

## Azovstal unveils blast furnace reconstruction plans to local government officials

The Mariupol City Council visited Metinvest Group's Azovstal Iron and Steel Works. The local government officials viewed the operation of cleaning equipment in the plant's blast furnace shop and reviewed its Blast Furnace #4 Reconstruction project.

A few years ago not all of Azovstal's blast furnaces were equipped with environmental protection equipment, but Metinvest has gradually been reconstructing its blast furnaces with state-of-the-art cleaning technologies.

Blast Furnaces #2, #4, and #6 now have dust and gas sampling from the casthouse. A dust suppression system using nitrogen was commissioned at Blast Furnace #3 four years ago. A similar system was installed at Blast Furnace #5 this year.

Measurements indicate that the dust level per one cubic meter of air is 36-39 mg at the plant's stack versus the standard rate of 50 mg.

Metinvest Group plans to invest more than \$92 million in the reconstruction of Blast Furnace #4, despite of the unfavourable economic environment.

Enver Tskitishvili, Azovstal's general director, told the visitors that the new furnace would be installed in the same location as the existing one. Blast furnace shaft cooling systems will be revamped. A new evaporative cooling system with forced circulation at the blast furnace will help reduce water consumption by five times.

The major overhaul of Blast Furnace #4 will employ a number of the latest technologies in metallurgy. Using cutting edge refractory materials for lining will increase the energy efficiency of the blast furnace, reduce the coke rate and improve the period between overhauls from the current 10-12 years to 15-20 years.

A hydraulic taphole drill and mud gun machines will be installed. The electrical equipment will be replaced, and modern process control automation and new instrumentation will be installed.

The new furnace will meet the best available environmental practices. To do this, double floor casthouses will be constructed, which will accommodate a highly efficient bag filter. The casthouses will be of a new design and the fume extraction system will reduce dust emissions by six times and eliminate red fumes.

Other items that will improve the blast furnace's environmental impact include the blast furnace gas cleaning system, covered iron and slag runners, reconstruction of fume extraction ducts at casthouses, new cleaning systems for the skip pit and a bell-less top charging device.

Mariupol Mayor Yuriy Khotlubey welcomed the start of Azovstal's reconstruction programme and highlighted its importance for the city of Mariupol. According to the mayor, Metinvest is likely to implement the city's environmental programme ahead of schedule and continues to sponsor environmentally friendly projects, even though its steelmaking plants are running at a loss.

"The reconstruction of Blast Furnace #4 creates completely new opportunities. It provides for the use of the latest international developments in ironmaking. Azovstal's production capacity is currently underutilized, yet the time is not being wasted – the reconstruction and updating work is in progress. The time is being managed as much as possible to keep Azovstal at the level of a modern plant," Khotlubey said.

City Council members also visited Blast Furnaces #2 and #5 when iron tapping was taking place and saw its efficient fume extraction systems, which were installed two years ago.

The visitors saw that the operation of the gas cleaning systems was monitored in real time. It is technically not feasible to run a blast furnace without functioning filters.

"I have something to compare this with. I am familiar with the operation of blast furnaces and used to work in an open hearth shop," said Vladimir Stepanov, head of the Ordzhonikidze District Administration. "The approach to the environment has changed a lot. I see how much work has been done. The general director also outlined the plans to modernize Azovstal. I am impressed with the huge step forward Azovstal has made and how big its plans

are. The level of cleaning at the new furnace will be better than in Europe. It is very impressive.”

At the close of their visit, City Council representatives attended a daily meeting where environmental issues and the key performance parameters of blast furnace shop were discussed.

“We plan to modernize all of the blast furnaces step-by-step, making operation of the blast furnaces environmentally friendly and improving environmental situation in Mariupol. We will develop the production process and apply leading eco-technologies to create comfortable conditions for the local community,” said Enver Tskitishvili, Azovstal’s general director.

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