# **Together with Our Customers** (Quality Assurance and Suppliers)

We value communication with our suppliers and create opportunities to share recommendations about our respective production processes so that we can consistently offer high-quality products that will satisfy our customers.

#### **Quality Assurance**

THK has established a quality assurance structure with each production facility both in and outside of Japan certified with the ISO 9001 Quality Management System and other quality standards that allow us to adapt to different industries, such as the automotive and aerospace industries, depending on the products each facility produces.

We have also established a system that allows quality data to be shared globally. In addition to gathering feedback from

#### **Quality Policy**

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

customers in each region, analyzing it, and providing rapid and appropriate service, we endeavor to develop products that meet market needs and to improve quality.

In our mission to satisfy all of our customers, we always strive to maintain and improve product quality, thereby delivering safe, dependable products and maintaining uniform quality all over the world.

#### Quality Management System Certification Status

		ISO 9001	JIS Q 9100 Aerospace Industry	ISO/TS 16949 Automotive Industry
	Japan	11	1	3
	Outside of Japan	11	_	7
	Total	22	1	10

#### **Quality Management Process**



 Pursue better process capability Pursue better lead time and costs

- Pursue uniform quality all over Pursue customer satisfaction
- Pursue quality improvements

#### **Together with Our Suppliers**

Throughout our supply chain, from design to sales, we strive to adhere to social norms and be environmentally conscious in order to facilitate the creation of a sustainable society. We have formed good partnerships with our suppliers, aiming for mutually beneficial relationships.

## **THK** Basic Policy on

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

- Long-term maintenance-free operation
- Low noise. low dust generation Develop grease that can be used in the food industry

- Investigate environmentally
- hazardous materials Comply with the Act against
- Delay in Payment of Subcontract Proceeds, Etc. to Subcontractors
- Reject dealings with criminal organizations

- Comply with the Energy Conservation Act
- Pursue zero emissions
- Reduce impact on the environment Maintain safe working environment
- Reject dealings with crimina
- organizations Security declarations for air
- Reduce waste via reusable containers

- Collect and reuse packaging
- Enforce safe driving practices
- · Fair and proper transactions

# **NIETVIEW** In Our Customers' Words

# Installing the NEXTAGE® dual-arm industrial robot will increase our productivity and lead to new business.

## NIC Autotec, Inc.

Founded in 1927 in Toyama Prefecture as Nishikawa File Corporation, a file machining and manufacturing company, Developed their business around their FA (Factory Automation) equipment, launching into the field of aluminum frames in 1983 with their development of Japan's first aluminum profile system, the ALFA FRAME® SYSTEM. Currently support manufacturing in Japan with their two core business areas: FA equipment and aluminum frames.



#### **NEXTAGE®**

The dual-arm industrial robot made by Kawada Robotics Corporation. As a joint venture between the THK Group and Kawada Robotics Corporation, Kawada Robotics Corporation manufactures the robot body, while THK INTECHS handles sales and develops optional parts.



Technical & Development Dept Development Group, Development Team Hironobu Nagai

#### Tell us how you began using NEXTAGE®.

We have a longstanding friendly relationship with THK. We purchase their LM Guides and other products indispensable to FA equipment, and THK INTECHS in turn uses our ALFA FRAME® SYSTEM.

Recognizing the problems with production capability and decreased quality that arise from the decline in the number of laborers due to the aging population, we had been investigating ways to maintain or possibly improve productivity for some time. It was then that THK INTECHS introduced us to NEXTAGE®, which can work alongside humans, and as we became more interested, we realized our ALFA FRAME® SYSTEM could also support NEXTAGE® peripherals. As we were thinking about how we wanted to stay ahead of demand by gathering expertise about humanoid robots, we were granted the opportunity to make use of the Ministry of Economy, Trade and Industry's Demonstration Project for the Introduction of Robots\* and install a NEXTAGE®.



NEXTAGE® using the cameras on its left and right hands to identify the spatial relationships between objects as it works

#### Tell us your impression of NEXTAGE®.

The NEXTAGE® we use sets the square nuts and nut holders that go in the aluminum profiles. Currently, we are doing a production trial with the concept of creating a work environment where robots can step in for people at any time by having the NEXTAGE® use cameras to read the same drawings employees do. We deal with small components, but the NEXTAGE® is able to use its hand cameras to accurately recognize spatial relationships and operate without any issues. I was also pleased that you can use marking tape within the head cameras' detection range so that the robot can automatically adjust to wherever it is moved, so it really can work in place of a person.

When we consulted with THK INTECHS about having the robot assemble nuts and nut holders, they custom-made the hands specifically for that task, and we received a lot of advice about the robot's movements. They also responded quickly whenever there was an issue during the installation, so we were very grateful for their assistance.



#### What do you hope to see from NEXTAGE® in the future?

I am hoping that NEXTAGE® can work in place of or alongside an employee, so I think it would be very convenient if there were features like additional applications or packages so that the actual employee could easily set and change the program instead of having an engineer do the programming.

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<sup>\*</sup> Project aimed at furthering robot utilization in society by promoting trials and verifications of robots introduced in manufacturing and service fields that have not yet embraced robotics

## Together with Our Shareholders

We communicate with our shareholders and various other stakeholders by disclosing corporate information in a fair and impartial manner. We thoroughly secure and manage information, including individual and customer information.

#### **Investor Relations Activities**

THK engages in IR activities in an effort to disclose information in a manner that is fair, impartial, expedient, accurate, and easy to understand. In addition to improving the quality of our financial results briefings, interviews, and other IR events, we strive to enhance our disclosures through IR tools such as our Investor Relations website and Annual Report.

#### **Investor Relations Events**

#### Financial Results Briefing

At the financial results briefing, our CEO discusses the company's performance and strategies, while leaving ample time for a Q&A session, where we receive candid feedback regarding our operations.

The proceedings of the meeting are posted on the Investor Relations page of our website in both Japanese and English.



Investor Relations page

#### Other Meetings

Through smaller-scale meetings and one-on-one interviews, we endeavor to open discussions with many more investors. We strive to take advantage of any opportunity to communicate with our institutional investors both within and outside of Japan through phone conference interviews, annual visits to American and European investors, and other means.

#### **General Meeting of Shareholders**

#### An Open Meeting

We have been holding our General Meeting of Shareholders on a Saturday in mid-June every year since 1998, thereby avoiding the period when many shareholder meetings are scheduled and allowing more shareholders to participate. We also provide a space in the meeting hall for observers, to give suppliers and others who have a stake in THK the opportunity to better understand our business. As a result, we have seen even greater attendance. After the conclusion of the General Meeting of Shareholders, we hold a product exhibition for attendees to experience THK products up close, which they have few opportunities to do in their everyday

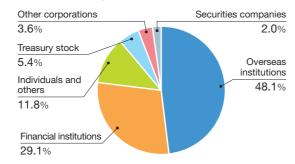
#### 47th General Meeting of Shareholders

Approximately 450 shareholders attended our 47th General Meeting of Shareholders held on June 17, 2017. At the product exhibition, our displays featured industrial machinery essential to manufacturing, such as machine tools and industrial robots, as well as applications that are carving the way into new fields, such as seismic isolation systems, automotive and transportation products, robotics, and renewable energy. We also introduced new initiatives that make full use of the IoT.



47th General Meeting of Shareholders

#### Stock Distribution by Owner (Current as of March 31, 2017)



# Together with Our Employees (Health and Safety)

We strive to create a pleasant work environment by preventing workplace accidents and hosting occasional seminars, lectures, and other activities to promote employee

#### **Occupational Health and Safety Management System**

Five THK facilities earned OHSAS\* 18001 certification in 2010. In 2016, we performed numerous activities to achieve our policy: Create a pleasant work environment with zero work-related accidents or illnesses.

Activity	Description	Target	2016 Result	
	Implement risk assessments and workplace safety training			Met
Allow occupational health and safety management system to	Organize and report on regulation-related matters (chemical substance risk assessment)			Met
reach all employees	Prepare and perform internal audits (reciprocal audits)	Semiannually	2 times	Met
	Conduct management review	Annually	1 time	Met
	Promote disaster prevention	Annually	1 time	Met
Revitalize health and safety committee activities	Implement traffic safety activities	Zero traffic accidents	11 accidents	Not met
committee activities	Conduct workplace safety patrols	Monthly	12 times	Met
	Promote 5S (6S) activities	Monthly	12 times	Met
	Prevent workplace accidents from occurring	Zero accidents	21 accidents	Not met
Eliminate workplace accidents	Promote submission of proposals to prevent near misses	Production: 1/month per group, Indirect: 1/month per department	1,535 proposals	Met
	Provide instruction to business partners who work on site and visitors			Met
	Perform regular and special health checks	Annually	1 time	Met
	Promote mental health	Annually	1 time	Met
Enhance health management	Perform stress checks	Annually	1 time	Met
Li ilianos riballi i management	Implement illness prevention activities			Met
	Make improvements based on occupational physician recommendations			Met

\*OHSAS: Occupational health and safety management systems

#### **Incident and Severity Rates (Data)**

	2012	2013	2014	2015	2016
Incident rate	<b>0.20</b> /1.59	<b>1.09</b> /1.58	<b>0.20</b> /1.66	<b>1.13</b> /1.61	<b>0.25</b> /1.63
Severity rate	<b>0.01</b> /0.10	<b>0.02</b> /0.10	<b>0.00</b> /0.09	<b>0.01</b> /0.07	<b>0.00</b> /0.10

(THK/Japan average (%))

Incident rate: Frequency of work-related injuries

[IR = (Number of incidents)  $\div$  (Labor hours worked)  $\times$  1,000,000] Severity rate: Severity of work-related injuries

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

\*Data from 2012 to 2015 represents 5 THK production facilities 2016 data represents a total of 12 production facilities, including those of THK and its subsidiaries.

#### **Luncheon Seminar**

We held luncheon seminars to prevent lifestyle diseases for the third time this fiscal year at our headquarters and Technology Center in December.

This seminar's theme was oral health, which can be intimidating for those who do not know much about it. Three dentists and one dental hygienist from the Meikai University

PDI Tokyo Clinic came and held a lecture about cavities and gum disease, in which they also explained the proper way to brush and floss to a total audience of 44 employees.



Lecture at the Technology Center

#### **Mental Health Class**

In an effort to create a healthier work environment, the Kofu plant's Test and Research Unit invited the clinical psychologist Yuuki Osada to hold two mental health classes there this year.

After each lecture, group discussions were held where employees and their supervisors had an open dialogue and

each side sought to better understand the other. In the future, we will hold classes focused on psychological resilience and learning to see the best in others.



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# Together with Our Employees (Supporting Development)

We provide avenues to create career paths and develop employee potential in the way best suited to each employee's individual strengths and weaknesses, using such methods as on-the-job training, on-site and off-site training courses, internal publications, and e-learning.

# Transferring Skills: Teaching Employees to Recognize Slight Deviations

The Manufacturing Section III Machining Group at the Gifu plant machines products for seismic isolation systems as well as wind and water power generation. One product they make is the Inertial Rotary Damping Tube (iRDT)\*, which is composed of a large diameter ball screw, M100, and M120, and it conforms to JIS Grade 1 specifications. However, variations due to slight deformations in material or thickness of the surface coating after plating can sometimes make these parts difficult to assemble. In such cases, it is necessary to make adjustments, but the shape is difficult for an NC system to clamp. Human technical skills are necessary, and the final adjustment is done manually by a person using a multi-purpose lathe.

This group holds periodic training sessions where experienced operators teach newer employees so that everyone in the department will be able to perform the process and pass the National Trade Skill Test & Certification system for lathe machining.



Trainer: Shoji Shimoma (deputy manager, left) Trainee: Tatsuya Yoshida (right)

\*iRDT: Uses a ball screw to absorb earthquake vibration in high-rise buildings by converting it into rotary motion. Effective as a countermeasure to long-period earthquakes

#### **Overseas Trainee Program**

Starting in December 2016, we established a program to enable employees who have worked at THK for at least three years to experience working at an overseas facility in order to gain the skills and mindset of those who may be transferred abroad in the future. As long as they satisfy a few criteria such as years of service, age, and language skills, anyone can apply for this opportunity, and a screening process is used to select employees and the facilities they will be sent to. In 2016, two employees were sent to start working in India and Singapore under this program.

#### HR Data Records -

(Fiscal year)

	2012	2013	2014	2015	2016
Individuals taking childcare leave	29	31	29	23	21
Individuals with shortened hours	33	41	48	62	71
Average years of service at THK	15.4	16.7	17.4	17.8	18.3
Recognition of Continuous Service recipients (Recognized every five years)	744	579	624	816	613
Kaizen proposal submissions/ Prize recipients	11,871/ 331	11,065/ 278	7,213/ 193	6,309/ 162	3,777/ 94
e-Learning course completion rate (%)	73.2	74.0	77.0	73.6	72.3
Disabled employees in the THK workforce (%) (As of the end of April)	2.01	2.24	2.23	2.21	2.17

## Voice

### **An Overseas Trainee's Experience**



THK LM SYSTEM Pte. Ltd **Hisato Miura** 

I majored in mechanical engineering at my university, focusing on sensor research, so I had hoped to join a company that dealt with components used in robots. I have always enjoyed interacting with people, and when I joined THK, I was put in the sales department as I had hoped. I got to put what I learned at my university to practical use in my sales activities, exercising my knowledge of concepts such as curvature and calculating displacement when explaining things to customers. I was later transferred to the engineering department, and as I accumulated experience there, I became interested in sales activities that would enable me to actually operate robots that use actuators. At the same time, I had learned through my prior sales work that many THK products are shipped to customers' plants outside of Japan. This made me want to make proposals that would meet the needs of those overseas plants, and by expanding sales, increase THK's brand recognition not just in Japan, but around the world. It was at that point that I heard about the Overseas Trainee Program, and I applied without hesitation. I chose Singapore because I would get to cover a large region spanning Southeast Asia and Oceania in my sales activities, and I thought that by getting to meet and talk to many customers from other countries, I could gain a great deal of knowledge that would then contribute to my personal growth. While my English is not at the level where I can use it to conduct sales work, I hope to better my English ability as quickly as I can to contribute to the company.

In 2016, over half of THK's employees were individuals from a country other than Japan. As we pursue globalization, I hope to fulfill my role as one of the first applicants to be selected for the trainee program and inspire many others to want to work overseas.

# Together with Our Employees (Human Rights and Diversity in the Workplace)

As a part of our commitment to employing individuals from a wide range of backgrounds, we do not discriminate in our hiring methods. We do not violate human rights through the use of child labor or forced labor, and we cultivate a work environment that is easy to work in, both physically and psychologically, for those with disabilities.

#### **Advisor About Employment for Disabled People**

In July 2016, Shunsuke Yoshinaga, deputy head of the Environmental Education Section at the Yamaguchi plant, was designated by the labor bureau to be an advisor concerning employment for disabled people. He gives lectures and provides advice to special needs schools from the perspective of private industry with the intention of supporting

the employment of people with disabilities. In November of last year, he presented THK's efforts to hire individuals with disabilities at the Vocational Rehabilitation Research Meeting organized by the Japan Organization for Employment of the Elderly, Persons with Disabilities and Job Seekers.

#### **Supported by Those Around Me**

Order Management Section
Manufacturing Promotion Department, Mie Plant
Mario Iwamoto





Replying to Sales regarding an order due date

Award

I studied lathe machining at a technical high school and chose THK because it was a company where I could make use of those skills. I was assigned to NC lathe machining in Manufacturing Section I. Five years after joining THK, I passed the National Trade Skill Test and Certification exam for the mechanical and machining trade, and then focused my attention on training less experienced members.

However, due to a careless mistake on my part, I lost the function of the joints in my right foot from an injury, and I

had to undergo rehabilitation for two years. I was officially recognized as having a disability, but I was able to return to work thanks to the efforts made around the plant to reduce the strain on my foot (adding railings on stairs, letting me use the on-site parking lot, etc.). Thanks to everyone's support, I was able to continue working, for which I received an award from the Japan Organization for Employment of the Elderly, Persons with Disabilities and Job Seekers in September

I now work in the Order Management Section, where I use the experience I gained working on the production floor to manage order due dates. When I receive a request from Sales for a short lead time, I contact the production floor and make adjustments to get as close as possible to meeting the customer's request.

I hope to create a way for disabled people working at different plants to communicate and spread improvements adopted at each plant to make everyone's work environments

#### Always Embracing Challenges

Order Management Section
Manufacturing Promotion Department, Yamaguchi Plant
Tomohiro Omoto





Final shipping transaction

Badge for passing the internal Grade 3 certification test

I joined this company because of the interest I had developed when I participated in a two-week training session at THK while attending the Yamaguchi Prefectural Special Education School in Shimonoseki. After gaining experience assembling cardboard boxes to pack products and ordering components from suppliers, I am now responsible for completing the final shipping transactions to distribute and ship finished products, ordering material like anti-rust film, and

inspecting received material. I was not sure I would be able to pass, but after three years, I became certified through an internal test that is equivalent to Grade 3 of the mechanical and machine trade section of Japan's National Trade Skill Test and Certification in 2012. While I had always been sure of my ability to concentrate, passing the skill certification test contributed greatly to my confidence, and since then, I have also been able to get a driver's license. I was interviewed by the Yomiuri Shimbun for an article about employees with disabilities improving their skills, and the article was published in the Western Japan edition on June 5, 2016.

By challenging myself both at work and in my personal life, I feel I have been able to grow immensely. While it is not necessary for my current position, I plan to actively get new qualifications in skills like driving a forklift that are required for jobs I might do in the future. I also hope to someday get married and start a family.

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# Together with Our Employees (Local Communities)

Along with cooperating with government agencies, NPOs, NGOs, and local communities, we support the independent activities our employees actively pursue to engage with their communities.

#### **Charitable Contributions**

As part of our contributions to society, we provide financial assistance in times of natural disasters and donate money to organizations devoted to the advancement of science and the future development of manufacturing in Japan. In addition, we sponsor a variety of events in communities where we have business locations.

#### Donations

Date	Purpose	Recipient		
April 2016	Kumamoto Earthquakes relief	Japanese Red Cross		
April 2016	Taiwan earthquake relief	Japanese Red Cross		
July 2016	Japanese Red Cross activities	Japanese Red Cross		
November 2016	Central Tottori Earthquake relief	Japanese Red Cross		
January 2017	Japan Science Foundation contribution	Japan Science Foundation		



ts long history of contributions, the ofu plant was the Silver Order of Merit by the Japanese Red

#### **Welcoming the Niigata Medical Association**

In November 2016, THK NIIGATA welcomed 19 physicians in response to a request to host a training session to help them become occupational physicians certified by the Japan Medical Association.

While this training is meant to improve their skill as occupational physicians by visiting companies, touring their facilities, and learning about how they manage safety and health, it was also a way for us to improve our work environment by hearing the opinions and suggestions of many physicians.

THK NIIGATA's occupational physician, Dr. Kooro, remarked, "The participants gained a deeper understanding of THK products, and THK even prepared their seismic isolation simulation vehicle for them. It was a very positive experience."



Lecture by Dr. Kooro

#### **Introducing Kids to the Workplace**

The Mie plant participated in an event held in July 2016 at Mie Kids' Castle to introduce elementary school students to different jobs. This was the fourth time the event was held, and 35 companies and organizations participated. At THK's booth, we introduced children to taking micron-scale measurements with calipers and micrometers, delicate movement performed by robot hands, and seismic isolation technology using an earthquake model.

Through this direct interaction with the work we do in their hometown, they became excited about the idea of having a job, and they got a taste of how fun science can be.



Children taking measurements with a

#### **Junior Internship**

In November 2016, the THK INTECHS Sendai plant accepted four students from KUROKAWA High School as part of the school's three-day work shadowing program for their second-year students.

These students mainly performed assembly work, but they also learned about how high-precision equipment does not allow for even micron-level errors, and how important the everyday greetings they tend not to think much about

The students are also required to send thank you letters after their experience, which is one way the school works to instill in them the manners they will need as adult members of society. As a result of their efforts in career development for their students and training a talent pool that can contribute to the region, this school received an award from the Ministry of Education, Culture, Sports, Science and Technology in January 2017.

Thank you letter from a participant

#### **THK America's Donation Drive**

At the request of the city of Schaumberg, THK America's headquarters provides support during the holiday season each year to those who are facing financial struggles. Employees volunteer to donate basic necessities to a charity organization, with items ranging from canned food, snacks, and seasonings to laundry detergent, toilet paper, and disposable diapers.

As they have been donating since 1998, they received an appreciation letter from the city in recognition of their long service. They will continue to undertake charitable activities as a way to give back to their community.



Food and daily commodities collected by employees (Left to right: Jennifer Cuthbert, Annette Drayton, Colleen Griffiths, Tracy Gardner)

#### Coaching Volleyball

I experienced my first match four years ago when my daughter got involved in a local youth volleyball league, but I got so into the excitement that I earned my referee and coaching certification in 2013. Now, I coach kids three times a week at local elementary and middle school gyms.

In recent years, we have seen a lot of isolated people unable to fit in with society, but sports are the best platform for character building (especially in terms of improving communication). Through the team sport of volleyball. I hope these kids learn the importance of being able to communicate, cooperate, and work with others around them. I plan on continuing to coach for the foreseeable future, and I hope to see those I have worked with return as coaches for younger players and keep bringing life to the youth sports league.



Team huddle during a match

Quality Assurance Section, Yamagata Plani

Tomonori Oorui

#### **Volunteering at the Wang Nursing Home (Liaoning)**

The Liaoning plant established a volunteer organization in July 2015, in which approximately thirty employees currently participate in various activities.

In March 2016, they visited the Wang Nursing Home, located twenty minutes away by car, where struggling, disabled elderly people with no relatives receive free support. Volunteers donated staples like rice, flour, and oil, and they made dumplings and ate dinner with the residents. At the opening ceremony for the Wang Garden in April, Hiroyuki Konno, the Liaoning plant's Chief Executive Officer, also attended and received a certificate for the support we provided.

In the future, we plan to continue volunteering and working with charity organizations in the city of Dalian and participate in environmental conservation activities.



Wang Garden opening ceremony and certificate of support (Certificate held by the person second from the right in the front row)

#### Sowing Seeds in Atsugi

Just like last year, volunteers from the East Japan Region OFC and Engineering Division participated in a rice-planting event organized by the city of Atsugi. We were also able to participate in the harvesting this year, so we received a total of 12 kg of glutinous and non-glutinous rice as our share.

Everyone who participated wanted the rice harvested lo-

cally to go to local children to help them become strong and healthy, so in part to promote the idea of local production for local consumption, we donated the rice to a child care center in Atsugi.



Our rice being served as mochi rice cakes at snack time

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