

BMA involved in sugar factory project in Russia



*Sugar factory
panorama*



*Site
preparations*

With an annual import volume of some three to five million tons of raw cane sugar from various parts of the world, the Russian Federation heads the list of the biggest sugar importers around the globe. Although the Russian territory provides the necessary parameters, including sufficient land resources, a very good climate and, at least in some regions, excellent soil conditions, sugar beet cultivated in the Russian Federation has until now covered only 30 to 50 % of the country's annual sugar demand. And without any doubt, the labour force that is required for developing this important sector is regionally available.

In order to solve some of problems the state is facing in connection with this development process, above all the considerable amounts of foreign currency that have to be made available for imports and the urgent need for development in various rural regions, the Russian government has now also given priority to development programmes in the sugar sector.

The ultimate aim is to create enough additional capacities by modernising existing sugar factories and building new ones so that most of the raw sugar imports can be replaced with domestically produced sugar. As part of this programme, rural areas will have to be radically restructured, for instance, by considering expanding beet cultivation areas. The regional governments concerned have already given their full support to this programme.

Plans to build a new sugar factory in the Tambov region are one step in this direction. This is the first sugar factory to be built in the whole of the Russian Federation for more than 20 years.

The Russian Tambovskaya Sacharnaya Kompania (TSK), who could be won over as an investor, showed the required entrepreneurial courage and above all farsightedness in giving the go ahead for this project. By signing the contracts with TSK in July 2009, BMA has taken on the exciting task to participate in a challenging sugar factory project.

The factory is to process 12,000 tons of beet per day, which is an impressive capacity by Russian standards. Since at a later stage, the aim is to



Signing the contract in Moscow in July 2009

On the left: Mr Artem J. Kuranov –

Chairman of the TSK Executive Board

provide storage capacity for thick juice to be able to make more efficient use of the plant for a longer time, the sugar house equipment will be limited to an equivalent beet capacity of 9,000 tons per day. As a side effect, this procedure will save considerable funds during the first investment phase.

BMA's share in the project will consist of supplying the equipment for the extraction plant, evaporator station and sugar house, some of which will be complemented with components produced locally. Manufacture of the local portion will be coordinated by the investor. All key components for the above plant sections will be manufactured by BMA in Braunschweig.

The elements for the extraction plant include a Ø 10.6-metre extraction tower with an extraction length of 22.83 metres, a countercurrent cossette mixer, all pumps, the electrical and control systems, as well as peripheral equipment.

The evaporation plant consists of a new 1st-effect falling-film evaporator with a heating surface of 6,000 m². Another five evaporators are used units that the customer has bought from a major German sugar company.

For the sugar house, too, TSK relies on BMA technology. There will be three modern vacuum pans for the production of 'A', 'B' and 'C' crystal

seed. Another four vacuum pans with a capacity of 106 tons will produce 'A' massecuite. The pans can also be connected into a cascade system, BMA's tried-and-trusted VKH, in which case they will provide for the option of continuous operation.

'B' and 'C' massecuite will be continuously produced in two vertical VKT vacuum pans. This will be the first installation of BMA's VKT, which has proved to be a highly efficient performer in many sugar factories, in Russia.

Among the machinery BMA will supply for the Tambov project are also 15 mixers and massecuite receivers with volumes between 7 and 100 m³, including the distribution mixers that will feed the centrifugals with massecuite. Eight batch centrifugals of type B1750 will be installed in the 'A' and 'B' centrifugal stations, while five continuous K2300 machines will handle the 'C' and affination massecuites. A total of 17 pumps of BMA's extremely sturdy F-series, with sizes between F350F and F1000F, will maintain the massecuite flow in the Tambov sugar factory.

When completed, this state-of-the-art sugar factory will be the first plant in the Russian Federation to process more than one million tons of sugar beet per year.

Harald Veleta