

A Russian bear wakes

Avtokran's achievements are as big as its Russian homeland. Now that it has rebuilt its home market dominance, it is looking overseas. Ruth Ling reports

Avtokran is the largest mobile and truck crane plant in Russia and the CIS (Commonwealth of Independent States). Its cranes range from 16t to 100t, and it manufactures slewing rings from 600mm to 3,000mm diameter. It is the only Russian plant that manufactures mobile cranes with a lifting capacity of 100t. The company's Ivanovets brand truck cranes have been exported to Europe, the Near East, Africa, Latin America and Asia.

During its first 50 years, Avtokran produced more than 150,000 cranes on chassis manufactured by the Minsk (MAZ), Ural (UralAZ) and Kama (KaMAZ) car plants, Minsk wheel truck tractor plant and Bryansk Automobile Plant (BAZ). The BAZ plant manufactures the special crane chassis, a support frame which forms an integral platform for the chassis, customised for crane use.

The Avtokran factory was founded in 1954, at a time when all industry in the Soviet Union was established and run by the state: some 33 years before the last president of the USSR, Mikhail Gorbachev introduced perestroika, the programme of economic reform that arguably led to the end of communist rule in the Soviet Union and opened up free trade, both



within the new Russia and the CIS, and with the rest of the world.

Joint stock company Avtokran is located in Ivanovo, a large industrial city 155 miles north-east of Moscow. It is a modern machine-building multi-complex enterprise engaged in a number of types of mechanical production, including metallurgical, forge-pressing, mechanical-treating, welding, assembling and painting, working in line with ISO 9001 process standards.

Crucial to its operation is its relationship with its three partner companies: Gazprom Kran, BAZ and its marketing arm, Ivanovskaya Marka.

Gazprom-kran, a closed joint stock company founded in 1955, is a leader in manufacturing high lifting capacity mobile cranes. Today, it is a modern and advanced crane building enterprise with a unique technological base and automatic production mode. Using highly efficient robotised lines, which include progressive pressing, cutting and welding equipment, the plant produces sections of telescopic booms and integrated frames for special wheeled chassis. This use of robotic lines significantly increases productivity while manufacturing very high quality items.

Avtokran began its relationship with Gazprom-kran in 2004. The company has unique facilities for manufacturing booms, with some of those manufactured by Gazprom-kran supplied to Avtokran. Gazprom-kran is authorised to produce mobile cranes under the brand name Ivanovets of 32t and 50t.

BAZ, also a closed joint stock company, is a major Russian plant for the production of special wheeled chassis and cross-road truck tractors with a load capacity of 16t to 34t. The plant was established in 1958 and in half a century has developed more than 70 models of BAZ wheeled chassis and truck tractors.

Collaboration between Avtokran and BAZ began in 2002, with an agreement between them for BAZ to produce unique all terrain mobile cranes of 50t lifting capacity mounted on special wheeled chassis. Avtokran and BAZ are also partners of the Independent



Association of Machinery Manufacturers (NAMS). It was as a result of this partnership that the BAZ plant was able to begin serial production of special chassis truck cranes with a lifting capacity of 25t, 36t, 50t and 100t.

"BAZ boasts advanced production and technical facilities and high intellectual engineering and technical human resources," says Alexander Khnykin, general manager of Ivanovskaya Marka and director of the sales division. "To satisfy the demands of our customers and end users, we strive to perfect methods of management and production quality and to increase technical standards. As a result, our Ivanovets truck cranes have gained a reputation among the customers as safe and easy-to-use units."

Avtokran's third partner, trading company Ivanovskaya Marka, is a 100% subsidiary, and the official marketing representative of Gazprom-kran and BAZ. After the collapse of the Soviet Union in 1987, the former state-run enterprise Avtokran was on the brink of bankruptcy.

The re-distribution of ex-state property began in the early 1990s, and a group was set up to reconstruct the ailing Avtokran. As part of this restructuring, Ivanovskaya Marka was founded in Ivanovo as the production and distribution division. Today it has its headquarters in Moscow,

with 14 subsidiary offices in major regions of the Russian Federation and CIS.

When Avtokran was established 55 years ago, it began manufacturing the mobile crane brand Ivanovets, which today can claim to be the most popular and reliable crane brand in Russia and the CIS.

All the product ranges of Avtokran and Gazprom-kran are marketed under the brand name Ivanovets, which supplies a wide range of mobile, crawler and manipulator cranes with lifting capacity from 16t to 100t. It enjoys more than 50% of the market share and is steadily and consistently increasing its overall production. In 2008 Avtokran manufactured 2,488 crane units. The strategic target is to increase Ivanovets' market share in Russia and the CIS to 62% by 2010.

Gazprom-kran won the licence agreement that allows it to produce Ivanovets cranes in the city of Kamishin, Volgograd, in 2005. Today, Avtokran produces Ivanovets mobile cranes of 16t, 17t, 25t, 36t and 100t, and Gazprom-kran produces models with 32t and 50t lifting capacities.

The Ivanovets product range includes 20 serially produced mobile cranes mounted on automobile and special chassis with lifting capacities from 16t to 100t, and a crawler crane, DGK-50.1.

The cranes

The model that Alexander Khnykin says "excels all the Russian counterparts by its performance capabilities" is the new KC-54712. Mounted on the BAZ special crane chassis with 6 x 4 drive, it features a new four-section boom with a multi-sided profile. The boom length is 30.1m, the longest in its category.

Truck crane KC-6478, of 50t lifting capacity, is mounted on special chassis BAZ-80291 (8 x 4). The first and second axles are steered. Chassis BAZ-80291 has quadruple-spring suspension, which provides travelling comfort on different roads. The lifting height with the jib is 48.6m.

The flagship of the list is the all terrain crane KC-8973, mounted on a special five-axle BAZ chassis, with a lifting capacity of 100t up to 57m. Unique in Russia, its characteristic feature is its excellent cross-country ability.

Also unique in the Russian market for construction machinery is the lattice boom crawler crane DGK-50.1, with a lifting capacity of 50t. Introduced at the Construction Equipment and Technologies 2009 exhibition, this model has no peers among Russian-made hydraulic crawler cranes, says Avtokran. It was manufactured using the most advanced engineering and technological techniques available.



"The design of the DGK-50.1 is remarkable for its characteristic features which provide functionality, manoeuvrability and operational efficiency," says Khnykin. "It meets all the world quality standards. Its technical characteristics and ergonomics are equal to those of any of its European counterparts; moreover the price is favourably compared with theirs."

The crane is remarkable for the modern design of its undercarriage, consisting of the main frame and two crawlers with drives manipulated separately. This guarantees high manoeuvrability on the working ground. The hydraulic mechanism allows the crawler width to be changed within the limit of 3.0m to 4.25m. For transporting needs, the crawlers can be moved back again. The hydraulic system facilitates step-less control of all mechanisms, even for the wide range of work operation speed control. This makes it possible to combine several operations at once and increases mounting accuracy.

The DGK-50.1 can claim the best-in-class load and height characteristics. The load moment is 211.5 tm. It is capable of load lifting at a height of 60m with a working radius of up to 45m. The main boom length (with a set of sections) varies from 11m to 51m, and the fixed or luffing jib length is from 11m to 31m. When working with a fixed jib, the maximum boom length is 62m. The DGK-50 also has the capacity to install tower boom equipment, using a main boom length from 16m to 36m, and a luffing jib length from 11m to 31m.

All the company's new models are equipped with a new operator's cabin with an extended windscreen, convenient controls, an up-to-date climate system and the facility for inclination change. For security reasons, including working in remote areas and/or with valuable and hazardous loads, all cranes are equipped with a satellite tracking system.





Sales and service

All service and maintenance for Avtokran and its partner companies are handled by Ivanovskaya Marka. Presently, Ivanovskaya Marka operates 52 service centres for Ivanovets cranes all over Russia and the CIS. It also maintains an export division, Namex, which is responsible for overseas contracts.

Khnykin says that Avtokran's principal customers are lease companies with large fleets; oil and gas companies including Gazprom, Surgutneftegaz, Rosneft, Transneft and Lukoil; and construction companies ranging from industrial developers to mid-sized and small businesses engaged in housing development.

"Our export side is still being restructured at the moment," explains Khnykin. "Prior to the break-up of the Soviet Union, we exported a great number of our cranes; thousands were sold every year all round the world. But after the USSR collapsed, the country was plunged into a deep crisis. The main aim of the company then was to concentrate on the domestic market. Only now, with a



market share of more than 50%, can we begin to think of exporting our products and provide high quality innovative mobile cranes abroad."

Avtokran has consistently remained the market leader for the 55 years of its history. "The present crisis hasn't changed that," says Khnykin. "By the end of this slump, most small-scale mobile crane producers will have fallen out of the race. That should give us an additional share of the market: we are planning to increase our market presence to 62% in 2010."

But, at the end of 2009, the first full year of the present recession, what have both domestic and export sales been like?

"Obviously, in difficult economic conditions such as those we are currently experiencing, sales decrease and here at Avtokran we are not an exception," says Khnykin, whose role as sales director includes being responsible for new business. "But our decline is not as significant as that which our main competitors have suffered. Moreover, in 2010, by when the recession should be over, we are planning to increase our sales as well as our market share."

He admits, though, that the company has had to cut back on production capacity. "Naturally, we have reduced our output," says Khnykin. "But our cut is much less than the average reductions being made in the market. Despite the crisis, our company continues to carry out innovative programmes in which we see our future, including the development of new products and personnel training."

Alexander V Tryndin is the strategic marketing and development director of Ivanovskaya Marka, responsible for analysing market shares and competitors, and looking at new developments and trends. Like many businesses facing a

slowdown in sales and productivity, Avtokran is taking steps to make sure it is prepared for improved market conditions.

"We are upgrading our production facilities so as to be able to produce brand new products," Tryndin says. "Our strategic aim is to expand channels of distribution. The end user markets which have shown themselves to be the most immune to the crisis are the oil and gas companies, whose production process is directly related to load lifting machines. These companies are interested in all our product range."

Avtokran is also using the present slowdown to carry out research and development. "Investment in new products is not only financial but also intellectual," says Tryndin. "In this respect it is impossible to create new products without research and development."

The company recently opened two new sales and service facilities in Kazan and Krasnodar. "These two cities were chosen as they are the largest in their regions and because, in a few years time, they will host two large international sports events, Universiada in 2013 and the Winter Olympic Games in 2014, which will both involve a lot of construction work," explains Tryndin. "In addition, Kazan has great oil and gas and machine building potential, and Krasnodar is the largest resort in Russia and also the region where the major ports are situated."

The vastness of the country seems to present no challenge in providing service support that Avtokran can't meet. "Our aim is to provide all our clients with a service centre within a distance of 300km," says Tryndin. "At present we have 52 Ivanovets service centres and we are increasing the number. Mobile teams are employed when necessary. We individually collaborate with companies which own large quantities of our cranes."

Given the economic uncertainty of present times, how does Avtokran view its future? Unsurprisingly, the company's aim is to overcome the impact of the crisis as rapidly as it can and to return to its previous production levels, says Tryndin. "We intend to do this by leveraging our competitive advantage of having the widest distribution chain across Russia. We will focus not just on Russia and the CIS but also abroad, on the foreign entrants into the market. We're starting expansion into the developing countries—Latin America, the Middle East, Africa and South East Asia—rather than tackling the highly competitive markets of the USA and Europe. For the next stage of our company's development, we're looking to the developing world." ■