TOMRA SORTING SOLUTIONS | MINING

PRESS RELEASE

Profitable Green Mining Is A Reality With Tomra's Advanced Sorting Technologies

City, country, date – TOMRA's advanced sensor-based sorting technologies offer mining operations the dual benefits of energy efficiency and the ability to recover valuable ore even from sub-economic deposits or dumps. This has become increasingly relevant as the mining industry – a very large consumer of energy – is shifting towards a Green Mining approach to reduce its environmental footprint in the face of climate change, while running profitable operations.

Tord Svensson, TOMRA's Head of Sorting Mining, explains: "For a mining company to become more sustainable and profitable, it requires a shift in focus that places more value on potentially limited commodities like water and ore. To achieve an environmentally-focused and efficiency-oriented production process – which is integral to Green Mining – it is necessary to implement solutions right from the beginning of the process. This is where ore sorting equipment comes in: using these technologies in the early stages of mining reduces waste material and shrinks the carbon footprint, while increasing profitability."

TOMRA is a leading pioneer of sensor-based sorting technologies, which are able to give a significant contribution to a more environmentally sustainable approach in mining. It offers smart technologies for sorting and separating a variety of valuable substances. Its solutions range from industrial mineral processes to sorting gemstones, ferrous and non-ferrous metals, coal and other fuels and slag metal. The sensor-based sorting technology by TOMRA not only significantly reduces the amount of energy and water required compared to more traditional methods such as grinding and DMS (Dense Media Separation), but also maximizes the efficiency and quality recovery of valuable ores.

X-Ray Transmission (XRT), one of TOMRA's leading solutions, separates dry material of various ore and minerals based on their atomic density, irrespective of surface properties and thickness. This means that it is not necessary to crush or grind every rock into smaller particles, which results in massive savings of energy, water, and their related costs. Considering that grinding is the most energy-intensive part of the production cycle, as an estimated 50-75% of the energy used in mining is for the liberation and comminution of ore and minerals[1], this technology can have a significant impact on the sustainability and profitability of a mining operation.

Pre-concentration techniques like sensor-based sorting have been proven to reduce energy consumption by about half, resulting in a considerable reduction of the CO_2 footprint and providing a highly cost-effective solution.

TOMRA has created a Green Counter that displays on its website the total amount of CO_2 reduced through the utilization of TOMRA's sorting machines in real time. It uses the smart technology within the equipment, which records the amount of rock sorted and eliminated, as well as throughput and total hours of operation. With this data, TOMRA and mining companies are able to calculate the energy in kWh saved by not treating the waste which has been removed by the sorters. The amount of energy saved is converted into CO_2 equivalents, which in turn are converted into CO_2 metric tons.

Through the use of TOMRA sorting machines, client companies have saved 123,696 metric tons of CO_2 in 2018 alone.

TOMRA's sorting solutions have proven to be more than just technological innovation – they are also considered the benchmark for industry standards in both efficiency and sustainability. TOMRA remains committed to evolving its technology with a clear focus towards preserving our shared natural resources.

[1]Source: "The Mining Industry and the Circular Economy" Mines – NREL Joint Workshop September 13, 2018

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About TOMRA Sorting Mining

TOMRA Sorting Mining designs and manufactures sensor-based sorting technologies for the global mineral processing and mining industries.

As the world market leader in sensor-based ore sorting, TOMRA is responsible for developing and engineering cutting-edge technology made to withstand harsh mining environments. TOMRA maintains its rigorous focus on quality and future-oriented thinking with technology tailor-made for mining.

About TOMRA

TOMRA was founded on an innovation in 1972 that began with the design, manufacture and sale of reverse vending machines (RVMs) for automated collection of used beverage containers. Today TOMRA provides technology-led solutions that enable the circular economy with advanced collection and sorting systems that optimize resource recovery and minimize waste in the food, recycling and mining industries.

TOMRA has ~100,000 installations in over 80 markets worldwide and had total revenues of ~8.6 billion NOK (€880m) in 2018. The Group employs ~4,000 globally and is publicly listed on the Oslo Stock Exchange (OSE: TOM). For further information about TOMRA, please see www.tomra.com

For more information on TOMRA Sorting Mining visit www.tomra.com/mining or follow us on LinkedIn, Twitter or Facebook.