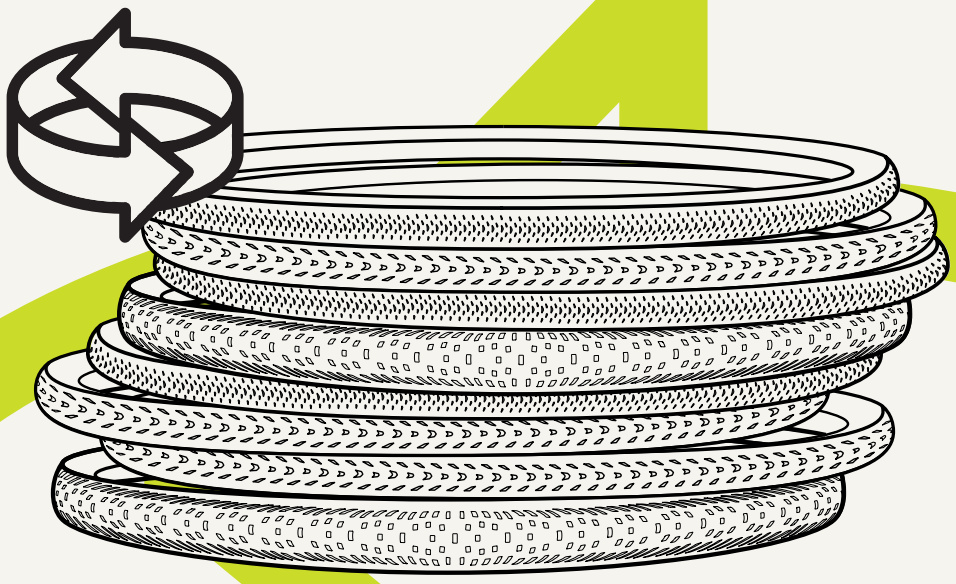


PRESS RELEASE
13.07.2022

SCHWALBE RECYCLING SYSTEM

SCHWALBE TIRE RECYCLING

THE BIG CIRCLE IS CLOSED

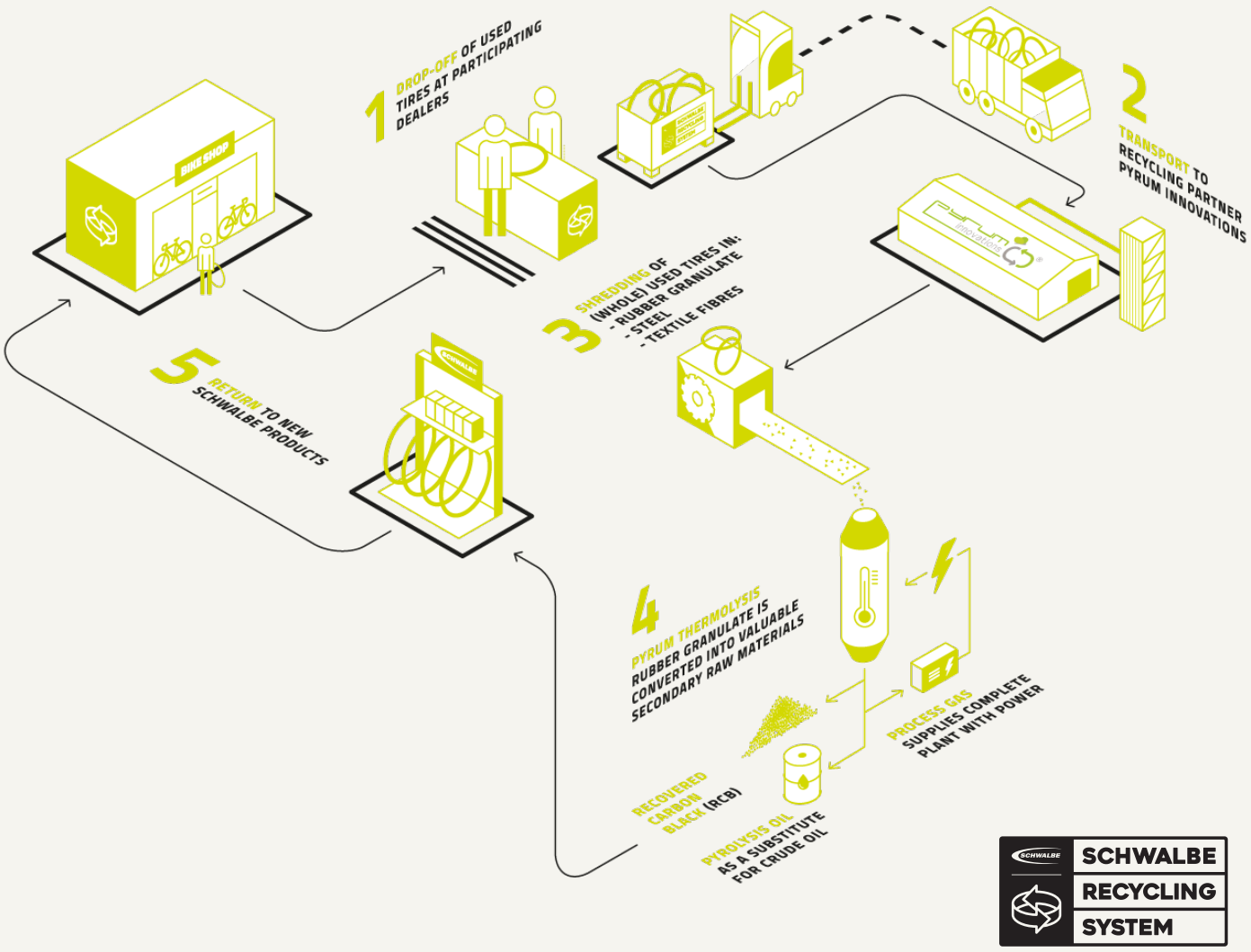
As the first bicycle tire manufacturer worldwide, Schwalbe and its cooperation partners have succeeded in developing an innovative and holistic tire recycling process.

It is an absolute world first: for almost 50 years, Schwalbe has been developing and producing high-quality bicycle tires, the right one for every cyclist. The topic of sustainability has been at the top of company founder Ralf Bohle's list of priorities since the first tire - back then it was called longevity. Since then, a wide variety of teams have been working with great energy on how used bicycle tires could be recycled.

After decades of research as well as an elaborate pilot project, Schwabe in close cooperation with its partners have now achieved the big breakthrough. As the first bicycle tire manufacturer in the world, Schwalbe, together with the Technical University of Cologne and the recycling specialits of Pyrum Innovations, has developed an innovative and holistic recycling process to recycle used tires of all brands - completely without waste. This represents a quantum leap in holistic environmental awareness and ecological responsibility. Until now, used bicycle tires were incinerated, the raw materials were lost, climate-damaging CO2 is released. Now new tires are being made from used ones. The big circle is closing.

The specially developed Schwalbe Recycling Box is available at participating specialist dealers.

HOW DOES SCHWALBE TIRE RECYCLING WORK?



PYRUM: FROM START-UP TO RECYCLING PYROLYSIS PIONEER

The pyrolysis idea was born in a garden shed. Founder Pascal Klein developed it into a start-up that is now listed on the stock exchange and a pioneer in the pyrolysis process. Pyrum currently runs the only tire-pyrolysis plant in the world that produces year-round.

„While their peers were partying the night away, the students were unscrewing clogged pipes, replacing heating elements or turning one of the many adjusting screws that need to be tweaked on such an industrial plant - until everything fell into place. While his friends contributed their knowledge as engineers and chemists, it was Klein's perseverance that helped the project succeed."
Spiegel Online, 6/26/2022

HERE'S HOW THE PYROLSE WORKS

1. **Shredding:** used tires are shredded in four stages
   Results: Rubber granules, textile fiber and steel
2. **Pyrolysis:** Rubber granulate goes into the pyrolysis oven at 700 °C in the absence of oxygen
   Results:
   Gas: provides for the electricity needs of the pyrolysis plant (runs completely self-sufficient)
   Oil: goes to BASF and is used, for example, in textile fibers
   Pyrolysis coke (rCB): Further processing into rCB (recycled carbon black)

SCHWALBE
RECYCLING PROZESS- & RESEARCH PARTNERS
ONE BIG FAMILY

SCHWALBE

With its Schwalbe brand, Ralf Bohle GmbH is Europe's market leader for bicycle tires and -tubes. Schwalbe continues to set standards today with its „unflattable" marathon tires, its G-One Graveltires and its Racing Ralph oder Nobby Nic MTB tires, among others. The family-owned company employs 187 people in Reichshof in North Rhine-Westphalia, and a further 61 are employed in five subsidiaries in Europe and North America. The project was built entirely by Schwalbe employees.

SCHWALBE / HUNG – A

Since 1973, Ralf Bohle GmbH has been producing bicycle tires under the Schwalbe brand, which are manufactured by production partner Hung-A in Indonesia and Vietnam. Hung-A exclusively produces Schwalbe products of the highest quality. The two family-owned companies are not only linked by a joint venture, but also by a friendship that has lasted almost 50 years and is unparalleled in the industry.

PERSONS

Frank Bohle - CEO
Felix Jahn - CSR Manager
Holger Jahn - COO
Sebastian Bogdahn - Scientific Manager Schwalbe Recycling System

PYRUM
THE PROCESS PIONEERS

Founded in 2008, the first industrial plant was completed in 2015 and initial test runs began. Today, the family-owned company has around 70 employees and is a global pioneer in the pyrolysis process.

PERSONS

Pascal Klein - Founder & CEO
Dr. Andreas Kapf - Scientific Director

TH COLOGNE
TIRE RECYCLING RESEARCH

Founded in 1971 as Cologne University of Applied Sciences, since 2015 Cologne University of Technology. One of the five locations is the Gummersbach campus, which includes the :metabolon teaching and research center in Lindlar. There, concepts for a sustainable circular economy are developed on a former household waste landfill. The tire recycling project and the work of Prof. Dr. Danka Katrakova-Krüger have already been awarded the TH Köln Transfer Prize.

PERSONS

Prof. Dr. Christian Malek - Expert high temperature technology/ pyrolysis
Prof. Dr. Katrakova-Krüger - Rubber material expert
Sebastian Bogdahn - Doctorand

EMONS – THE LOGISTICS EXPERTS

The family business was founded in 1928. With 3,420 employees, Emons offers employees at 100 locations in 16 countries transport (road, rail, air, sea), customs clearance and logistics. Its specialty: tailor-made logistics solutions („Anyone can make a Euro pallet").

PERSONS

Ralf Wieland - CEO
Jan Hochlenert-Pottberg - Branch manager Bexbach

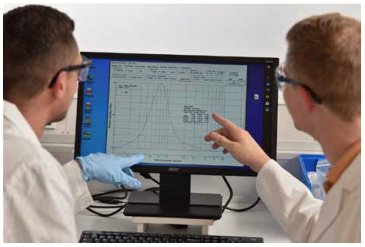
SPECIALIST TRADE GERMANY

To date, around 500 dealers are already taking part in the Schwalbe pilot tire recycling project, which in the first stage is available exclusively in Germany.

"As a businessman, I think it's great that Schwalbe is the first to address and solve the important topic of tire recycling with the specialist trade. Finally, tires are no longer being burned." Schwalbe Recycling specialist dealer

PRESS RELEASE
13.07.2022

Doctoral student Sebastian Bogdahn, scientific director of the Schwalbe Recycling System, is conducting intensive research with the team from TH Köln on the further development of the recycling components.



SCHWALBE & TH COLOGNE *RECYCLING RESEARCH PARTNER*

RESEARCH FOR SUSTAINABLE QUALITY AND SAFETY

"Recycling not at any price - we are only satisfied with the result when the quality of the recycled materials meets the necessary level with which we can produce Schwalbe quality again. That's why we are researching so intensively with the team from TH Köln and Sebastian Bogdahn," explains Holger Jahn, Schwalbe's COO. „The vCB, which is important for tire production, is to be completely replaced by rCB in the future."

Recycled materials are not always of the same quality as their original materials. However, this is a must for the success of the project to produce new bicycle tires from used ones. This is something that is being worked on and researched very hard. The tire on the bicycle is a safety-relevant component. Especially with the significantly higher load demands on bicycle tires today, Schwalbe quality and performance must be the same.
Prof. Dr. Malek and the team around Sebastian Bogdan are developing the bicycle tire recycling process to produce the high-quality rCB from the rubber granulate of used tires by means of pyrolysis. In her material studies, Prof. Dr. Katrakova-Krüger is investigating whether and how it is possible to produce high-quality bicycle tires again using the rCB in the appropriate rubber compound. For her research she has already received the transfer award of the TH Cologne for the research project on bicycle tire recycling.
The cooperation with Pyrum and all their previous experience in the field of pyrolysis are an important point for the next development steps.

"As in 1983 with the first Schwalbe Marathon, we are at the beginning of a long road with tire recycling and very grateful to Pyrum for their pioneering work in the pyrolysis process," says Schwalbe's CEO Frank Bohle

"As a family business, we have believed in this for decades, shown perseverance and invested heavily in the project, research and personnel. We have big things in store and want to be pioneers in bringing dealers and customers along with our innovative recycling solutions."

SCHWALBE *RECYCLING STORY*

FROM THE IDEA TO RECYCLING

1993 RUBBER MATS

- *Bicycle tires to rubber mats for specialized trade*
- *Technically, it was not possible to produce more than rubber mats from bicycle tires*
- *First approach to recycle used bicycle tires instead of burning them*

2015 TUBE RECYCLING

- *Start tube recycling program*
- *Hung-A production manager Jong Soo Kim tinkered and developed the devulcanization process to recycle recycled inner tubes*
- *To date: Five countries, 2500 dealers, approximately 7 million tubes recycled*
- *Result: 80% energy savings, 20% recycled content in every Schwalbe standard tube*

2022 TIRE RECYCLING

- *Start of Schwalbe tire recycling in Germany*
- *500 specialist dealers receive a tire recycling box developed in-house*
- *Strategic recycling process and research partners: Pyrum Innovations, Emons, TH Köln*
- *Recycling process saves 80% CO2 emissions*

PS.: We would like to invite you already now to the press conference at Eurobike 2023, where we will present the first Schwalbe product made of 100% rCB from recycled bicycle tires.