Too good to waste: King of the Netherlands opens new state-of-the-art recycling plant in Delfzijl

Purified Metal Company has developed a new worldwide patented process to give contaminated steel scrap a second life, closing material loops with the support of EIT RawMaterials

Brussels/Berlin, 25 September 2020. Developing raw materials into a major strength for Europe – this week Purified Metal Company (PMC) has made an important contribution to the vision of EIT RawMaterials in opening the first recycling plant for contaminated steel scrap worldwide. Guest of honour, His Majesty the King Willem-Alexander of the Netherlands, welcomed numerous guests and solemnly opened the plant, underlining the importance of the issue: a sustainable Europe is no longer a mere idea, it is already taking shape.

A sustainable use of natural resources is the basis for a prosperous European economy. Across the globe, primary raw material sources are depleting, while the amounts of industrial waste and end-of-life-products are rapidly increasing. These waste streams contain valuable raw materials that can be extracted to meet the growing demands from global industrial production and consumption. PMC is the first company in the world with an environmentally friendly and economically feasible method to recycle contaminated steel scrap into high-quality raw materials for the steel industry. Thereby the newly constructed plant makes a valuable contribution to the decarbonisation of the EU's steel industry: it will save 150 000 tons of CO2 per year compared to the production of steel from iron ore. Those CO2 savings equal the annual emissions of 45 000 passenger cars.

From start-up to market leader

The idea of PMC was born in 2011. The combination of steel with hazardous substances can be found in various steel objects, such as valves, railways, tubes, bridges and heating devices. Without PMC, those objects are cleaned, provided this is economically feasible, and then sold as raw materials or as end products. If cleaning is not possible, the material is disposed of in landfills. In this way, entire trains disappear underground. Through the new process developed by PMC, substances such as asbestos are broken down into harmless components and the steel scrap is converted into a new premium raw material - high-quality Purified Metal Blocks (PMB)™. The hermetically sealed factory guarantees the safety of people and the environment during processing and transport. Only tried and tested techniques are used, which have already clearly proven their reliability in other areas.

On its way from start-up to technological leadership, PMC received support from EIT RawMaterials, the largest innovation community in the raw materials sector worldwide. Amongst others, EIT RawMaterials provides funding and entrepreneurship coaching to early-stage start-ups, with a focus on idea-to-market. With this experienced supporter on the side, the former start-up grew into a well-established Small and Medium Enterprise (SME). In 2017, PMC was even nominated for the EIT Venture Award, recognizing the most promising entrepreneurs and innovators in Europe.

“Considering the materials needs of an exponentially growing world population, recycling will have to evolve from a side stream to a major pillar of raw materials supply if we want to protect our planet and make business sustainable. PMC is taking an important pioneering role here and for us as EIT RawMaterials it is exciting to be able to support such valuable innovations on their way to the market.”, says Bernd Schäfer, CEO at EIT RawMaterials.

“It was an intense process to connect the right parties to our ambitious plan for a circular solution for contaminated steel scrap.”, the Co-founders Jan Henk Wijma, Nathalie van de Poel and Bert Bult explain. “We are very grateful for the contribution of EIT RawMaterials that helped the success of this project.”

A big step in decarbonising the European steel industry

The recycled steel by PMC is a high-quality raw material that can be used by steel manufacturers to produce new steel products. Therefore: every kilogram of Purified Metal Blocks processed saves 1 kg of CO2 because the steel is not produced from iron ore. Not only does PMC thus solve a waste problem: it also lowers CO2 emissions by 50% at factories that produce steel from the blocks of PMC compared to factories that make it from iron ore.

The European Parliament’s ‘Green Steel for Europe’ Pilot Project (GREENSTEEL) supports the EU towards achieving the 2030 climate and energy targets and the 2050 long-term strategy for a climate neutral Europe, with effective solutions for clean steelmaking. In this regard, the opening of the PMC is an important step in the EU’s mid- and long-term strategy to decarbonize the steel industry and the EU’s effort to secure raw materials and foster a circular economy.

About EIT RawMaterials:

EIT RawMaterials, initiated and funded by the EIT (European Institute of Innovation and Technology), a body of the European Union, is the largest consortium in the raw materials sector worldwide. Its vision is to develop raw materials into a major strength for Europe. Its mission is to enable sustainable competitiveness of the European minerals, metals and materials sector along the value chain by driving innovation, education and entrepreneurship.

EIT RawMaterials unites more than 300 partners from leading industries, research and technology organizations and universities from more than 27 European countries. Partners of EIT RawMaterials are active across the entire raw materials value chain: from exploration, mining and mineral processing to substitution, recycling and circular economy. They collaborate on finding new, innovative solutions to secure supplies and strengthen the raw materials sector in Europe.

Contact & Info:
navos - Public Dialogue Consultants GmbH
By order of:
EIT RawMaterials GmbH | Tauentzienstr. 11 | 10789 Berlin | Germany
T +49 30 467 2425 73 | E eitrawmaterials@navos.eu