

Together with Our Customers

THK's Sales Approach

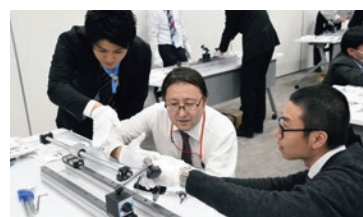
The THK company name incorporates three principles: Toughness (tough, durable products), High Quality (the world's top-quality products), and Know-how (expertise for our customers). Under these principles, we conduct our daily sales activities with a customer-focused approach where we think, act, and verify results from the customer's perspective.

THK has established an integrated production and sales structure with 118 sales offices and 35 production facilities close to centers of demand in order to produce and sell

locally in four regions: Japan, the Americas, Europe, and Asia. We have also established an e-commerce website, Omni THK, which enables customers to purchase products in regions without any THK sales offices. Furthermore, we ran booths at 21 exhibitions in Japan and 34 overseas in 2018 to introduce more customers to our products. Besides participating in exhibitions, we also occasionally hold private shows and technical seminars as venues to explain our offerings directly to customers.

Technical Seminars

In May 2018, we began holding technical seminars to introduce many more customers to THK. The curriculum allows participants to experience our products up close, including a tour of our new showroom* and a viewing of the seismic



Technical seminar

isolation system installed beneath our new headquarters established in October 2017. Many customers signed up for the seminars, with over 300 people

participating over the course of 15 sessions held at our headquarters and five other sales offices.

Members from administrative and engineering departments exchanged ideas to come up with the structure of the seminar, and actual participants commented that the contents were informative and very easy to understand.

We will continue to develop strategies to improve our technical seminars, such as developing a curriculum focused on products with high demand from participants and holding local seminars to reach customers in distant regions.

* Our headquarters showroom is open during normal business hours (8:30 a.m. to 5:30 p.m.) on weekdays.

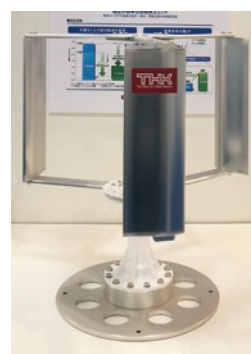
THK Receives the New Energy Foundation Chairman's Award

The New Energy Foundation grants the New Energy Award for new products and activities to promote the introduction, widespread use, and understanding of new energy in society. In recognition of its significant role as a product promoting the widespread use of new energy, THK's Model WLS Low-Torque Shaft Unit for Vertical-Axis Wind Turbines received the Chairman's Award in the category of goods and services in 2018.

The WLS is a high-intensity, high-efficiency, and low-torque bearing unit that combines the shaft, bearings, and housings that form a small vertical-axis wind turbine. The bearings have a new design developed specifically for vertical-axis wind turbines. Their significantly lower torque enables the turbine to activate in slight breezes and has improved the efficiency of power generation. Furthermore, every component has been optimized, from critical items such as the shaft to individual screws. This product provides sufficient strength and durability and guarantees a high level

of safety, conforming to IEC 61400-2 international standards for wind turbines and Japan's JSWTA 0001 standards.

The WLS is provided as a complete unit that meets the requirements for complex processes that have proven difficult for conventional wind turbine manufacturers, such as rotary machine component design, bearing assembly precision control, and preload adjustments. The award was granted in recognition of the reduced labor hours and significant performance boost for wind turbines that turbine manufacturers can expect as end users of the WLS, in addition to the WLS's potential for further development, including in markets outside of Japan.



The award-winning WLS

In Our Customers' Words



Lessons in Customer-Oriented Sales from THK

GUANGZHOU MINJIA MANUFACTURING TECHNOLOGY CO., LTD.

President Zhao Hu (Left)

Vice President Li Yuanyuan (Right)

— Tell us about your company.

We were established in 2001 as a manufacturer focused on two divisions: parts for compressors and core components for machine tools and robots. Our corporate philosophy is to provide our customers with energy-saving and high-efficiency machine tools, competitive solutions, and superior service. We have production and sales bases in Suzhou, Guangzhou, and Baoji, and 60% of our 300 employees work at our development division located in Guangzhou. We have been recognized for our ability to develop original technology, being the only Chinese company selected among affiliated metalworking businesses worldwide to receive a technology innovation award three times, in 2015, 2017, and 2018. We currently have 100 patents, and we are one step ahead of other Chinese companies when it comes to machines that manufacture ball screws, the LM Guide, and bearings.

— Tell us how you first encountered THK products.

I think it was about 30 years ago. When I was working in the machine tool development division at another company, a THK salesperson told me about their products. It was the first time I had seen a THK product, but I was convinced that sliding guides would give way to rolling guides in the future. That was how we began using the LM Guide, including in prototype machines, 10 years before our competitors. Using the LM Guide drastically improved our productivity, enabling us to develop high-quality multifunctional machines. Honestly, I think our technology would not have improved if I had not met THK. That is because, even as we purchase THK products, we also provide THK's Chinese factories with production equipment. THK has very strict quality requirements

for the products we deliver, which gives us a lot of inspiration for technological innovation, one of our core principles. By manufacturing machines that would satisfy THK, without realizing it, we had naturally become able to create high-quality machines. In particular, we frequently exchange ideas about technology with THK MANUFACTURING OF CHINA (CHANGZHOU), which has led to the development of our original multifunctional machines.

— What do you think about THK's technology and service?

The stable quality of THK's products is essential to our goal of producing the best machines in the world. They have an office near our factory in Guangzhou, so having salespeople come over right away when there is a concern has been very helpful. THK is a large corporation, but they treat each of their customers with the same, unchanging level of respect. I often stop by exhibitions, and I see THK's representatives doing their best to introduce even small and medium-sized companies to their products. I admire how their sales efforts remain unchanged while focusing on the future. THK truly practices customer-oriented sales activities, thinking, acting, and verifying results from the customer's perspective. We have reflected that in our corporate philosophy, too. I have had the opportunity to meet President Teramachi, and looking back, I almost feel like I have spent more time in meetings with THK than in industry meetings. I will reach out to people in related industries, so when a new product comes out, I hope THK will hold an information session for us. We will continue to maintain a good relationship with THK and refine our technology.

As a final note, I heard we are the first users outside of Japan to be introduced in THK's CSR Report. We are greatly honored to have been chosen.



The four-axis grinding machine that won the technology innovation award in 2017

Interview

Together with Our Suppliers

Material Purchasing Policy

- 1. Global procurement** *Optimize procurement locations
- 2. Accelerated ordering** *Develop purchasing system that incorporates AI
- 3. Active proposals** *Double communication with business partners to promote value analysis and production innovation

THK's daily operations are performed in accordance with our policy to manufacture products in the optimal location and to conduct our business and improve our technology in a way that meets the needs of our customers.

Throughout our supply chain, from design to sales, we strive to adhere to social norms and be environmentally conscious in order to create a sustainable society.

Due to the new system of accountability for freight owners* announced by the Ministry of Land, Infrastructure, Transport and Tourism in 2018, our distribution centers moved the time they stop shipping forward by one hour, from 4:00 p.m. to 3:00 p.m., in an effort to alleviate the workload of truckers. With the introduction of this new system, we have taken steps to limit the following types of behaviors that actively lead to violations:

1. Constantly having truckers wait on shipments
2. Specifying unreasonable arrival times
3. Punishing truckers for unavoidable delays
4. Asking truckers to violate weight regulations, etc.

As we promote our CSR activities, in addition to reflecting the voices of customers, we will also continue to implement activities that involve the entire supply chain, such as conducting CSR surveys of our suppliers.

* New system of accountability for freight owners

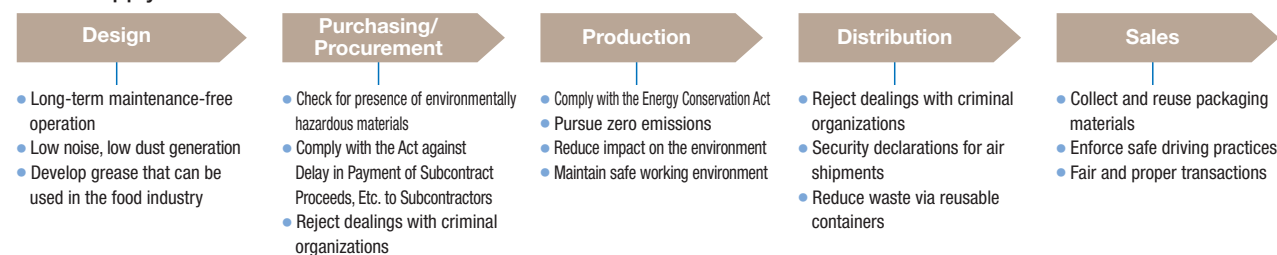
In accordance with Article 64 of the Motor Truck Transportation Business Act, in cases where administrative sanctions are imposed in response to a violation such as a truck transportation business operator's transportation of excessive load or failure to prevent over-strained driving, when it is recognized that the violation is mainly attributable to the action of the freight owner, such as being under the direction of the freight owner, the Minister of Land, Infrastructure, Transport and Tourism shall recommend that the freight owner take appropriate measures to prevent the recurrence of the violation.

THK Basic Policy on Procurement

In order to continue to provide THK products that satisfy our customers, we establish good, healthy, and mutually beneficial relationships with our suppliers.

- Activities**
- 1 Procurement practices emphasizing communication with suppliers. Evaluating and choosing suppliers with thorough consideration for QCDES
 - 2 Fair and equitable dealings in compliance with all pertinent laws and social norms
 - 3 Efforts to minimize costs. Encouraging the active pursuit of cost-saving projects and value-analysis initiatives
 - 4 Pursuit of global procurement
 - 5 Implementation of a BCP (business continuity plan)
 - 6 Environmental consciousness through green procurement

THK's Supply Chain



Working with Suppliers

THK meets with suppliers to exchange technical information about processes in order to improve and refine both party's techniques. Businesses in the THK Association actively

conduct value analysis proposals relating to machining technology, and the number of proposals jumped dramatically from 467 in 2017 to 550 in 2018.

In Our Customers' Words

Customer Award-Winning Engineering Solutions and High-Quality Products

Hitachi High-Technologies Corporation Analytical & Medical Solution Business Group



Taku Sakazume (Center)
Medical Systems Product Division, General Manager

Tetsuji Kawahara (Right)
Medical Systems Design 1st Department, Senior Engineer

Yukinori Sakashita (Left)
Medical Systems Design 2nd Department, Senior Engineer

— Tell us about Hitachi High-Technologies and Analytical & Medical Solutions products.

Our corporate vision is "Simplify our customers' high-tech processes." We have developed our business around three segments: "Analytical & Medical Solutions" that provide bio and medical systems such as clinical analyzers and scientific instruments, "Nano-Technology Solutions" that provide semiconductor manufacturing equipment and electron microscopes, and "Industrial Solutions" that focus on fields such as social and industrial infrastructure as well as automotive and transportation equipment, etc. We help our customers to solve their problems by providing technologies, products, and services based on our core technologies in "Observation, Measurement, and Analysis."

— Why did Hitachi High-Technologies (HHT) apply THK products on your medical systems?

HHT provides clinical analyzers for clinical laboratories in hospitals and commercial laboratories. Generally, these products are categorized as IVD (in-vitro diagnostics) devices. Our products are mainly used to quantify the concentration of components in blood, in urine, or in other body fluids. Medical doctors can request several specific tests from more than 200 items to identify diseases. The test menu has been expanding for the last fifty years. In the past, it took time to get the results. Patients were requested by doctors to appear the following week to get the results. Today, so many blood tests can be completed in a hospital's clinical laboratory within one hour after drawing a patient's blood. Medical doctors can diagnose the diseases more accurately. Supporting this change have been the many improvements



Immunoassay module cobas® e 801
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in the IVD industry, including those in clinical laboratories. We focused on the development of the analyzer, a kind of robot for biochemical reactions. It contains multiple mechanisms for quantitative liquid transportation of samples and reagents, mixing functions, optical detection, and a temperature-controlled incubator to carry out the reaction. Around one hundred reaction containers are processed in parallel. For clinical laboratories with limited space, the analyzers are designed with a combination of 3-dimensional movements. This requires many linear actuators with high accuracy and reliability. THK's linear guide products are used for this very precise movement.

— Why did HHT award the VEC (Value Engineering for Customers) to THK in 2018?

The competition in this market is based on the throughput you get out of the floor space. We have been working with a European-based IVD reagent company for over forty years. They want to keep the established reagent composition. In addition to that, the system throughput and reagent capacity on board must be maximized in limited floor space. But the most critical point was reliability. New analyzers are expected to operate 24/7. To achieve that, THK's marketing, sales, and engineering staff were requested to join the discussion with HHT's purchasing and engineering team from very early in the concept stage. In 2018, we proudly selected THK for the award from among our 1,500 vendors. THK supported HHT in many important aspects, including prompt production on demand, high quality, and regulatory compliance.

— What does HHT expect from THK?

In the IVD device business, it takes time to get the approval of products with IVD assays by healthcare authorities after the instrument design is fixed. After we get clearance, rapid production ramp-up is required. We would like to cooperate with THK in this business environment to prepare for the scale-up. From our experience of the earthquake in 2011, we would like THK to prepare for various kinds of natural disasters, including those that may impact THK's material vendors. Recently, environmental and national security requirements have been getting more complicated. We expect THK to prepare for such requirements in advance.

Interview

Quality Assurance Structure

Quality Policy

We implement quality assurance activities that ensure we always deliver products that will satisfy our customers and earn their trust.

THK has established a quality assurance system in which each production facility both in and outside of Japan is certified with the ISO 9001 Quality Management System. We provide a quality assurance system for the industrial machinery business that produces machine tools, semiconductor manufacturing equipment, medical devices, robots, and seismic isolation and damping systems. With this as our base, we obtain certifications in quality standards adapted for new fields such as the automotive and transportation business and the aerospace industry.

Furthermore, we perform regular quality audits based on the quality management systems at our business partners and suppliers, and we work to maintain and improve product quality on a daily basis with a thorough quality assurance structure.

We have also established a system that allows quality data to be shared globally. In addition to gathering feedback from customers in each region, analyzing it, and providing rapid and appropriate service, we endeavor to develop products that meet market needs and improve quality.

Quality System Overview



Quality Management System Certification Status

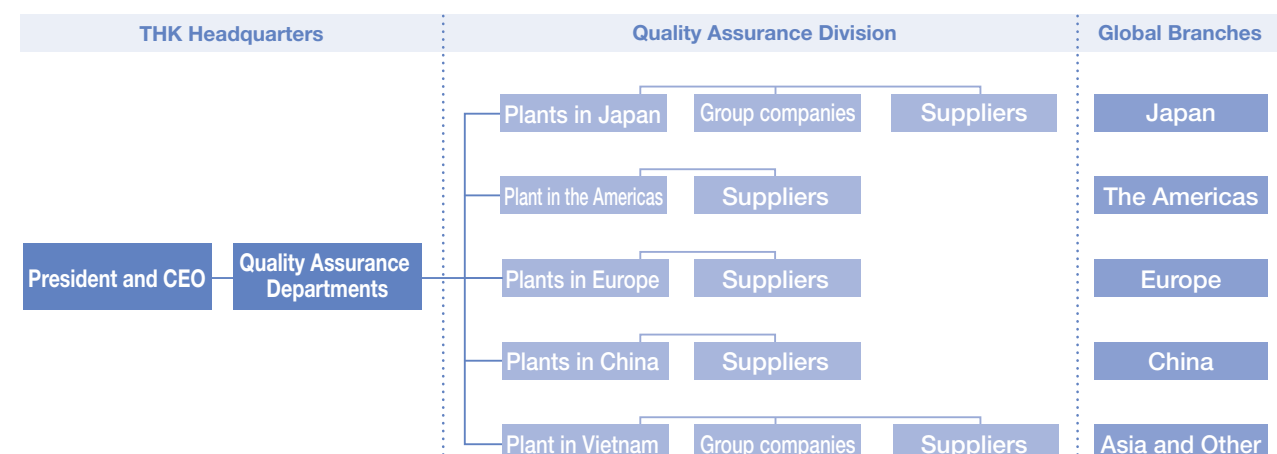
	ISO 9001	JIS Q 9100 Aerospace Industry	ISO/TS 16949 Automotive Industry	IATF 16949
Japan	11	1	1	—
Outside of Japan	13	—	7	6
Total	24	1	8	6

(Facilities)

Quality Management Process



Global Quality Assurance Structure



Together with Our Shareholders

THK engages in IR activities in an effort to disclose information in a manner that is fair, impartial, expedient, accurate, and easy to understand. We strive to provide more thorough and valuable information through IR events such as financial results briefings and IR tools such as our investor relations website and Annual Report.

Primary IR Activities

IR events	IR meetings	• Interview around 500 analysts and institutional investors annually
	Roadshows outside of Japan	• Hold IR meetings led by the president for institutional investors outside of Japan
	Financial results briefing	• Post presentation materials and videos on the IR website mid-year and at year end
	General Meeting of Shareholders	• Scheduled on a Saturday during a period when few shareholder meetings are scheduled, accompanied by an exhibition
IR tools	IR website	• Publish various IR tools and content oriented towards individual investors
	Annual Report	• Compile company overview, management targets, and medium- to long-term strategies
	Investor information (fact book)	• Compile detailed financial data

The IR Website



Investor Relations page

1. IR Library

The IR Library contains various IR tools, including investor information compiled from summaries of financial results and detailed financial data. Presentation materials and videos are available here following the financial results briefings held every year in February and August.

2. IR Information E-mail Delivery Service (RIMSNET)

This service sends an electronic newsletter announcing financial results and other news releases to registrants.

Register at: <https://rims.tr.muifg.jp/?sn=6481>

* The IR Information E-mail Delivery Service is managed by Mitsubishi UFJ Trust and Banking Corporation.

3. For Our Individual Investors

This page contains general information about our company history and management strategy as well as examples of our product applications.

General Meeting of Shareholders



49th General Meeting of Shareholders

Since 1998, we have held our General Meeting of Shareholders, which is based on the concept of an open meeting, on Saturdays during periods when few shareholder meetings are scheduled. We provide seats for observers so that many people, including business partners, can participate.

We also hold an exhibition after the meeting for participants to experience our products up close, where we introduce the various fields where our products are utilized, such as machine tools, industrial robots, automotive and transportation equipment, and seismic isolation systems.

Health and Safety

Management Structure

Five THK facilities in Japan earned OHSAS* 18001 certification in 2010. In 2018, we took proactive measures in accordance with our policy. In 2019, we worked on transitioning to the ISO 45001 occupational health and safety

management system, as OHSAS will expire in 2021.

* OHSAS: Occupational health and safety management system

* ISO 45001: Occupational health and safety management system standard published in March 2018

Policy Create a pleasant work environment with zero work-related accidents or illnesses.

2018 Occupational Health and Safety Activities in the Production Division

Objective	No.	Activity	Result
1. Allow occupational health and safety management system (OHSAS 18001) to reach all employees	1	Implement risk assessments and workplace safety training	Met
	2	File and provide information pertaining to relevant regulations (chemical substance risk assessments)	Met
	3	Prepare and perform internal audits (reciprocal audits)	Met
	4	Conduct management reviews	Met
2. Revitalize health and safety committee activities	5	Promote disaster prevention	Met
	6	Implement traffic safety activities (achieve zero traffic accidents)	Not met
	7	Conduct workplace safety patrols	Met
	8	Promote 5S (6S) activities	Met
3. Eliminate workplace accidents	9	Achieve 3.1 million hours without any accidents (class 1 accident-free record) Prevent workplace accidents from occurring (zero accidents) Promote submission of proposals to prevent near misses (production: 1/month per group, indirect: 1/month per department)	Not met
	10	Ensure employees confirm machines have completely stopped	Not met
	11	Train new employees (temporary and mid-career hires) thoroughly	Met
	12	Provide instruction to business partners who work on site and visitors	Met
4. Enhance health management	13	Perform regular and special health checks	Met
	14	Promote mental health	Met
	15	Perform stress checks	Met
	16	Implement illness prevention activities	Met
	17	Make improvements based on occupational physician recommendations	Met

Incident and Severity Rates (Data)

	2014	2015	2016	2017	2018
Incident rate	0.20/1.66	1.13/1.61	0.25/1.63	0.82/1.66	0.76/1.83
Severity rate	0.00/0.09	0.01/0.07	0.00/0.10	0.01/0.09	0.01/0.09

(THK/Japan average (%))

Incident rate: Frequency of work-related injuries

[IR = (Number of incidents) ÷ (Labor hours worked) × 1,000,000]

Severity rate: Severity of work-related injuries

[SR = (Number of lost workdays) ÷ (Labor hours worked) × 1,000]

* Due to the change in the fiscal year period in 2017, the 2017 data reflects a period from January 1 to December 31, 2017, and the data for prior years reflects a period from April 1 to March 31.

Annual Physical Participation Rate

THK has its employees in Japan receive annual physicals and recommends medical examinations through our health insurance society. The following tables show the annual

physical participation rate and the examinations our health insurance society offers.

Medical Examinations Offered

General check-up	Younger than 35
Gastric cancer screening	Younger than 35
Lifestyle disease screening	35 or older
Comprehensive health examination	35 or older
Uterine and breast cancer screening	—

Annual Physical Participation Rate (THK CO., LTD., only)

2014	2015	2016	2017	2018
100%	100%	100%	100%	100%

RIZAP

Comparing the results of the medical questionnaire filled out before the annual physical with statistics from the National Federation of Health Insurance Societies, we learned that few employees at our headquarters regularly exercise, and many grab dinner less than two hours before they go to bed. To inspire lifestyle changes, we hosted a RIZAP (pronounced “rye-zap”) seminar in November 2018.

Forty-four people participated. After a lecture about reflecting on one’s lifestyle, setting goals, and the RIZAP method (low-sugar diet, exercise, etc.), there was an activity for stretching and squatting with the proper technique. Participants praised the seminar and asked for more

practical sessions on food and exercise and content geared toward women and life after retirement.



Practicing stretching

Establishing a Safety Dojo

DALIAN THK established its own safety dojo in September 2018 to improve safety, quality, and employee skills. This dojo operates under the slogans of “Safety is the top priority!” and “Instill safety awareness through practice and aim to be a workplace with zero accidents!”

This dojo has a training area to teach basic safety knowledge and hazard prediction training, as well as an interactive area where employees can experience the alarming sensation of getting caught in a machine or receiving an electric shock. By the end of December, training was conducted at the dojo 28 times, with around 940 employees participating. DALIAN THK will continue to use its dojo to conduct training and aim for higher safety, quality, and employee skill levels.



Employees listening attentively to the lesson

Mental Health Class

Mental health issues in the workplace and health disorders caused by overwork are currently major concerns in the field of occupational health. As a company event to coincide with Japan’s National Occupational Health Week, occupational physician Dr. Kouda gave a class on mental health at the THK RHYTHM Hamamatsu plant in October 2018.

Around 100 supervisors and managers attended. One participant commented, “He explained what happens between when a person becomes depressed and when they return to work, from the differing perspectives of the individual, their colleagues, and the company. It was really easy to follow.” Another noted, “It was a good opportunity to learn about something I might encounter.” We will continue to deepen awareness of mental health issues to improve and create an

even better work environment.



Dr. Takahiko Kouda giving his lecture

Supporting Development

HR Data Records

	2016			2017			2018		
	Overall	M	F	Overall	M	F	Overall	M	F
Turnover rate (%) ¹	1.5	1.3	2.4	1.0	0.8	1.9	1.8	1.7	2.4
Years of service	18.3	19.0	14.2	17.5	18.1	13.7	17.1	17.7	13.8
Individuals eligible for childcare leave	131	112	19	248	209	39	234	194	40
Individuals on childcare leave	21	2	19	41	2	39	46	3 ²	43 ³
Reinstatement rate (%)	100	100	100	100	100	100	100	100	100
Retention rate (%)	97	100	97	100	100	100	100	100	100
Individuals with shortened hours	71	0	71	69	3	66	59	2	57
Employees with disabilities (%) ⁴	2.17	—	—	2.20	—	—	2.12	—	—

¹ Turnover rate only includes full-time employees. ² One took extended leave.
³ Three took extended leave. ⁴ Inclusion mandate: 2.20

Turnover rate = $\frac{\text{Employees who left during the fiscal year}}{\text{Employees registered at the year end}} \times 100$

Reinstatement rate = $\frac{\text{Total employees reinstated after childcare leave}}{\text{Total employees planned to be reinstated after childcare leave}} \times 100$

Retention rate = $\frac{\text{Total employees still registered two months after returning from childcare leave}}{\text{Total employees reinstated after childcare leave during previous reporting period}} \times 100$

Employees Who Passed the National Trade Skill Test & Certification

	Passed in 2018		Total as of 12/31/2018	
	M	F	M	F
Metal heat treating	6	0	101	1
Machining	10	0	325	1
Electrical discharge machining	1	0	7	0
Finishing	0	0	26	0
Electric equipment assembling	1	0	7	0
Machine inspecting	6	1	239	12
Pneumatic equipment assembling	0	0	7	0
Hydraulic equipment adjusting	0	0	23	0
Plastic molding	0	0	4	0
Machine/plant drafting	0	0	99	2
Electrical drafting	0	0	0	0
Metal material testing	0	0	59	0
Machine maintenance	7	0	374	0
Total	31	1	1,271	16

Data includes 12 THK facilities in Japan.

Year Two of the THK Education Outreach Program

To use our experience as a manufacturer to support proactive learning, we partnered with Leave a Nest Co., Ltd.* and launched the THK Education Outreach Program in 2017. In 2018, we introduced students to manufacturing through school visits and began our program to create manufacturing-related learning materials. We visited the Kaichi Nihonbashi Gakuen Junior High School twice in March and invited junior high school teachers to visit the THK headquarters for an information session about the learning materials project. Following the information session, participants attended the Learning Materials Research Committee

meeting. After incorporating feedback from those educators into our vision of the next generation of talent, we refined the content of our learning materials.

As we did in 2017, we also sponsored the second Science Castle* Grant THK Prize. Out of thirty-four research grant proposals, ten were adopted, and Seiko Gakuin High School was awarded the THK Prize.

* Leave a Nest Co., Ltd., is a company whose corporate philosophy is "Advancing Science and Technology for Global Happiness." They promote initiatives in science education and training for the next generation.

* Science Castle is a conference that Leave a Nest Co., Ltd., holds for junior high and high school students.

What students said about the school visits:

- "It was really fun to use so many tools in creative ways."
- "It was a great chance for every student to share their ideas."

What teachers said:

- "The Japanese education guideline reforms encourage a focus on the pursuit of knowledge. This program aligns well with that goal because it involves creating things without a set solution."
- "All of the students were extremely engaged in the activities. The fact that they remained focused the entire time speaks to how effective this program is."

Dedicated Calibration Technician Receives Award for His Efforts

Hiroyuki Fujimoto
Quality Assurance Section
Yamaguchi Plant



At the calibration room desk

Since joining the company in 2000, I have been in charge of calibrating and repairing all measuring instruments used at our factory. Calibrating involves testing these instruments by operating them in the correct way, confirming they display an accurate measurement, and repairing or outsourcing repairs as needed. Gauges can malfunction for a number of reasons, including water or oil penetration or being dropped. It is easier to ask a vendor to repair them, but I factor in the cost and time and fix them

myself whenever possible. Repair work suits me, and I cannot describe the satisfaction I feel when I am able to fix something. In September 2018, I received an award from the chairman of the Japan Organization for Employment of the Elderly, Persons with Disabilities and Job Seekers in recognition of my efforts in the workplace.

If I recall, I learned about THK during a plant tour when I was a student at a school for the deaf. The polite reception I received from the employees assured me that it was a good company, and I decided to join. As I have worked here, I have felt the kindness emanating from everyone at the Yamaguchi plant as they come to greet me. The award I received was the result of the cooperation of the people around me, and I am grateful. I will work toward receiving awards from the prefectural governor and the Minister of Health, Labour and Welfare.

Prefectural Governor's Award



Shunsuke Yoshinaga, deputy manager of the General Affairs Section at the Yamaguchi plant, was one of three individuals to receive an award from the governor of Yamaguchi Prefecture

in September 2018. He was recognized for his keynote speech given to many people with disabilities, and for his work as a lecturer at a local government-sponsored seminar for new educators and instructors who interact with people with disabilities, and as an advisor appointed by the Yamaguchi Labor Bureau for supporting the employment of people with disabilities.

Science Castle Grant THK Prize Winner: Seiko Gakuin High School



Seiko Gakuin High School team members

We are grateful for the opportunity to present the results of our research at Science Castle. We are also proud that we won the THK Prize for using the LM Guide as the subject of our research

to experiment and develop our own solution for a challenge faced by society.

First, we discussed different social challenges the world is facing. We concluded that every problem—energy problems, food shortages, and overpopulation—stems from a lack of land. We focused on effectively using the ocean, which we cannot say has been utilized enough. We felt we could use the ocean for more land to solve the land shortage and showcase Japan's advanced technology to the world.

Our plan is to create artificial islands and install the R Guide on the floating structures that surround the island to absorb the rocking from the push and pull of the waves. When we created a small model, placed it in an acrylic pool, and measured the movement caused by the waves we generated, we found that the rocking of the floating surfaces

was somewhat absorbed (see photo).

Our experiment is still ongoing. Even if it is not much, through trial and error and repeated experimentation, we hope to see satisfying results.



The R Guide protects the island by absorbing wave motion



Shodai Aoyama
Reliability Research Section,
Fundamental Technology
Research Laboratory

A Word from the Technical Advisor

I was really amazed at the spectacular concept of creating land on the ocean and the efforts of this team repeatedly coming up with and testing hypotheses to gradually make progress toward their goal. I will continue rooting for them, and I look forward to their future research.

Local Communities

THK's Approach

As a good corporate citizen, THK actively contributes to society. Our activities include:

1. Establishing a basic philosophy of contributing to society through our business activities
2. Identifying areas to prioritize our efforts and using our corporate resources to promote specific contributions based on our corporate philosophy
3. Coordinating and cooperating with various stakeholders, including NPOs, NGOs, local communities, governments, and international institutions
4. Supporting employees' own community contributions and involvement
5. Participating in industry and business community efforts that contribute to society

In 2018, we provided financial support for numerous causes, including relief for multiple natural disasters in and outside of Japan. To introduce young people to the joy of manufacturing, we also welcomed a total of 184 interns at 10 production facilities around the world.

Minato City Marathon

The Minato City Half Marathon 2018 was held in December in the Minato ward of Tokyo, where the THK headquarters is located. We cosponsored the event and provided operational support, with five employees volunteering as course guides. The area in front of the THK headquarters was a checkpoint, and we provided a first-aid station so runners could enjoy the marathon without worry. The event was favored with good weather, and 19 of our employees also participated as runners. We will continue to deepen our communication with local residents through activities closely tied to the regions we are located in.



The front of the THK headquarters served as a checkpoint

Charitable Contributions

Date	Purpose	Recipient
June 2018	Northern Osaka earthquake	Japanese Red Cross
July 2018	July 2018 heavy rains	Japanese Red Cross
Sept. 2018	Hokkaido Eastern Iburi earthquake	Japanese Red Cross
Oct. 2018	Sulawesi earthquake (Indonesia)	Japanese Red Cross

Science Fair

In September 2018, the Yamaguchi plant participated in the two-day 9th Science Fair at the Onoda Sunpark. The theme of the event was inspiring scientific curiosity and interest and introducing more people to the fun and appeal of science. THK was in charge of helping children make hourglasses with iron, the raw material used for our products.

Both days were packed with attendees, and many determined visitors helped the hourglasses take form. The event was so successful that we ran out of all the materials we brought to make over 150 hourglasses.

We will continue to pursue activities that present children with challenges that encourage them to wonder "Why?" and nurture their scientific interest.

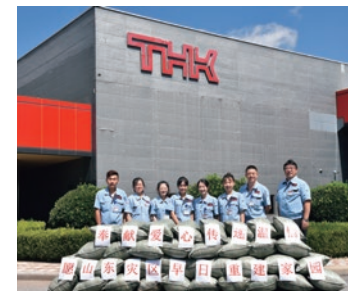


(Above) Engaged participants
(Below) Completed hourglasses

Heavy Rain Disaster Area Relief

The landfall of Tropical Storm Rumbia in mainland China in August 2018 caused damage to 13 cities, including Weifang, Dongying, Heze, and Tai'an in Shandong Province. Around 5.09 million people were affected by the disaster, with 18 fatalities and nine cases of missing persons. The direct economic impact reached a loss of 12.08 billion yuan (about 193.3 billion yen). As a result of the heavy rains, water levels at the nearby Yeyuan, Tangshuiya, and Heihushan reservoirs rose drastically. Releasing the water triggered massive flooding in the downstream city of Shouguang, causing homes, crop fields, greenhouses, and pig farms to be inundated with water and resulting in severe damage.

THK Liaoning immediately collected donations for the affected areas, sending the clothes and bedding gathered from around 100 employees to the Shouguang Charity General Association.



Donated relief supplies

Community Involvement



Mike from TRA CANADA's
St. Catharines plant (second from left)

Karate helps you develop respect for others, self-confidence, and self-control.

Through our lessons, you naturally learn how to behave as part of a group. Even when people come to us shy, quiet, and lacking self-confidence, after a year, they grow to the point where they could lead the class. I hope that my students grow in practical ways through karate and become the kind of person who can speak in front of a crowd with confidence.

Coexisting with Local Communities

In 2012, Vice President Sun at THK Liaoning became a member of the Dalian People's Political Consultative Conference for the Jinzhou New Area, a district under the administration of the city of Dalian. Every year since then, she has brought up proposals reflecting the desires of local citizens. In 2017, she proposed a strengthening of services for the elderly, which aimed to establish community centers where children whose caretakers work can interact with the elderly. This proposal received the Jinzhou New Area's seventh outstanding proposal award and was adopted by the city.

In March 2018, Dalian announced a directive to establish community centers for Dalian's elderly and other residents, and the city plans to continue strengthening its elderly services.



At the conference (in back, on right)

Sekigahara 2018

The Gifu plant ran a snack stand at the Sekigahara festival held in October 2018, serving mitarashi dango, hot dogs, and soft drinks. The lively two-day festival was blessed with good weather, and around 60,000 visitors attended. The THK snack stand was also very popular, and 17 of our employees spent a busy but rewarding time there. During the festival, our employee parking lot was open to attendees, many of whom took advantage of the parking space. City representatives thanked us for our cooperation.

This festival is held every year, and we plan to continue actively supporting it as a means to revitalize the local area.



THK's snack stand