

**Haver & Boecker Niagara and Metinvest have met: Together for a future with more CO2-efficient ironmaking process**

The iron and steel industries are indispensable components of economy. Our world is built by using steel. We need even more steel for the improvement of infrastructure of our cities. Owing to this increasing steel demands we consider significantly growth of the iron ore production in recent years.

On the other hand, there are many environmental effects from the iron industry. Iron ore and steelmaking are the largest energy consumer of electricity and fossil fuels, being responsible for over 25% of hazardous atmospheric emissions and over 30% of carbon dioxide emissions. That's why we need to think about sustainable solutions that minimize the CO2 emissions and energy use by iron ore production; solutions that deliver higher performance in terms of energy efficiency, resource efficiency and better process and product performance. We need CO2-efficient ironmaking processes.

One of the possible solutions could be direct reduction process like Midrex- or HYL, Corex process. 1

In this light, the transformation of iron ore into steel requires several process stages. First at all, we need to become H2 and iron ore pellets. Iron ore pellets produced from the iron ore concentrate by pelletizing and sintering. At the same time, the quality requirements of pellets, such as size distribution, physical, chemical and metallurgical specifications are higher and should be guaranteed by very innovative pelletizing technology that is able to ensure the perfect flow for our blue planet.

As a world's leading supplier for customized screening, washing, pelletizing machines and plants solutions, we are feeling responsible to take actions into the protection of our environment by developing systems, which use fewer resources, fulfill the needed higher quality of the pellets and care for the health of the mother Earth.

The result of our efforts we developed the SCARABAEUS pelletizing disc. The pelletizing disc fulfills the specification needs for the processes of direct reduction and saves up to 5% energy by reduced recycling rate. The production capacity can be up to 150 t/h.

Those characteristics convinced experts from Eastern Europe in the potential of our innovative pelletizing technology for the production of iron ore pellets with a very narrow particle size distribution (10 to 12,5 mm) and high product rate (up to 70 %). Subsequently we got the great opportunity to work with one of the international steel and mining groups in east Europe: Metinvest. After conducting iron ore tests in Haver Engineering in Freiburg and proving the possibility of achieving the desired parameters, a contract for the supply of the necessary equipment was signed. The pelletizing disc SCARABAEUS 7500 was delivered in combination with completely automatic control system.

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WASHING

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In order to satisfy the higher needs of the pellets, an automatic pelletizing disc control system was introduced for the first time, incorporating three machine parameters: rotation speed, tilt angle, and board height.

In the end of July the CEOs of Haver Niagara GmbH (Peter Grotjohann) and Metinvest (Yuriy Ryzhenkov) have met in the manufactory of Metinvest in Ukraine. They inspected our powerful and reliable pelletizing technology and discussed the future course of our business relationship. The managers have dealt with all the advantages that our technology ensures to Metinvest and put heads together into developing the best strategy that is able to become fully aware of their common vision for the future: to live in a stronger, lighter and more sustainable world, where technology guarantees the care for the health of the mother Earth using highest environmental protection standards.

We are very happy that starting working together with Metinvest opened new doors to more CO2-efficient ironmaking processes and we have the unique opportunity to lay the first foundation stone of the future to green iron ore processing.

Metinvest, we would like to express our huge thanks for the trust, which you have placed in us. It is such a pleasure working together!

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