

Baker Hughes Introduces Innovative Waygate Technologies Robotic Inspection Solution Krautkrämer WheelStar RPS for Rail Industry

- *First fully automated ultrasonic testing system in combination with proprietary matrix technology*
- *Solution addresses critical rail industry regulatory requirements, significantly reduces cycle time, and offers improved user-friendliness for railway inspection processes*

HUERTH, Germany, July 2, 2025 – Waygate Technologies, a Baker Hughes business and market leader in nondestructive testing (NDT) solutions for industrial and energy infrastructure inspection, has announced that it is expanding its advanced inspection solutions portfolio for the rail industry with the introduction of the new Krautkrämer WheelStar RPS*. A fully automated ultrasonic testing system that is combined with proprietary matrix technology, the Krautkrämer WheelStar RPS ensures precise results and cost reductions in the inspection process of dismantled train wheels, helping train operators and *Maintenance, Repair & Operations (MRO)* facilities keep up with growing regulatory requirements, as well as increase reliability and maximize train utilization.

Robotics combined with matrix ultrasonic technology

WheelStar RPS uses a robotic assembly to position the ultrasonic mechanics on the train wheels. As part of a fully automated process, the wheel is rotated by an underfloor shift-rotate unit while the inspection is facilitated using proprietary Waygate Technologies phased array matrix probe technology, which allows a very compact design and ensures reduced complexity at the same time. Results are then compared with calibration data. Once the first wheel has been inspected, WheelStar RPS moves on to the second wheel without any need for manual intervention, resulting in a cycle time of just six minutes per wheelset.

Check and re-check are performed automatically, eliminating the need to manually handle reference wheelsets. The combination of innovative matrix technology and highly efficient industrial robots paves the way for intelligent and fast inspections of wheels in service, completed within a reduced time frame.

Addressing customer key pain points

Rail wheels are one of the most critical safety components of rolling stock. A failure can lead to catastrophic events resulting in high material damage and personal injury, or even fatalities. Therefore, international railway standards require non-destructive inspection by means of ultrasound testing (UT) on a regular basis.

With its advanced features, the new system optimizes defect detection across varying wheel geometries and wheel wear conditions. It ensures precise inspections, minimizes false indications, and reduces avoidable costs while offering wheel profile compensation and direct coupling control for maximum safety.

During the development of WheelStar RPS, Baker Hughes' Waygate Technologies engineering team also focused on addressing the shortage of highly trained inspection personnel, a long-standing challenge in the industry. The result is a workflow principle that makes the new solution exceptionally easy to use. The user is guided throughout the inspection process and can operate the system via a single screen. By using pre-programmed wheelset types and profiles, along with automatic report generation, training times for inspectors are significantly reduced compared to other solutions in the market. Depending on the actual setting the total shift work time can be reduced by 7 – 23 percent, including the check/re-check time that goes down by 5 percent itself. In case of failures or if any sort of assistance is needed, remote service is available on demand.

The Krautkrämer WheelStar RPS is available for order in August 2025.

A legacy of axle, track and wheel inspection

Waygate Technologies is a legacy manufacturer of UT electronics and testing machines with more than 75 years of experience. From Solid Axle Mechanized Testers and track integrity and flaw detectors to the industry-proven [Krautkrämer WheelStar UFPE](#) for complete wheelset inspection: An extensive solutions portfolio addresses all train and rail inspection applications operators are faced with today.

**RPS stands for German 'Radsatz-Prüf-System' which translates to 'wheel set testing system'.*

###

Learn more and about the industrial inspection portfolio from Waygate Technologies:

- Krautkrämer WheelStar RPS [Product Page](#)
- Krautkrämer WheelStar RPS [Product Video](#)
- Waygate Technologies blog [Smart Inspection of Rail Wheels with Matrix Arrays](#)
- Waygate Technologies [LinkedIn Channel](#)
- Waygate Technologies [YouTube Channel](#)

###

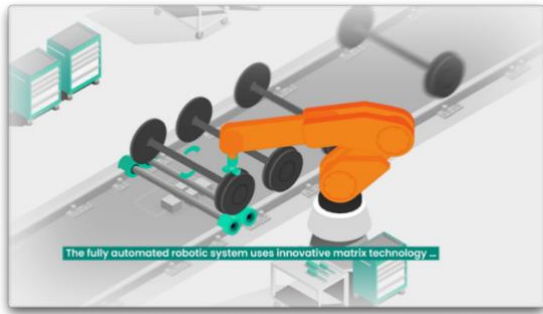
Collaterals

1.



The Krautkrämer WheelStar RPS is a robotic ultrasonic inspection system for dismantled train wheels which uses state-of-the-art matrix phased array technology.

2.



To learn more about the wheel inspection process with Krautkrämer WheelStar RPS please also refer to the brief explanation video provided with this announcement.

###

About Baker Hughes

Baker Hughes (NASDAQ: BKR) is an energy technology company that provides solutions to energy and industrial customers worldwide. Built on a century of experience and conducting business in over 120 countries, our innovative technologies and services are taking energy forward – making it safer, cleaner and more efficient for people and the planet. Visit us at [bakerhughes.com](https://www.bakerhughes.com).

About Waygate Technologies

Waygate Technologies is part of the Inspection portfolio within the Baker Hughes (NASDAQ: BKR) Industrial & Energy Technology business segment. As an industrial inspection solutions provider and world leader in nondestructive testing (NDT), we ensure safety, quality and productivity. We combine more than 125 years of experience and a collection of heritage product brands including Krautkrämer, Phoenix, Seifert, Everest and Agfa NDT. Today, hundreds of brands in the automotive, aviation, space exploration, electronics, energy, battery, rail and transport industries trust our technologies. We drive digital

transformation through a broad portfolio of award-winning solutions in industrial radiography and computed tomography (CT), remote visual inspection (RVI), ultrasound (UT), and robotic inspection. *Inspection starts here:* bakerhughes.com/waygate-technologies

Media Contact

Henning Juknat

Global Communications Leader

Waygate Technologies

Baker Hughes

+49 2233 601272

henning.juknat@bakerhughes.com