

The 100% recycled road

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Year of commitment : 2018

Address 1 - street : PONS-SAINT-AUBIN A10, France

Diameter : 1000

CO2 Impact : reduced by 50%

Sustainable mobility : Roads

Circular economy and waste management : Reuse, Optimization of ressources, Save of ressources, Organic recycling



5 000 000 €

GENERAL INFORMATION

The "100% recycled road" was created as part of a major renovation motorway project on the VINCI Autoroutes network, on a 1 km section of the A10 motorway between Pons and Saint Aubin, in the Gironde department. This first experiment was successfully implemented by Eurovia after more than two years of research and development.

As a responsible developer, VINCI Autoroutes aims to promote and deploy solutions that reduce the environmental footprint of its projects, particularly by limiting the use of natural resources.

Progress Status

Delivered

Data Reliability

Self-declared

Funding Type

Private

Website Enterprise / Infrastructure

Sustainable Development

Attractiveness :

Well Being :

Social Cohesion :

Preservation / Environmental Improvement :

Resilience :

Responsible use of resources :

The "100% recycled road" was made possible thanks to the design, in partnership with the Marini-Ermont company (Fayat group), of an innovative continuous mobile asphalt plant (TRX 100%), allowing the recycling of 0 100% asphalt aggregates near the road maintenance sites and therefore in proportions well above the current maximum rates (50 to 60%)

Most of the materials can be produced from products from the site, preserving part or all of natural resources and reducing transport logistics to a minimum and therefore the carbon footprint of the works with a reduction of 50% of greenhouse gas emissions.

Testimony / Feedback

The test took place in October 2018 in Pons-Saint-Aubin (Gironde) on the A10 motorway, the ASF network, and it is a success: Eurovia (Vinci group) has successfully repaired a section of 100% highway by recycling. "On a kilometer of slow lane of the A10, the test was to remove the existing coating for reprocessing about ten kilometers, in the first mobile plant capable of hot-mix road asphalt containing up to 97 or 98% recycled materials , " says Ivan Drouadaine, director of the Eurovia research center in Mérignac."We have redone 100% recycled three layers of the road: the foundation, the base and the wearing course of vehicles," he adds.

According to Nicolas Hautière, road specialist at the French Institute of Transport Science and Technology (Ifsttar), "Vinci is the first in the world to do it on the motorway. The 100% recycled road already existed, but in cold manufacturing, which limits its resistance and the reserve to moderately trafficked roads. In the hot, less controlled process, Germany and Japan are rising at a high recycling rate on high-traffic routes, but France is the first to flirt with 100%, and obtain a high-quality motorway surface coating. This advance is all the more important as "high-traffic roads have a thicker pavement structure, which makes material recycling particularly interesting," continues Ivan Drouadaine.

<https://www.lesechos.fr/industrie-services/immobilier-btp/la-route-100-recyclee-avance-141308>

Governance

Eurovia

Holder Type : Private Company

In collaboration with Vinci Autoroutes, Eurovia has unveiled the first "100% recycled road" in the world, made possible thanks to the design, in partnership with marini-ermont (Fayat Group), of an innovative continuous mobile asphalt plant (trx 100%), to recycle from 0 to 100% of asphalt aggregates. This research project is the winner of the "route of the future" call for projects made by ademe as part of the investment program for the future.

Business Model :

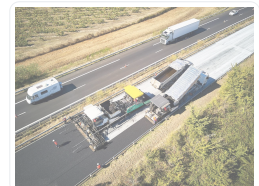
Once the economic model of the solution has been validated, making it possible to respond to works contracts, the plant developed should be duplicated in France and abroad in order to carry out major road maintenance projects (motorways, national roads).) who are the main targets. Indeed, these infrastructures offer large and relatively homogeneous volumes of asphalt aggregates that could be re-used.

Sustainable Solutions

The 100% recycled road

Description :

Until now, the recycling rate of a road has been around 50% of materials reused for a new bituminous mix and its lower layers (or base layers). Knowing that, on average, in France, 35 million tonnes of asphalt are produced, but in parallel use only about 20% of the 7 million tonnes of aggregates resulting from maintenance work. A huge deposit to build roads without new materials. The Eurovia road is 98% recycled for bitumen, its surface course, and 97% for base layers, the remaining 2 to 3% corresponding in particular to additives, still essential to reactivate the qualities of materials implemented.



This project aims to design the technical and material means to manufacture asphalt containing 100% recycled materials. These mixes must have the mechanical performance and durability of a new traditional pavement. For this, the project will have to:

- Pushing the limits of recycling rate of hot mixes in current mobile asphalt plants,
- Check that the mixes manufactured comply with the normative framework in force,
- Develop an economically competitive solution,
- Develop a solution to limit smoke emissions

CO2 Impact : -50,00

- Mobility :
- Resources :
- Circular economy

Company (es) Website :

Company (es) Website :



Cerema

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Prix du public

