

► DIVISION MATERIALS AND TRADE / RHEINMETALL INVENT GMBH

15 November 2022

Special accolade for new fibreglass suspension spring

Rheinmetall wins SPE Automotive Award 2022

Rheinmetall has won the coveted SPE Automotive Award 2022 with its globally unique fibreglass suspension spring. The innovative new component overcame the competition to take the Grand Innovation Award, a special category. The award ceremony took place in Neuss in mid-October.

First and foremost, Rheinmetall's fibreglass suspension spring convinced the jury of experts because of its significantly lower weight compared to conventional springs, coupled with its unique, specially patented design. The jury consisted of 27 experts from the plastics technology sector, OEMs, institutes, and trade publications.

"We're very happy about this special prize, which acknowledges our yearslong research and development effort in what for Rheinmetall is a new sector", declares Marcus Gerlach, CEO of the Group's Materials and Trade division.

This unique fibreglass suspension spring has already been put to its first real test at a major automaker. Furthermore, additional development work is already underway with other leading manufacturers in the automotive sector and other industries.

"As we see it, our unique fibreglass suspension spring offers significant advantages, and we're convinced that it has massive market potential", insists Ralf Buschbeck, CTO at Materials and Trade.



SPE Central Europe, a section of the Society of Plastics Engineers Inc., has announced the Automotive Division Award contest every 18 months since 1992. By late June, the jury of experts had already made an initial selection of the contestants for the 21st SPE Automotive Award. According to the organizer, the number of components submitted in the contest had never been so high.

As a proven technology partner of the automobile industry, Rheinmetall has been putting its expertise in the world of innovative materials to work for years, making valuable contributions to weight optimization and thus to reduced consumption, while simultaneously leading to advances in e-mobility.

With its innovative spring suspension system, Rheinmetall has succeeded not only in breaking new technological ground: it is entering a future-oriented market with strong growth potential. Today, Rheinmetall INVENT GmbH, a unit of the Group's Materials and Trade division, is investigating and developing various chassis components with an eye to full-scale production.

► Key facts

- Rheinmetall's innovative fibreglass suspension spring wins the plastic sector's coveted SPE "Grand Innovation Award"
- Developed and manufactured in Neckarsulm
- Weight-saving solution enables greater operating range in electric vehicles
- Longstanding expertise in lightweight automotive engineering

► Contacts

Oliver Hoffmann
Head of Public Relations
Rheinmetall AG
Tel.: +49-(0)211 473 4748
oliver.hoffmann@rheinmetall.com
rheinmetall.com

Dr. phil. Jan-Phillipp Weisswange
Assistant Head of Public Relations
Rheinmetall AG
Tel.: +49-(0)211 473 4287
jan-phillipp.weisswange@rheinmetall.com
rheinmetall.com

► Social Media

 @Rheinmetallag
 @Rheinmetallag

Because they serve as a link between the wheels and the chassis, suspension springs play a vital role in determining how a vehicle handles as well as its overall safety. Compared to conventional helical springs made of steel, the new fibreglass-reinforced plastic springs from Rheinmetall result in a weight saving of up to 75 percent in the unsprung mass, making them especially suitable for range-optimized electric vehicles.

Besides light weight, achieving maximum rolling and pitch stability was a key development objective, as were optimum noise, vibration and harshness characteristics. Compared to conventional steel springs, fibreglass-reinforced suspension springs feature the added advantage of greater corrosion resistance, since only certain chemicals can corrode them, but not oxygen and water. The new springs fit into the same design space as standard springs, feature excellent longevity as well as an emergency operating capability that enables the vehicle to keep driving.

The newly developed chassis springs are based on technical know-how accumulated over the decades at Rheinmetall in the twin realms of mobility and security, paired with the Group's pioneering innovative spirit and commitment to forward-looking trends and developments.

Rheinmetall has longstanding expertise in lightweight automotive engineering: its Castings unit is a world-leading maker of lightweight aluminium parts, with a product portfolio encompassing structural and chassis parts as well as specially designed e-mobility components such as e-motor housings and battery trays. Since 2019, the company has also held a roughly 25 percent share in Carbon Truck & Trailer GmbH Stade, which produces support components made of carbon-reinforced plastic. The focus here is on developing reasonably priced serially produced parts for lightweight commercial vehicles.

For more information on this product, please see: rheinmetall.com/fibersuspension