

## PRESS RELEASE

### **Zeppelin Systems demonstrates concentrated solutions competence with strong partners of the Zeppelin Sustainable Tire Alliance in Hanover**

**Friedrichshafen, March 13, 2024. At the Tire Technology Expo in Hanover ( March 19 - 21, 2024), Zeppelin Systems, together with four partners of the Zeppelin Sustainable Tire Alliance, will be presenting innovative and sustainable solutions for the rubber and tire industry. At Stand 9000 in Hall 21, the companies RubberJet and Vertech, Recykl, ReOil and RCB Nanotechnologies will be conveying a common message in collaboration with Zeppelin Systems: Sustainable production of tires and environmentally friendly recycling of used tires are possible!**

In times of increasing environmental pollution, high energy prices and resource scarcity, it is more important than ever to use the available raw materials sustainably and reuse them multiple times during the economic cycle. A key role is played by state-of-the-art production processes for both making new tires and, in particular, recycling old tires. In 2023, several international companies joined forces along the tire production and recycling value chain in the “Zeppelin Sustainable Tire Alliance” founded by Zeppelin Systems. In the technology network, the companies are jointly pressing ahead with innovative technologies for producing tires and recycling used tires. With four partners from the Technology Alliance, Zeppelin Systems will be presenting for the first time at the leading trade fair Tire Technology 2024 in Hanover.

At the trade fair, the plant engineering firm Zeppelin Systems will focus on material handling solutions for the modern mixing room and the sustainable preparation of conventional materials. Zeppelin Systems’ portfolio also includes solutions in the area of silo storage and pneumatic conveying as well as the weighing and feeding of liquids and process oils, silanes, functional liquid rubber and solids (such as carbon black, silica and small chemicals). The service package is rounded off by smart automation solutions. “Together with our partners of the Zeppelin Sustainable Tire Alliance, we will impress visitors at Tire Expo 2024 with concentrated plant engineering expertise for the rubber and tire industry, innovative know-how and a strong network focusing on sustainable solutions for the circular economy,” explains Dr Markus Vöge, CEO of Zeppelin Systems GmbH. “As a system integrator, it is important for us to demonstrate unity and cohesion with regard to the common goal of sustainable tire production,” adds Vöge. The joint trade fair presence with four partners of the Zeppelin Sustainable Tire Alliance underscores these efforts. “We support our customers in producing high-quality tires while protecting the environment.” According to the CEO, one does not have to rule out the other in the future.

**RubberJet and Vertech: Breaking down old tires using a 100% environmentally-friendly high-pressure water jet process:**

The Italian technology group RubberJet and Vertech specializes in remanufacturing particularly large old tires, for example from trucks, construction or mining machinery. The company developed an environmentally-friendly, patented high-pressure water jet process that separates particularly large tires into individual parts of rubber and steel. The high natural rubber content of large tire rubber compounds means that the recyclates obtained are of particularly high quality. In addition, this recycling process gives them a particularly large surface structure, which is indispensable for re-cross-linking so that the recycled material can be vulcanized again in new tire or rubber compounds. These quality advantages allow the rubber flour and granules obtained in this way to be marketed directly.

**Recykl: Textile fibers extracted from used tires used as stabilizers for asphalt mixtures**

The Polish company Recykl Organizacja Odzysku S.A., a member of the Recykl Group (GRC), has been intensively involved in processing used tires since 2004. In mechanical recycling, it has developed new processes – particularly in the devulcanization of rubber – which produce high-quality recycled materials that can be directly incorporated back into the production cycle of new tires by the customer. Another development of the company is SMAPOL. The product derived from the textile fiber in tire recycling stabilizes and strengthens asphalt binders and the structure of asphalt compounds to create homogeneous and durable road surfaces. In road construction, the additive even exhibits better properties than conventional stabilizers, for example, it makes it more difficult for water to penetrate and reduces fatigue, thermal cracking or trenching.

**ReOil: Specialist for Pyrolysis**

The Polish company ReOil, Europe's largest pyrolysis plant operator, is active in the field of raw material recycling. ReOil uses continuous pyrolysis to break down rubber from used tires into the substances gas, oil and recovered carbon black (rCB). The recycled materials obtained are reused, for example, in the manufacture of textiles, new tires, rubber components, plastics, steel or aviation fuel. Following the commissioning of the first plant in 2015, ReOil is now recycling around 20,000 tons of used tires per year. Construction of a second plant is scheduled to begin this year (engineering and execution are the responsibility of Zeppelin Systems), which will increase annual capacity to around 60,000 tons.

**RCB Nanotechnologies: Professionals in processing raw recovered carbon black:**

The German company RCB Nanotechnologies GmbH has developed a cleaning process that refines the carbon-containing residual material, the raw-recovered carbon black (rCB), produced during the thermal pyrolysis of old tires. In addition to carbon black, the residual material also contains up to 25% ash, which mainly consists of silicates and zinc. The new technology makes it possible to separate the ash content from the rCB. This means that 100% of the rCB can be used as a raw material. New, high-quality zinc or silicon-based products can also be obtained from the separated ash content. This makes it possible to close further material cycles in the tire industry for the first time.

As a system integrator with many years of plant engineering experience, Zeppelin Systems is able to integrate all the technologies of the Zeppelin Sustainable Alliance partners when designing new plants or modernizing old plants. "We know the requirements and challenges in the market – which



is why we as a company and founder of Zeppelin Sustainable Tire Alliance act as a bridge builder and solution provider. Through the combined know-how of our partners, customers benefit from comprehensive solutions in the field of tire production. Sustainable, from a single source and always in tune with the times," explains Guido Veit, Vice President Sales for Polyolefins, Rubber und Silos at Zeppelin Systems GmbH.

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## About Zeppelin Plant Engineering

Zeppelin Systems specializes in the design, construction, and technological upgrading of industrial plants for storing, conveying, mixing, dosing, and weighing high-quality bulk materials and raw materials. With around 1,700 employees worldwide, Zeppelin Systems provides daily solutions for customers in the plastics, chemicals, rubber, and tire industries. Customers in the food industry also value Zeppelin Systems' many years of technological know-how and experience in delivering turnkey solutions. From plant planning and project implementation to after-sales service including process optimization – Zeppelin Systems is an integrated solutions provider, delivering complete solutions from one source. Every Zeppelin plant is characterized by customized features to meet specific customer requirements, smart automation solutions, and comprehensive service. We refer to this as the embodiment of engineering art, and we apply it to the entire life cycle of a system. With roots in Germany and global operations at more than 20 sites around the world, Zeppelin Systems makes industrial-scale testing available to its customers, thereby facilitating the assessment and sustainable optimization of their plant design. Zeppelin Systems also develops and manufactures mechanical and plant engineering components that can be seamlessly integrated into third-party systems. We create solutions for our customers every day. We Create Solutions! For more information, visit [www.zeppelin-systems.com](http://www.zeppelin-systems.com).

## About the Zeppelin Group

The Zeppelin Group offers solutions in the construction industry, drive and energy systems, engineering and plant engineering. The Group provides customers with expertise in a number of areas, from the distribution and service of construction, mining, forestry and agricultural machinery, through rental and project solutions for the construction sector and industry as a whole, to drive and energy systems as well as engineering and plant engineering, and enhances its offering with digital capabilities in all areas. Zeppelin is represented at more than 340 sites in 26 countries and regions worldwide. In the 2022 financial year, the Group workforce comprised over 10,000 employees and generated sales of EUR 3.8 billion. The Group organizes its activities into five strategic business units (Construction Equipment Germany/Austria, Construction Equipment International, Rental, Power Systems, and Plant Engineering) and the Strategic Management Center for Group IT Services. Zeppelin GmbH is the Group holding company. It is legally domiciled in Friedrichshafen and has its head office in Garching bei München. The Zeppelin Group is a foundation-owned company. Its roots can be traced back to the establishment of the Zeppelin Foundation by Graf Ferdinand von Zeppelin in 1908. For more information, visit [zeppelin.com](http://zeppelin.com).

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