IHI GROUP
Realize your dreams

MEISEI

Sensing & Communication

meisei electric co.,ltd.

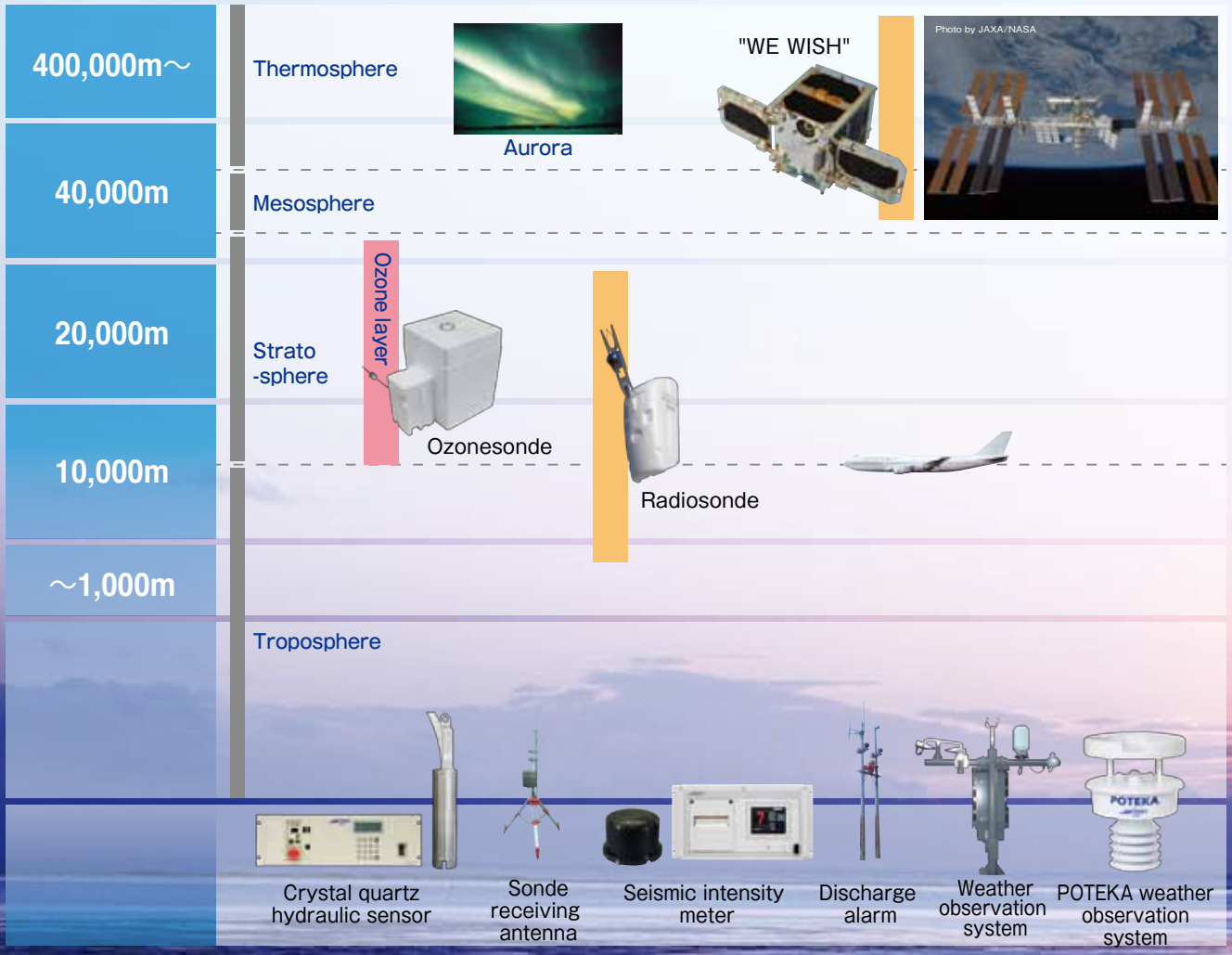
Sensing & Communication

We create innovative products and services with our original Sensing & Communication technologies and thereby contribute to development of a safe and secure society.

To quantify various natural phenomena in the magnificent universe and transform to valuable information. This is the mission of Meisei Electric Co., Ltd.. Starting with the manufacturing of meteorological observation system "radiosonde", Meisei has been leading the meteorological and seismological observation in Japan through the development of "AMeDAS", "seismic intensity meters", etc. In the Space field, Meisei has been involved from the initial stage of Space development in Japan and developed and launched approximately 3,000 units of observation instruments to the universe. In 2012, we succeeded in the deployment of Cubesat "WE WISH" from the International Space Station, which we had originally developed. Measures to mitigate damage from natural disasters such as frequent earthquakes, local heavy rains and floods are becoming increasingly important. Meanwhile, Space utilization has already become closely connected to our life and higher utilization is expected. Sensing & Communication, "Technology to measure" and "Technology to communicate". Based on these original technologies, we will continue to create innovative products and services to contribute to the development of a safe and secure society.

From underwater to outer space
Meisei is the world's only manufacturer of comprehensive environmental measurement systems.

The core technologies of Meisei, "Technology to measure" and "Technology to communicate", are applied to a various range of products from underwater to outer space, including measuring instruments designed for ground use such as water management and seismic meters, various sondes to be used in the stratosphere, and observation equipment to be installed in satellites.
Meisei is the world's only manufacturer of comprehensive environmental measurement systems that consistently develops these products and systems including design, manufacturing, sales, construction, and maintenance.



Meisei's products and systems are playing an active role in various fields.

Meisei contributes to global environmental conservation, mitigation of damage from natural disasters, development of industrial facilities, infrastructure, etc. through development of innovative products and systems in meteorological observation.
Meisei has also participated in national projects for Space development to expand the possibility of Space utilization.
Create a secure living environment, explore unknown world.

Now, let us introduce our main performance achieved to date.

Meteorology

Meisei has developed meteorological observation systems that cover a wide area from the ground surface to 30,000m above the ground. In addition to the general weather information on the observation elements of wind, precipitation, temperature and humidity, Meisei also supports environmental measurements of ozone, carbon dioxide concentrations, etc. in order to provide systems optimized and customized according to customer needs.

Upper air sounding

【Radiosonde】

Radiosonde is equipment for direct observation of upper air with its sensors of atmospheric pressure, temperature, humidity, etc. hung from a balloon flying in the upper air. Data observed by radiosonde is transmitted to the ground with a radio. Meisei has developed and manufactured various radiosondes since the foundation year of 1938. In the field of upper meteorological observation, "Rocketsonde" played an active role (1964-2001) and "Ozone sonde" contributed to detection of an ozone hole in the Antarctic exploration (1983). In recent years, Meisei has released "GPS radiosonde" etc., equipped with GPS function to realize quicker and high precision observations.
Further, in response to the increasing concern about the issue of environmental conservation and global warming, Meisei, as the Japan's only manufacturer of radiosonde,has been developing sonde for observing carbon dioxide (CO_2) and radioactivity in addition to meteorological sonde.

Radiosonde and receiver

【ARS Automated Radiosonde System】

Meisei's ARS is a radiosonde system that can automatically launch a maximum of 40 radiosondes. By automating a series of processes including pre-launch inspection, gas filling into balloon, other preliminary operations, receiving radio wave from sonde and GPS satellites, and processing of observed data, ARS provides very efficient observation.

Courtesy of JMA

Surface weather observation

【AMeDAS Automated Meteorological Data Acquisition System】

AMeDAS is an unmanned weather observation system that automatically observes meteorological data at place of installation and transmits the observation data via line. Starting with weather robot as predecessor, AMeDAS was commercialized in 1974 and has been installed at approx. 1,300 locations throughout Japan. It observes precipitation, wind directions, wind velocity, temperature, sunshine duration, and snow depth. The AMeDAS data are collected by Japan Meteorological Agency(JMA) for analysis together with other observation data and is widely used for prevention / mitigation of disasters as well as weather forecast.

"AMeDAS" observation station Courtesy of JMA

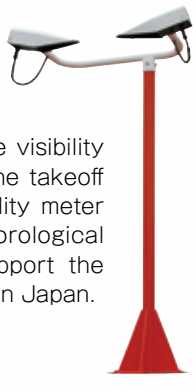
Source: JAPAN Meteorological Agency website

【POTEKA® Ultra High Density Weather Observation System and Information Delivery Service】

POTEKA® system is a new weather observation system. It is comprised of compact weather station (POTEKA Pro) and server, which performs observation data and statistic collecting, data display, alert processing, all in one system. Compact weather station POTEKA Pro consistently observes eight types of weather element by installed seven types of weather sensor, and communicates to server every minute. Using solar cell and storage battery for power supply and mobile line (3G) for communication, it can be easily installed without power and line construction. Server collects observation data and statistics from POTEKA Pro. All observation data can be accessed from WEB browser (POTEKA NET) using internet connection. Furthermore, when weather disaster is likely to occur, server will send alert via email. Observation data can also be easily transferred to other system by Web-API.

*POTEKA® is a contraction of "point", "tenki" (weather) and "kansoku" (observation).

【Visibility Meter】



The visibility meter measures by the scattering of light. The visibility obtained by the visibility meter is called MOR (Meteorological Optical Range). MOR of the visibility meter is required at the airport to judge the takeoff and landing of the airplane. Meisei's visibility meter has been delivered to the Japan Meteorological Agency, Japan Coast Guard, etc. to support the security of the airports, harbors and roads in Japan.

Hydrology

Meisei's 'water management' technologies, consisting of telemetry (water level/rainfall) systems, water discharge warning systems, dam data processing systems, etc., cover total river area from the upstream flowing through mountainous area and the downstream flowing through urban areas, and contribute to effective use of valuable water resources as well as disaster prevention.

【Dam / River Management System】

Telemeter (water level /rainfall) systems to observe rainfall, dam water level, etc. Dam body observation systems for conservation of dam body and facilities. Control processing system for monitoring operation status and various dam data processing. Discharge warning systems and disaster prevention monitoring systems, etc. serving for warning local residents of the danger. Meisei's dam and river management systems allow total system establishment and operation based on the processing technologies used for meteorological observation, water level observation, etc. and in combination of various systems.

Shimagawa dam at Gunma Pref.

Discharge warning system

【Sluice Gate Remote Monitoring Control System】

A Sluice Gate Remote Monitoring Control System is a remote monitoring and automatic control system of lockage, sluice-gate and floodgate, etc. in order for the coastline disaster prevention when Tsunami or high tidal water. Utilizing our measurement and data processing technologies incorporated in the J-ALERT/Seismic meter/Earthquake Early Warning, etc., gates can be closed quickly. This system, through interlocking with water-level observation and alert control system, effectively contributes to operation management system and disaster prevention of costal and river facilities.

Shirohata Sluice Gate in Chiba Pref.

【Crystal Quartz Hydraulic Sensor】

Our crystal quartz hydraulic sensor is the product of years of Meisei research into crystal application technology. This crystal hydraulic sensor is one of the most precise water level gauges on the market. Improved lightening resistant solar powered electricity supply, coupled with simple installation, enable a wide range of applications such as dam water level measurement, river water level measurement, dam leakage measurement, tide monitoring, and surge tank level measurement.

Demodulator

Sensor

Disaster Prevention

Landslides, floods caused by typhoons, etc., damage caused by earthquakes and Tsunami….
In order to protect people from such natural disasters and ensure them a safe and affluent life, Meisei continues to develop various disaster prevention systems, by effectively combining its reliable measurement, data processing, and transmission system technologies with the know-how accumulated as the pioneer of meteorological observation.

【Seismic Intensity Meter
Passed the inspection by JMA and Supporting Nowcast Earthquake Information】

Meisei's seismic intensity meter measures the P wave that arrives immediately after an earthquake occures and calculates the magnitude and epicenter of the earthquake. By informing the arrival time "before the tremor hits people", this meter contributes to mitigation of damage.

Display unit of the seismic intensity meter


Measuring unit of
the seismic intensity meter


Processing unit of the seismic intensity meter

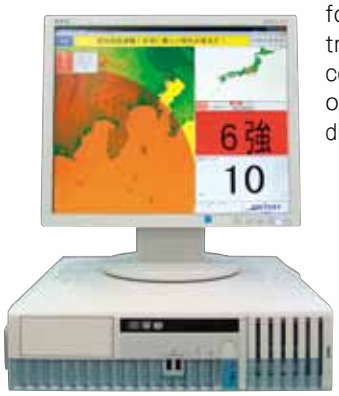
【External System Control Seismometer】

In order to reduce earthquake damage, this system control device measures earthquakes in the vicinity with the aim of providing rapid control. Calibration is carried out by the built-in accelerometer, meaning that each individual unit can perform a range of tasks from seismic observation to control signal output.

External system control seismometer

【QCAST® Series Responding to Earthquake Early Warning by JMA】

QCAST® Series is a system that receives "Earthquake Early Warning" distributed by JMA and then transmits the warning information to people before a strong tremor reaches them and automatically controls plant equipments by transmitting control signals. This is an "earthquake detector" based on a new concept and created with Meisei's technology for "knowing before the tremor" and is greatly contributing to the realization of smooth and accurate disaster prevention activities.



Receiver
Using log information in the receiver, earthquake disaster prevention can be simulated.

Receiving unit
The industry's first redistribution functions released. Warning is displayed and announced.

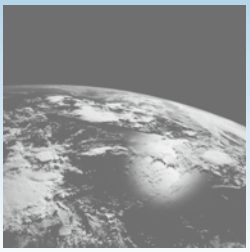
【Landslide Alert Facility】

"Landslide alert facility" is a system for quickly informing local residents of emergency landslide information on the disaster prevention website etc. by transmitting information on the weather conditions of mountainous areas and analyzing the transferred data with the centralized monitoring system installed in the disaster prevention administrative organs. By observing local weather conditions, this system contributes to mitigation of damage caused by landslide.


Monitor station


Rain-gauge station

Outer Space



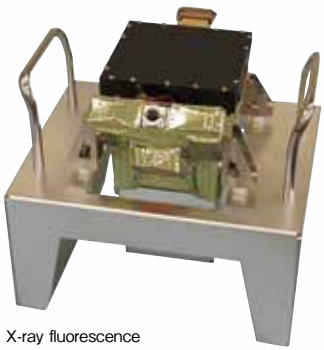
Meisei's "neutron monitoring instruments" are employed in the American experiment and habitation module installed in the International Space Station (ISS). Thus, Meisei is the first Japanese manufacturer of space observation units to be used by the ISS. Since then, Meisei has developed many products including observation equipment and supported Space development projects at home and abroad.

【Cubesat "WE WISH"】

In October 2012, Meisei's first cubesat "WE WISH" was released into Space by the robot arm operated by astronaut Hoshide in ISS and completed its mission after circulating the earth for 158 days.
With the slogan of 'Feel more familiar with Space," we will lead the small satellite development in the future.

【Equipment Installed in Asteroid Probe "Hayabusa"】

The "X-ray fluorescence spectrometer" developed by Meisei observed the main elements of the surface material when Hayabusa approached asteroid Itokawa and sent the data to the earth.



X-ray fluorescence spectrometer loaded into "Hayabusa"

"Hayabusa" flying toward asteroid "Itokawa" (image)

【Instruments Equipped in Selenological and Engineering Explorer "KAGUYA"】

Of the 15 kinds of observation instruments loaded into KAGUYA, Meisei took charge of 8 kinds including Hi-Vision cameras, which contributed to the clarification of the origin and evolution of the moon.

■ Equipment developed by Meisei

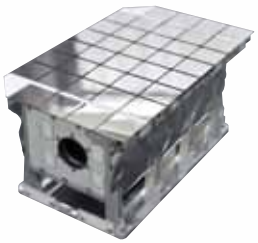
- X-ray fluorescent spectrometer
- Gamma ray spectrometer
- Radar sounder
- Magnetograph
- Plasma energy Angle and Composition Experiment (PACE)
- Particle counter
- Upper atmosphere plasma imager
- Hi-Vision camera

Hi-Vision camera loaded into "KAGUYA"

"Full Earth from the Moon" shot with a Hi-Vision camera of KAGUYA
Photo by JAXA/NHK

【Equipment Installed in the "Hayabusa2" Asteroid Explorer】

We supplied a near-infrared spectrometer and a deployable camera system for observation for the Hayabusa2, which is now heading for the Ryugu asteroid.



Near-infrared spectrometer (NIRS3)

Deployable camera system for observation (DCAM3)

Rocket & Defense

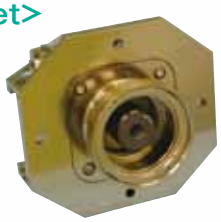
Starting with the development of "Telemeter transmitting device" -- Japan's first electronic equipment installed in a rocket launched in 1955, Meisei has developed various devices along with the history of Japan's space development and approximately 3,000 electronic devices of Meisei have been installed to date.
Meisei's technologies accumulated as such have been also attracting attention in the fields of rocket monitoring used for launching and control devices, as well as satellite-mounted devices.

[Equipment Installed in H-II A/B Rocket]

H-II Rocket (Launch Vehicle) has carried many observation satellites into Space to date. "KAGUYA" and "SHIZUKU," both equipped with Meisei's observation devices, were launched by H-II A Rocket, and H-II Transfer Vehicle "Konotori (white stork)," which carried cubesat "WE WISH", was launched by H-II B Rocket. In H-II Rocket, rocket-mounted camera and picture compressor equipment (PCE) are installed and playing an active role.

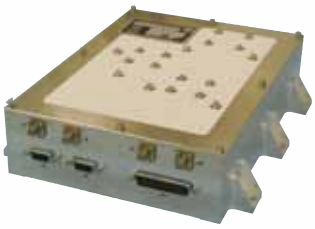
<Camera Installed in Rocket>

An excellent product with specifications that withstand shock and vibration during rocket launching and separation as well as harsh environment unique to Space, such as drastic temperature changes and cosmic radiation.



<Picture Compression Equipment (PCE)>

The PCE is installed in a rocket to obtain image data ranging from launch to separation of the satellite, and convert and compress the data into digital images to narrow the band, and then transmit the compressed data to the ground by the UHF telemeter (wireless).



[Equipment Installed in Epsilon Rocket]

The new Epsilon Rocket (Launch Vehicle), developed by JAXA with systems developed and manufactured by IHI Aerospace Co., Ltd., is fitted with a number of components manufactured by Meisei: a rocket-mounted camera, picture compressor equipment (PCE), an attitude control Hot Gas Valve (HGV) motor controller, and a power sequence distribution box (PSDB).

Power sequence distribution box(PSDB)

<Hot Gas Valve (HGV) Driving System>

Epsilon Rocket is equipped with "Thruster" -- solid motor side jet (SMSJ) system for attitude control. This SMSJ is controlled by the motor controller driven by the Hot Gas Valve (HGV) developed by Meisei, which is supporting highly precise control when the rocket is injected into the orbit.

HGV motor controller

[Defense Equipment]

In addition to the delivery of meteorological observing systems and air-traffic control equipment, Meisei develops and produces measuring instruments for various tests and training of military equipment utilizing its superior technologies to measure and transmit electric / magnetic waves. Meisei contributes to defense of Japan through the enhancement of reliability of equipment.

Space Technology Diversion for Ground Equipment

We utilize the space technology we have accumulated over many years to produce unique observation and measuring devices.

【Diffusive Characteristic X-ray Camera】

A small, light, portable camera able to visualize cesium derived radiation in a short amount of time. We are looking forward to seeing it utilized in future decontamination work.

【Detection System for X-ray Free Electron Laser (XFEL) Experiments】

XFEL is the dream light which enables us to observe momentary movements of atoms and molecules. There are great hopes around the world that this will be a high-performance detection device which will revolutionize the development of new drugs and our understanding of the causes of serious illnesses.

Entrusted Test

Meisei provides various testing services in its test facilities where assessment is conducted of vibration resistance, environmental resistance during launch and thermal design, performance, etc. in space for satellite and rocket components.

【Small Space Chamber】

The small space chamber simulates the conditions (high vacuum, cold, darkness) to which devices installed in satellites will be exposed, in order to evaluate, amongst others, their environmental tolerance, thermal design and performance on the ground.

【Vibration Testing System】

The vibration testing system simulates the vibrations rockets and satellites will have to withstand when they are launched.

Air Traffic Control

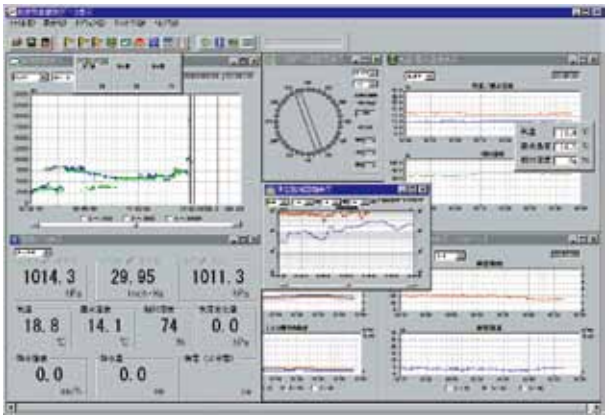
For the take-off and landing of airplanes, meteorological information, such as runway visual range, wind direction, and wind velocity, is important. Meisei has been supporting the safe operation of airplanes by supplying various airports with meteorological observation and information systems.

【Airport Meteorological Observing System (AMOS)】

Meteorological observation in airports is an important factor for supporting the safe take-off and landing of airplanes. "AMOS" is an advanced meteorological observing system that monitors the meteorological conditions in airports and provides the information.

※AMOS : Airport Meteorological Observing System

Airport meteorological observing system "AMOS"



【Air Traffic Control System】

Air traffic control system is indispensable for safe operation of airplanes. Meisei supplies telecommunication control equipment that plays a core role in the air traffic control system. By controlling radio communication between airplane pilots and air-traffic controllers, Meisei's equipment contributes to safety of the sky.

Console for air-traffic control

【Control Tower System for Emergency (EVA)】

The control tower system for emergency is an alternative system available when the main air-traffic control system falls into an unexpected situation. The system is a movable type that can be transported by air or on land and is provided with an elevating module going up to 6 m high and function of emergency power generation. Meisei's EVA are introduced into major airports including Haneda Airport.

Control tower system with an elevating module

Through involvement with various projects at home and abroad, Meisei continues to make history.

Since its incorporation in 1938, Meisei's technology has been making history in many fields.
Meisei's technology has been consistently supporting the histories
of meteorological observation and Space development in Japan.
We will continue to be involved in epoch-making projects
through development of innovative products and systems.

Rocketsonde and its inside structure

1938~1940's

1939
Meisei developed its first radiosonde.

Meisei received the first order of 1,000 radiosondes. Three types of sondes were manufactured to measure cloud, wind, and temperature & humidity.

1948
Radiosondes were delivered to the Central Meteorological Observatory.

Meisei developed "CMO-S48B code sending type radiosonde," adopting the then innovative digital method. This product was delivered to the Central Meteorological Observatory and contributed to the establishment of reputation as "Meisei renowned with sonde".

CMO-S49B code sending type radiosonde made in 1950

1938
Incorporated with capital of 300,000 yen in Shimomaruko, Kamata-ku, Tokyo.

1945
Lost the plant due to the fire caused by the air raid. Relocated the head office and plant to Isesaki, Gunma.

1946
Relocated the head office to Omori, Ota-ku, Tokyo.

1950's

1952
A weather robot was delivered to the Central Meteorological Observatory.

Meisei's radio technology realized unmanned observation of precipitation, which would replace the conventional manned observation in meteorological stations, and made it possible to observe precipitation in mountainous areas as well.

1955
Japan's first electric instrument launched by a rocket.

Meisei developed and delivered an FM-FM telemeter transmission system for the "Baby-T rocket" in 1955. The successful launch made us the Japan's 1st manufacturer of electric instruments to be installed in rockets.

Baby-T Rocket ©JAXA

1953
Designated common battery switch manufacturer by the Nippon Telegraph and Telephone Public Corporation (present NTT).

1956
Achieved the best performance in the International Sonde Comparison Test, held in Payerne, Switzerland.

1957
Relocate the head office to Ginza, Tokyo.

1960's

1964
Developed a rocketsonde.

Meisei developed a rocketsonde that observed the mesosphere thermosphere (altitude of 60 km above ground level). These rocketsondes were launched from the meteorological rocket observation center in Ayasato, Sanriku-cho (present Ofunato-shi), Iwate Prefecture. A total of 1,119 sondes had been launched by March 2001, when the rocket observations were ended.

1969
Meisei's instruments were employed by the Winter Party of the 11th Japanese Antarctic Research Exploration.

Meisei's instruments played an important role in the observation of Aurora Polaris by rocket or balloon in the Antarctica from 1969 until 1985 (for 16 consecutive years), when the rocket experiments officially completed, and Meisei involved in all Aurora Polaris' observations.

Aurora Polaris observation using balloons
by the Winter Party of the Japanese Antarctic Research Exploration

1962
Stocks listed in the second section of the Tokyo Stock Exchange.

1964
Moriya Plant completed at Moriya-cho, Ibaraki.
Participated in IGY (International Geophysical Year).

1965
Key telephone systems delivered to the Nippon Telegraph and Telephone Public Corporation.

1966
Satellite tracking instrument delivered to the Department of Aeronautics and Astronautics, University of Tokyo.
RC-type PABX delivered to the Nippon Telegraph and Telephone Public Corporation.
Head office relocated to Koishikawa, Bunkyo-ku, Tokyo.

1968
New Isesaki plant completed in Isesaki, Gunma Prefecture.

1969
Echosonde for vessels delivered to JMA.

1970's

1974
AMeDAS (Automated Meteorological Data Acquisition System) was delivered to JMA.

"AMeDAS" is a meteorological instrument that became popular among Japanese people with its simple and easy-to-understand name. This unmanned observation system was deployed at 1,300 locations throughout Japan to observe precipitation, wind direction, wind velocity, temperature, and solar radiation.

AMeDAS

1973
Telemeter systems for disaster prevention of coastal areas delivered to JMA.

Home telephone systems delivered to the Nippon Telegraph and Telephone Public Corporation.

1974
Weather satellite data receiving units delivered to JMA.

Push-type key telephone systems delivered to the Nippon Telegraph and Telephone Public Corporation.

1976
Wired robot meteorological observation systems delivered to JMA.

1978
Hydrographic and meteorological automatic observation units delivered to Chiba Prefecture.

1979
No. 4 key telephone systems delivered to the Nippon Telegraph and Telephone Public Corporation.

1980's

1982
Very Long Baseline Interferometry (VLBI)

Meisei contributed to the development of "VLBI", which observes radio sources of stars with a radio telescope for ultrawide measurement. It is now possible to detect tectonic plate motions in the order of 10cm/year with the VLBI technology, which is greatly contributing to the prediction of earthquake occurrence, etc.

1983
NASA's Space Shuttle launched with Meisei's products.

Meisei delivered six mounted devices for Japan's first artificial aurora experiment (SEPAC) using a space shuttle.

*SEPAC (Space Experiments with Particle Accelerators) is a joint US-Japan investigation.

[VLBI] installed in the Geographical Survey Institute

Space shuttle launched with Meisei products equipped in it

1981
Seismic telemeters delivered to JICA (Japan International Cooperation Agency).

1983
EP-10 electronic switching systems delivered to the Nippon Telegraph and Telephone Public Corporation.

1986
Seismic telemeters installed on Izu Oshima Island.

1987
Aeronautical meteorological observation equipment system delivered to Turkish Republic.

1988
Seismic observation units delivered to Haneda Airport.

1990's

1991
Seismic intensity meter were delivered to JMA.

Meisei developed the world first seismic intensity meter. Seismic intensity measurement achieved a great progress from the conventional somatosensory method. Seismic information captured by the Seismic Intensity Meter is transmitted through telecommunication lines, and promptly delivered to the population through TV and other media thus contributing to the rapid deployment of emergency and rescue teams in the initial stage of earthquakes.

1994
Tsunami earthquake observation instruments were delivered to JMA.

In light of the lessons learnt from the disastrous experiences in the Nihonkai-Chubu Earthquake and Southwest-off Hokkaido Earthquake (Okujiri Earthquake), Meisei's tsunami earthquake observation instruments were deployed at 182 locations throughout Japan in order to detect earthquakes which may cause Tsunami as early as possible. These instruments allow around-the-clock observation of earthquakes throughout Japan and issue tidal wave information within approximately three minutes of the occurrence of an earthquake.

Seismic intensity meter

1990
Water supply monitoring system delivered to Naha City Waterworks Bureau, Okinawa.

1992
Meisei Engineering Co., Ltd. (affiliate company) established (presently, Meisei Management Service Co., Ltd.)

Participated in ISY (International Space Year).

1994
Certified for Quality Management System ISO 9001.

1995
JMA-95 type ground meteorological observation units delivered to JMA.

PHS public base stations delivered to Astel Group.

1996
Delivered Seismic intensity meters capable of measuring seismic intensity scale up to 7 (Japanese scale).

1999
Quantitative Tsunami information processing systems delivered to JMA.

*JMA: Japan Meteorological Agency

2000's

2000
AMOS (Airport Meteorological Observing System)
AMOSs are installed at 50 airports throughout Japan to observe weather conditions at the airports and transmit the data to the Civil Aviation Bureau and airlines. Serving an important role in the safe operation of aircraft.

2006
Automated Radiosonde System (ARS)
By automating a series of processes including pre-launch inspection, gas filling into balloons, and other preparatory operations, flying, receiving radio waves, and processing of observed data, ARS achieves very efficient observation.

2007
QCAST® Series Responding to Earthquake Early Warning by JMA
QCAST® Series is a system dedicated to receive Earthquake Early Warning by JMA corresponding to guidelines. By linking with QCAST® Series, the window time until the tremor hit will be announced through public addressing system, which allow people to prepare for evacuation. QCAST® Series also enables control facilities and equipment by linking with control device, such as unlock electronic locks, control elevators, and activate automatic power generator.

2007
Technical contribution to Selenological and Engineering Explorer "KAGUYA"
Of the 15 observation missions of KAGUYA, Meisei took charge of 8 mission. In 2008, a Hi-Vision camera of Meisei successfully shot "Full Earth from the Moon."

2008
JL Display and Announcement Device
Meisei released the JL display and announcement devices that support the National early warning system (J-ALERT). This device clearly indicates information on disaster prevention by mapping out the J-ALERT data received. With connection to QCAST® Series, it can establish a system that widely provides Earthquake Early Warning. The Device contributes to the instant provision of emergency information to ensure safe life in response to various needs.

2009
MAXI-SEDA-AP
In the Japan Experiment Module "KIBO" of the International Space Station (ISS), the Space Environment Data Acquisition (SEDA) system and the Monitor of All-sky X-ray Image (MAXI) were installed and their operation started. They have a system which can transmit the astronomical phenomena that cannot be observed on the earth, to the observation center on the earth in real time immediately after its appearance.

Courtesy of JMA

QCAST® Series
Responding to Earthquake Early Warning by JMA


Disaster prevention audio playback device compatible with the J-Alert system

2000
Received ISO 14001 certification.

2002
Mission demonstration test satellite MDS-1"Tsubasa" was successfully launched carrying Meisei's space environment observation unit and commercial devices.

Successful launch of a wireless communication device (satellite bus).

2003
Seismic observation instruments with Nowcast function delivered to JMA.

2005
Integrated Moriya Plant into Isesaki Plant.

2008
AWS (Automatic weather station) delivered to Department of Meteorology, Sri Lanka.

2009
Greenhouse Gases Observing Satellite "Ibuki", provided with Meisei's technical data acquisition equipment (TEDA) and monitor cameras, was successfully launched.

JL Display Processing Device and QCAST® Series were designated as new technologies for safety / disaster prevention by the Ministry of Land, Infrastructure, Transport and Tourism and exhibited in Kanto Technology Development Office.

2010's

2010
"Hayabusa" returned.
After about 7 years, traveling a total of about 6 billion kilometers, Hayabusa safely returned to the Earth in June. Meisei's X-ray fluorescence spectrometer (XRS) installed in Hayabusa collected composition data on the main surface elements on the asteroid Itokawa and transmitted the data to Earth.

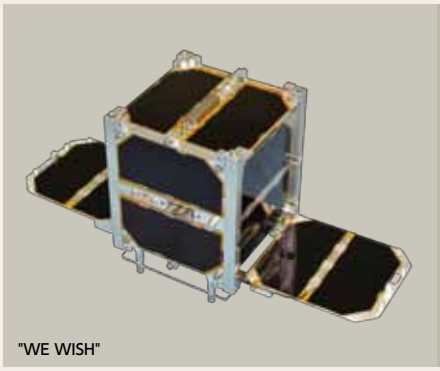
2012
CubeSat "WE WISH"
"WE WISH", Meisei's first ever CubeSat, was released into space from the international space station on October 4. It subsequently orbited the Earth successfully and was in operation for longer than had been originally planned - a total of 158 days.

2014
Release of the world's smallest and lightest iMS-100
Compared to conventional radiosonde devices, this global strategic product is a huge improvement in terms of miniaturization, lightness, safety, running cost and environmental load. A new type of sensor gives dramatically improved accuracy of observation.

2015
POTEKA® information delivery service launched
The Japan Meteorological Agency approved POTEKA® launched its information delivery service. A range of benefits from the service are anticipated, such as countermeasures to regional climatic disasters.

2016
Launch of Epsilon 2 and Geospace exploration satellite "ARASE"
The Epsilon rocket is fitted with a Meisei's power sequence distribution box, hot gas valve motor controller, rocket-mounted camera, and picture compressor equipment. ARASE is fitted with a small-size star scanner and 7 devices for observing electrons, ions and wave fluctuation, to solve the mysteries of the radiation belt which envelops the Earth.

2017
Release of the world's G401 seismometer
The G401 is a seismometer which uses the internationally recognized Modified Mercalli Intensity Scale, and transmits the data over the network. The dust-proof and water-proof casing have enabled the device to withstand the harshest measuring environments around the world and securely transmit data crucial for earthquake disaster prevention.


"WE WISH"


POTEKA®

G401

2010
Social contribution through Hayabusa Festa, Isesaki Science Seminar, etc.

2011
Helped with the reconstruction of emergency control tower systems after the Tohoku Earthquake.

Completed X-FEL facility of the Institute of Physical and Chemical Research (Riken).

Developed the two-dimensional X-ray detector electronic circuit.

Measuring devices for the "Soratena" climatic data service installed in 3,000 sites around Japan.

Developed the FES-C optical CO_2 automatic sensor.

2012
Technical tie-up with the U.S. Southwest Research Institute Inc.

Enrolled in the IHI Group.

Developed the multi-channel seismometer.

2013
Epsilon test rocket successfully launched.

Developed the S401 fitted with an HGVmotor controller.

Moved the Tokyo Office to Toyosu, Koto-ku.

2014
Produced a near-infrared spectrometer and a deployable camera system installed on the Hayabusa2.

2015
Received orders from Turkey for iMS-100 radiosonde

16 low energy ion measuring devices produced for the American MMS satellite mission.

X-ray free electron laser (XFEL) experiment testing devices delivered to Korea.

2016
Received orders from Mexico for iMS-100 radiosonde devices.

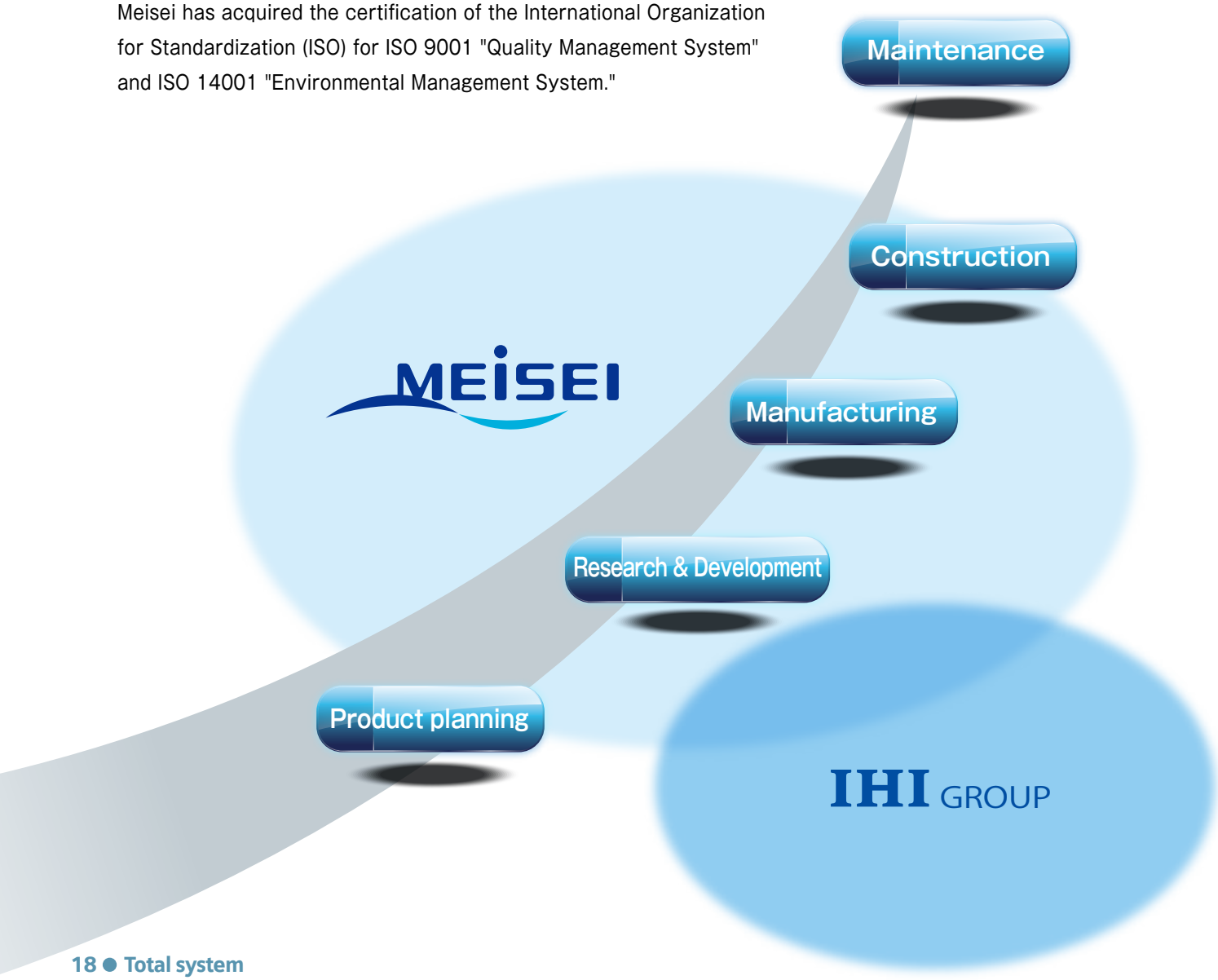
New-type ARS is delivered to JMA.

2017
Developed the QWP F series solar powered crystal quartz hydraulic sensor.

With a consistent system covering from research and development to design & production, and maintenance, MEISEI responds to customer's needs.

In order to constantly pursue new possibilities and deliver excellent products that exactly meet customer's needs, Meisei established a consistent system covering from research and development to design & production, construction, and maintenance.
In June 2012, Meisei has started anew as a member of the IHI Group.
In combination of the original manufacturing capabilities accumulated by Meisei and wide business opportunities of the IHI Group, Meisei will continue to create world-leading products and services.

Meisei has acquired the certification of the International Organization for Standardization (ISO) for ISO 9001 "Quality Management System" and ISO 14001 "Environmental Management System."



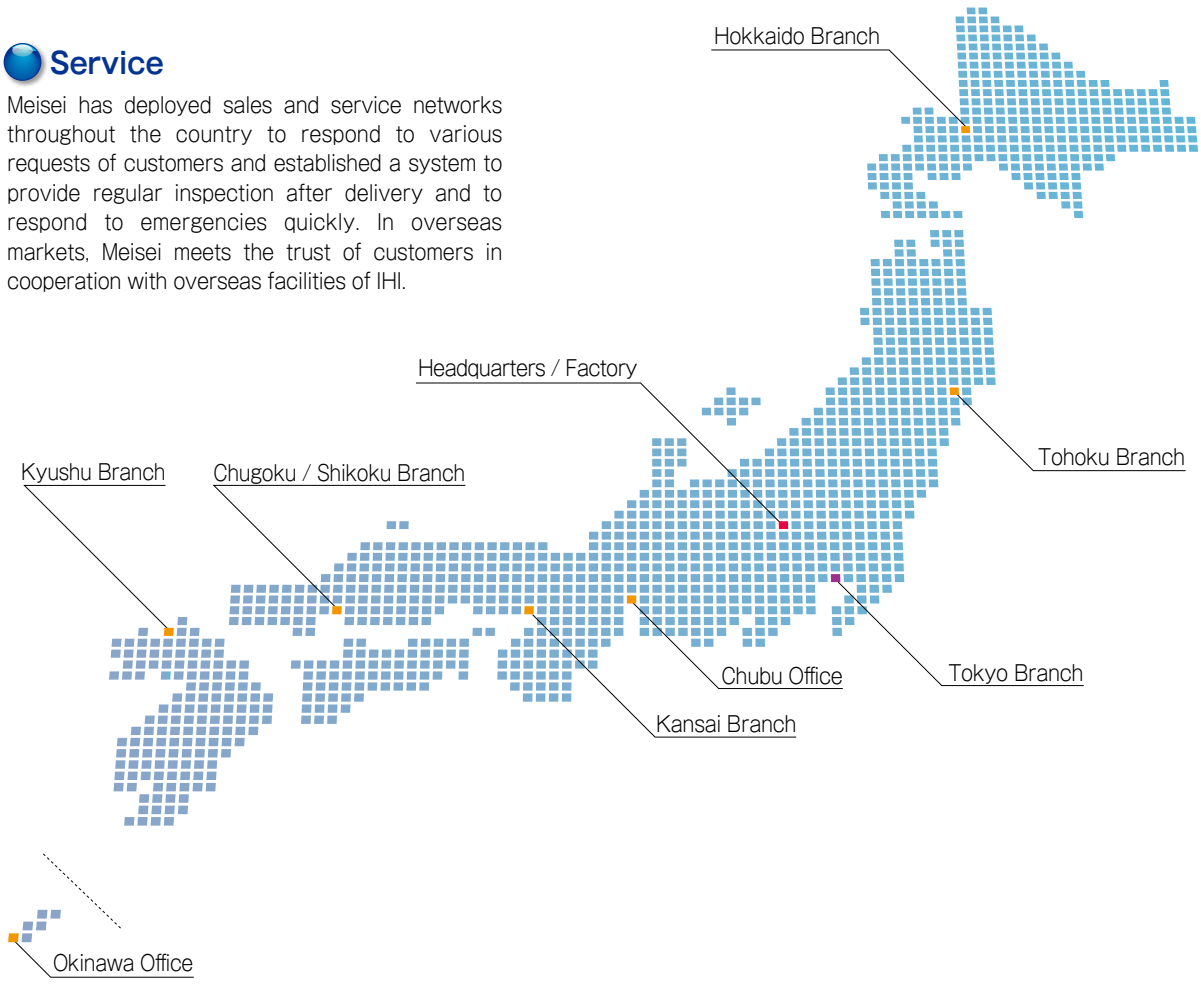
Product Planning

Research & Development

Design & Production

Service

Meisei has deployed sales and service networks throughout the country to respond to various requests of customers and established a system to provide regular inspection after delivery and to respond to emergencies quickly. In overseas markets, Meisei meets the trust of customers in cooperation with overseas facilities of IHI.



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