ECOPNEUS FOR A CIRCULAR ECONOMY IN ITALY RECOVERING END-OF-LIFE TYRES

Ecopneus is a non-profit company created in 2011 by the six major tyre manufacturers operating in Italy to manage a large part of the over 380,000 tons of tyres that reach the end of their life every year in the country. Over the years many other tyre production and import



companies have joined Ecopneus which counts today 59 members, managing 70% of the ELTs in Italy.

Ecopneus was set up on the basis of the Italian legislation which obligates tyre manufacturers and importers to manage a quantity of ELTs equal to that they have placed on the spare market the previous calendar year. The legislation provides that tyre manufacturers and importers can fulfil their legal obligations both as individuals or in a partnership. Ecopneus is currently responsible for handling a number of ELTs proportionate to the overall market share of its member companies, with an organizational model already adopted by most European countries.

Every day an average of 1,000 tons of End-of-life tyres is collected and recovered in Italy. In 2016 Ecopneus collected and recovered over 245,000 tonnes of ELTs and 1,400,000 since the beginning of the business in September 2011, transforming them into new materials and producing new energy. The objective of Ecopneus is to reach 100% of ELTs collected and recovered in the country.

The company ensures all the following national system's managerial functions:

- identify all the points of generation of the tyrewaste. The complete mapping of the tyre fitters, service stations and garages allows the monitoring of the places where waste production occurs;
- optimize the logistics of the system. Ecopneus guarantees the pick-up of ELTs from tyre fitters, the transport to storage centres and the recovery functions in an integrated and efficient manner;
- guarantee the supply to all operators. The flow of ELTs to be collected must be constant and spread throughout the area in order to support a local economy;
- promote new uses of ELTs. Ecopneus promotes the research and development of the applications and markets that can use the materials derived from ELTs; it also disseminates adequate information to expand their possible uses;
- carry out monitoring and reporting. In order to prevent ELTs being dispelled in illegal channels it is important to constantly follow their flow and promoting proper reporting.









The main applications of the materials derived from ELTs <u>are presented in the Ecopneus website</u>: modified asphalts, sports surfaces, insulating material, street furniture, flooring and minor constructions, building works, reuse in mixes for the production of technical articles, electric arc steel works, mulching material for gardens or, traffic islands, regeneration for a second vulcanization process.

From 2011 till today 62.5% of the collected ELTs have been used for energy recovery, while 37.5% have been transformed into new materials. Ecopneus is working to promote even new applications of rubber recycled from ELTs, by investing in research and innovation activities with all the associated companies. In this context, one of the areas of research with a strong potential for development is the use of rubber deriving from the recovery of end-of-life tyres (ELT) as an additive in bituminous conglomerates to create a high-performance *modified asphalts*. Ecopneus has played an active part in various experiments throughout the country.

An important aspect of Ecopneus's work is the collection of used tyres abandoned in historical landfills of the Italian territory. Based on the provisions of Italian law, Ecopneus invests 30% of the operating surplus in reducing the amount of abandoned ELTs. Since 2012 over 73,000 tonnes have been withdrawn from historical landfills, equivalent to the weight of more than 8 million tyres, securing sites and ensuring the correct recovery of collected ELTs.

To further ensure the quality of work Ecopneus has started the certification for granules and powder obtained from the shredding process of End-of-Life Tyres of its own chain. The Quality trademark *Ecopneus Certified Product* guarantees the quality and top characteristics of the secondary raw material derived from ELT recovery. That certification is programmed to be extended also to finished products made with ELT products.

Ecopneus's work and the resultas achieved show the incredible potential of the circular economy approach applied to an industrial chain that is growing both in the economic value produced and in the ability to generate employment. The system created by Ecopneus also represents a major contribution to improving the environmental situation of Italian territory, population health, landscape quality and overall quality of life.

In fact, the national Ecopneus system that directly involves Italian private companies is accompanied by a large number of initiatives by environmental associations that carry out permanent campaigns for the collection of used tyres abandoned in roads, fields, beaches and the Italian seas to eliminate their negative impact on the environment and improve the quality of life of citizens.

To know more

Ecopneus website

Ecopneus in Facebook

Ecopneus in Facebook videos











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Italian Ministerial Decree 82/2011

Article in Legambiente sitio web

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