware and Metallurgical Works have been completely reconstructed. Modernized rolling production will provide the expansion of rolled-products range. Implementation of electric furnace steelmaking technology leads the enterprise to the new level in a qualitative sense. At present time Nizhneserginsky Hardware and Metallurgical Works is the only electrometallurgical mini-mill of European kind in Russia with production capacity of 1 million tones per annum.

The own raw material base – net of scrap collecting and processing enterprises provides low production costs of rolled iron and hardware products. Cooperation with famous producers of special equipment Danieli, SMS Demag, VAI guarantees smooth production flows.

- “Maxi-group”'s strategic plan is building-up of modern electrometallurgical mini-plants in Russia. Start-up of the next plant will be in the year 2006
- Nizhneserginsky Hardware and Metallurgical Works is the only electrometallurgical mini-mill of European kind in Russia meeting all the environmental safety requirements.
- “Maxi-group” is the owner of scrap collecting and processing enterprises net which is the second in Russia in the context of production capacity.

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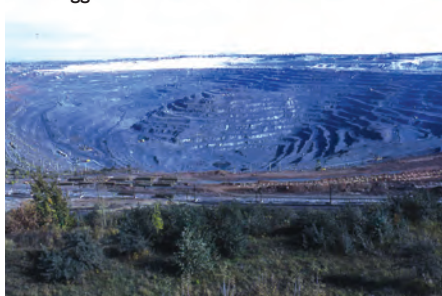
continuous casting machine (900kt/y) and mill modernisation. CHTPZ Group will contribute over \$50M to the whole process. This strategic co-operation with CHTPZ will create optimal conditions for the modernization of production of both Ural Steel and CHTPZ. One of the results is that we will receive high quality strips for tubes up to X 80, which we cannot produce today.”

For all the positive outcomes resulting from this amalgamation, Efindev does have areas which need tweaking: “Currently we produce 150kt/y of long products and only 70kt/y of flat products, I am not happy with such a balance of production. I would prefer not to produce any long products at all because right now both Russian and international markets are totally saturated with long products. Our ultimate goal is to produce more high value added products of higher quality. We want to be known as a full product line producer.”

The Ural Steel-Mihailovsky tie up is indicative of how the steel industry is trying to reinvent itself. By securing critical raw materials the industry is not only guaranteeing supply but also ensuring that it attains a degree of protection against price hikes that countries such as South Korea are experiencing from their suppliers of iron ore. On top of this, the cozier relationships that are being developed with final customers coupled with investments in the latest equipment abroad, place the industry in a strong position to build upon its dominant domestic position. Long unable to supply the quality of products demanded by international customers, this consolidation along with investments in production and marketing will enable Russian players to more effectively approach the previously elusive foreign markets.

Craft Enterprises International Ltd is a relative newcomer to the steel manufacturing market, being founded in 1994. However thanks to the acquisition of Gurievsky metallurgical plant, a key producer of grinding balls and the construction of the mini-mill, Craft is moving dynamically towards being a leader in grinding balls production. While not as massively concentrated as other companies in the sector, Craft's reliance on its own steel and its global orientation, makes it an ideal partner for foreign companies looking for a foothold in Russia.

The Lebidinsky mining and dressing plant is the biggest in Russia



Major joint Russian-foreign investments are also part of the innovation and investment pictures. The Severgal joint venture between Arcelor (25%) and Severstal (75%) for the manufacturing of 400kt/y of hot dip galvanised rolled products per year is one such foray. At \$170M, it is also one of the largest investments of the sector in recent years. The factory, once completed in the third quarter 2005, will be one of the most modern units worldwide and ready to produce steel sheets for the automotive industry, notably for the Renault Logan, already produced in Romania and to be manufactured in the Russian Federation.

But when it comes to technological innovation and investment in state-of-the-art production equipment, it is not only the



Local competencies are the backbone of a thriving industry

big shots that show dynamism and the will to compete with the global standards but also smaller groups that display strong ambitions.

Maxi Group is an example of such dynamism, having become the first *minimill* in Russia to invest in up-stream scrap processing, a move showing the way to other EAF based steelmakers. Mr Aleksander Loginovskikh, First Vice President of Maxi Group, composed of Metallurgical Holding, which consists of Nizhneserginsky Plant with facilities in Revda and Nizhneserginsk as well as the Uralvtorchermet network of scrap collection, storage and transport, explained: “January 29 was a turning point for our group, when our new one million tonne a year electric arc furnace was launched. The technology of compact minimills close to the scrap source works effectively abroad and our experts decided that we would also benefit from this innovative technology. Our 120t per heat electric arc furnace was constructed by VAI-Fuchs and the new continuous casting unit marks a big step in the right direction for us. We want to be a modern, highly efficient company with the world-class technologies”.

In times of increasing scarcity of raw material, such a vertically integrated model is a good display of forward thinking. The continuous investment in technical innovations and the best production technologies available is also aimed at raising the image of the group in Russia and internationally towards attracting further partners or investors. From across the spectrum, examples abound to show that the Russian steel industry is ambitiously striding forward.

Up-to-date technologies also allow steel makers to achieve the highest product quality, moving away from commodity type of products and to benefit from increased flexibility in the production of custom-made products. In his interview Mr Mark Leivikov, Chairman of the Board of Directors of Zlatoust Metallurgical Works, one of the oldest Russian special steel and alloys plant mentions his plant's customer orientation and flexibility as the key advantage. “We are always ready to produce steel of the exact chemical composition that you require. We want to be known locally and internationally as the producers of high quality special steel and we are always happy to find new strategic partners and customers interested in our special steel and alloys”.

The rise from the rust of the Russian steel industry is real and has been propelling the sector forward, on the back of Chinese consumption, the Russian economic awakening and the European appetite for cheap steel. This has fuelled strong investments in production technology that has made for happy days for many western equipment makers. It has also helped local equipment suppliers to stay afloat, thanks to partnerships with the world's best. It is likely that Russian equipment makers will learn very quickly and soon will benchmark their products against the sector's best. Taking advantage of local competences and Russian domestic demand offers western equipment makers both a way of securing major equipment supply contracts and the possibility of an alternative and strategic manufacturing base.

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Russia benefits from being the most cost competitive steel producer in the world due to its vast supplies of low cost energy, low labour costs (annual average salaries for steel workers are around \$3000) and abundant supplies of raw material. Hot rolled products cost around US\$200/t to produce. Given record steel prices, these factors have helped local producers earn significantly higher margins than other international players. Despite constantly increasing gas and electricity prices since the lows of Soviet times, energy prices still remain several times lower than in most other countries.

All this has not prevented Russian companies from acquiring steel rolling facilities close to the end-customers overseas. This strategy allows the Russian companies to take advantage of serving their new customers more efficiently, adding value to their products and being at the forefront of the international steel market.

When we talk about a foreign expansion, Russians bring their own brand of globalisation. The governments of developed countries are generally supportive when domestic companies acquire foreign assets, both economically and politically. But in Russia, such purchases are seen more significantly as 'capital outflow', which the government is trying to discourage. The excessive zeal in this battle on the part of officials is the main barrier to the Russian business world's expansion. For this reason, many Russian companies are calling for a legal separation of criminal capital transfers from legitimate purchases of assets abroad. They have even suggested special terms such as 'capital export' and even 'business import'.

Capital export plays a limited but extremely positive role in Russia's economic climate. It is limited because the amount spent on purchasing foreign assets cannot be compared to the amount spent in Russia. It is positive because it builds confidence at home. Many feel that the government must not limit this process because it will send a signal that first of all the government does not trust Russian business, secondly that it is overly heavy handed and thirdly that nothing will stop it from being so. Prohibiting Russian companies from purchasing foreign assets will have negative consequences comparable to those of the Yukos affair. Despite all this, the idea of international expansion is a hot topic for Russian metallurgists and is being increasingly viewed as the key point in their business development strategy.

In this respect the case of Severstal is one of the most interesting. Severstal Group leader, Mr Aleksey Mordashov, has a goal of making the company one of the six major international steel producers by 2010. He believes that an active merger policy and increasing capitalisation of the Russian company through the synergies gained from mergers is the way that this can be achieved. Following the purchase of Rouge Steel, a flat product producer in Michigan, USA at the start of 2004 for \$285M, Severstal hopes to overcome the traditionally strong protectionism of American steel producers and gain additional opportunities in the US automobile-body sheet market. North America is very attractive to Russian metallurgy companies because of the high cost of steel production there. American

Steel on the tracks – Russian steelmakers foray abroad

With energy prices remaining several times lower than in most other countries, Russian companies are taking advantage of serving their customers more efficiently, adding value to products and being at the forefront of the international steel market.

BY* KIRILL OSYATINSKI & CAROLINE COURONNE

steel costs \$850/t on the world market, compared to \$600-650 in Russia and Europe.

Severstal also acquired the Italian steel works, Lucchini. At \$570M, the 62% stake in the Italian company cost roughly twice that of Rouge Industries. Both of these transactions are in line with Severstal's strategy aimed at boosting its production capacity. In addition, the acquisition of the European asset will enable the Russian company to gain a stronger foothold in the European market, bypass the EU import quotas and boost its output and sales of higher value added products. The company will benefit from a wider geographical sales coverage and customer diversification thanks to the fact that Lucchini is the second largest steel manufacturing group in Italy, which produces mainly long steel products, while the Russian parent is mainly a flat steel producer with a significant share of revenues generated from its domestic Russian market.

The synergetic effect will most likely be represented by exports of Russian raw material and semi-finished products to Italy (since Lucchini has experienced shortages, while Severstal has excessive volumes). In theory, Severstal's Cherepovets mill can turn out low-cost semi-fabricated steel, which can then be re-rolled into more valuable products for sale in the European markets which would otherwise limit the entry of Severstal's metal. In any case, the cash-strapped Italian steelmaker will definitely benefit from the Russian cash infusion.

Another example of a Russian company looking at broadening its horizons is Evraz Holding. Russia's largest steel maker, Evraz Holding was rumoured to be on the acquisition trail for Shanghai's Baosteel, China's largest steelmaker and the third largest in the world. If the deal would have gone through, Baosteel, with its output of 19.5Mt/y of flat steel products would have dwarfed Evraz's, which with three mills specialising in long steel products has a combined output of about 13Mt/y. Here again, the issue at stake was access to raw material and the possible combined exploration of new iron ore and coal deposits in Russia. This wasn't seen under a positive light by the Kremlin however and alongside opposition to the takeover in China itself, it stalled a deal that would have changed the destiny of Evraz Holding, multiplying its production capacity while also radically expanding its product mix.

The company also made the headlines in 2004 by being candidate to the privatisation of Ukraine's Krivorozhstal and South Korea's Hanbo. Both plants went to domestic steelmakers and Evraz never got near to closing these deals but here again these attempts provided clear indications of the strong will of the company to expand its global reach.

On January 24, 2005, Evraz secured its

acquisition of 70.8% of the shares in the Zestaponi ferrous alloy plant, Chiatura manganese mines and the Vartsikhe hydroelectric power plant, all located in western Georgia. It also restated its interest in the Tkibuli coalmines and the Rustavi metallurgy plant, also both in Georgia. This time however, the Kremlin is said to have provided the owner of EvrazHolding, Mr Abramov, with its full backing.

While Severstal is not alone in its quest to expand overseas, it certainly has been

the most energetic and most capable at acquiring and integrating newly purchased assets into their portfolio. More than merely adding value to the company's balance sheet, such international adventurism builds a more balanced industry at home as new technologies and know how are acquired and new and potentially more attractive markets are opened. But the industry should also consider the interest of other steelmakers in foreign acquisitions, as all are facing the same access issues to foreign markets as

well as displaying very strong ambitions fuelled by the favourable situation of the global steel trade. These acquisitions; attempted or successful, mark the real coming of age of the Russian steel makers, and are a sign of the maturity of Russian big business. Finally, whilst the government may frown over the loss of valuable hard currency used to finance shopping sprees abroad, the longer term gains to be enjoyed from the repatriation of profits may encourage the over cautious bureaucrats to think again. **STI**

46▶ 'Steeling the show': Russian steel sector overview...

privatisation more into line with those found in other western democracies.

The treatment seems to have worked, with annual GDP growth averaging in excess of 6%, real personal incomes have improved 12% and external debt has dropped from 90% of GDP to around 28%. Nevertheless, problems still persist with 80% of its economy reliant on raw materials (oil, natural gas, metals and timber) and the manufacturing sector still in need of modernisation. Although reforms have been instigated, shortfalls still exist within areas such as the financial sector as well as in government institutions, which still do not instill confidence in potential foreign investors.

Accounting for over \$44bn Russia's ferrous metal industry represents roughly 10% of the country's economy and currently shows healthy growth rates with the sector growing 8.9% in 2003 according to Russia's central bank. Correspondingly the Russian steel industry is one of the largest in the world, producing 65Mt of steel, accounting for 6% of total world steel production. In absolute terms Russia is the world's largest exporter, with 46% of its production going to foreign markets. Meanwhile, domestic demand for steel has been growing strongly, with domestic sales increasing by 5% in 2004 compared to the

China	265
EU	168
Japan	113
US	99
Russia	65
World	1045
Source: IISI	

Major world steel producers in 2004 (Mt)

previous year. Metallurgy accounts for 20% of Russia's total industrial production, making the metal sector Russia's second-largest export industry accounting for 20% of total export earnings; \$20bn for 2004. Steel production has increased despite the price increases for coke and coal as well as the increased railway freight rates. Surprisingly it is not so much the increase in demand from China that is driving this growth but an increasingly steel-hungry domestic market.

Following massive investments in the sector and increased demand from the domestic market, Russian ferrous metal producers have benefited vastly from the favourable situation in China and the United States. In 2004 over 96% of export revenues were generated from shipments outside of the CIS states. Global steel

markets have been strongly influenced by China's growing demand for steel, with a yearly consumption increase of over 20% over the last two years; China accounts for more than 50% of the estimated 9% annual growth in world steel consumption. The increasing demand in steel consumption and a further increase in iron ore prices are expected to drive up steel market prices still further in the future.

Sixteen years on from the fall of communism and seven years since the economic meltdown that brought the country to its knees, Russia is moulding itself as a global economic powerhouse self sufficient in its needs coupled with a local market rapidly gaining economic and social wealth. China may command the title of the world's factory, but given the presence of crucial raw materials, Russia is not far behind. Although clouds such as the Yukos debacle, the continuing fighting in Chechnya and the occasional meddling in neighboring CIS countries still persist, the country retains a high attraction for foreign investors and its economy can now joust with the international heavy weights.

This report, researched during a two month stay in Russia during which time we met many of the business leaders from the steel sector, aims to depict the current situation of the steel industry in Russia, its ambitions, challenges and the potential and opportunities that it offers. **STI**



Metal traders

The outcome of mergers and acquisitions affecting domestic and international steel markets has resulted in highly competitive producers and led to the disappearance of small independent traders.

BY* KIRILL OSYATINSKI &
CAROLINE COURONNE

The result of the flurry of mergers and acquisitions affecting the local and international steel markets has resulted in the emergence of a top tier of mammoth producers. For their part, these new behemoths are more concentrated and correspondingly more competitive than their previous entities, putting enormous pressure on smaller producers. Not surprisingly, this evolution has also led to the disappearance of many small independent traders.

The principal factors stimulating growth in the sector are the increased purchasing capacity of Russian consumers and a boom in the construction sector, a major user of steel. The record high prices of steel on the world markets have also improved matters.

The main challengers to the metal traders are the steel producers themselves, who have been hit by the rapidly increasing prices of raw materials such as coking coal, which are outstripping price rises for steel. While steel groups such as Severstal and Evraz holding possess their own raw material supplies and are less sensitive to the price hikes, others are forced to trade their own steel in order to be less dependent on the large metal traders.

Once the metal traders affiliated with steel manufacturers enter the market, they start dumping their products at rock bottom prices in order to increase their market shares, thus driving the smaller metal traders out of business. In such a situation the only way to stay competitive for the independent metal traders is to find their own specialised niche. Bigger traders often take advantage of being able to offer and levy credits, expanding their services and distribution networks as well as building metal service centres, which combine metal cutting and storing facilities along with metal construction production together and trading activities.

Dipos Group illustrates this tendency. The company employs 1200 employees and has nine branches all over Russia. As Mr Aleksandr Drozdov, the company's General Director says: "It's crucial for us as a trader to have a well-equipped service centre network in Russia. In order to improve our service centre facilities, we have invested heavily in foreign equipment, which helps us take full advantage of the high demand coming from the Russian construction sector. We keep on expanding our own production capacities to serve the needs of this sector better. As a result of our investments we enjoy the fact that our drive

Taiwan. I believe this product has a great future in Russia. Currently we import 30% of our sales but at the end of this year I would like to increase this to 50%. Our most important customers are Russian equipment manufacturers and there is an enormous potential for selling steel to this sector as the demand for new equipment in Russia steadily increases".

Another defense strategy adopted by certain traders to protect their business against the major producers carrying out their own trading activities is to move into production themselves. ESN, for example, established in 1993 and located in St Petersburg, has moved from trading to direct production of grinding balls. Mr Stepan Ostafiychuk, General Director of ESN says: "We are active in approaching new companies world-wide, especially cement makers and iron ore producers. A few months ago we signed a long-term agreement with Lafarge to supply them with grinding balls. We have an ambitious goal ahead of us to double our production levels within the next four months. For this we will blend our experience and know how with new equipment and technologies that we are installing. Russia has a good investment climate and we believe there continues to be a great potential for the Western companies."

Established in 1996, Craft Group has also followed the production route following constraints weighing on its trading activities. The group originally expanded trading long products within and outside of Russia, mainly to Turkey and other billets-buying countries.

The Group used to source its supplies from Ukraine but today, according to Dimitri Trifonov, the group's Managing Director, "the activity is concentrated in 'powerful hands'". To alleviate the sourcing difficulties, the company acquired Gurievsky metallurgical plant, a key producer of grinding balls. Heavy investments were put together to make Gurievsky more competitive and able to sell its products in Asia and in other parts of the world. This unit became the centrepiece of the group's growth strategy, alongside its control of Magnesit, a large refractory materials producer. Very keen on the quality of its products, Dimitri Trifonov explains that "pure trading business has become increasingly tight, unless you have a direct control of the product source. By achieving this stage, you are also optimising the quality levels and don't have excuses for low standards of services. You are in direct line with your clients and your production achievements are their future market success. This is a great satisfaction for a trader". Looking at markets in Lebanon, Syria, Dubai, Egypt, Turkey, Algeria, the group also plans to build a mini mill to provide its own raw material for producing grinding balls.

Indeed, Russian trading houses have a great deal to offer to would-be foreign investors. They have broad experience and knowledge of the Russian market, wide distribution and procurement networks and excellent contacts – a vital factor when entering what remains a complicated local market. As competition from producers squeezes them out of their traditional markets, they are eager to look at foreign partnerships and joint ventures in order to carve new niches for themselves.

Moscow-based Incorp, a medium size trader specialised in stainless steel has also established a service centre to add value to the products traded. But besides, it has developed a partnership with an Italian company to benefit from competence transfer and increase its international exposure, already wide through the sourcing of steel to Sandvik, ThyssenKrupp and other leading global suppliers. Mrs Natalya Pakhomova, Incorp's General Director, explains that "We have developed good relationships with our partners and are looking at further expanding our sales of Incorp-produced stainless steel tubes to sell these not only on our home market but also abroad. With the price of manufacturing here, we are competitive across the board and our European partners have understood this. Obviously, our largest competition is from Russia itself."

Having examined the current state and future tendencies of Russian steelmakers it becomes clear that the Russian steel market retains massive potential. Local steel makers have enjoyed substantial growth over the past few years and all indicators point towards this upward trend continuing. International co-operation and foreign market exposure are the current buzz-words in Russia. The Russian market offers great potential for Western companies, as opportunities for co-operation with the local steelmakers are virtually limitless. Every year an increasing number of Russian steel companies are expanding abroad as even the gigantic and rapidly expanding Russian market becomes too small for them. It is very likely that within the next few years more Western metallurgists will have to come to terms with a new development as Russia's leading steel companies exert their might on the global stage. **STI**

Turkey	Taiwan	China	USA	S Korea	Italy	Iran	Ukraine	Others
14	9	9	6	6	5	4	4	43

Table 1 Importers of the Russian Steel (%)

to continuously expand our services is being fully appreciated by a growing number of our customers."

Special Steel and Alloys is a successful stainless steel trading company founded in 2000. Mr Semen Serikov, its General Director, highlighted in his interview that the main reason for the rapid growth of his company was a steady increase of their product selection. "We want to keep increasing our product selection in the future. In the past we have been selling steel plates from ThyssenKrupp and Arcelor in addition to which we are now the official dealers of the Volzhsky and Sinarsky pipe plants. Right now we are developing a new product for the Russian market, bi-metal pipes, which we are going to import from





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Carbon and alloy constructional
Bearing including alloy steel
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High-temperature

Alloys

Precision
High-temperature

Section assortment

Dimensions, mm

Hot rolled.....	8...150, 28...250, 9...40x40...110
Forged.....	48...250, 48...200, 20...75x55...300
Cold-drawn.....	5E46
With special surface finishing.....	2...25
Semis for axles.....	190...250
Tube stock.....	80...140
Hot-rolled billet.....	18...42x250...260
Forged billet.....	37...65x165...275

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Strength in depth

The main players in the Russian steel market include Severstal, Magnitogorsk Metal Plant (MMK), Novolipetsk Metal Plant (NLMK) and EvrazHolding. All of these mills offer a wide range of products, while specialising in flat steel products mainly for the engineering, automotive and building industries. Severstal and NLMK are so dominant in their home regions that they provide more than half of all industrial production there. They are able to keep per unit costs low due to their sheer size and due to the abundant labor available in each of those regions. These major players play a key role in Russia's economy and politics, frequently lobbying the Kremlin for their causes and enjoying significant exposure at national and international levels. Unsurprisingly for an economy formerly based around central planning principles, 86% of the country's total steel output is concentrated amongst just ten integrated players.

In **Table 1**, the three largest flat product producers; Severstal, MMK, NLMK account for 47% of crude steel output and 52% of rolled steel production. Meanwhile EvrazGroup (ZSMK, NTMK, NKMK), Mechel, Uralsteel and OEMK combined account for 38% of the country's total crude steel output and 36% of rolled steel output.

Looking at the factors contributing to the great financial performance of the Russian steel makers, **Table 2**, high steel prices are obviously playing a crucial role. In addition to which, capacity expansion through massive investment programmes have resulted in higher output and higher revenues. This is particularly the case with Severstal and NLMK. When we look at Russian steel output by product type however, it becomes clear that Russia produces a very low proportion of high value products when compared to western markets, **Table 3**. In the West, Russia is associated more with supplying semi-finished and low-value products. This

At 4.5Mt/y output Severstal's No5 blast furnace is the largest in the world

86% of Russia's total steel output is concentrated among nine integrated players.

The main companies include Severstal, MMK, NLMK and EvrazHolding, which offer wide-ranging products.

BY* KIRILL OSYATINSKI & CAROLINE COURONNE

Company	2004 Revenue in billion \$	2004 Profit in billion \$
Severstal	6.41	1.34
EvrazHolding	5.12	1.08
MMK	4.63	1.05
NLMK	4.32	1.43

Source: Interfax

Table 2 Financial performance of the leading Russian steel companies

Table 1 86% of the country's steel output is concentrated amongst just ten integrated players

COMPANY	STEEL OUTPUT (t)				ROLLED OUTPUT (t)			
	2002 (Mt)	2003 (Mt)	2004 (Mt)	2004-2003 change %	2002 (Mt)	2003 (Mt)	2004 (Mt)	2004-2003 change %
Severstal	9.6	9.9	10.4	4.9	8.5	8.8	9.1	4.1
MMK	11.0	11.5	11.3	-1.6	9.8	10.2	10.2	0
NLMK	8.6	8.9	9.1	2.9	8.0	8.2	8.7	5.6
EvrazGroup								
ZSMK	5.7	5.9	5.6	-6.4	4.6	4.8	4.7	-1.9
NTMK	5.3	5.5	5.5	0	3.9	4.1	4.2	4.2
NKMK	2.0	2.4	2.6	7.0	2.0	2.1	2.3	6.4
Mechel	3.9	4.1	5.0	21.3	2.6	2.7	3.3	22.8
Uralsteel	2.9	3.1	3.6	17.8	2.0	2.2	2.7	19.7
OEMK*	2.2	2.4	2.5	4.8	2.0	2.1	2.2	2.3
Total top 10	51.3	53.5	55.4	3.5	43.5	45.2	47.3	4.7
Share of Russia (%)	86	85	85	0	90	88	87	-1.2
Russia total (t)	59.9	62.7	65.2	4.0	48.5	51.1	54.1	6.0

Source: Goskomstat - Federal State Statistics Service
*DRI based EAF

Product type 2004	Russia	Developed markets
Semi-finished	25	0
Long carbon steel	35	30
HR Flat coil	20	20
Plates	5	10
CR Flat coil	10	10
Coated sheet	5	30

Source: Alfa Bank

Table 3 Comparison of product mix between Russia and developed countries (%) product

	Iron ore supplies	Coking coal supplies
Severstal	100	100
MMK	10	0
NLMK	100	0
Evraz Group	85	100
Mechel	90	100

Source: Alfa Bank

Table 4 Control over raw materials supplies (%) captive mines

is something that some Russian companies would like to change. Thus many are shifting their product mix and investing in value-added steel production, especially at the time of very high steel prices, this is generally seen as the way forward.

A very illustrative case to demonstrate the shift towards the high-value products is Severgal, a joint venture between Severstal and Arcelor in which Severstal owns 75% of the company. Severgal will produce 400kt of high quality galvanized steel for the automotive industry. MMK has also invested in producing galvanized steel, with a planned annual production of 500kt. The Russian domestic market is demanding increasingly sophisticated products thus further encouraging companies to move up the value chain.

Backward integration is another key issue for steel companies as the major steel mills wrestle to gain direct access to raw materials and formalise their control over the raw material suppliers, **Table 4**. Steelmakers are increasingly buying other layers of the production chain and consolidating assets in their industry. Novolipetsk Metal Plant (NLMK) recently acquired Stoilensky Iron Ore Mining Plant (GOK) and in February Uralsteel purchased Mihailovsky Iron Ore Mining Plant (GOK) (see later). Evraz and Severstal are not only self-sufficient in terms of raw materials, but also have excess raw materials that they sell to other companies outside of their respective groups.

Looking at the case of Severstal, we see a perfect example of the vertical integration process. Severstal-Resurs generates half of its revenue from selling raw materials inside the group while the other half is from selling to outside companies. In February 2005 Severstal-Resurs was reintegrated back into Severstal, a strategically motivated move to support further raw material concentration within the Severstal group. Coal mining is increasingly viewed as a key to increasing revenue, which led to

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the acquisition of existing mines in Russia. In the case of Severstal, despite steel always being the group's core, coal mining has been viewed as a major profit generator. The concept of vertical integration started in 1997 with the acquisition of the Karelsky Okatysh and Alenikotsky mines. This was followed by the acquisition of coal producers from the Kuzbass region as well as the Vorkuta mine.

Mr Kruchinin, General Director of Severstal stresses that the company's long term objective remains improving product quality and the output of higher value added products. "We are gradually shifting more and more towards serving the domestic market and increasing our home market share. It's crucial that we become the key suppliers for the Western companies which are opening their manufacturing branches in Russia, such as GM, Toyota and others. Our goal is to increase production of IF Steel, AP metal, hot rolled and high strength steel. We are determined to always stay ahead of our competition in Russia and want to be one of the ten largest steel companies world-wide."

Mr Kruchinin added: "Entering into joint ventures to provide us with technological improvements and create new products is a crucial element of our sales strategy. One of our major investment plans is the new Pipe Project, which involves production of large diameter pipes at the Izhora Tube Plant. We plan to invest \$250M into this project and expect to reach a production capacity of 450kt of longitudinal single-joint welded pipes of diameter up to 1420mm. In this project we benefit from our strategic partnership with the German company SMS Meer."

Severstal is an integrated iron and steel works, with production facilities including a coke-oven, by-product division, iron making division, steel making division and steel rolling division. The plant is using advanced production technologies with the sintering plant producing 7.6Mt/y. For the first time in Russia, instead of raw iron ore, concentrated iron ore was used here.

The main advantages of Severstal's sinter are high iron ratio of 58%, low gangue and a low detrimental content. The iron-making plant consists of five blast furnaces of up to 5500m³ in volume. The furnaces have the highest productivity and the lowest specific coke consumption in the country. Blast furnace number 5, 'Severyanka' with an annual production capacity of 4.5Mt and a height of 102m is the world's largest blast furnace and is included in the 'Guinness Book of Records'. The electric furnace shop is using the latest technology by VAI Fuchs, which provides a highly economical procedure where the charge preheated in a shaft furnace is later refined in a ladle metallurgy station. This new technology has a designed capacity of 1.1Mt of highest quality steel. At the same time the electric power consumption is considerably reduced and each sequence takes 55 minutes instead of 4.5 hours. The general strategy of Severstal is to use continuous casting technology to improve the quality of finished rolled products and reduce the cost per unit product.

The most recent and perhaps striking case of backwards integration took place in January of this year and constitutes one of the biggest deals in the history of the



Mr Usmanov's companies control 40% of Russia's ore production

Russian metallurgy sector. Mr. Alisher Usmanov, (head of Gazprom's investment division, Gazprominvestholding, main shareholder of Ural Steel and owner through Interfin Group of Gazmetall, which controls Lebedinsky GOK and Oskol Electrometallurgical Plant) and Mr. Vasily Anisimov from Coalco bought 97% of Mihailovsky GOK for \$1.65bn. The deal resulted in Ural Steel becoming the sole controller of Mihailovsky, thereby highlighting the massive consolidation taking place in the upstream Russian steel sector.

Mihailovsky GOK is the second largest producer of iron ore in Russia, with an annual capacity of 18Mt. Considering the fact that Mr. Usmanov also controls Lebedinsky GOK, which is the largest iron ore producer in Russia, he now owns a total of almost 40% of Russian iron ore production.

One may question local anti-monopoly legislation but Russian authorities did not block the transaction because total output of the two plants in question account for less than 50% of Russian Federation's total world iron ore production, **Table 5.**

China	22
Brazil	20
Australia	17
Russia	8
India	7
Ukraine	5
Other	21
Source: US Geological Society	

Table 5 World iron ore output (%)

Nevertheless, although the deal wasn't technically outside the parameters laid down by the law, heads of other major Russian steel makers, such as MMK and NLMK, Mr Viktor Rashnikov and Mr Vladimir Lisin were naturally alarmed following the approval of the deal. As a result of the transaction, both of them expect a drop in production of pig iron by 10% as only one-third of iron ore produced in Russia will now be available in the open market – the rest being controlled by the other majors. In light of the lack of intervention by the anti-monopoly authorities, MMK and NLMK are pressing for a set of protective measures that would prevent market distortions by dominant players.

The case of Ural Steel has drawn a lot of attention both at home and abroad due to the sheer size of the entity once Mihailovsky GOK has been subsumed. This acquisition highlights the ever-increasing rate of concentration in Russia's metallurgical sector. Mr Nazim Efindeev, General Director of Ural Steel, is undaunted by his critics; "the increase in demand for iron ore coming from China alone creates a scarcity of iron ore world wide. It's clear that future iron ore prices will grow by 50-90%." Going on to defend the decision to amalgamate;

"before the Mihailovsky acquisition only MMK and Ural Steel did not possess a solid raw material base and we felt vulnerable. Now that we have secured our own supplies we can rest easier and similarly Mihailovsky benefits through the fact that 30% of its production will now be guaranteed through in house consumption." Finally, to highlight the fact that there was no underhand or shadowy methods involved, Mr Efindeev ascertains that; "we do not get a special or reduced price in our purchase of

pig iron, we pay the market price as any other organisation would."

While the resulting hangover from communism has left the country with a highly concentrated steel sector (amongst others), traditional complacency that can be seen elsewhere is not prevalent here. Foreign investment is taking place and players are clearly interested in learning more so that producers can move away from their lower priced products and into more lucrative markets traditionally dominated by the West. Rather than constrict the operational efficiency and market outlook of these companies, the size of the leading players appears to have been well used in their desire to drive down costs and increase market penetration. As the steel world enjoys record prices, the level of integration, their tight grip on raw materials and the sheer size of their operations puts the Russian giants on a strong footing should any down turn in the market occur, which could have more extreme effects on less well integrated competitors abroad. The leading Russian companies have strength in depth! **STI**



Lebedinsky GOK mine supplies international and domestic markets



Russian production of flat rolled products is on the rise