

The first automated aluminum recycling plant in Africa debuts, built by the Italian company (GME Recycling)



milan, Lombardy Sep 12, 2024 ([Issuewire.com](https://www.issuewire.com)) - [GME Recycling](#), a leading Italian company in the design and construction of recycling plants, has announced the creation of the first fully automated aluminum scrap recycling plant on the entire African continent, located in Nigeria.

The new facility represents a prime example of excellence in innovation, safety, recovery, and sustainability, aiming for quality and reliability in the complex context of Nigeria.

The waste recycling industry in Nigeria has significant yet underutilized potential, especially considering it is currently the most populous state on the African continent and the sixth in the world. In Lagos alone, only 20% of approximately 13 million tons of annual waste is correctly collected, a minimal amount with severe consequences such as clogged infrastructure, floods, diseases, and an estimated loss of 2.5 billion dollars in potential recycling value each year.

This significant gap motivated [GME Recycling](#) to design a plant that can make a difference, promoting sustainable circular models.

Maurizio Mori, Marketing and Sales Manager of GME Recycling, states: *"In general, there are plants in Africa for the recycling of aluminum scrap, but none with this combination of high capacity (150,000 tons of waste per year) and GME's level of technology and automation, and therefore final yield recovery. It is estimated that our plant can achieve separated aluminum with a yield of over 97% and is fully automated, drastically reducing the disposal of abandoned waste and eliminating the typical*

exploitation of these territories”.

Equipped with innovative features such as the “MAX1700” Hammer mills and the “VENTIDUDENTI” shredder, as well as eddy current systems and X-ray machinery, the plant volumetrically reduces aluminum and removes contaminants. The eddy current systems and XRAY sorting units remove heavy metals such as copper, brass, and zinc and separate primary from secondary aluminum. Additional sensor machines divide the heavy metals by color.

The main products of the plant are directed to internal and external foundries of Terra Aqua, completing the recycling process and production of new semi-finished products. This process produces high-quality single-product fractions ready for use in furnaces, reducing the need for primary aluminum derived from the mining industry.

Thanks to this innovative plant, it is possible to significantly reduce CO2 emissions and save up to 95% of the energy needed for the production of new aluminum, substantially contributing to environmental sustainability.

The plant also includes a dry sole furnace for treating specific types of more "complex" scraps, such as engine blocks, connected to an exhaust gas purification system to minimize emissions.

Currently, this plant represents the first example of complete automation of its kind for technological type and advanced configuration in the entire African continent, with a primary focus on sustainability, circular economy, and safety.

The plant will also involve around 20-25 specialized figures in its operation, in addition to another 50 hires necessary for managing activities with stakeholders. A social sustainability project that aims to promote community well-being, improve quality of life and economic stability, ensure equal opportunities, and preserve resources and the environment.

The technological investment amounts to 6 million euros, with a total construction cost of 10 million euros, considering also equipment, personnel, and utilities. The estimated potential turnover is about 177 million dollars per year.

This initiative represents an important step towards a green economy in Nigeria, a country where waste management is out of control, with scraps often abandoned, burned, or buried, sometimes in the presence of contaminants such as motor oil.



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