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**TOMRA pioneers the use of deep learning technology to distinguish between different types of wood-based materials and boost yield and purity**

Sensor-based sorting specialist, TOMRA Recycling, has further strengthened its offering for the global wood recycling sector by becoming the first in the world to use deep learning, a subset of artificial intelligence, in wood recycling applications.

The company has combined its industry-leading AUTOSORT® technology with its deep learning-based sorting add-on, GAIN, to create a solution that can distinguish between and sort different types of wood-based materials, significantly enhancing customers’ sorting and manufacturing processes.

The primary application for TOMRA Recycling’s new solution is sorting *Wood A* – non-processed wood – from *Wood B* – processed wood products such as MDF (medium-density fiberboard), HDF (high-density fiberboard), oriented strand board (OSB) and chipboard.

TOMRA Recycling has been a frontrunner in the global wood recycling sector for more than 10 years. The company’s X-TRACT solution quickly became popular with chipboard manufacturers to produce a clean recycled woodchip fraction by sorting and separating out the inert material (glass, stones, ceramics, etc.) and metals. Once the X-TRACT unit has removed these impurities, the recovered woodchip is of sufficiently high quality to be used in the production of standard chipboards.

In recent years, however, TOMRA Recycling has been approached by an increasing number of customers who are looking to use recycled wood of a much higher purity level in their production processes. To achieve these specific purity requirements, in addition to removing the inert material and metals in the infeed stream, other impurities including engineered wood composites as well as polymers, would have to be removed.

As these materials are not distinguishable using x-ray technology, the X-TRACT unit was unsuited to this sorting task. Determined to help these customers and recognizing a potential gap in the market for a solution which would allow companies in the wood recycling sector to optimize their wood sorting processes, TOMRA Recycling’s deep learning experts developed an application that combines TOMRA’s industry-leading AUTOSORT® unit with its deep learning-based sorting add-on, GAIN.

TOMRA’s Wood A vs Wood B application uses deep learning technology to sort and extract impurities that couldn’t previously be detected, making it possible for the first time to detect, analyze and sort every different wood type, therefore cleaning up the real wood fraction.

TOMRA is the first company in the world to use deep learning technology to detect and separate different wood types, targeting Wood B (processed wood composites) as impurities to leave a clean Wood A fraction (non-processed wood), or, depending on customers’ requirement, producing individual high purity engineered wood composite fractions out of the infeed stream.

Philipp Knopp, Product Manager at TOMRA Recycling, comments: “Wood recycling is a fast-evolving market, with increasingly stringent legislation being introduced in a number of regions globally to move towards a more circular economy model. Our AUTOSORT® with GAIN solution uses deep learning technology to create a robust and flexible solution which we are confident will be welcomed by wood good producers across to globe. It will also enable our customers to future-proof their operations as they will be better equipped to adapt and react to any future changes in the global wood recycling market such as new legislation. We are delighted to be the first in the market to offer this artificial intelligence-based solution.”

**About TOMRA Recycling**

TOMRA Recycling designs and manufactures sensor-based sorting technologies for the global recycling and waste management industry. Over 7,400 systems have been installed in more than 100 countries worldwide.

Responsible for developing the world’s first high capacity Near Infrared (NIR) sensor for waste sorting applications, TOMRA Recycling remains an industry pioneer with a dedication to extracting high purity fractions from waste streams that maximize both yield and profits.

TOMRA Recycling is part of TOMRA which also develops sensor-based systems for sorting, peeling and process analytics for the food, mining and other industries.

TOMRA Recycling is owned by Norwegian company TOMRA Systems ASA, which is listed on the Oslo Stock Exchange. Founded in 1972, TOMRA Systems ASA has a turnover of around €995m and employs ~4,300 globally.

For more information on TOMRA Recycling visit [www.tomra.com/recycling](http://www.tomra.com/recycling) or follow us on [LinkedIn](https://www.linkedin.com/company/tomra-sorting-recycling/?originalSubdomain=de), [Twitter](https://twitter.com/TOMRARecycling) or [Facebook](https://www.facebook.com/TOMRA-Sorting-Recycling-183257172165234/).

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