

# KAKO TECHNOS CO., LTD.

## <COMPANY PROFILE>

Head office	7-4-2 Ota-cho, Suma-ku, Kobe, Hyogo, Japan 654-0024
Website	<a href="http://www.kako.co.jp/index-en">http://www.kako.co.jp/index-en</a>
Mail	<a href="http://www.kako.co.jp/index-en/contact-en">http://www.kako.co.jp/index-en/contact-en</a>
Number of employees	216 persons (as of January 2017)
Capital	¥77,000,000.-
Incorporated on	December 1, 1961 (founded in 1935)
President	Koichi Kako (Chairman) Taizo Kako (President)

## <BUSINESS>

Design and manufacture of electric equipment for trains (control systems, auxiliary devices, etc.), electric transmission and distribution equipment (control systems, etc.) and other control equipment for industrial use. Manufacture of machinery and sheet metal components.

## <TECHNOLOGY>

Stop trains safely and without fail! State-of-the-art control technology



Kako Technos deals with train control systems as its main business. The company designs, manufactures and tests equipment for Shinkansen bullet trains and other new trains, including brake systems, safety systems such as ATC (automatic train control) and ATO (automatic train operation), display systems, and driving systems.

Kako Technos's control systems are mounted on almost half of the trains (including Shinkansen) in operation in Japan. Utilizing its excellent technology that has supported its achievement of a 50% domestic production share, the company supplies electric components for trains around the world, gears for power stations and

substations, and equipment used in the aerospace industry (on artificial satellites). Thus Kako Technos's "technology of stopping" has been widely applied in the fields of electricity and industrial devices.



Train control systems are installed in train cars (cabs, under the seats, etc.) as well as under the train floors. This being the case, robustness is required for such systems so that they can endure the harsh environment caused by rain, dust and vibration. What heightens the environmental tolerance of such equipment is the excellent technology of Kako Technos. Structural design should be created in consideration of endurance with waterproof, dustproof and quakeproof qualities, and circuit design should focus on measures against electrical noise and low voltage. In making products that meet these design specifications and creating optimized products via fusion of design and manufacturing techniques, as well as in providing tests and verification that support quality assurance, all divisions of the company are working in cooperation with each other, always aiming to be better. The company is making efforts to offer products of higher quality so that it can contribute to the creation of a safe and secure society.

#### **【Behind the scenes of development】**

Kako Technos began mechanical processing of train brakes in 1948. Since then, it has worked to meet customers' demands and achieve the best QCD (Quality, Cost and Delivery) possible, and started to create an integrated production system in 1980, covering every process from design to manufacture and testing. This enabled system proposals by many designers, and the "technology of stopping" was used not only for components but also for devices and mechanisms. Through inter-division feedback, the company is pursuing new technical development to meet the demands of new social infrastructure.

#### **【Unique features】**

One of the features of Kako Technos is its verification system involving 50 employees. Tests for brake systems and security systems produced by Kako Technos are performed by its employees not only within the company but also in the places where the systems

are actually used. In this way, Kako Technos is engaged in quality assurance in addition to manufacturing. Also, feedback on ideas and clues for improvement gained through actual cases is given to the design and manufacturing divisions. Kako Technos performs quality management throughout the entire company, aiming to ensure “zero defective products.”

**【Future development】**

At the new plant launched in April 2016, it has been under consideration to establish IoT (Internet of Things) platforms connected to existing plants in order to further improve the efficiency of production management. Also seeking the possibility of introducing robots, the company is striving to become a manufacturer with higher levels of efficiency and quality. One of the results is Kako Technos’s compact, light-weight and robust rotational speed sensor. By developing products to meet the demands of the times and creating new markets for them, Kako Technos is working to contribute to the improvement of train safety and comfort.

**<TOPICS>**

Received the Hyogo No.1 Monodzukuri\* Award 2016!

The rotational speed sensor supporting next-generation signal systems



Rotational speed sensor

Kako Technos’s rotational speed sensor was listed in the Monodzukuri New Selection in Kansai and received the Hyogo No. 1 Monodzukuri Award in FY2016. It is a device installed on trains to measure the rotational speed of motors and wheels, and is compact, light and environmentally resistant. Higher output and reliability is ensured by the thick detecting coil being wound many times in the limited space. 2,000 units have already been shipped. Currently the company is engaged in the development of a new sensor compatible with next-generation signal systems that can measure even in an extremely low-speed area.

\*Monodzukuri means “manufacturing”

Continuously receiving the creativity award (from the Hyogo Industrial Association) and technical contribution award (from the Hyogo Prefectural Government)



Received the Hyogo technical contribution award

In December 2016, employees of Kako Technos received the “award for creativity in work fields” (Hyogo Industrial Association) and the “technical contribution award” (Hyogo Prefecture). As of this writing, Kako Technos’s employees have received the former award for 20 consecutive years (including three commendations by the Minister of Education, Culture, Sports, Science and Technology) and the latter for 14 consecutive years. These are the results of the employees’ endeavors toward the goal of “thinking by oneself and acting with improvement in mind,” and they are continuing their efforts to achieve further growth.

#### <HISTORY>

- 1935    Founded in Kobe
- 1961    Incorporated as Kako Industrial Co., Ltd.
- 1980    Ono Plant was established in the Kiyotani Industrial Park in Ono City
- 1984    A sheet metal factory was established in Kobe; the integrated production system was completed
- 2001    Sun Technology Co., Ltd. was established
- 2003    The name of the company was changed to Kako Technos Co., Ltd.
- 2011    Received the Hyogo management innovation award  
          Started exhibiting the Kobe Electric Railway train car, No. 1117
- 2012    Selected as one of the “100 vigorous manufacturing companies in Kansai 2011”
- 2015    Selected as one of the “300 proactive SMEs” by the Ministry of Economy, Trade and Industry
- 2016    Building E was newly established in Ono Plant