

Sumitomo Riko Exhibiting at Automotive Engineering Exposition Yokohama 2018

“Haptics Interface” Application of Smart Rubber Exhibited for the First Time

Sumitomo Riko Company Limited (Headquarters: Nakamura-ku, Nagoya-shi; President & CEO: Tetsu Matsui) will exhibit at a joint stand together with Sumitomo Electric Industries, Ltd. (Headquarters: Chuo-ku, Osaka-shi) and Sumitomo Wiring Systems Ltd. (Headquarters: Yokkaichi-shi, Mie Prefecture), at the Automotive Engineering Exposition Yokohama 2018, to be held from Wednesday, May 23 on at Pacifico Yokohama.



As the automotive industry enters a period of major change, including accelerated efforts in the shift to electric vehicles (EVs) and the practical application of self-driving cars, our company is actively engaged in the R&D of new products and materials utilizing our core competences of polymer materials technology and comprehensive evaluation technology.

This year, we will exhibit for the first time our Haptics Interface, which uses rubber as an actuator to produce a vibration. It utilizes the technology of Smart Rubber (SR), a soft and electrically conductive rubber material, which is a field in which our company excels. The booth will also introduce our innovations for the future automobile society, such as by letting visitors try out our Driver Monitoring System that detects the driver’s heart rate, breathing and body motion, as well as display MIF, highly heat-dissipating urethane foam that helps to resolve heat problems.

<Outline of exhibition>

Exhibition name	Automotive Engineering Exposition Yokohama 2018
Exhibition dates	Wednesday, May 23 to Friday, May 25
Venue	Exhibition Hall, Pacifico Yokohama
Booth no.	Booth No. 301

<Overview of the exhibited products>

>> Haptics Interface (Development item/first time exhibited)

When the user touches a certain area of their car navigation screen etc., the Haptics Interface vibrates to signalize the user the input has been detected. What produces this vibration is an actuator made of Smart Rubber (SR), a special rubber that conducts electricity.

Using SR's characteristic of stretching when a voltage is applied and the contracting force inherent to rubber, SR can express various kinds of vibration, such as strong and weak, different rhythms, etc.

The actuator itself offers a high degree of freedom in design, being thin and small but having the softness of rubber. We aim to put it into practice soon as a new actuator that changes to an electric motor.



>> Driver Monitoring System (Development item)

SR sensors are either built into the seat or manufactured into the shape of a cushion and fitted onto the seat. The driver's heart rate, breathing, body motion etc. are detected from changes in pressure on the surface of the chair measured by the SR sensors.

The system uses the results to assess the driver's condition, such as fatigue, drowsiness, sudden illness etc. It can then connect to an advanced service, such as alerting the driver, actuating a driver assistance system, or sending a notification externally.

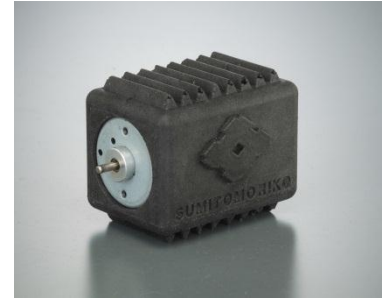


Cushion with built-in SR sensor installed in seat

>> MIF (Magnetic Induction Foaming)

Heat dissipation & sound absorption material

This is the world's first heat-dissipating soundproof sponge (urethane foam). By foaming urethane containing heat conductive particles within a magnetic field, the particles are arrayed to form heat bridges. This enables around 20 to 100 times more heat to be dissipated than with conventional urethane foam. MIF can help with noise and heat countermeasures for EVs, automotive electrical equipment, etc.



About Us-----

Founded in 1929, Sumitomo Riko is a manufacturing company headquartered in Nagoya-shi, Aichi, Japan. We changed our name from Tokai Rubber Industries, Ltd. in 2014. In the automotive field, we manufacture anti-vibration rubber parts, in which we have a leading global share, as well as rubber and resin hoses and urethane sound controlling/insulation products and interior equipment. We are also applying the technologies we have accumulated in automobile parts development to expand our business in the fields of electronics, infrastructure, and "housing environment and health & nursing". Utilizing our global network of 106 bases in 23 countries, we aim to be a "Global Excellent Manufacturing Company" that provides safety, security and comfort to people worldwide.

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