

Outlooks

Circular Economy

Intersectoral collaborations among cross-disciplinary partners in business and science will speed knowledge transfer and create innovative products, processes, and business models, especially for SMEs. These efforts aim to establish ELT components as valuable raw materials and continually strive to reduce the volume of used tires through the development of markets and sales channels.

Creating a Circular Economy is the optimal way to get more value out of a material cycle while preserving resources. And as part of a well-functioning Circular Economy, tires should be recycled to 100% after their first life and reused as new products.



Rubber is used in special sound-absorbing asphalt mixtures.

Solutions

In the future, industry product innovations will lead to increased use of recycled tire material. In addition, these innovations will enhance the profitability of existing processes and create new, attractive products and applications for those industries already benefiting from tire recycling. Simultaneously, they provide opportunities for other industries to utilize and process the material. It is necessary to overcome reservations and increase the acceptance of rubber recycling. Thorough information on scientific facts will help to break down misconceptions. Recycled rubber is a material with outstanding properties. This highly versatile material is flexible and, at the same time, robust. Moreover, it is easy to plan its availability.

Promising Potentials for the Partners

Cooperative ventures between the AZuR partners guarantee that the industry will pursue these goals for the long term. There has been a wide range of uses for rubber granules to date. Other sectors will use recycled material more, thanks to a boost in innovation. The objective is to link up medium-sized companies operating in the ELT recycling sector at all relevant levels, all the way through to the final recycling step. This approach cascades the use of the recyclable material and creates new value at every processing stage. As a result, SMEs gain access to more processes and methods in the recycling chain.

The conditions in Europe are ideal for exchanging know-how and technologies, to develop new market solutions and products in collaborative efforts with other industries and stakeholders. In the process, the environment will benefit significantly by conserving resources and using raw materials sustainably, avoiding excessive exploitation of natural resources.

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End-of-Life Tire Recycling



Introduction

Fertile soil lies where the spirit of research and entrepreneurship meet, allowing innovation to thrive. In 2020 we created this nurturing environment by launching the Innovation Forum for end-of-life tire (ELT) recycling AZuR „Allianz Zukunft Reifen“ (Alliance for the Future of Tires).

As the trade association of the German rubber industry (wdk), we are delighted to carry on the work of AZuR under our patronage. The ZARE initiative, a joint work group of the German Tire Trade and Vulcanization Association (BRV), proposed the foundation of a network to bring stakeholders in the tire industry together. Their goal was to discover new distribution channels for end-of-life tires. Initially, AZuR received funding for its network from the German Federal Ministry of Education and Research (BMBF) during the first ten months of its existence. Numerous companies, organizations, associations, research institutes, and media representatives are now members of AZuR, including waste-to-energy recyclers, machinery manufacturers, tire-retreading, and disposal companies.

Within the first year, AZuR formed fruitful working groups and cooperative ventures. The network will continue to work toward recycling end-of-life tires and return 100% of tires to the resource cycle. From everyone involved, that calls for open-mindedness, creativity, and the boldness to break new ground. In our experience, business success is the reward for this courage.

Yours, Stephan Rau
Chief Technical Officer of wdk
and patron of AZuR

The AZuR Network: Goals and Missions

Goals and Missions
As the heap of scrap tires in Germany is mounting, the market for end-of-life tire recycling is transforming. For example, it is becoming evident that cement factories, traditionally using scrap tires as fuel, are increasingly utilizing alternative fuels. And with that, there is also a decline in second-stage recycling in tire retreading. The number of low-quality imported tires unfit for retreading is on the rise. Moreover, commercial vehicle operators prefer low-cost imports and refuse to consider retreaded tires of comparable price. Motorists likewise favor new tires over retreads, noting that retreaded passenger car tires are not easily available commercially. Recycling is gaining importance, but the public and recycling companies still have reservations about using recycled rubber.

The Innovation Forum for „End-of-Life Tire Recycling“ AZuR creates new collaborative models, develops new market potential, and explores previously undiscovered sales avenues for services and products. It encourages these

through interdisciplinary networking between the ELT recycling industry, dominated by small and medium-sized enterprises (SMEs), and the scientific and research communities. Businesses taking on the recycling of ELTs in Germany are predominantly middle-sized companies that operate nationwide. Most of these SMEs are unable to push for research and development in a way that leads to developing sustainable products and innovative recycling methods. A broad network with scientific support is necessary to achieve those goals.

AZuR's Innovation Forum for ELT-Recycling ensures the long-term prospects of SMEs operating in end-of-life tire recycling. With the reinforcement through tight networking and cooperation, the project leads to new and innovative products and the breakdown of market barriers. Supported by the Innovation Forum, new approaches are underway to shape the market for recycled rubber.

AZuR Partners

The national association of the German tire trade, the Bundesverband Reifenhandel und Vulkaniseur-Handwerk e.V. (BRV), launched the Innovation Forum with industry partners. Among these partners stands the initiative ZARE „Zertifizierte Altreifen Entsorger“ (Certified End-of-Life Tire Disposal Companies), which originated within the BRV association. All relevant market participants and stakeholders interested in the issues can unite and cooperate within this network. Following the BMBF-funded phase, the German Rubber Industry Association (wdk) will assume patronage of the project. Now the network is self-financed. The wdk is the umbrella organization of German manufacturers of tires and technical elastomer products. It incorporates roughly 160 companies and represents approximately 85% of the German rubber industry's revenue.

Today, numerous companies, organizations, associations, research institutes, and media partners from the tire and recycling industry are part of the AZuR network. The network communicates the urgent need for action in „avoiding used tires and recycling used tires.“ to its partners. The Innovation Forum's objective is to safeguard the sector's long-term future and, while doing so, to trigger a transformation in handling end-of-life tires. More benefits in the recycling industry will result in the long term if science and industry are closely interlinked in their applications. A goal-oriented knowledge transfer, workable processes, and products will lead to the participation and emergence of new companies. This process is sparked by the initiative and promotes the exchange of both interdisciplinary and cross-industry cooperation.

Recycled rubber is a secondary raw material for playground and sports field floorings.

