

Sensors for structural health monitoring for automotive: detection of defects in composite structures, detection of deterioration and malfunctioning of bearings

Summary

Profile type

Technology offer

Company's country

Germany

POD reference

TODE20250917021

Profile status

PUBLISHED

Type of partnership

**Commercial agreement with
technical assistance**

Targeted countries

• World

Contact Person

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Term of validity

17 Sep 2025**17 Sep 2026**

Last update

17 Sep 2025

General Information

Short summary

The German engineering company has developed sensors for the automotive industry for the detection of defects in composite structures, the detection of deterioration and malfunctioning of bearings and for structural health monitoring as well as for noise, harshness and vibrations measurements. They are looking for 1st or second tiers for a commercial agreement with technical assistance.

Full description

The German company is an engineering company with a focus on high-tech developments in automotive and sensor technologies. Furthermore, they are specialised in sales and engineering, acting as an agency which is representing domestic and foreign suppliers to the European/German automotive industry.

The company is known for technical consulting and product development in many areas and has more than 20 years international experience in sales and engineering services in the automotive industry.

They are experienced in working together with Chinese companies for more than ten years and have a local support in China. Their working experience with European and American companies totals more than 20 years.

The company has developed sensors for automotive applications. The company offers the developed sensors for the automotive industry for several applications:

- Detection of defects in composite structures (such as lower control arm) due to vibration and impact monitoring via Piezo- and MEMS-technology (Micro-Electro-Mechanical Systems)
- Detection of deterioration and malfunctioning of bearings (such as strut bearings) with MEMS acceleration and
- Vibration sensors in order to monitor the structural health and also noise, vibration and harshness of the components

The sensors are designed in such a way that they can be used to monitor the following parameters: vibrations, mechanical impacts, allow for SHM (Structural Health Monitoring), allow for NHV measurements (Noise, Harshness and Vibrations), monitor makroskopische deflections (bending), acceleration or also spatial 3D orientation of key components.

They are looking for a development project with a 1st or second tier for sensor use cases of vibration monitoring of the lower control arm, strut bearings SHM or loadmonitoring. Cooperation under a commercial agreement with technical assistance is offered. Besides companies from Europe, the German company is especially interested in partnerships with companies from Canada, USA, China, Japan and UK.

Advantages and innovations

Automotive sensors to detect defects in composite structures due to vibration and impact monitoring via Piezo- and MEMS-technology (Micro-Electro-Mechanical Systems), detection of deterioration and malfunctioning of bearings, monitoring the structural health as well as noise, vibration and harshness of the components.

Technical specification or expertise sought

Stage of development

Available for demonstration

Sustainable Development goals

- **Goal 8: Decent Work and Economic Growth**
- **Goal 9: Industry, Innovation and Infrastructure**

IPR Status

Secret know-how

IPR Notes

Partner Sought

Expected role of the partner

The German automotive engineering specialist is looking for suppliers to the automotive industry - 1st or second tier for sensor systems –, automotive companies which need sensor electronics for their products. Furthermore, they are interested in contacts to the development departments of automotive companies.

Type of partnership

Commercial agreement with technical assistance

Type and size of the partner

• **SME 50 - 249**

• **Other**

• **Big company**

• **SME 11-49**

• **SME <=10**

Dissemination

Technology keywords

- **09001009 - Sensor Technology related to measurements**
- **02009009 - Sensors for cars and transport**

Targeted countries

- **World**

Market keywords

- **08002007 - Other industrial automation**
- **08002002 - Industrial measurement and sensing equipment**

Sector groups involved

- **Mobility - Transport - Automotive**