

INNOVATIVE RECYCLING

OF GIANT ELT OTR THROUGH WATER JET

THE PROJECT

For the first time in the world, InReGEO project provides a definitive solution to the environmental risk of the Giant and Mining End-of-Life, either abandoned, landfilled or stockpiled. The objective is to build and fully validate an innovative pilot plant that breaks-down Giant EOL OTR (Off-the-Road) tyres through a totally chemical free and green process that uses only High Pressure Water Jet (H.P.W.J. Technology) in a closed-circuit system, enabling the production of a valuable secondary raw materials that is rubber Powder and Granules with unique properties.

THE PROBLEM

Currently giant and OTR scrap tires are not recycled. Due to their size, it is impossible to process them and obtain the granules and powder as it is done with the car and truck tires. Most of the time they are simply stockpiled, dumped or worse abandoned and only sometimes they are cut to reduce their size to be transported and make them available for further arrangements or burning.

OBJECTIVES

- Build and fully validate an innovative pilot plant that breaks down Giant End-of-Life OTR tires through a totally chemical free and green process in a closed circuit system named "High Pressure Water Jet".
- Production of valuable secondary raw materials: already partially devulcanized and pure rubber Powders and Granules extremely rich in Natural Rubber content, ready to be reintroduced, for the first time into the tire manufacturing or retreading processes.
- Harmonic Steel with a very high degree of purity in compliance with steelworks quality requirements.
- A real Circular Economy model in the tire industry, closing the loop of manufacturing value and supply chains by providing a substitute of the Natural Rubber for new tire compounds creating a total 100% Environmental Friendly and sustainable recycling.
- Increase company awareness operating in the field of Giant Tires, through targeted information and communication campaigns through our unique way of recycling this kind of special tires

GREEN GOALS

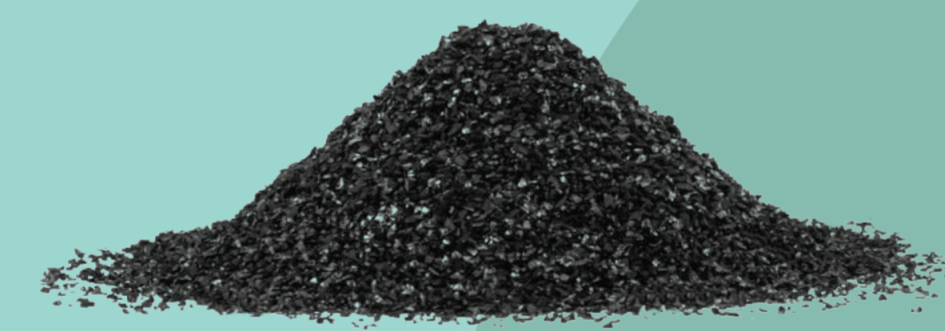
- ⤴ INCREASE THE EU'S CLIMATE MITIGATION AND/OR ADAPTATION AMBITION.
- ♻️ TRANSITIONING OF INDUSTRY TO A CLEAN AND/OR CIRCULAR ECONOMY.
- 🌲 PRESERVING AND RESTORING ECOSYSTEMS AND BIODIVERSITY ("TREES").
- 🌿 REALIZING A ZERO-POLLUTION AMBITION AND A TOXIC FREE ENVIRONMENT ("WATER").



RUBBERJET VALLEY

It is an Italian company that has developed an innovative proprietary Technology named "High Pressure Water Jet" able to recycle OTR and Giant End of Life Tires and able to produce engineered raw materials (Polymers) which are Powder capable of replacing virgin raw materials (e.g. Natural Rubber) in a wide range of applications including new tires compounds.

www.rubberjetgroup.com



PIAVE TYRES

Is an Italian company founded in 1960 and has become one of the European retreading company leader specialized in retreading OTR Tires, selling its products all over Europe. The company act as relevant partner in the project with the aim to follow all the characterization activity and validate the insertion of the final products within their retreading applicaton.

www.piavetyres.it



ETRA

It is a European Association devoted exclusively to tyre and rubber recycling. Founded in 1994, currently ETRA has around 250 members in 46 countries. ETRA plays an important role in the project by contributing to evaluate key aspects of OTR recycling and disseminating the results to wide audience of industries and Stakeholders.

www.etra-eu.org

The InReGEO project has received funding from the LIFE Programme of the European Union.
<https://lifeinregeo.eu/>



PROJECT ACRONYM:
LIFE InReGEO LIFE19 ENV/IT/000313
DURATION:
September, 1st 2020
to February, 28th 2023