Première at GiFA 2015 in Düsseldorf. Erhardt + Abt Automatisierungstechnik GmbH from Kuchen claims that it already had the fastest wheel inspection system on the market. With the integration of an industrial robot, this tried and tested technology has now undergone a revolutionary overhaul, and was presented to the public for the first time at GiFA 2015 in Düsseldorf as the HeiDetect Wheel Robot.

With around 78,000 visitors and 2,000 exhibitors from around the world, GiFA 2015, which was held in Düsseldorf from June 16th-20th 2015, demonstrated that it is the world’s leading international trade fair and the international meeting place for the foundry industry. More than half of the exhibitors and visitors came from abroad. There was a very high level of interest in European metallurgy and foundry technology from the Asiatic region.

The fully automated inline X-ray inspection system for cast aluminum wheels enables the reference-free, parameterizable evaluation of the X-ray images. Casting defects such as shrinkage cavities, pores, mold cavities and foreign bodies can be detected and classified. Integration of the system into the existing manufacturing process is possible even under extreme conditions in a mass production environment. The wheel gripper, which was developed in-house by Erhardt + Abt, is designed to cope with testable wheel diameters ranging from 13 to 24 inches. Thanks to the innovative gripper system, even wheels with a
defective flange can be inspected. Naturally other functions, such as laser and labeling units, can be integrated seamlessly.

When fitted with the right equipment, Erhardt + Abt’s HeiDetect X-ray systems can also be adapted to inspect other components and materials. This series also includes the newly developed HeiDetect XS CT, which was recently presented at the Control Trade Fair in Stuttgart. This "little brother" of the HeiDetect Wheel Robot enables not only all safety components, such as steering knuckles and wheel bearings, to be inspected, but also components which help conserve energy through reductions in materials and therefore also weight. The HeiDetect XS CT opens up wide range of possible applications for industrial X-ray technology.

The exhibits excited considerable interest among national and, in particular, among international visitors. The durable X-ray technology was seen as a major advantage of the system by those interested. This durability has been made possible by the fact that the system’s detector suffers no degradation. The detector was developed by Erhardt + Abt's partner in this collaboration, the Fraunhofer Institute for Integrated Circuits in Erlangen. Completely shielding all electrical components from the X-rays has also proven extremely practical; shielding the operator from the X-rays is compulsory. The presence of the developers at the trade fair meant that visitors were able to gain first hand information about the functions and advantages offered by the systems.
Many visitors to the trade fair already had concrete ideas about what investments they planned and precise requirements in respect of their individual inspection procedure. As a result, many conversations yielded new ideas about additional functions and applications for the Erhardt + Abt X-ray and CT inspection systems. In this way new trends were recognized and picked up on at the trade fair. Other areas where the X-ray and CT inspections systems could be used were also uncovered. It became clear that innovations are much needed in the foundry industry. Buzzwords such as energy efficiency and Industry 4.0 were mentioned time and again.

Erhardt + Abt can also make an important contribution to these forward-looking fields with their other areas of expertise, namely robotic automation and engineering services for every aspect of automation technology. Whether it is a question of loading or unloading machines, assembly tasks, feeding systems or using robots to pack products, Erhardt + Abt has the relevant expertise. Erhardt + Abt has been active in the fields of automation and plant engineering for almost 20 years. More than 400 robots installed around the world demonstrate both their outstanding quality and good availability. A highly motivated team of engineers and experts is always available to provide expert support to customers at Erhardt + Abt.