

**Special Feature:** 

# NEW LEADERSH TAKES OFF.

Outgrowing the Safe Path,
Aiming for Permeation of the RK Brand
through Product Developmental Power
with an Eye toward
Growing our Global Market Share

On April 1, 2021, RIKEN KEIKI Co., Ltd. migrated to a new management structure led by two representative directors: The Chairman and the President. The goal of this new management structure is to realize further growth of the RIKEN KEIKI Group.

We interviewed President Junichi Koyano, who will guide the Group under this new management structure, about his aspirations on appointment as President and the future vision that the RIKEN KEIKI Group should aim to achieve.

The Goal is to Grow to be an Enterprise with Net Sales of 50 Billion Yen by our 90th Anniversary.

Outgrowing the Safe Path toward One of Dramatic Progress

—Congratulations on your appointment as President. Please tell us about your feelings and aspirations upon this occasion, and about the directions and goals of RIKEN KEIKI in the future, as it sets course on a new path amid the continuing COVID-19 pandemic.

While I am starting a new position as President, I have been with the Company for 40 years since joining it in 1981.

In addition, this year the Company marks the 82nd anniversary of its founding. When I looked over the Company's history upon being appointed President, it was clear that with the exception of a few times during the 1950s, soon after its founding, the company has continued to walk a highly-safe, steady path free from loss-making years and dramatic ups and downs.

Over the past period of nearly 20 years, we have maintained an annual growth rate of approximately 5% in net sales. A simple

calculation shows that if this continues, then we could grow to become an enterprise with consolidated net sales of 50 billion yen by our 90th anniversary. I would like us to take on the challenge of realizing this dream, and at the very least I would like those of us in my generation to prepare the route toward this dream.

For this reason, while of course I would like us to aim to continue our 82-year tradition of management free from loss-making years, I also would like us to aim to outgrow the safe path and aim for further dramatic progress.

At the dawn of the semiconductor industry in Japan, the hard work of our predecessors in the Company succeeded in securing a massive share of the semiconductor market, and our continued dominance of the market is a valuable asset to the Company. Fortunately, the semiconductor industry has not been affected strongly by COVID-19. In fact, it can be described as demonstrating highly-stable performance during this period. As such, I do not feel as if I have been assigned the heavy responsibilities of President at a particularly difficult time. Digital industries are booming in areas such as IoT, AI, the digital transformation (DX), 5G, electric vehicles (EV) and automated driving. I feel that I am very fortunate to be taking on this role at this time.

At the same time, it would be problematic for us to rely solely on

#### Junichi Koyano

Born April 5, 1958 in Tokyo; graduated from the College of Industrial Technology,
Nihon University

April 1981 Joined RIKEN KEIKI

March 2007 General Manager, Research and Development Department, Technical
Collaboration Division

June 2007 Executive Officer/General Manager, Research and Development
Department, Technical Collaboration Division

June 2009 Director and Executive Officer/General Manager, Research and
Development Department, Technical Collaboration Division

June 2014 Executive Managing Director/General Manager,
Development/Production Division

June 2017 Executive Director/General Manager, Technical Collaboration Division

April 2020 Executive Director/General Manager, Corporate Administration
Division/General Manager, Corporate Strategy Office

Appointed President

President

Junichi Koyano

the semiconductor industry, and although we have competed in the market largely in the business of gas detectors since our founding, concentration on a single business is not a desirable state in terms of the business portfolio. As Chairman Kobayashi has suggested, we would like to broaden our market base by expanding into fields such as analytical devices and process control devices, in which we can put to use the technological capabilities and management resources that we have amassed until now.

#### Special Feature: RIKEN KEIKI Co., Ltd. Launches a New Management Structure

#### NEW LEADERSHIP TAKES OFF.

[Opening Feature: Special Interview]

Our Business Domains Themselves Contribute to the Achievement of SDGs
A Commitment to Gender Inclusivity and Employment Equality

—Would you describe to us the specific efforts being made by RIKEN KEIKI as a manufacturer as individual enterprises are setting their own targets and striving to achieve them in line with the 17 Sustainable Development Goals (SDGs) identified for achievement by 2030 under United Nations leadership, as well as your thoughts on goals you would like to continue to aim for in the areas of corporate social responsibility (CSR) and corporate governance?

Our management philosophy calls for us to create safe working environments for workers. I am confident that from this point of view as well, our business domains themselves contribute to the achievement of several of SDGs.

Our business mission is to ensure the safety of workers in the workplace, and I believe that we can contribute to SDGs by creating detectors to help protect people and the environment from harmful gases at lower prices and with higher quality and longer lifespans, and ensuring that as many people as possible can use these reliable devices around the world.

At the same time, the efforts throughout society toward decarbonization and switching to hydrogen energy are also themselves measures intended to achieve SDGs, and I believe that supplying the gas detectors needed by people aiming to develop



infrastructure based on such clean energy sources is also an activity that contributes to SDGs.

Furthermore, this year we are beginning companywide activities under the leadership of the newly-established SDG Working Group, aiming to identify what we can do internally in our own business domains. We are advancing diligent efforts in areas such as raising awareness among companies that cooperate in our production activities, studying the use of renewable energy, reducing the number of Company-owned vehicles and adopting eco-friendly vehicles, as well as the adoption of eco-friendly novelty goods. Our technological development sections are striving to lessen our environmental impact by making our products themselves more eco-friendly, involving reduced volumes of consumables and waste.

In the area of corporate governance, we are considering the appointment of female outside directors to increase the diversity of the membership of the Audit and Supervisory Board that audits the execution of duties of Directors, and furthermore we are stressing diversity in terms of skills, including specialized knowledge and experience, in various fields related to management.

On the subject of gender issues and employment equality, our policy calls for hiring human resources from any background who are able to work together with their colleagues. As a unique and independent company, we are able to stick to our policies without being affected by various external factors. In fact, in the area of workplaces that are comfortable places for women to work, in the past we won the grand prize in the industrial sector in the Tokyo Metropolitan Awards for Promoting Women in the Workplace. Furthermore, as we enhance our overseas business development in the future, we plan to further expand our employment of global human resources.

Reorganizing the Overseas Dealer Network to Enhance our International Businesses Promoting RK Branding Based on our Product Development Strengths

—As the Production Center begins full-fledged operation in the near future, it will help to further spur advancement into overseas markets in collaboration with the Development Center. Would you tell us about goals or measures regarding how to advance RK branding as a measure intended to increase RIKEN KEIKI's name recognition and grow its market share overseas?

It makes me sad as somebody who has worked in technological development all his career to see how Japanese manufacturing, which was the envy of the world in the 1980s, is contracting today. As an enterprise engaging in B2B markets, our own markets will fail

# Moving beyond the safe path to become a 50-billion-yen enterprise by our 90th anniversary. Promoting international branding based on our product development strengths.

to grow if Japanese industry itself is not growing. While it can be said that the necessity of turning our eyes toward international markets is a natural development, global business development is essential to the further progress of the RIKEN KEIKI Group, and I would like us to remind the world once again of the strengths of Japanese manufacturing. Whatever the case, RIKEN KEIKI's basic strategy for the future is one of enhancing our international business development.

As the first step in doing so, Chairman Kobayashi has worked to enhance our sales abilities through a review and reorganization of the international dealer network. This has shown clearly that we need to enhance our product capabilities. As authorization and standards vary from one country to another, we need to expand our lineup of products that meet the standards and market needs of each country, and to this end we will promote and invest in the enhancement of our technological development capabilities.

At the same time, of course branding as a global enterprise is also important. The RIKEN brand has ensured a degree of recognition in overseas markets, but I believe that in the future we will need to advance branding as RIKEN KEIKI instead of as a company under the banner of the Japanese national science and research institute RIKEN.

To do so, even before deploying advertising and promotion efforts, it will be essential to build up trust in the RIKEN KEIKI brand by focusing on product development and earning a reputation for attractive, high-quality products, as well as our technological development capabilities. On this point, we will aim to collect a broad range of information on user needs and develop products thoroughly suited to these needs, through means such as collaboration with overseas subsidiaries, dealers around the world and the Global Sales Department.

Furthermore, to guide this flow consisting of branding activities, information collection and feedback to product development, we plan to enhance staffing in the Corporate Strategy Office and develop an organizational structure to support our international business development in areas including legal affairs.

Making Progress Driven by the Power of Each and Every Employee, Based on the Keywords of Change, Evolution and Strengthening.

—Do you have a closing message for the roughly 1200 RIKEN KEIKI Group employees active in Japan and around the world?

In our priority policies for this fiscal year, we have identified as keywords change, evolution, and strengthening. Although the external environment is undergoing massive changes, including the



impact of COVID-19, I believe that instead of simply having change forced on us by some kind of external influence, we need first of all to transform ourselves into a company that changes with the external environment.

To do so, I would like each and every employee to evolve by changing his or her consciousness and motivation and taking action, so we can change the Company's course in a better direction with the spirit of taking on challenges without fear of change. This is not something that I can do on my own. I hope that we will be able to move forward toward our dream for our 90th anniversary as a company driven by the power of each individual employee, as we demonstrate our power through centripetal force from the bottom up in addition to top-down centrifugal force.

At the same time, we have continued to maintain the key policy of positivity, good health and energy for more than 20 years. This can be described as a desire to be a company with an open atmosphere. Doing business is based on the efforts of human resources of various types, not just a select few. I would like us to aim toward the development of human resources whose strengths can be represented as a "T" shape, with discernment on a wide range of topics in addition to specialized knowledge. We will do so through means including grouping employees appropriately.

Reforming a company with a history of more than 80 years requires reform on the part of each individual employee.

Let's build a new future for RIKEN KEIKI based on the combined abilities of all individuals in the Group, as we demonstrate our individual strengths while moving forward without fear of change as members of the RIKEN KEIKI Group.

(Date of interview: February 8, 2021)



The Tide of Digital Transformation (DX) is Sweeping the whole Industrial World.

For RIKEN KEIKI—which boasts leading-edge sensor and other technologies, as well as know-how accumulated through more than 80 years of experience in manufacturing—the development of data management strategies that meet the demands of the new era has also become an urgent issue in the technological development process, both at the manufacturing sites and on the frontlines of field engineering in order to respond to customer needs. In Special Feature 2, we interviewed Kazuma Nakamura, Executive Officer of the Engineering Division, who led all processes from organizational reform to on-site deployment for the rapid introduction of a computerization system named Smart RIKEN Engineering Assistance System (SmartREAS) into maintenance operations of the Engineering Division last year.

# Advantages of Integration and Centralized Control

—As Executive Officer of the Engineering Division, you are responsible for an organization comprised of 486 employees, including six sections of the Technical Engineering Department and nine sections in the Field Engineering Department. Since its establishment in 2015, the Division has seamlessly engaged in the delivery and installation of monitoring systems and instruments, as well as product maintenance operations including planning, management and the proposal of maintenance. Tell us about the benefits in terms of system design and maintenance and the advantages in terms of customer service that have been brought about by the aforementioned system of the Division itself.

In the Engineering Division, the beginning of a major change was the unification of maintenance and inspection management operations, which had been separately conducted by the maintenance service subsidiaries of three domestic companies, as a result of the merger of the three companies in 2015. The three companies, which were located in the east and west of Japan, had different cultural backgrounds and different business scales. Each had its own operational procedures and management methods. In the merger process, we analyzed them, incorporated procedures that could be utilized even after the merger and then added changes to the standard operations and the quality level of inspection to unify them.

As for the work jointly set up by the subsidiary in charge of maintenance and the instrumentation engineering department at the

headquarters, it took time to adjust the work of the installation of monitoring systems and instrumentations due to the difficulties in liaising between different organizations. Furthermore, each of the factories across the country had a different management subsidiary even for the same customer and therefore had different management methods and inspection plans for the same product, and these issues had to be solved. They were solved by the consolidation of the departments involved in the common operations. As a result, staffing plans can now be developed and operations defined more smoothly and swiftly. We have also built a system that enables us to dispatch all engineers at 34 service stations nationwide to any area. I believe that we are now able to meet a wide variety of customer needs flexibly from various directions.



# Advanced Data Management brought about by the Introduction of SmartREAS

—When the tide of digital transformation (DX) is sweeping the entire industrial world, RIKEN KEIKI introduced tablets to the field maintenance operations in this fiscal year and computerized the process of creating and storing performance lists, which had long been conducted on paper, Tell us the current status and your future perspective about the increased efficiency and reliability of the field operations brought about by SmartREAS, how feedback is given to the engineering operations and the data management that will be utilized for product development in the future, as well as the higher level of customer service.

We introduced SmartREAS to increase efficiency in the completion of inspection performance lists, while ensuring safety management and preventing operational errors. This changed the procedure of the preparation and provision of performance lists given to customers in paper form, which had long been maintained since the company's foundation. It has become a huge turning point for us

The safety of engineers is the highest priority during the inspection of RIKEN KEIKI's product at sites where there is a possibility of a gas leak. As each factory has different safety devices and erroneous operation may cause the shutdown of equipment or physical injury, preparation of safety documents needed to be enhanced in the organization after the merger, including the preparation of safety check documents in advance and the proper use of operation check sheets.

Naturally, this made the preparation process complicated and increased the burden of paperwork. On the other hand, handwritten or manually entered data were managed by each service station alone and such valuable field data were not utilized at the company level, despite the fact that the work consumed a large amount of time and labor. Therefore, the digitization and collection of data was urgently needed.

The huge amount of paper consumption was also a major problem. Forty to fifty sheets of paper were needed for one inspection and millions of sheets were used every year. Even if they were scanned and converted into digitized data, there was still another problem of disposal of the used paper. Entering data on site and going paperless as a result can solve these problems all at once.

It was SmartREAS that realized this. To create a safety check document before inspection, the items to be checked by each person are collected and integrated during the group work on the terminal of the person responsible for the work. This makes it possible to immediately discover if there is an omission of check items on site and also to confirm work procedures and take measures against human error in a timely and reliable manner. As for inspection management, a performance list can now be created automatically only by entering gas sensitivity data obtained during the inspection and registering replacement parts, if the product has already been registered. In the second and subsequent periodic inspection, even a change in gas sensitivity over time is visualized as data, which is helpful for the early detection of abnormalities in a sensor and the development of a parts replacement plan. These will also be used for future sensor development as data actually measured in the field environment.

We would like to expand this capability as maintenance management software that improves efficiency and reliability, including operations directly linked with detection products.



#### Future of Engineering Operations in Overseas Business

—The influence of the COVID-19 pandemic is more obvious overseas than in Japan and overseas businesses are also ahead of Japan in the context of DX. Tell us, in particular, about the roles that the Engineering Division assumes in the fields of product maintenance and education/training outside Japan, as well as information provision to overseas sales agencies and your future prospects including DX in overseas markets.

The Engineering Division is responsible for not only domestic field operations, but also the development of product operation and inspection manuals, the production of inspection tools and the provision of training for partner companies, sales agencies and RIKEN KEIKI's local subsidiaries in each region of the world.

In the current COVID-19 pandemic, it is difficult for engineers to visit local sites. To overcome this situation, we launched a website named "Partner Site" this fiscal year that only our partner companies can access and obtain technical information. Through this site, anyone can check necessary maintenance information from any part of the world 24 hours a day without any help. We also prepared videos that provide explanations of maintenance. We are planning to increase the opportunities for the provision of technical information via the website and training on product maintenance for overseas sales agencies, while enhancing the product lineup.

We will make full use of DX technologies and enhance the functions to help engineers specialized in the support of local equipment operation to be able to respond to emergencies remotely.

Field maintenance is global-scale work covering both domestic and overseas fields. Although the Engineering Division is located in Japan, it plays an extremely important role in the maintenance and management of RIKEN KEIKI products across the world.

I will continue to be committed to this responsibility, while studying and working hard every day to prove worthy of the trust in the RK brand both in Japan and overseas.

(Interview date: February 9, 2021)

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# Equipped with New Highly-Functional "F Sensor!" Global Standard Model! Explosion-Proof Type Gas Detector Head With Transmitter MODEL SD-3 Series

Certified with Various International Explosion-Proof Tests

Gas Detector Head with "SD-3" Transmitter Head, in which a Next-Generation High-Performance Sensor is Incorporated, is on the Market.

Last September, RIKEN KEIKI developed and released a explosion-proof type of gas detector head with the "SD-3" transmitter, the functions and performance of which have been drastically improved as it has become compatible with IEC/EN performance and can be used in a temperature range of -40°C to 70°C through the incorporation of a newly-developed, next-generation, highly-functional sensor.

As plant facilities including petrochemical plants increase in size and become more sophisticated in terms of technology, gas detectors are also required to offer high performance and exhibit various functions. In such a situation, we recognize that, as a pioneer of industrial gas detector and alarm systems, it is urgently needed to develop global standard gas detector heads with transmitters that are certified with various international explosion-proof tests and standards. The "SD-3" series was born as an explosion-proof fixed gas detector head that satisfies the above needs, and in large plant equipment in particular, it continuously monitors combustible gases, toxic gases and oxygen.

Thanks to the Next-Generation, Highly-Functional Sensor "F Sensor" Series, the Self-Diagnosis Function has been Enhanced. The Replacement of Sensors is Digitally Indicated.

The "SD-3" series integrates our next-generation, highly-functional "F sensor." In addition to notification of the replacement time at the expiration of the three-year use period, the sensor is equipped with a sensor deterioration diagnosis function that makes predictive diagnosis of sensitivity based on the movements unique to sensor principles and sounds an alarm at the recommended replacement time. It also features a service life diagnosis function that sounds an alarm after calculating the sensor output available capacity at the time of gas calibration based on the calibration history at the time of shipment. Leveraging these self-diagnosis functions, which have implemented dramatic improvements, the detector head monitors and warns about gas leaks 365 days a year.

#### A Variety of Output Options Including 4-20 Ma Signal + HART

Gas alarm values detected by the "SD-3" series are converted into 4-20 mA analog output signals and digital HART output signals, and then output externally. It is also possible to add Modbus communication (RS-485) capability or contact outputs of three relay points. These various output options allow you to flexibly address integration with an existing system.

It is also possible to make optional contact outputs by sorting them to gas alarm (ALARM1/ALARM2) and trouble alarm (FAULT) outputs. This makes it possible to locally construct a gas detection system by combining external devices including alarm lamps and buzzers.

The Rigid Body Structure Allows the Device to also be Applied to Severe Environments.

The Product can be Applied to Various Usages Including Petrochemical Plants, Utility Tunnels, Power Generation Stations, and Vessels.

The "SD-3" series has a rigid body structure (body material: stainless steel, degree of protection: IP66/67 or equivalent), and can be used in severe environments due to its applicable temperature range of -40°C to +70°C (this differs depending on the sensor specifications).

It is also possible to install a remote sensor at a location up to 20 m away from the detector body. As the detector can be inserted in a duct by using the optional splash guard and dedicated kit, the detector can be applied to various installation environments and usages including locations with little installation space or at heights where maintenance work is impossible. In a variety of environments ranging from plant facilities including petrol refineries and petrochemical product plants to ground infrastructure including common ducts and utility tunnels—in addition to power generation stations, vessels and offshore facilities—the gas detector detects combustible gases, toxic gases and oxygen to save human lives and ensure the safety of facilities.

# SUSTAINABLE GALS

Sustainable Development Goals (SDGs) refer to the global goals aiming to achieve a better and more sustainable world by 2030, consisting of 17 goals and 169 targets, as stated in the "The 2030 Agenda for Sustainable Development," adopted at the United Nations Summit in September 2015.







To protect precious human lives and valuable properties from the invisible risks of gas—under this mission, our company promotes creating safe working environments for workers, by developing and manufacturing state-of-the-art gas detector and alarm systems.

Through its business activities, our company contributes to the attainment of the goals above under the SDGs.

# CSR REPORT

# **Sponsorship for the Committee**of Japan Physics Olympiad

As a Company that has the Laws of Physics (Light Interference) in the Background of its Establishment, We Support Young People Interested in Physics.

The International Physics Olympiad (IPhO) is an international competition of physics. Its first championship was held in Warsaw, Poland in 1967. IPhO is held once every year during



summer vacation, aiming to help young people from many countries before entering advanced educational institutions to participate and enhance their interest and ability in physics, and to further promote physics education in the participating countries through international exchange.\* Japan is scheduled to host IPhO for the first time in 2023.

The Committee of Japan Physics Olympiad (JPhO) organizes the domestic preliminary round for selecting contestants in IPhO, which is referred to as the "Physics Challenge." By organizing the Physics Challenge and dispatching the Japan Delegates to IPhO, JPhO provokes interest in physics and promotes the development of human resources in science and technology.

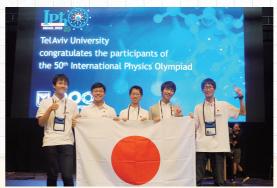
Because our company is deeply associated with physics, with the laws of physics (light interference) utilized in the principle of detection for the "RIKEN Gas Detector," the product that marked our establishment, and also for supporting students interested in physics, we sponsor JPhO.

Due to the influence of the spreading COVID-19 infection, the Physics Challenge 2020 was held online, with the first round in July and the second round in September. An award with our company name, the "RIKEN KEIKI Award," is presented to the best-performing contestant in the second challenge, in the second year of high school or younger. In 2020, the certificate of the award and the supplementary prize were presented to Yasuo Kusumoto, then a sophomore of Kurume University Senior High School.



Yasuo Kusumoto won the RIKEN KEIKI Award

Our company will continue to sponsor the Physics Challenge, thereby supporting young people interested in physics, in order to achieve high-quality education for all people and contribute to Goals 4 and 17 under the SDGs aimed at the promotion of partnerships for sustainable development.



\* The International Physics Olympiad (IPhO) in Lithuania, originally slated for July 2020, was postponed one year due to the influence of the spreading COVID-19 infection.





Our support for the Committee of Japan Physics Olympiad (JPhO) contributes to the two Goals under the SDGs.

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# RIKEN KEIKI COMMERCIAL (SHANGHAI) CO., LTD.

RIKEN KEIKI COMMERCIAL (SHANGHAI) CO., LTD. ("RKC") was established in November 2009. Sumihisa Ishihara, Executive Officer who has served as the President of RKC since 2018, says, "Among the 170,000 foreign residents in Shanghai, 50,000 Japanese make up the largest share with as many as 6,300 Japanese companies operating there. Community activities are extremely vigorous among the prefectural associations, alumni, sports clubs, hobby clubs, etc. There are also a number of Japanese restaurants that serve the same taste and service as in Japan, and casual drinking parties are frequently held, making us sometimes forget that we are not in Japan," even though they at RKC actually compete with as many as 500 competitors in the entire Chinese market. The third article in the "RK GLOBAL FRONTLINE" series is a report from Shanghai, the global commerce city of a gigantic scale in all aspects that continues developing with overwhelming volume and energy.

Fine-Grained Hospitality Trained Through "RIKEN-Ism" with its Origin in CRSC (Beijing)\*

The featured strength of RKC is the fine-grained hospitality for customers at each of the seven key dealers. In fact, this

hospitality has its origin in CRSC (Beijing)\*, which was established in 1991 for the maintenance of products delivered from Japanese plants. Our employees were thoroughly infused with "RIKEN-ism" through training by RIKEN KEIKI at that time. This "RIKEN-ism" has been inherited by all dealers, always pursuing services that



[Local reporter]

#### Sumihisa Ishihara

President

RIKEN KEIKI COMMERCIAL (SHANGHI) CO., LTD.

exceed customer expectations, and continuously enhancing customer satisfaction. This tradition is also bolstered by the long service years of employees at the dealers. While China is a society where people step up by moving to different jobs in two or three years, most employees at our dealers have served more than ten years, sometimes even more than twenty years. This is why our stock of skills based on "RIKEN-ism" is inherited by young employees, leading to the strong trust from customers.

The main task of RKC is how to establish an environment that facilitates activities by these strong dealers. We at RKC consider that it is our mission to sincerely respond to various requests and complaints that we receive day to day, and improve the achievement ratio of difficult tasks, with cooperation from the Global Sales Department.

# Competing with 500 Competitors in Markets that Evaluate us, Instead of Targeting all Markets

Approximately 500 competitors are operating in the entire Chinese market, the largest number across the world. It is naturally impossible and unreasonable to compete with all of them on the same ground and under the same conditions. To survive and acquire market share, it is necessary to take different strategies and tactical methods than in Japan or other countries. In other words, we must only identify the markets that evaluate our strengths, and thoroughly increase those strengths and compete in those markets, rather than targeting all markets.

As the markets where we can leverage our strengths, we have identified and focused on 1) the Electronic Device Market, 2) Calorimetry & Analysis Market and 3) Indoor Environment Market. In particular, we are able to leverage our technology accumulated over the 80-year history of RIKEN KEIKI in the Calorimetry & Analysis Market. At present, RKC is acquiring high

RIKEN KEIKI COMMERCIAL (SHANGHAI) CO., LTD.

# Three Strong Markets

Electronic Device Market

Calorimetry & Analysis Market

Indoor Environment Market

accolades in this market in China. However, much more time is required for our business to fully blossom, and we will need to make continuous improvements in accordance with the market.

# Continuously Taking on Challenges and Agilely Responding to Changes in the Gigantic Market that Aims to Achieve the Largest GDP in the World in 2028

The gigantic market of China has the world's largest population of 1.4 billion. It has been growing by 2.3% every year, with its GDP reaching approximately 1.4 trillion dollars. If this growth rate is maintained, China may even catch up with the United States, the largest country with the present GDP of approximately 2.1 trillion dollars.

As RIKEN KEIKI pursues globalization, the Chinese market is the most important area along with the United States. We at RKC, which operates with the Chinese industries that continue expanding due to the country's huge size and population, have the responsibility to keep taking on challenges and agilely responding to changes. We will pursue the resolution of the problems we face in this market through cooperation among the head office of RIKEN KEIKI, dealers, and RKC, thereby powerfully advancing in this energetic market day by

#### Tourism

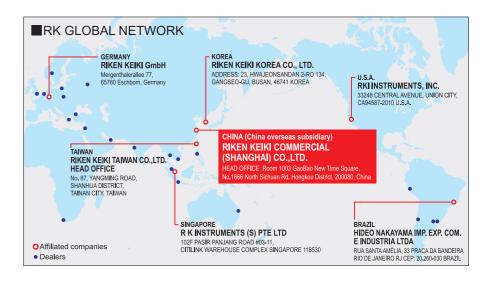
While it may sound unexpected for many people, China is also the fourth largest tourism destination in the world (France receives the largest number of tourists, followed by Spain; Japan is 12th). China has uncountable tourist spots



across its vast area and over its 5,000-year history. China also has 52 world heritage sites, the second largest number after Italy. Therefore, whenever I have several days off, I plan trips to visit tourist spots.

I determine the destination first, and select the accommodations next. Finding a hotel that accepts foreigners requires a certain amount of effort. I usually manage to find one somehow, and actually visit the place. All the tourist spots are beautifully maintained, without so much as a piece of litter. I find and visit a local restaurant, and enjoy the local food and drink. All payments are made by smartphone (in China, people usually do not carry around wallets). Except for the beer that is served at room temperature (this is because Chinese people do not like cold beverages from the viewpoint of Chinese medicine), we can enjoy comfortable sightseeing trips.





\* Abbreviation for CHINA RIKEN SERVICE CENTER BEIJING

#### **Roots of MISSION:INVISIBLE**



RIK	EN I	KEI	KI's	hist	ory	#3	L
as told by its products							L

#### 1953 to 1954

From the United States Coal Agency,
RIKEN KEIKI Obtained the Permission to Sell and Use
"Gas Detector Type 17 and 18."

Subsequently, These Models Passed Tests in France, Germany, Belgium, and the UK, and Exports to Europe and the United States Started.

n 1950 when the Korean War broke out, the Japanese economy enjoyed booming as many companies received the benefits of special procurement demand. This boom continued and turned into a period of High Economic Growth. Despite this, however, RIKEN KEIKI declared losses for four consecutive periods in April 1950 to March 1952\*. Behind these hard times for our company, which has been operating in the black for 60 consecutive years between 1960 to 2020, was the Price Control Ordinance that was enforced by the national government in 1946 for the purpose of stabilizing society and the economy—as well as the lives of citizens—through price stabilization. While coal production increase measures were implemented, gas detectors were designated as important materials and subject to price controls. However, as the price revisions conducted by the national government could not keep up with inflation, we were consequently forced into the red.

In those times, what saved the company from an unprecedented crisis were overseas exports. \*20th and 21st periods (April 1950 to March 1951), 22nd and 23rd periods (April 1951 to March 1952)

## Introduction by Dr. Fritsche from RWTH Aachen University in West Germany

Coincidentally in autumn of the same year (1952), Dr. Fritsche from RWTH Aachen University in West Germany was in Japan to observe the Japanese coal industry. While he was visiting coal mines in Hokkaido and Kyushu, he saw the gas detectors from RIKEN KEIKI in many locations. He was surprised to learn that optical detectors were used to check the gas in the mines. Before he left Japan, he visited President Jiro Tsuji and gave the following advice.

"You may be surprised to hear this, but in Germany, gasoline safety lamps are used to measure methane gas. I saw by myself Japanese gas detectors for the first time. They are very advanced machines, so I would like to suggest that "RIKEN" be exported to Germany."

Even after the doctor returned to Germany, as he introduced our product saying that "RIKEN gas detectors were very advanced measurement instruments" every time he gave a lecture or wrote a newspaper or magazine article, RIKEN KEIKI soon came to be known throughout the world. Taking advantage of this one-in-a-million opportunity, president Tsuji made a move. In the following year, he travelled to Europe, visited parties concerned with the coal industry, as well as government-run coal mine research laboratories and mine test laboratories, first in West Germany and then in Belgium, France and the UK, and explained about "RIKEN."

In West Germany in particular, thanks to the introduction by Dr. Fritsche, Tsuji had opportunities to explain about RIKEN gas detectors to the director of Bochum Laboratory where the national testing of gas detectors was conducted, as well as to top-ranked experts in the coal mine industry. In one investigation report from the laboratory that was submitted later, there was a description stating, "This is the best gas detector among all the gas detectors that are currently known in the world."

## Acquired Certifications One after Another, Starting with the United States and then Europe

As these efforts bore fruit, first in 1953, permission to sell and use the "Type 17" gas detector was obtained from the United States Coal Mine Agency, which Tsuji visited on his way back from Europe. In 1954, the following year, permission for the "Type 18" was also granted. In the same year, the "Type 17" passed the national tests of France and West Germany. Permission was also granted in Belgium in 1956 and in the UK in 1957.

Although it took many years to obtain certifications for national testing in those countries, RIKEN KEIKI steadily conducted negotiations and increased the number of export destinations, and accordingly inquiries from various countries sharply increased. Trade with China, that had been long discontinued, was also reopened in 1954.

### Withdrawal of Petition Under Corporate Reorganization Act and Promotion of Rebuilding

The start of exports to Europe and the United States, and the reopening of trade with China made RIKEN KEIKI spring back to life. Although the downturn in domestic demand at the time could not be wholly covered by exports, it is no exaggeration to say that the crisis of the company's survival was overcome by overseas demand. In this year, the filing of a petition for bankruptcy protection was withdrawn, and Hideo Oshima, then director and later the third president, was put in charge of rebuilding the company and strongly pushed forward the rebuilding of RIKEN KEIKI. (Continued to article #4)



RIKEN KEIKI Co., Ltd.

We are a pioneer in creating safe working environments for workers.

The magazine "Rizm" Vol. 3 Published April 1, 2021

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The "Type 17" approved in France and West Germany



The "Type 18" gas detector approved by the United States Coal Agency



A "gasoline safety lamp" used for methane gas measurement in Europe



1977

Serial article in Nihon Kogyo Shimbun describing RIKEN KEIKI at that time (article in February 1977)

\*Source and permission: Nihon Kogyo Shimbun Co., Ltd.



Hideo Oshima, the third president