

EU-7 emissions standard: reduce emissions faster with BENTELER and Oberland Mangold

- **Electrically heated catalytic converter from BENTELER ensures almost 100 percent removal of pollutants during cold starts.**
- **Thanks to the cooperation with Oberland Mangold, the catalytic converter reaches the optimum temperature faster.**
- **Customers benefit from market readiness in the near future in order to be able to respond early to the strict requirements of the EU-7 emissions standard.**

Salzburg/Paderborn, September 23, 2021. The EU 7 emissions standard for internal combustion engines is expected to come into force in 2025. This is a challenge for automotive manufacturers, as a significant reduction in pollutants is again required. BENTELER offers an attractive solution: an electrically heated catalytic converter that reduces pollutant emissions to almost zero during cold starting. Together with Oberland Mangold, the experts in metal substrates and catalyser systems, BENTELER now offers a solution that ensures the exhaust gas treatment system reaches the optimum operating temperature faster.

Cooperation with Oberland Mangold accelerates important process step

The central component of the electrically heated catalyst is a wound metal structure. This consists of extremely thin foils with a maximum thickness of 50 microns. Winding requires the highest precision and specialized know-how. "We are therefore very pleased about the partnership with Oberland Mangold," says Dr. Rainer Lübbers, Executive Vice President of the Engine & Exhaust System business unit at BENTELER Automotive. "Here we have a proven specialist in catalyst structures at our side. For example, BENTELER uses a pre-validated winding and vacuum brazing technology, which saves development work, costs and time. This benefits our customers. We offer them an attractive product solution faster and at a lower price that reliably meets our quality standards."

Frank Vehlen, CEO of Oberland Mangold GmbH together with the owners, the Mangold family, emphasize: "We are very happy to contribute our many years of expertise in metallic catalytic converter structures to this cooperation. Together we offer car manufacturers a solution at an early stage that will enable them to meet the requirements of the EU 7 standard. Last but not least, this also benefits the environment."

Economically attractive and environmentally friendly solution

The electrically heated catalytic converter from BENTELER ensures almost 100% removal of pollutants during cold starts. "Our electrically heated catalytic converter ensures that emissions are reduced during cold starts," explains Dr. Rainer Lübbers. "Plus, our many years of system expertise

in the exhaust sector additionally makes for a very attractive economic solution." The electrically heated catalytic converter from BENTELER also offers a major advantage with the driving cycle aspects of the future pollutant tests: these tests assign greater importance to the cold-start component than previously.

The electrically heated catalytic converter from BENTELER is welded into the exhaust system between the turbocharger and the conventional catalytic converter. It is suitable for all cars with internal combustion engines – regardless of whether they are gasoline, diesel or hybrid powered.

Solutions for sustainable mobility

"Sustainability is a key issue in modern mobility and, in the case of internal combustion engines, the path is clearly heading in the direction of the 'low emission vehicle,'" says Lübbers. "Our electrically heated catalysts effectively support car manufacturers on the path to the 'Low Emission Vehicle'." The production of electrically heated catalytic converters requires considerable know-how for forming and high-temperature brazing – core competencies of BENTELER. As an experienced partner to the automotive industry, the metal processing specialist excels at global production in large quantities.

Environmental technology

"Our goal is always to improve environmental compatibility through technically innovative products," says Vehlen. In addition to exhaust gas treatment in the mobile and industrial sectors, Oberland Mangold GmbH is increasingly focusing on sustainable technologies such as the effective production of hydrogen.

Background:

EU-7 standard tightens CO2 limits and reduces permissible pollutant emissions

Although the share of electrically powered cars is increasing in Europe, most passenger cars still use combustion technology. To enable more sustainable mobility in this area as well, BENTELER is developing environmentally friendly and future-proof products: They already comply with the emission limits that the EU plans to make mandatory in a few years.

The exact specifications of the EU 7 standard have not yet been determined. However, car manufacturers will be faced with the challenge of reducing pollutant emissions by around half again. It will also be necessary for the car exhaust system to ensure highly effective removal of pollutants immediately after the engine is started. According to current information, the EU 7 standard will be introduced in 2025 at the latest. Given the multi-year development time needed for vehicles, this is already having an impact on car manufacturers.

Photos and captions:

- **BENTELER_Catalyst.jpg:** The electrically heated catalytic converter from BENTELER (shown in the picture) consists of a stacked metal structure. This is welded into the exhaust system between the turbocharger and the conventional catalytic converter.
- **BENTELER_EES-Team.jpg:** Rainer Lübbers, EVP of the Business Unit Engine & Exhaust Systems, is happy together with Eugen Aul, Director Business Development of the Business Unit Engine & Exhaust Systems, about the cooperation with Oberland Mangold, expert in catalyser systems.

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About BENTELER

BENTELER is a global, family-owned company serving customers in automotive technology, the energy sector and mechanical engineering. As innovative partner, we design, produce and distribute safety-relevant products, systems and services. In the 2019 financial year, Group revenues were €7.713 billion. Under the management of the strategic holding BENTELER International AG, headquartered in Salzburg, Austria, the Group is organized into the Divisions BENTELER Automotive and BENTELER Steel/Tube. Our around 30,000 employees at 100 locations in 28 countries offer first-class manufacturing and distribution competence – all dedicated to delivering a first-class service wherever our customers need us. BENTELER. The family of driven professionals. Since 1876.

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About BENTELER Automotive

BENTELER Automotive is the development partner for the world's leading automobile manufacturers. With around 26,000 employees and more than 70 plants in about 25 countries we develop tailored solutions for our customers. Our products include components and modules in the areas of chassis, body, engine and exhaust systems, as well as solutions for electric vehicles.

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