



THINK TOMORROW

SHINKO SEIKI

Corporate Profile

We make contributions to society with “our top production technologies”.

Following the demonstration of the existence of vacuums by the Italian scientist Torricelli for the first time in the world in 1644, studies on vacuums have contributed to the development of humankind in a variety of stages. Today, vacuum technology is attracting increasing attention as an essential technology in every industrial field. Vacuum technology supports our daily lives and is continuously growing in order to enrich people's lives. It covers not only the electronics industry but also food, medicine, bio-related industries, transportation equipment such as automobiles, and the fields of energy and aerospace including artificial satellites.

Shinko Seiki was the first company in Japan to succeed in the domestic production of large-size vacuum pumps and mechanical booster pumps in 1957. Since then, Shinko Seiki has continued the developments of technologies such as plasma technology, thin film technology, and precision heat treatment as a creator of vacuum technologies. Shinko Seiki is also focusing its attention on the development of new technological fields including biocompatible and medical technologies.

As a comprehensive vacuum technology company we have been continuously undertaking challenges related to unprecedented technology in order to fulfill the needs of industries. Our passion and persistency for manufacturing form a pillar of Shinko Seiki's technology and have been handed down in an unbroken tradition.

Shinko Seiki is eager to be of service to customers as a development oriented corporation to lead a dream and possibility to the realization of a new function. Shinko Seiki endeavors to protect the environment of our irreplaceable earth, and makes contributions to the innovation of production processes of society and industry through its reliable advanced technologies in order to create the foundations for an affluent society and enriched lifestyles.

INDEX

| | |
|--|----|
| ■ Introduction | 02 |
| ■ Section Introduction | 04 |
| ■ Business Establishment | 06 |
| ■ Equipment Division | 08 |
| Thin-film deposition equipment | 09 |
| Precision heat treatment equipment and soldering equipment ... | 10 |
| Plasma processing equipment | 11 |
| New Technology 01. Plasma polymerization technology | 12 |
| 02. c-BN thin film | 13 |
| ■ Component Division | 14 |
| Vacuum pump | 15 |
| New Technology Dry pump | 16 |
| Optical Technology Optical inspection apparatus | 18 |
| ■ History | 20 |
| ■ Work for the public good | 22 |



Manufacturing to Deliver Comfort and Affluence to Customers

Technology

Shinko Seiki's core technologies

Vacuum technology

Thin film formation
technology

Precision heat
treatment technology

Optical measurement
technology

Plasma technology

High reliability
Innovative
technology

Persistency as a company

Ecology

Contributions to industry and society

Contributions to a beautiful
global environment

Challenge

Fusion of technologies

Development of
new technologies

Experience

Pride as a pioneer

Accumulation of
technologies



Section Introduction

Shinko Seiki's technology is born from the fusion of the latest technology and accumulated experience, and creates new potential.

Shinko Seiki's organization works efficiently under an integrated division system covering areas ranging from research and development to production, marketing and servicing, and provides more speedy and accurate responses to the needs of customers.

Development and production of components
for vacuum pumps and optical projectors, etc.

Component Division

Using evacuation technology accumulated over more than half a century, the Component Division manufactures a variety of vacuum pumps and exhaust equipment. We provide evacuation systems optimized for the intended applications of each equipment manufacturer and end user as components that support vacuum processes required in a wide variety of production lines.

Development and manufacture of vacuum equipment such as semiconductor manufacturing equipment, thin-film equipment, and display manufacturing equipment with unique value added to vacuum technology

Equipment Division

The Equipment Division provides environmentally friendly dry processes as reliable production systems to a variety of industrial fields based on the three core technologies of "vacuums", "heat treatment", and "plasmas" accumulated through unique research and development.

Development of new products and new technology



Development promoted in conjunction with the marketing, engineering and manufacturing divisions and customers.

Undertaking challenges in new areas for the creation of better products utilizing accumulated developmental know-how

Research and Development Division

The Research and Development Division strives for the development of innovative technology unique to Shinko Seiki by taking full advantage of accumulated technical capabilities and comprehensive vacuum technology with continued strenuous efforts for development of excellent functions to meet the needs of the times.

Business Establishment

From Kobe to the world

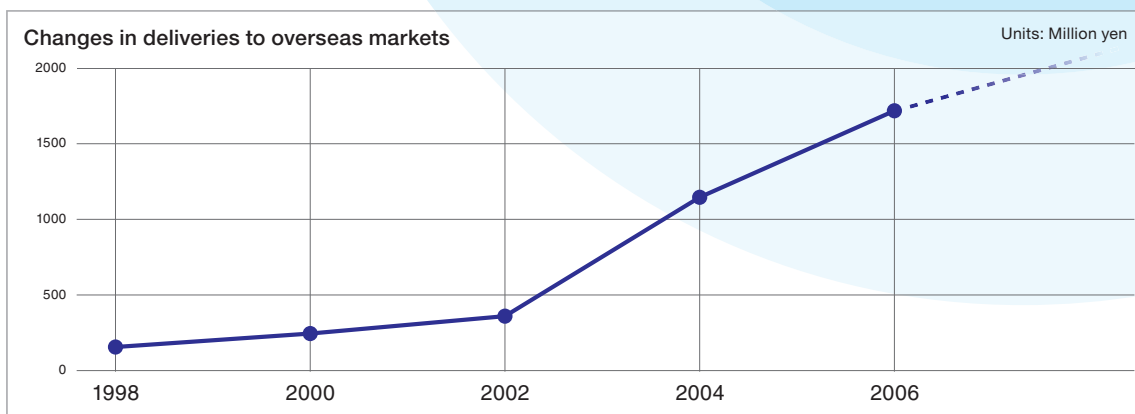
Shinko Seiki transmits state-of-the-art technology

With rapid advances in the globalization of industries, Shinko Seiki is now transmitting state-of-the-art technology from Kobe to the world and has promoted business development in global markets.

Shinko Seiki has established a network of sales and repair agents in a wide variety of countries, which acts in an integrated manner to provide a comprehensive range of services to customers.

Positive evaluations of the technical capabilities of "Shinko Seiki" are rapidly growing in global markets. In East and Southeast Asian markets in particular, the development of sales and repair networks for vacuum pumps has enabled the satisfaction of the needs of local customers with regard to low prices and high levels of quality, resulting in high levels of positive evaluation for Shinko Seiki's products among users in these countries.

With a great deal of cooperation from Shinko Seiki's sales and repair agents, we are aggressively taking on the challenge of further advancement into global markets under our slogan "from Kobe to the world".





Head office, Kobe factory



Shiga Moriyma factory

Sales and manufacturing system designed to quickly deliver the latest information

Production is performed at two production bases, the Head office, Kobe factory and the Shiga Moriyma factory, in order to manufacture state-of-the-art machines and equipment.

Marketing activities are promoted in two locations, Kobe and Tokyo, which are key cities for collecting information. These systems allow us to speedily supply more superior products not only in Japan but also to customers around the world.

Head office, Kobe factory

- Functions as the Head office
- Development and manufacture of products related to electronic devices
- Development of biomedical products in line with the Kobe Medical Industry Development Project

Shiga Moriyma factory

- Development and manufacture of products in the Component Division
- Manufacturing of display devices in the Equipment Division
- Development of products related to thin and rigid films
- Service base for deliveries centering on western Japan

Tokyo Service Center

- Component servicing base centering on eastern Japan

Kobe office

- Base for marketing activities mainly in west Japan
- Base for sales promotion activities to global markets

Tokyo office

- Base for marketing activities mainly in east Japan



Equipment Division

Product lineup of Equipment Division of Shinko Seiki

- Thin-film deposition equipment
- Precision heat-treatment system
- Soldering equipment
- Plasma processing equipment

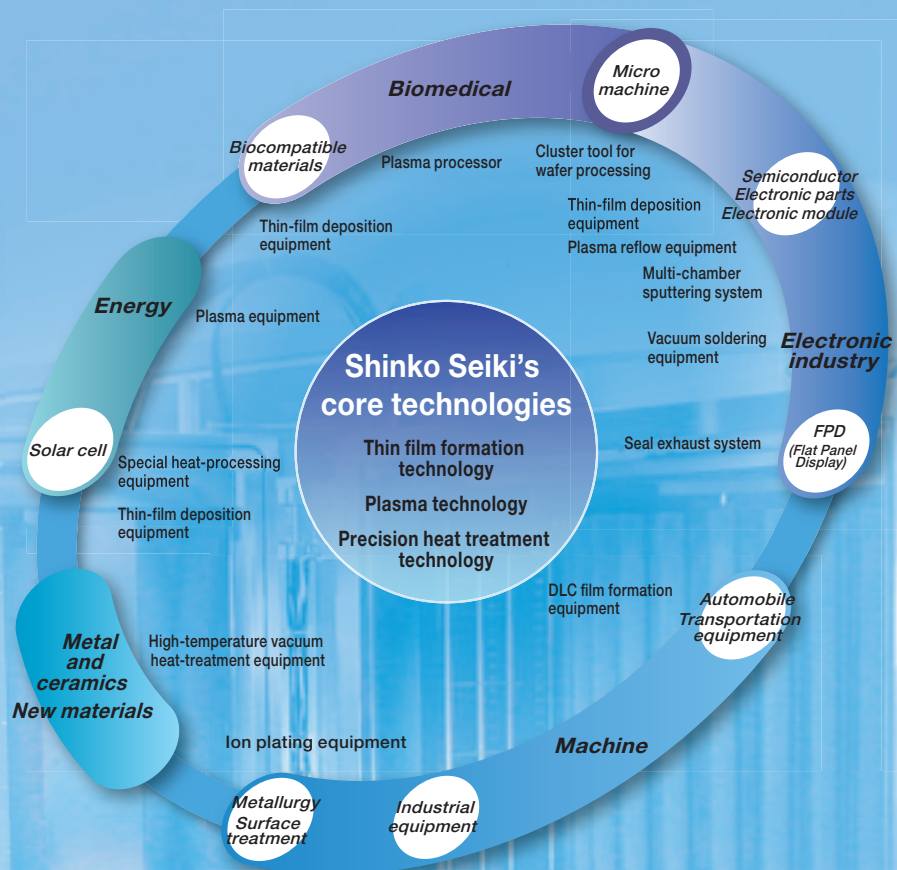
The thin-film deposition technology, precision heat treatment technology and plasma technology of which Shinko Seiki is proud support the technological innovation of the vanguard industry.

The history of a variety of machines and equipment manufactured by Shinko Seiki based on vacuum technology, heat treatment technology and plasma technology is the history of the development of advanced industries in line with the progress of Japan's scientific technology after the War. The pursuit of high ideals and skilled technology has inspired Shinko Seiki to continue the development of more advanced technology and solve various problems. The results are the development of state-of-the-art equipment offered to various industrial fields to meet the demands of various industries for reliable quality, advanced performance, environmental consciousness and others.

Flow of development and delivery of equipment in Shinko Seiki



Role of products of Shinko Seiki in advanced technology industry

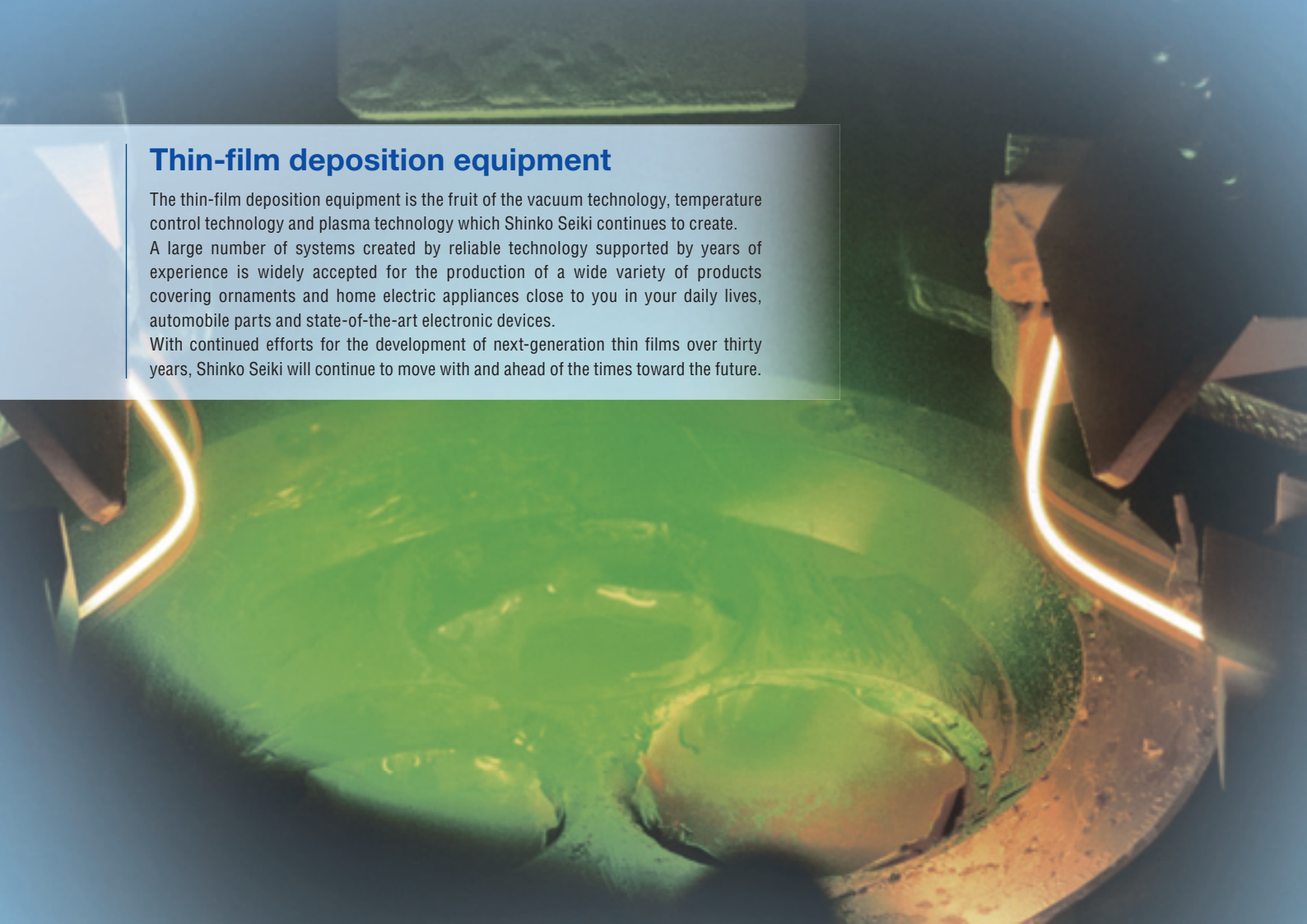


Thin-film deposition equipment

The thin-film deposition equipment is the fruit of the vacuum technology, temperature control technology and plasma technology which Shinko Seiki continues to create.

A large number of systems created by reliable technology supported by years of experience is widely accepted for the production of a wide variety of products covering ornaments and home electric appliances close to you in your daily lives, automobile parts and state-of-the-art electronic devices.

With continued efforts for the development of next-generation thin films over thirty years, Shinko Seiki will continue to move with and ahead of the times toward the future.



Thin-film deposition equipment for electronic devices

A strong product lineup is available based on a wealth of accomplishments continued from the time of the start of semiconductors. The lineup offers a variety of systems in flexible configurations with reliable technology based on past achievements, which includes the AAMF series of deposition equipment for wafer processing as the best seller product over a quarter-century, the AAH series effectively used for quantity production of small electronic devices such as crystal oscillators, and the STM series of multi-chamber sputtering systems widely used for research and development, trial production and quantity production of advanced devices.



Multi-chamber sputtering system

Rigid film deposition equipment

The rigid film deposition equipment of Shinko Seiki born from Shinko Seiki's unique technological development creates higher added value. The equipment delivers the most-advanced rigid film and surface treatment technology. The lineup includes the arc-discharge high-vacuum ion plating equipment having delivery records of 250 units or more in total, PIG-type DLC film formation equipment that allows the formation of DLC thick film of 20 μ m not achievable by other methods and provides excellent lubricating performance, and c-BN film formation equipment, the sole type of equipment at the practical application stage.



PIG-type DLC film deposition equipment

Precision heat treatment equipment and soldering equipment

This is the newest lineup of Shinko Seiki's precision heat treatment equipment that has occupied a unique stance in the manufacturing processes of electronic devices, FPD and new materials among the large number of heating-process manufacturing devices available in the market.

The lineup includes the seal exhaust system that innovated the manufacturing process of large-size PDP panels and vacuum H₂ soldering equipment supporting the quantity production of hybrid cars by the unique, unmatched technology that Shinko Seiki alone can provide with its attempt to move forward through the cutting-edge area.

Precision heat treatment equipment and soldering H₂ equipment

This innovative soldering equipment allows voidless soldering at a higher level not achievable by conventional methods, which is essential to assure high reliability for power devices like hybrid cars and electric power converters.

The fusion of the core technologies of Shinko Seiki's "vacuum technology" and "precision heat treatment technology" with the addition of "gas atmosphere control technology" has led to the completion of high-level hardware and software, which achieves a market share close to 100% in the industrial areas requiring this technology.



Vacuum soldering equipment

Seal exhaust system for large FPD

The seal exhaust system achieves an integrating process from sealing to exhaust for FPD panels larger than 40-inch in size such as PDP, in a quantity production scale. It is an excellent large-scale vacuum and heating system that assures high efficiency, high productivity and automation of the production line.

Deep understanding of panels and manufacturing processes through years of accumulated experiences in research, development, practical application and quantity production of PDP is delicately arranged in each part of the equipment and system.



Seal exhaust system

Plasma processing equipment

Shinko Seiki's plasma processing equipment opens new possibilities in plasma technology as a new drive process and is receiving widespread attention in many fields nowadays. The plasma etching and ashing system used for micro-fabrication of electronic devices achieves compact hardware, a variety of software and reasonable costs. In addition, the plasma cleaning equipment allows surface treatment on resin and dies which was not achieved by conventional methods. On top of these, the plasma reflow equipment assures clean and ecological processes by the use of dry processes in the semiconductor package process by means of plasma technology.

Etching and ashing system

The full-scale etching and ashing equipment supports wafer processing of semiconductors and MEMS, and the research and development stage to the full-scale quantity production of advanced FPD panels.

The standard plasma etching equipment "EXAM" achieves micro-fabrication in submicrons at reasonable costs and in a compact installation space. The "EXAMΣ" type is developed by adapting "EXAM" to automated lines for effective use for more specialized processes. The "SWP" series offers high-rate and side etching capabilities for removing the sacrificial layer of an organic film essential for the MEMS manufacturing process. With these unique devices, Shinko Seiki continues to produce outstanding results in the advanced processes from its unique stance.

In addition to the applications for wafer processing and display array processing, the lineup includes the "POEM" type to be used for a wide range of applications including the cleaning of PCBs and surface treatment of precision dies.



Plasma ashing system



Plasma etching system

Plasma reflow equipment

The plasma reflow equipment assures a complete flux-free process in bump formation on a large-diameter wafer by reflow processing in a hydrogen radical atmosphere by using the strong reducing power of hydrogen radicals generated from a surface-wave plasma source to provide uniform high-density plasma on a wider area.

The realization of the flux-less reflow allows the elimination not only of the flux application process, but also cleaning processes before and after flux application and achieves outstanding process reduction and energy conservation effects. The equipment achieves high reliability with good performance in the quantity production line of 300mm-size wafers.

This technology is also born from the fusion of the plasma technology, soldering technology and precision heat treatment technology accumulated over years and the fruit of Shinko Seiki's next-generation technology focused on ecological performance.



Plasma reflow equipment



Plasma cleaning equipment

New Technology



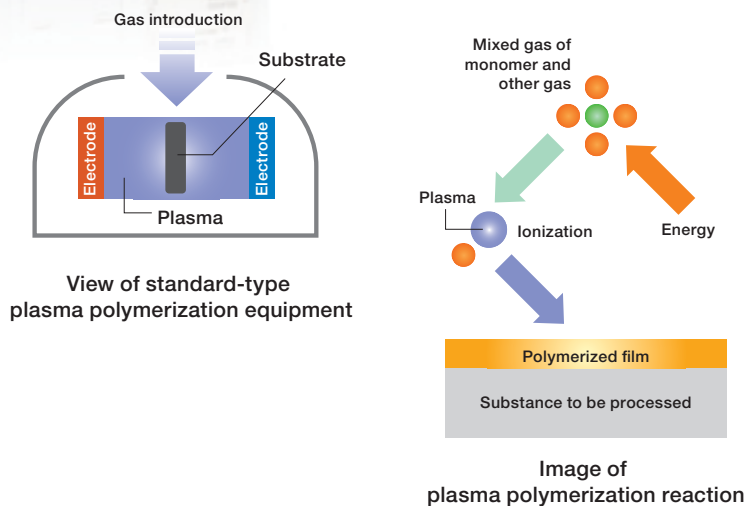
Plasma polymerization equipment

Challenge to new technology of Shinko Seiki

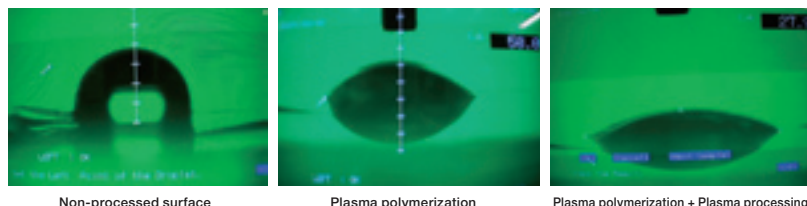
01 Plasma polymerization technology

- The plasma polymerization technology is a completely new thin film technology in which an organic thin film is formed on polymer material for the purpose of using it for medical instruments and bio material while inorganic thin film has been mainly used for electronics and metal surface treatment in conventional thin film and plasma technology.
- This technology has already been put to practical use for disposable contact lenses. Shinko Seiki has been working on developments and practical application for new, unprecedented uses of this technology.

Standard-type plasma polymerization equipment and view of plasma polymerization reaction



Hydrophilic effect by plasma polymerized film



Non-processed surface

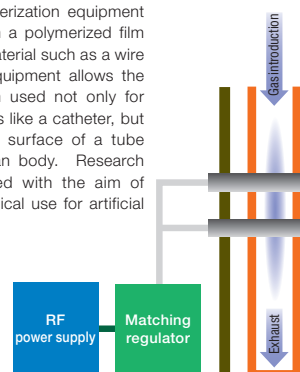
Plasma polymerization

Plasma polymerization + Plasma processing

A plasma polymerized film on silicon rubber was formed.
Hydrophilic effect was checked.
Substantial improvement in hydrophilic effect is observed
in comparison with an unprocessed surface.

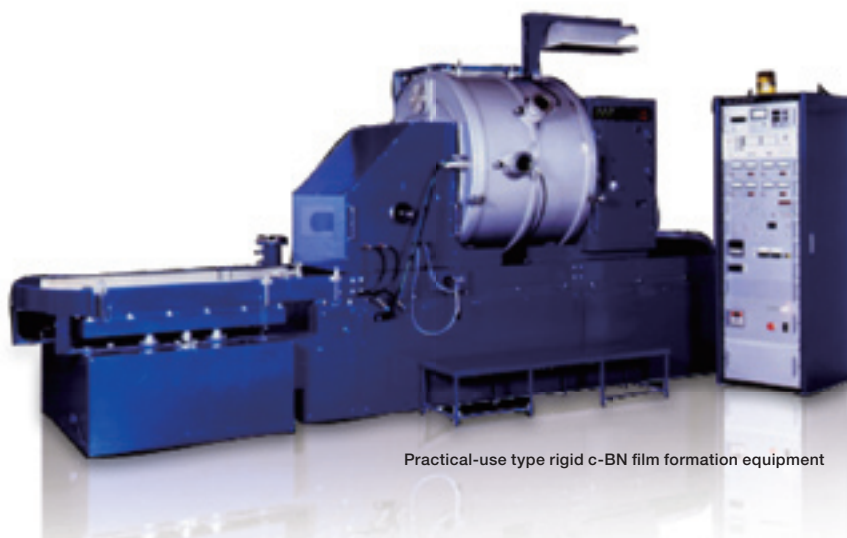
Tube-type plasma polymerization equipment

This plasma polymerization equipment is intended to form a polymerized film on long and thin material such as a wire and tube. This equipment allows the formation of a film used not only for medical instruments like a catheter, but also on the inside surface of a tube used for the human body. Research has been advanced with the aim of putting it into practical use for artificial blood vessels.



Shinko Seiki is steadily moving ahead with its next-generation technology.

Shinko Seiki has been promoting completely new technologies for the “development and practical application of c-BN film” and “plasma thin film technology” not present in the conventional thin film materials, has put these developments into practical applications in the bio-medical area and has achieved significant achievements. The combined use of the next-generation technology with the core technologies allows clean and environment-friendly production.



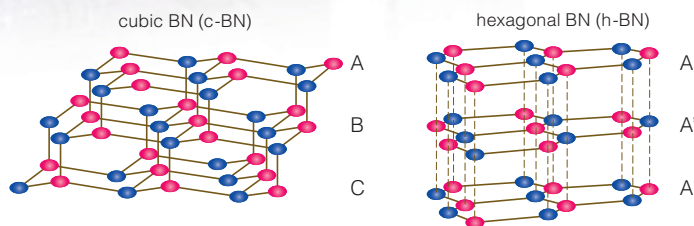
Practical-use type rigid c-BN film formation equipment

Challenge to new technology of Shinko Seiki

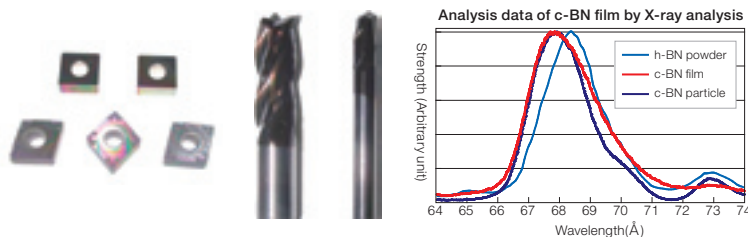
02 c-BN thin film (Cubic Boron Nitride)

c-BN (Cubic Boron Nitride) is a crystalline body of SP³ bond of boron (B) and nitride (N) possessing a high hardness almost equivalent to diamond. It is used in a sintered compact for cutting tools like a c-BN tool. However, the sintered compact is developed by baking at high temperature and high pressure, it is brittle and susceptible to fracture and not widely used due to its limitation in applications. h-BN (SP² bond) having a different structure from c-BN is soft in characteristic and used as the lubricating powder.

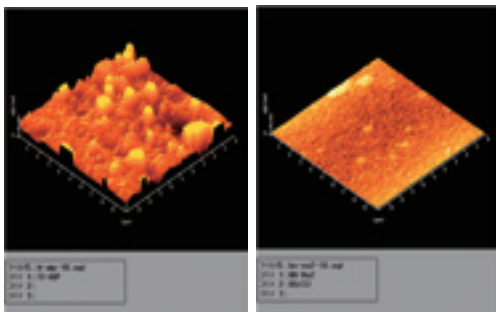
By using c-BN in the form of thin film, it can be expected that c-BN can be used for a variety of applications besides cutting tools.



Example of c-BN film formation and analysis data



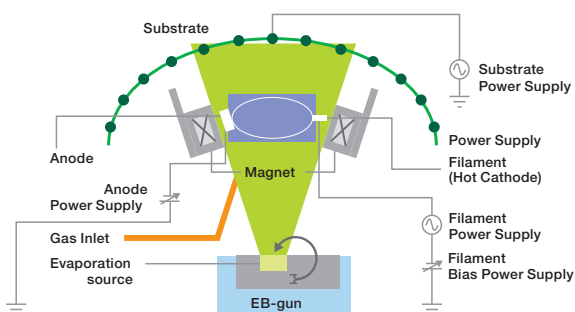
Surface status of c-BN film



Evaluation on surface smoothness of TiN film by ion plating of other company

Evaluation on surface smoothness of c-BN film of Shinko Seiki

Magnetic field excited ion plating system



Shinko Seiki makes it possible to form stable c-BN thin film deposition in a quantity production scale by using the magnetic field excited ion plating method developed on its own. The c-BN thin film is developed with the intention of its practical application for cutting tools with its excellent hardness and thermal stability.

Component Division

Product lineup of Component
Division of Shinko Seiki

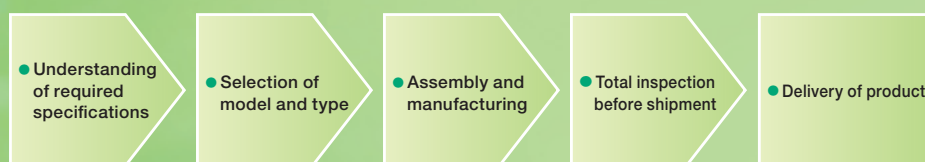
- Dry pump
- Water-ring vacuum pump
- Oil-sealed rotary vacuum pump
- Mechanical booster

Accumulation of know-how over half a century leads to the capabilities for technologic development of the state-of-the-art technology Outstanding reliability in excellent exhaust perfor- mance

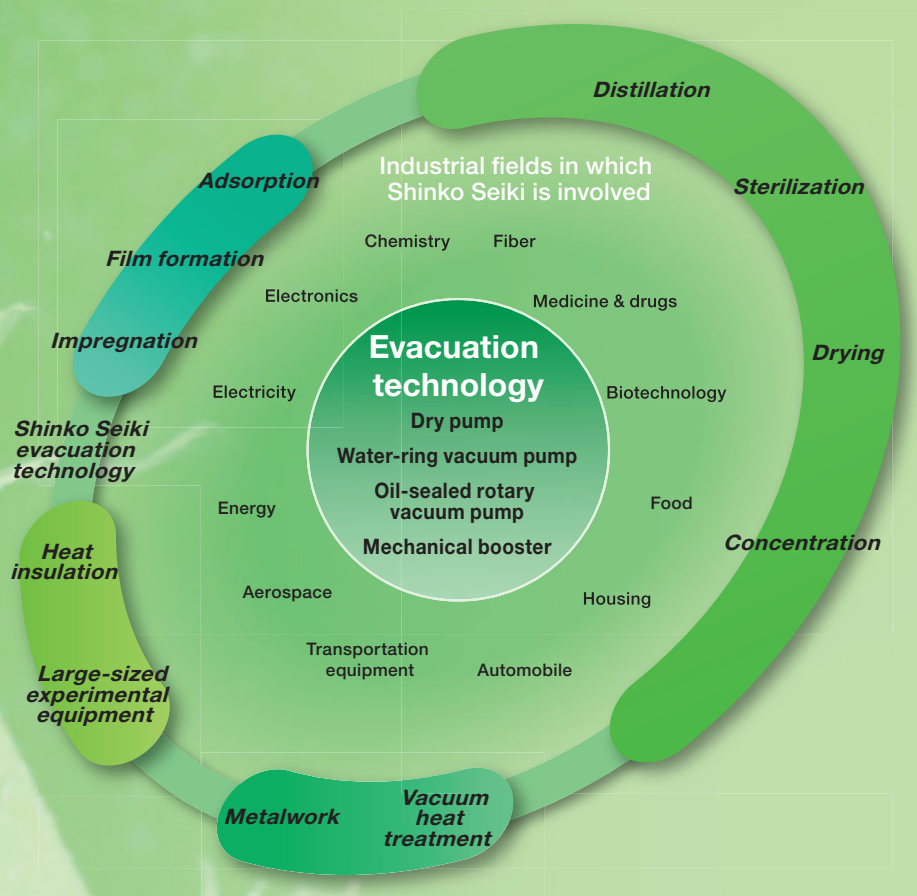
Vacuum pumps are essential in various industrial fields from the core industries to the state-of-the-art technological industries including the IT, car, food, chemistry, and energy industries. Since the development of the vacuum pump in 1951, Shinko Seiki has supplied more than 200,000 units of robust and user-friendly vacuum pumps to the industrial world, which have supported a wide variety of scientific technologies and industries.

The accumulated technologies are supported by the combined efforts of development, production and sales divisions with a spirit to “produce and steadily supply better products” to assure high quality through excellent design, accurate processing, and skilled assembly technologies in addition to Shinko Seiki’s total inspection system. Shinko Seiki products produced in this way have gained a great reputation and are achieving excellent performance in various technological areas.

Flow of component production and delivery in Shinko Seiki



Contribution of Shinko Seiki to industry by evacuation technology



Vacuum pump

Vacuum pumps, which create a vacuum (depressurization) state in a sealed container by discharging air, gas and others from the container, have various structures, working pressures, applications and others. By properly combining them, the optimum structure of the evacuation system can be achieved. Shinko Seiki is engaged in the development, manufacturing, sales, and after-

sales service of the dry pumps of new technology as well as the development, manufacturing, sales, and after-sales service of oil-sealed rotary vacuum pumps, water-ring vacuum pumps, and mechanical booster pumps. With this strong lineup, we are ready to offer you optimum proposals to meet your needs.

Water-ring vacuum pump

This pump delivers highly reliable performance mainly in a lower vacuum region. The material may be selected from among FC, SUS and hastelloy according to your intended use. By selecting a proper material, the pump can discharge corrosive gas, flammable gas, and poisonous gas easily.

The pump of the sealing liquid circulating type is available for powerful recovery of solvent by the use of a heat exchanger.

- Exhaust of corrosive gas
- Exhaust of poisonous gas
- Recovery of solvent



Model SW-300S

Rotary plunger vacuum pump

This pump delivers highly reliable performance mainly in the lower to middle vacuum regions. A wide range of pumps are available from small to large sizes and in various exhaust speeds. The simple internal structure using a piston assures more robust and durable design compared with vacuum pumps of other types.

- Operable in lower to middle vacuum regions
- Exhaust of poisonous gas
- Excellent durability in severe environment
- Easy maintenance



Model SR-37BII

Vane-type oil-sealed rotary vacuum pump

This pump can be used for a wide range of applications mainly in middle to high vacuum regions. With vanes incorporated, the two-stage compression cycle of the pump allows operation with low vibration and at low noise even in a high vacuum region and requires just a smaller installation space.

The pump provides clean vacuum in the manufacturing of electric household appliances, semiconductors and others.

- Operable in middle to high vacuum regions
- Two-stage compression cycle allows operation with low vibration and at low noise in high vacuum region
- Compact design



Model SGD-600

Mechanical booster

This pump accelerates the exhaust velocity in wide pressure regions. In combined use with an oil-sealed pump and water-ring pump, a variety of evacuation systems can be configured. The material of the pump can be selected from FC and aluminium according to the intended use and the design is compact.

- Allows various configurations of evacuation system
- Compact design
- Excellent exhaust performance



Model SMB-C06

Evacuation system

This evacuation system is comprised of a mechanical booster and various pumps. The system allows the flexible combination of vacuum pumps, valves and traps according to the intended applications to provide a waste-less and optimum evacuation system.

- Flexible combination according to the degree of vacuum
- Allow various configurations of evacuation system



Model SMB-5000RP



Model S609

New Technology

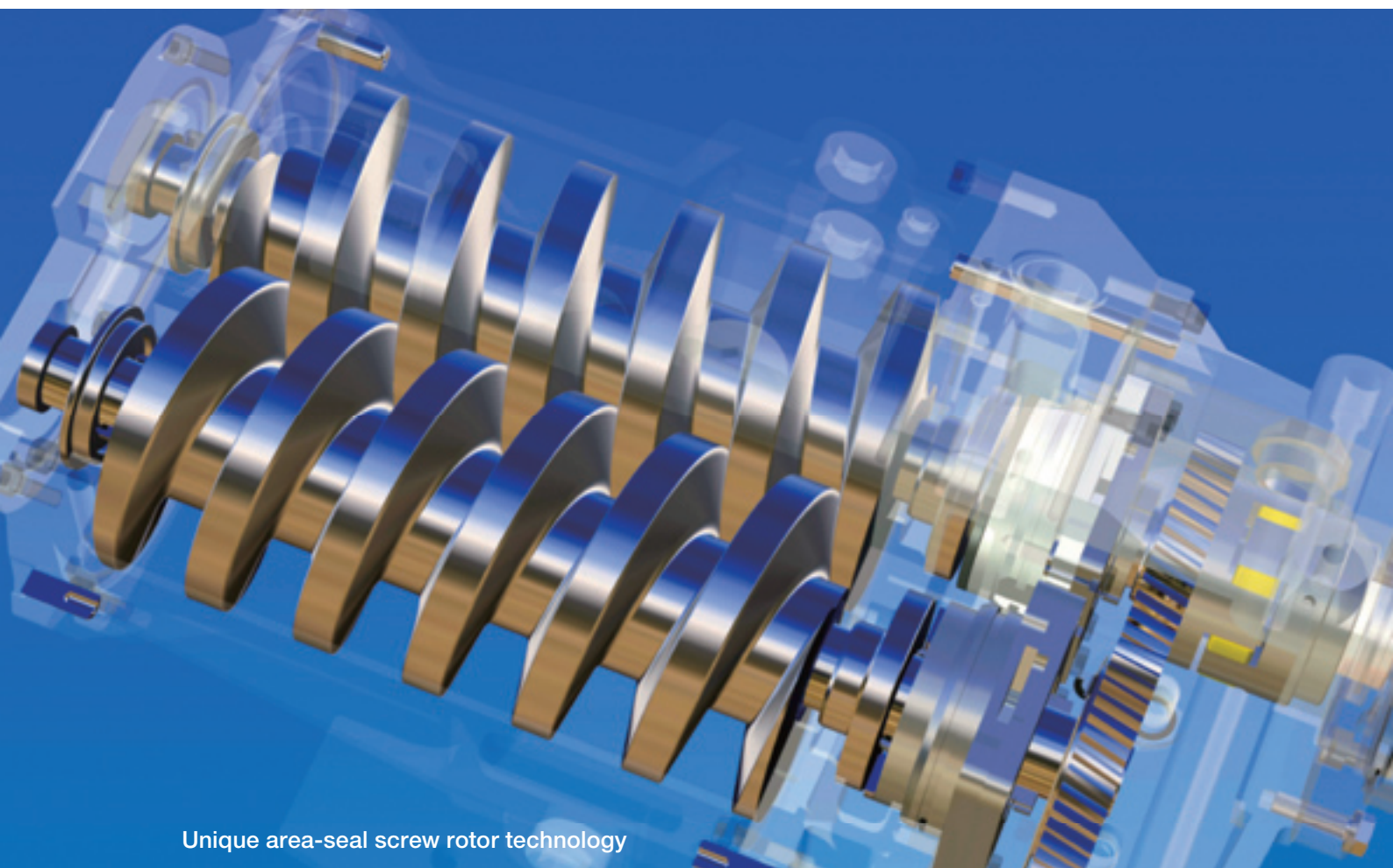
Dry pump

Problems of waste oil, waste fluid and exhaust gas are inevitable in the operation of a conventional oil-sealed rotary pump and water-ring vacuum pump. However, a clean vacuum atmosphere is required in the production of semiconductors and IT-related equipment. In order to solve these problems, the dry pump not using oil and liquid for the sealing of gas is inevitable.

By maximizing the evacuation technology accumulated over many years, Shinko Seiki has developed a robust dry pump easy to use and applicable to a wide range of applications.

While most existing dry pumps revolve at high speed, Shinko Seiki's dry pump assures excellent exhaust performance at low speed and allows longer operating lives of shaft seals, bearings and gears.

There is no need for cooling gas, shaft seal gas and purge gas in the case of exhausting of non-corrosive gas. On top of this, each series of this pump offers a wide variety of options such as drain tanks, intermediate drains, and cleaning suction pipe sets so as to provide a waste-less optimum evacuation system to you. The superior performance of Shinko Seiki's dry pumps makes it possible to use a dry pump widely in industrial fields and applications where the use of a dry pump was considered to be unsuitable. This innovation of the dry pump creates a new revolution in the evacuation process.



Unique area-seal screw rotor technology

Shinko Seiki's dry pump uses an area-seal screw rotor and minimizes the reduction in evacuation performance due to wear and corrosion to the utmost limit. The pump is also suitable for exhaust of liquid, condensable gas and particles and can be used for wider applications.

Technology of Shinko Seiki continues evolution

Development of dry pump overcoming the limits of conventional pumps and suitable for wider applications

Features Shinko Seiki's dry pump

Features of functions

① Use of area-seal screw rotor.

② Minimize the reduction of evacuation performance due to wear and corrosion to the utmost limit.

Features in performance

① Revolution at low speed assures high exhaust efficiency and allows longer operating lives of shaft seals, bearings and gears.

② Allow continued exhaust of liquid and particles.

③ Allow exhaust of condensable gas and cleaning inside the pump with liquid and gas.

④ Allow operation in applications for which an oil-sealed rotary vacuum pump could not be used.

Wide variety of options

① Selectable from a wide variety of options.

② Can install a cleaning suction pipe set, drain tank, keep-warm heater, and maintenance base according to intended use.

③ Assure operation for wider applications and enhanced maintainability.

SSH series

Being developed as a pioneer of Shinko Seiki's dry pumps, the SSH series includes robust dry pumps of the screw-rotor type. The pump is mainly mounted on semiconductor manufacturing equipment and allows stable exhaust performance required for manufacturing of semiconductors. The pump controller incorporated in the pump allows centralized control.

- Application: Manufacturing of semiconductor, general industry, research and development



Model SSH-150

SSE series

The SSH series includes exhaust units incorporating a dedicated mechanical booster in the box so as to allow large displacement. The inverter control minimizes energy loss to achieve energy conservation operation. The exhaust units of this series are provided with a communication function to enable control in conjunction by connecting a number of units.

- Application: Manufacturing of semiconductor, manufacturing of flat panel



Model SSE-1200

SST series

The SST series includes multipurpose dry pumps developed for general-purpose uses requiring a dry pump. Dry pumps of this series make the most of the features of Shinko Seiki's screw rotor in features such as explosion-proof operation by a universal motor, provision of a cleaning mechanism inside the pump with water and solvent, pump heater to avoid the deposition of product materials and aspirated materials and recovery mechanism of exhaust gas and others.

- Application: Industrial furnace, manufacturing of chemicals, molding of resin



Model SST-150

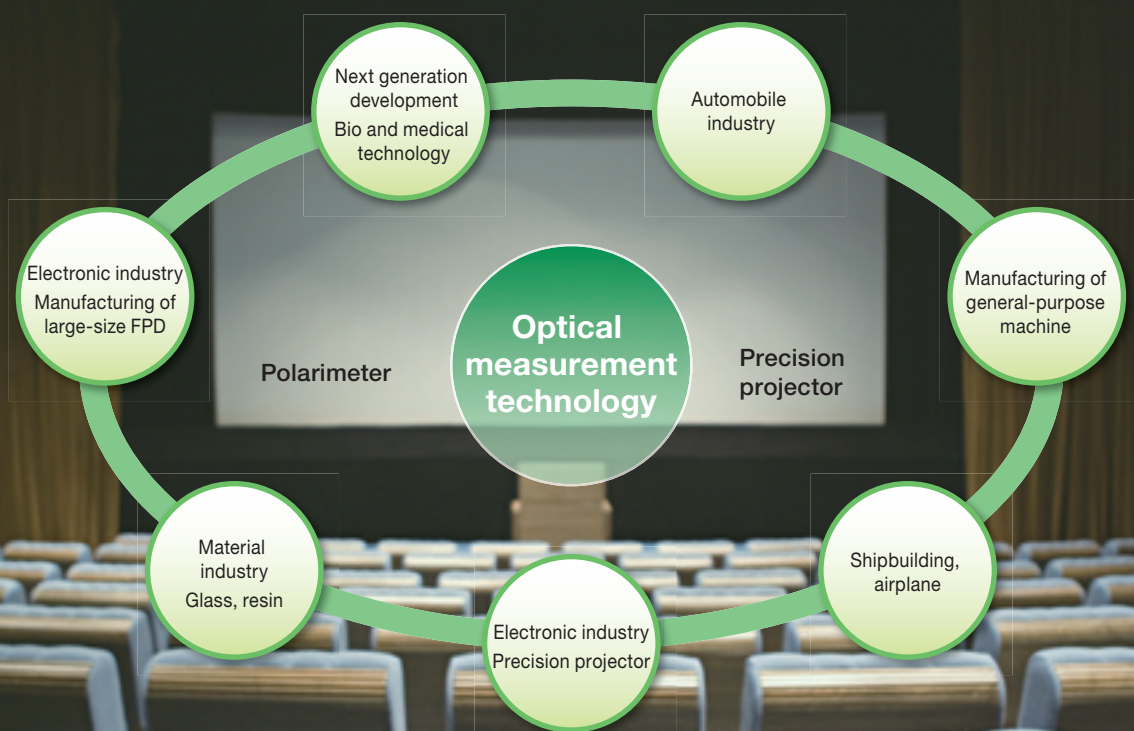
Optical Technology

Optical inspection apparatus

With the progress of technological evolution, there are increasing needs for product control. These needs are required in wider areas not only in production lines, but also private and public research institutions and other areas.

Shinko Seiki technology on film projectors and optical projectors has been developed into optical measuring technology, leading to the development of polarimeters with an image processing function and a bearing chamfer measurement projector. These devices are used as indispensable tools in various situations.

Pursuit of “accuracy” essential for measuring instruments is a challenge for Shinko Seiki in system development of optical measuring technology.

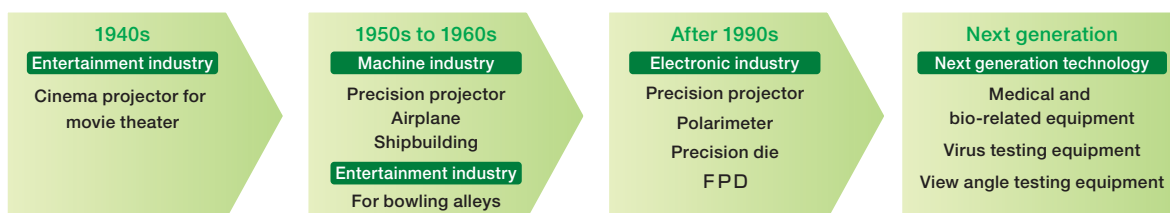


The high level of control technology required in thin-film deposition technology results in the development of a high precision measuring instrument.

This may be contrary to the image you have of Shinko Seiki, but the history of Shinko Seiki started from optical equipment, specifically, a cinema projector used in a movie theater.

Moving flexibly along with the trend of the times from this starting point, Shinko Seiki's optical technology continues its evolution into more familiar technology to you toward the new era.

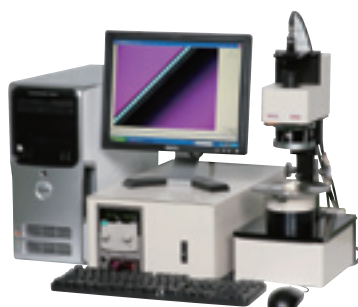
Flow of optical technology and optical products in Shinko Seiki



Polarimeter

The polarimeter is used to measure "stress" in invisible strains which could trigger damage and reduce the life of glass and plastics. It automatically digitalizes the stress by the use of Shinko Seiki's dedicated software so as to allow easy checking of product quality.

- Application: Measurement of strain: Sealing area of PDP chip tube, bonding area of fluorescent tube terminal for LCD back light, single lens of liquid crystal material



Model SF-IIC



Model SP-II

Bearing chamfer measurement projector

Shinko Seiki's optimal projector has a good reputation as a projector dedicated to inspecting the internal and external chamfers of a bearing on screen for efficient inspection of a bearing essential for smooth operation of a vehicle and rotary equipment. One-touch inspection is allowed on a production line by the use of various special jigs appropriate for the bearing to be inspected.



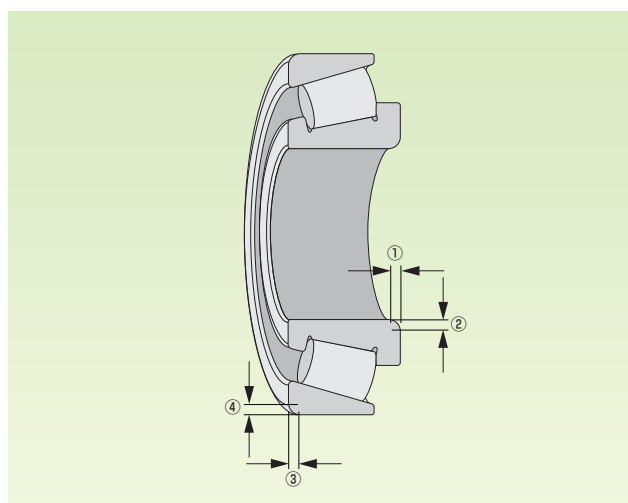
Model ST-200LT
(For external chamfer)



Model ST-205LT
(For internal chamfer)



View of measurement of strain on sealing area of FPD by SF-IIC



Area measured by bearing chamfer measurement projector

History

Moving ahead as a pioneer of vacuum technology for 60 years

| | Corporate body | Equipment Division | Component Division |
|------|--|---|---|
| 1949 | <ul style="list-style-type: none"> Founded with a capital of 200,000 yen. Operation started by borrowing equipment from the Karumo Plant of Kawanishi Kikai Co., Ltd. (Current Fujitsu Limited) | | |
| 1950 | <ul style="list-style-type: none"> Manufacturing of combing machine, electric equipment and sound projector | <ul style="list-style-type: none"> Start of manufacturing of infrared drying oven | |
| 1951 | | <ul style="list-style-type: none"> Start of manufacturing of vacuum equipment | <ul style="list-style-type: none"> Start of manufacturing of vacuum pump equipment |
| 1956 | | | <ul style="list-style-type: none"> Start of manufacturing of various precision projectors |
| 1957 | | | <ul style="list-style-type: none"> Succeeded in development of Japan's first large-size vacuum pump SMB-20000 mechanical booster receiving subsidies from the Ministry of International Trade and Industry |
| 1958 | | <ul style="list-style-type: none"> Start of manufacturing of semiconductor manufacturing equipment | |
| 1959 | <ul style="list-style-type: none"> Purchased all borrowed machines and equipment along with the development of business | | <ul style="list-style-type: none"> Completion of high evacuation set combining a mechanical booster pump, water-ring pump and oil-sealed rotary vacuum pump |
| 1960 | <ul style="list-style-type: none"> The capital was increased to 20 million yen. | | |
| 1962 | <ul style="list-style-type: none"> The capital was increased to 50 million yen. | <ul style="list-style-type: none"> Completion of single crystal furnace | |
| 1963 | <ul style="list-style-type: none"> Tokyo branch was upgraded as Tokyo office. The capital was increased to 100 million yen. | <ul style="list-style-type: none"> Completion of high-vacuum deposition equipment for electronic devices | <ul style="list-style-type: none"> Completion of large-size precision projector SG-30GS |
| 1965 | | <ul style="list-style-type: none"> Electron-beam deposition equipment Development and commercial realization of soldering equipment | |
| 1966 | <ul style="list-style-type: none"> Tokyo factory was newly established. | <ul style="list-style-type: none"> Start of marketing of multistage diffusion furnace | |
| 1968 | <ul style="list-style-type: none"> Shiga Moriyama factory was newly established. The divisions for manufacturing optical equipment and industrial equipment were moved from the factory of the Main office. | | |
| 1969 | <ul style="list-style-type: none"> Completion of new coating method, powder-coating facilities | | <ul style="list-style-type: none"> Completion of new-type projector VN-20 |
| 1970 | <ul style="list-style-type: none"> Completion of second stage construction of Shiga Moriyama factory, and vacuum equipment manufacturing plant | | |
| 1971 | <ul style="list-style-type: none"> The capital was increased to 200 million yen. | <ul style="list-style-type: none"> 1971 - 1975 Completion and commercial realization of crystal oscillator manufacturing equipment and thick film IC manufacturing equipment | <ul style="list-style-type: none"> Start of marketing of oil-sealed rotary vacuum pump SR-3700B Completion of large-size precision projector HG-40 having the largest screen among projectors manufactured in Japan |
| 1972 | | | <ul style="list-style-type: none"> Production of projectors for bowling exceeded 10,000 units. |
| 1974 | | | <ul style="list-style-type: none"> Completion of Japan's largest two-stage water-ring pump SW-1800 |
| 1975 | | | <ul style="list-style-type: none"> Start of marketing of oil-sealed rotary vacuum pump SRP-15000B Start of marketing of projector for marking in shipbuilding |



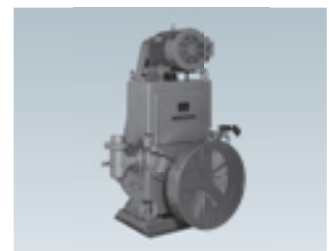
1949 Founded with capital of 200,000 yen



1951 Start of manufacturing of vacuum equipment



1957 Succeeded in the development of Japan's first large-size vacuum pump SMB-20000 mechanical booster



1971 Start of marketing of oil-sealed rotary vacuum pump SR-3700B

| | Corporate body | Equipment Division | Component Division |
|------|--|---|--|
| 1976 | | <ul style="list-style-type: none"> Completion of ion plating equipment for quantity production Establishment of rigid and corrosion-proof film formation technology | |
| 1977 | | | <ul style="list-style-type: none"> Completion of projector VSF-300 |
| 1978 | | <ul style="list-style-type: none"> Completion of high-speed sputtering system | |
| 1982 | | | <ul style="list-style-type: none"> Completion of directly-connected oil-sealed rotary pump SGD-600, 1000, and mechanical booster pump SMB-300D |
| 1984 | <ul style="list-style-type: none"> Completion of construction of Head office and Kobe factory in Seishin Industrial Complex (Nishi Ward, Kobe) and start of operation | | |
| 1985 | <ul style="list-style-type: none"> Completion of 2nd stage extension of Kobe factory and start of operation | | <ul style="list-style-type: none"> Completion of directly-connected aluminium mechanical booster pump SMB-100D, 600 |
| 1986 | <ul style="list-style-type: none"> Relocation of Kobe Sales Office to Mitsui Nissei Kobe BLDG (Chuo Ward, Kobe) | | <ul style="list-style-type: none"> Completion of directly-connected oil-sealed rotary pump SGD-1300 |
| 1987 | | <ul style="list-style-type: none"> Completion of exhaust system for display device | |
| 1989 | | <ul style="list-style-type: none"> Development of c-BN film formation equipment | <ul style="list-style-type: none"> Completion of low-noise oil-sealed rotary vacuum pump SR-75BII |
| 1991 | <ul style="list-style-type: none"> The capital was increased to 300 million yen. | <ul style="list-style-type: none"> Development of multi-chamber sputtering system | <ul style="list-style-type: none"> Completion of erect normal image precision projector VS-302 |
| 1992 | | <ul style="list-style-type: none"> Completion of multi-chamber ashing system | |
| 1993 | | | <ul style="list-style-type: none"> Completion of low-noise oil-sealed rotary vacuum pump SR-25BII, 37BII |
| 1995 | | <ul style="list-style-type: none"> Development of DLC film formation equipment Start of marketing of vacuum and H₂ soldering equipment | |
| 1996 | | <ul style="list-style-type: none"> Completion of seal exhaust system for PDP | |
| 1998 | | <ul style="list-style-type: none"> Start of marketing of plasma surface treatment equipment | |
| 1999 | <ul style="list-style-type: none"> Certification of ISO9001 in Shiga Moriyama factory | | <ul style="list-style-type: none"> Start of marketing of bearing chamfer measurement projector ST |
| 2000 | <ul style="list-style-type: none"> Certification of ISO9001 in Head office, Kobe factory, Kobe sales office and Tokyo Branch | <ul style="list-style-type: none"> Delivery of continuous seal exhaust system for PDP | |
| 2002 | | <ul style="list-style-type: none"> Completion of plasma polymerization equipment for quantity production | |
| 2004 | <ul style="list-style-type: none"> Start of Business Divisions (Equipment Division, Component Division) | | <ul style="list-style-type: none"> Completion of developing deep-focus measuring instrument Start of marketing of dry vacuum pump series |
| 2005 | <ul style="list-style-type: none"> Certification of ISO14001 in Head office and Kobe factory | | |
| 2006 | <ul style="list-style-type: none"> Certification of ISO14001: 2004 in Head office, Kobe factory and Moriyama factory | | |
| 2007 | <ul style="list-style-type: none"> The vacuum soldering equipment for lead-free soldering won the Performance Award in the 2nd "The Monodzukuri Nippon Grand Award" hosted by the Ministry of Economy, Trade and Industry | | |



1976 Completion of ion plating equipment for quantity production



1984 Completion of construction of Head office and Kobe factory



1995 Start of marketing of vacuum and H₂ soldering equipment



2004 Start of marketing of dry vacuum pump series

Work for the public good

Corporate philosophy of Shinko Seiki

Every member of Shinko Seiki takes pride in being involved in the creation of new technology as a good corporate citizen and strives for contribution to society through manufacturing of environment-friendly products that satisfy customers.

Consideration of environment

We identify all factors in our business activities that may harm the environment, review and improve our organization and system without interruption so as to seek and promote the method of environment conservation.



Shinko Seiki complies with all the laws and regulations related to the environment and fulfills the requirements of customers.

In order to clarify the performance and results of environment conservation activities, Shinko Seiki continuously sets the objective and target, promotes improvement activities, and reviews them through the results of internal audits and others.

Management and
reduction of total
purchase

Management and
reduction of industrial
waste

Elimination of specific
substances harming the
environment

Further improvement
and sales expansion of
environment-friendly
products

All employees of Shinko Seiki fully understand the meaning of environment conservation and promote activities by effectively utilizing the established means and methods to protect the environment.

Specific policies for “Manufacturing” and product group to contribute to the environment according to the corporate philosophy

“Manufacturing” of environment-friendly and user-friendly products



Support of “Manufacturing” of products with high value added
and minimum environment load



● Efforts for evolution and market penetration of dry process

- Development of dry pump
- Development of plasma equipment
- Development of thin-film equipment

Developed products

Screw-type dry vacuum pump
Plasma surface treatment cleaning equipment
DLC film formation equipment
Various thin-film deposition equipment

● Support for “Manufacturing” of products to eliminate waste in the production line

- Development of precision optical inspection equipment

Developed products

Special projector
Polarimeter

T e c h n o l o g y f o r f u t u r e
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