

# MMK-Metalurji increases investment in Turkey

*Steel Times International* was invited by Russian steel company Magnitogorsk Iron and Steel Works (MMK) Group to visit its Turkish flat-products minimill, MMK-Metalurji, which started operations in 2010, and to meet with its CEO Vitaly Galkin who presented a plan of additional investment worth up to US\$100M to further reduce costs and increase production efficiency.

By Alex Gurov\*

MMK-Metalurji A.Ş. is a new generation ecologically friendly minimill with a production capacity of 2.3Mt/y of various high-margin flat steel rolled products. It is located in Iskenderun, southern Turkey.

An investment exceeding US\$2bn was made to construct the plant which was completed in 2010, and officially opened on March 9, 2011.

The Company comprises a minimill and steel service center, covering an area of 500ha in Dörtöyl district close to Iskenderun southern Turkey, as well as a second service center in Istanbul. The service centres process various flat steel products.

The company employs about 2500 local workers – with good professional training – and just ten plant managers from MMK. The official language of contacts within the plant is English.

The Italian company Danieli, supplied all key process equipment.

The 300t AC EAF is one of the most powerful worldwide and has an annual capacity of 2.3Mt/y crude steel. Steel is cast up to 1750mm wide on a thin slab caster supplied by Danieli which is directly linked to a compact hot strip mill. Further processing of the hot rolled coil is on a continuous pickling line and a reversing cold-rolling mill. Downstream, there is hot-dip galvanizing and colour coating lines.

MMK-Metalurji is the sixtieth complete minimill built by Danieli. Danieli Automation supplied all the plant automation using a PLC-SCADA optimisation configuration.

In a short time after start-up the plant was able to achieve project capacity equating to 2.3Mt/y of hot-rolled coil, 800kt of cold-rolled coil, 900kt of galvanised coil and 400kt of colour coated coils with highest quality of products in low and medium C steels and HSLA steel grades.



The thin slab caster – mill complex at MMK-Metalurji in Turkey

MMK-Metalurji has its own seaport on the Mediterranean coast able to handle 12Mt of cargo a year. The berthing length is 1200m and the water dredged to a depth of 30m enabling up to twelve vessels of various types – eg dry bulk, general cargo, scrap carriers, container ships and ro-ro vessels of up to 100 000DWT, to be berthed and unloaded/loaded simultaneously.

The seaport at Iskenderun offers good logistics for supplying the service center in Istanbul with cold rolled coil.

MMK-Metalurji produced a variety of added-value flat steel products for the rising domestic market and export into the countries of Europe, the Middle East, Mediterranean, South Russia and Ukraine. According to CEO Vitaly Galkin the plant will produce just 1Mt of steel products in 2012 as the market is slack; of this 90% will go to markets in Turkey. However, an output rate in excess of 190kt during one month of 2012 proved that the mill could reach its 2.3Mt annual capacity. Further development of MMK-Metalurji is a priority for the MMK Group in the expectation of a global economic upturn and a recovery in the steel sector in the foreseeable future.

MMK-Metalurji CEO Vitaly Galkin presented some proposed additional investment projects to the current production technology. These would expand the mix of steel products towards more high value-added products and increase their share of the high-value-added sector, cut production costs and increase pro-

duction efficiency. “We see such investments as well-timed and rational during the current phase of the economic cycle”.

The list of investment projects includes construction of an OxiCup shaft furnace and briquetting plant to treat plant dusts and also to melt pig-iron in order to reduce the Company’s consumption of scrap, the cost of which has closely followed that of coil in recent years. The OxiCup furnace will also make efficient use of production waste and replace bought-in pig iron with MMK’s own, supplied from Russia.

Fine ferrous materials, such as dusts, sludges and mill scale arisings from the plant will be converted to high-temperature-resistant self-reducing pellets in the OxiCup furnace. This technology enables the recovery of hot metal from wastes for use in the EAF. An EAF with scrap pre-heating proves the most appropriate for melting these so-called C-bricks which, together with scrap and skulls, offers an extremely attractive feed for steel shops that are forced to process their byproducts for economic or to meet legislation. In the process of the recovery of the iron units, the residual materials are converted into an inert slag that has some commercial value. This zero-waste-principle compares well in terms of economic efficiency.

Another project deals with modernisation of the hot strip mill 1750, which currently produces coil in strip 1-20mm thick and 800-1570mm wide, by the addition of another 4-Hi rolling stand in order to expand the product range and increase the share of high-value products. The capacity of the port will also be expanded by an investment of US\$13M.

MMK CEO Boris Dubrovsky said: “Currently we are working on several projects in our investment portfolio for MMK-Metalurji that may see investments of upwards of US\$100M.” ■



Automation and key plant was supplied by Danieli of Italy

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