

Daihatsu Introduces AI-Based Automotive Parts Inspection System at Shiga (Ryuo) Plant as Part of Shopfloor-Led DX Initiatives

– System jointly developed with VRAIN Solution –

Daihatsu Motor Co., Ltd. (hereinafter, “Daihatsu”) has introduced an AI-based inspection system for automotive parts at the No. 1 area of its Shiga (Ryuo) Plant as part of its shopfloor-led digital transformation (DX) initiatives.

Under the slogan “Digital Technology That Cares for People,” Daihatsu is promoting company-wide DX initiatives aimed at strengthening its competitive edge through the use of digital technologies. In particular, Daihatsu places importance on developing the skills and environment that enable employees at manufacturing sites to utilize AI tools and implement solutions themselves. The company is actively fostering DX talent in its plants through initiatives such as on-site training programs.

The newly developed system inspects transmission components produced on the aluminum machining line at the No. 1 area of the Shiga (Ryuo) Plant, using AI to detect scratches and other defects inside machined holes. Inspection of subtle defects has traditionally relied heavily on the experience and judgment of skilled operators, as deviations as small as 0.1 mm can affect product quality. However, variations in the types and locations of scratches have made it difficult to establish a method for ensuring stable inspection accuracy. By integrating the knowledge accumulated on the shop floor with advanced technologies such as AI and image recognition, Daihatsu has automated a process that previously depended on human visual inspection and operator expertise, achieving both improved inspection consistency and reduced workload.

This system was jointly developed by Daihatsu and VRAIN Solution, Inc. (hereinafter, “VRAIN Solution”), a provider of AI solutions for the manufacturing industry, and the two companies have jointly filed patent applications related to this technology. The system is currently in operation at the Shiga (Ryuo) Plant and can be applied to aluminum products with similar structures. Daihatsu plans to expand its use to inspection processes for other components in the future.

Going forward, Daihatsu will continue to accelerate efforts to solve challenges through the use of digital technologies across its factories, aiming to enhance productivity and realize people-friendly manufacturing, in pursuit of a mobility society that enriches customers’ lives.

◆VRAIN Solution and Daihatsu websites

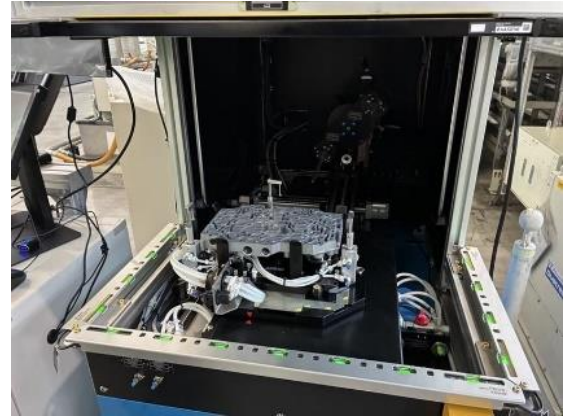
URL : <https://vrain.co.jp/en/>

Daihatsu HP : <https://www.daihatsu.com/news/2025/20251020-2.html>

Daihatsu’s DX : <https://www.daihatsu.com/jp/dx/index.html> (Japanese)



conventional visual inspection



AI-based quality inspection system