## Prilhofer Consulting, 83395 Freilassing, Germany

## Revolution in industrial residential construction in Russia

The Morton Group is one of the three largest property developers in Russia and number 1 in the Moscow region. It actively promotes the modern property market in Russia. In order to maintain and further strengthen this position, the Morton Group will start up a new automatic production plant for the manufacture of steel reinforced precast concrete elements in the 2nd quarter of 2014. A separate company has been established under the name of 'DSK GRAD' for this. This precast factory will have a capacity of 500,000 square metres of living space per year. However, the factory will not only handle orders from 'Morton', but will also take on orders from other investors and building contractors who wish to build high-quality and technically sophisticated houses.



The 'DSK GRAD' precast factory will have a capacity of 500,000 square metres of living space per year.

The construction of this factory is the next logical step for the Morton Group as it looks to become the largest construction company in Russia and to strengthen its influence on the property market in the Moscow region.

This factory can offer many superlatives. Never was such a large factory built in such a short time. By the time it is commissioned this factory will be the largest and most modern production plant for precast concrete elements in the world.

The very special equipment in the factory allows the manufacture of the entire range of precast elements for the building of houses: ventilation shafts, lift shafts, stairs, loggia balustrades, floor slabs, columns, beams and other special structural elements.

State-of-the-art automated equipment will be used in this factory for the production of the precast concrete elements, including three automated CAD/CAM-controlled pallet circulation plants with automatic manufacturing of the reinforcing elements by 3 mesh welding plants and subsequent automatic manufacturing of the reinforcement cages. The central concrete mixing plant can produce 1,800 m<sup>3</sup> of concrete per day in order to reliably supply all production areas with concrete.

A further unique advantage of the new manufacturing technologies is the ability to produce different types of building in the same production plant with maximum efficiency and quality. This is made possible among other things by the latest CAD/CAM controller for the production plant. This means that the data from planning are sent directly to the machines and robots in the production plant, making it possible to keep the periods for the development of new building types demanded by the market and customers as short as possible.

The unique technologies are also used for the storage and transport of the precast concrete elements. The precast elements are placed in magazines and taken to the building site by special 'inloader' transport vehicles. These vehicles can load and unload themselves independently without a crane. Hence, the high traffic volumes in the Moscow region are accounted for. The vehicles can supply the building sites with parts independently of the construction times and the assembly technology used during low-traffic periods (e.g. at night). This makes a substantial contribution to the efficiency on the building site and the total costs of the building process are thus also significantly reduced.

By the consistent use of state-of-the-art technologies it will be possible to manufacture less expensive residential buildings than with the system currently used, whilst at the same time increasing the building quality with regard to living comfort (noise or thermal insulation). The overall appearance of the buildings is also improved by modern facade designs.

The buildings will thus be manufactured at the high world market level. This factory and the project solutions used in it (automation systems, technologies and equipment) represent a milestone in the industrial production of buildings in Russia and worldwide.

FURTHER INFORMATION



Prilhofer Consulting Christian Prilhofer Münchener Str. 1 83395 Freilassing, Germany T +49 8654 69080, F +49 8654 690840 mail@prilhofer.com, www.prilhofer.com