



Nexa Resources advances in the acquisition of 10,000 tons of bio-oil from Aperam BioEnergia to reduce emissions when producing zinc oxide

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- Company starts large-scale use of green fuel at Três Marias (MG) unit;
- Project represents an annual reduction of 25,000 tons of CO₂ (scope 1) released into the atmosphere.

Nexa Resources has entered into an agreement to acquire 10,000 tons of bio-oil from Aperam BioEnergia in order to gradually replace the use of fossil fuels in the production of zinc oxide at the Três Marias (MG) metallurgical unit.

Recovered and processed as a co-product from the production of charcoal from Aperam BioEnergia's renewable forests in the Jequitinhonha Valley, the biofuel will be used by Nexa in 12 zinc oxide production furnaces later this year. It is a sustainable solution that contributes to the energy transition and industrial decarbonisation.

With vegetable origin, 100% renewable and low sulfur content, the bio-oil has been tested since 2017. It has been used in and adopted to different applications and is now capable of replacing the use of fossil oils in industrial processes, such as 1A, BTE, among others.

Paulo Nogueira, General Manager of Nexa's Três Marias Metallurgical Unit, says that the next step in the partnership is the gradual application of biofuel in the 47 furnaces of the Três Marias unit. "Today, Nexa is already the zinc producer with the lowest carbon footprint worldwide. The use of bio-oil in our operations will intensify the achievement of our decarbonization goals by 2030, which foresees a reduction in direct emissions (scope 1) by 20%, which means a total reduction of 52 thousand tons of carbon, in addition to maintaining the high share of renewable sources in its electricity matrix", he highlighted.

The executive manager of Aperam BioEnergia, Benone Braga, also celebrated the partnership with Nexa, saying that the contract validates the large-scale adoption of the sustainable bio-oil produced at Aperam BioEnergia, commercially and environmentally. "We already have other contracts with other companies, and we are negotiating with other major Brazilian players. This gives us the certainty that we are on the right track, offering the market a 100% national product with great added value", he emphasized.

Bio-oil and its advantages

Bio-oil is a fuel produced from liquid co-products of charcoal production that otherwise are burned into a combustion chamber before release in the atmosphere. Developed in 2017 through a partnership between Nexa and Aperam BioEnergia, with the participation of a team of technicians who make up the current startup WOX Engenharia de Processos Customizados. The following year, it began to be tested in Três Marias (MG) and based on good results, Nexa prepared to adopt the fuel on an industrial scale, focusing on greener production and focused on decarbonization.

"The production of charcoal generates a co-product, bio-oil, which is recovered and processed from a series of adaptations focusing on innovation that Aperam South America has developed and implemented in its processes. Aperam BioEnergia was able to enable the production of a sustainable product that will contribute to the decarbonization of several industries. The great innovations are the result of several other changes that are taking place and, in the end, make it possible to break old processes," adds Benone Braga.



About Nexa

Nexa Resources is one of the zinc producers with the lowest carbon footprint in the world, as well as producing copper and lead. It has been operating for more than 65 years in the mining and metallurgy segments, with operations located in Brazil and Peru and an office in Luxembourg, supplying its products to all continents. Its employees work every day focused on building the mining of the future, to be increasingly sustainable, innovative and with the best safety practices and respect for people and the environment. Since 2017, its shares have been traded on the New York Stock Exchange, with its majority shareholder being Votorantim S.A. For more information, visit www.nexaresources.com

About Aperam

Aperam is a global player in stainless, electrical and specialty steel, with customers in over 40 countries. Starting from 1 January 2022, the business is organized in four primary reportable segments: Stainless & Electrical Steel, Services & Solutions, Alloys & Specialties and Recycling & Renewables.

Aperam has a flat Stainless and Electrical steel capacity of 2.5 million tonnes in Brazil and Europe and is a leader in high value specialty products. In addition to its industrial network, spread over six production facilities in Brazil, Belgium and France, Aperam has a highly integrated distribution, processing and services network and a unique capability to produce low carbon footprint stainless and special steels from biomass, stainless steel scrap and high performance alloys scrap. With Bioenergia and its unique capability to produce charcoal made from its own FSC® -certified forestry and with ELG, a global leader in collecting, trading, processing and recycling of stainless steel scrap and high performance alloys, Aperam's places sustainability at the heart of its business, helping customers worldwide to excel in the circular economy. Thanks to BioEnergia forestry sequestration, Aperam's Brazilian operations presented a certified net negative GHG balance (scope 1+2) in 2022.

For further information, please refer to our website at www.aperam.com.

About Aperam South America

One of the largest producers of charcoal in the world, Aperam BioEnergia is the renewable energy production unit of Aperam Brazilian operations - Aperam South America, the first steelmaker in its segment to achieve a neutral balance between carbon emissions and removals in its operations, in scopes 1 and 2.

The steelmaker is an integrated producer of stainless, electrical and carbon flat steels. Its industrial plant, located in Timóteo-MG, has a total production capacity of 900 thousand tons of liquid steel per year.

Aperam BioEnergia, located in the Jequitinhonha Valley (MG), produces and sells charcoal, genetic technology, industrial technology, seedlings and seeds, from renewable eucalyptus forests. The company is also the first in Latin America to market carbon removal credits from the production and application of biochar in its forests.

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