

Occupational Safety and Health

Relevant SDGs



The ULVAC Group has made “Safety First” the fundamental principle of business management. By operating our Occupational Safety and Health Management System (OSHMS) focused on risk assessment, we endeavor to ensure safety of the products and services used by our customers and create dynamic workplaces where Group employees can work in good physical and mental health.

Approach on Occupational Safety and Health

In the execution of development, manufacturing, transport, installation, maintenance and other business processes, everyone in the ULVAC Group, from senior management to line workers, is encouraged to seize the initiative in continuously undertaking improvements placing the highest priority on safety, striving to maintain and improve the safety of everyone involved and ensure a healthy working environment.

ULVAC Basic Policy on Occupational Safety and Health Management System (OSHMS)

1. Compliance to the code/regulations, and implementation of risk assessment

Comply with Codes of Occupational Safety & Health Management and Rules according to ULVAC's OSHMS, and conduct Risk Assessment in order to perform Occupational Safety & Health Management activities with the help of all the employees.

2. Assure safety of ULVAC's products

Comply with ULVAC's standard for safety design and perform risk assessment of our products, in order to deliver our safe products and services to our customers.

3. Planned education about Occupational Safety & Health & Product Safety

For all the employees and contractor's employees, perform Occupational Safety & Health training based on ULVAC Safety Management system, while offering scheduled Product Safety training for our users.

4. Promotion of mental health care

Promote mental health care achieve a health, vigorous workplace environment.

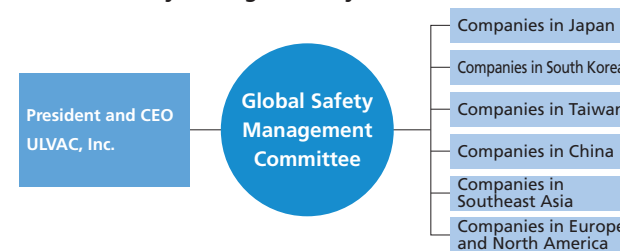
5. Global expansion of ULVAC group

Through the Safety & Health promotion activities by the Global Safety Management Committee, we will try to create an appropriate work environment for the whole ULVAC group, and contribute to prosperity of our businesses.

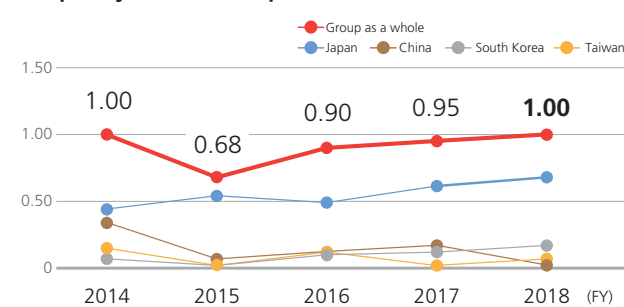
Aiming for a Type-V Zero Accident Record

To ensure the safety and good health of its customers and employees, the ULVAC Group regularly holds meetings of the Global Safety Management Committee, and all Group companies promote safety and health activities in an integrated manner. Each Group company operates the OSHMS, and everyone is engaged in safety and health activities, such as management reviews conducted by the president and other executives and risk assessments performed by each employee. In 2019, the Chigasaki Plant achieved a Type-V zero accident record (total of 15.7 million hours), the highest level provided by the Ministry of Health, Labour and Welfare. With “Safety First” as their motto, all Group companies will continue their efforts to extend the zero accident record.

ULVAC's Safety Management System



Frequency ratio of occupational accidents at ULVAC



* This graph shows the rate of occupational accidents for each fiscal year, with the value for fiscal 2014 (as of June 2015) as 1.00. The number of accidents remained low in fiscal 2018 with the lowest number of accidents with lost working hours.

Safety and Health Activities

In recent years, hazards associated with chemical substances have been attracting attention and laws have become stricter. ULVAC, Inc. provides special seminars to employees on chemical substances, covering key points of risk assessment and procedures for filing applications with the authorities, to prevent occupational accidents and ensure compliance with laws and regulations.



Special seminar on chemical substances

Environment

Relevant SDGs



Based on its environmental policy, the ULVAC Group provides products that allow customers to embrace the feeling that they have made environmental contributions. Through management and reduction of energy consumption and other efforts, we are working to minimize environmental impacts. As we have a global production system, we are working to gain integrated ISO 14001 certification so as to strengthen governance, ensuring information sharing among Group companies and swift implementation of instructions issued by top management. The ULVAC Group will continue its efforts to reduce environmental impacts through its products.

Environmental Philosophy

The ULVAC Group is tackling protection of the global environment, one of the major issues confronting people worldwide. We will consider environmental conservation in all aspects of our business activities and will contribute to realization of a better living environment and a more affluent society.

Environmental Policy

Develop energy-saving products, reduce the use of natural resources and protect the environment.

- 1) ULVAC Group products/Final products
- 2) ULVAC Group manufacturing process

Environmental Activities in Fiscal 2018

Total waste emissions decreased somewhat compared with the previous fiscal year.

As recovery of valuable materials is important also from the perspective of material recycling, we will continue to promote it throughout the ULVAC Group.

We are also implementing group-wide initiatives, including visualization of wattage, concentration of locations where electricity-intensive activities are conducted, and 100% conversion to

LED lighting for factories and offices, in order to reduce energy (electricity) consumption. CO₂ emissions decreased compared with the previous fiscal year. Water consumption increased greatly at Group companies in Japan.

The ULVAC Group will continue to promote environmental management activities in order to reduce environmental impacts derived from its business activities.

Material balance (Source: Aggregate data for fiscal 2018)

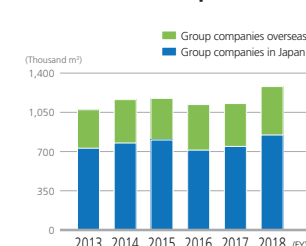
INPUT		OUTPUT	
Electricity consumption	179,752 thousand kWh	CO ₂ emissions	88,961 t-CO ₂ (Emissions due to consumption of electricity, gas, and fuels)
Gas consumption	LPG: 149 t LNG: 656 t City gas: 1,568 thousand m ³	Total waste emissions	8,549 t Total amount of waste recycled: 7,093 t Amount of landfill: 385.2 t
Fuel consumption	Heavy oil: 58 kL Kerosene oil: 32 kL Diesel oil: 181 kL	Final landfill disposal rate	4.5%
Water consumption	1,278 thousand m ³		
Packaging materials	1,375 t		

* The above data are based on the data from 37 Group companies in Japan and overseas.
* The volume of packaging materials is based on the data from 16 Group companies in Japan and overseas.

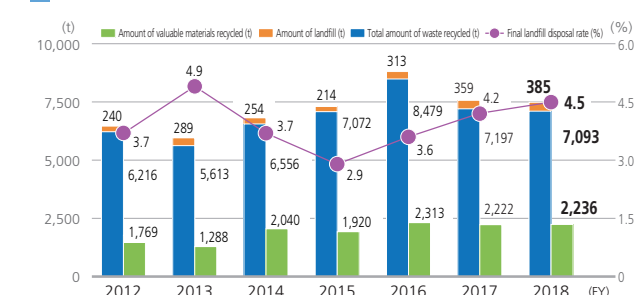
CO₂ emissions



Water consumption



Waste emissions



Environment

Major initiatives

ECO-SHOCK series

For many years, ULVAC, Inc. has offered products that contribute to energy conservation. We released ECO-SHOCK ES10 in 2002 and ECO-SHOCK ES4A in 2015 and cumulative sales of these dry vacuum pump attachments reached 1,500 units. Since dry vacuum pumps consume large amounts of electricity on production lines that use vacuum pressure, reducing energy consumption was a big challenge when we first introduced ECO-SHOCK. The main feature of ECO-SHOCK accessories is that connecting them to dry vacuum pumps makes it possible to substantially reduce energy consumption. We released the LS series of dry vacuum pumps with built-in ECO-SHOCK technology in 2018 and sales of these products, which offer both high pumping speed and low power consumption, continue to rise.



ECO-SHOCK ES4A

Receipt of an incentive award for environmental safety from the governor of Gyeonggi Province, South Korea

On June 19, 2019, Pure Surface Technology, Ltd. received an incentive award for environmental safety from the governor of Gyeonggi Province, South Korea.

Due to the distinctive characteristics of Pure Surface Technology's business of surface processing of parts for film deposition equipment, environmental regulations have an important bearing on its operations. On the recommendation of the chairman of the Gyeonggi Province Society of Environmental Engineers, the company received the award in recognition of its major contributions to environmental protection, including improving air pollution prevention facilities along with atmospheric pollutant reduction activities as well as improving wastewater treatment facilities in tandem with water pollutant reduction activities.



Receiving a certificate of commendation

Management of chemical substances

Chemical substances are highly versatile and functional and are widely applied in everyday life. On the other hand, some substances are harmful to the human body and the environment. ULVAC uses a wide variety of chemical substances in the parts and materials composing products (metals, resins, coatings, etc.), manufacturing processes (organic solvents, lubricants, and other substances used in cleaning, etc.), and technology development (chemicals, gases, etc.). We appropriately manage these substances and strive to prevent accidents and environmental pollution.

Introduction of energy-saving products and activities to visualize electric power consumption

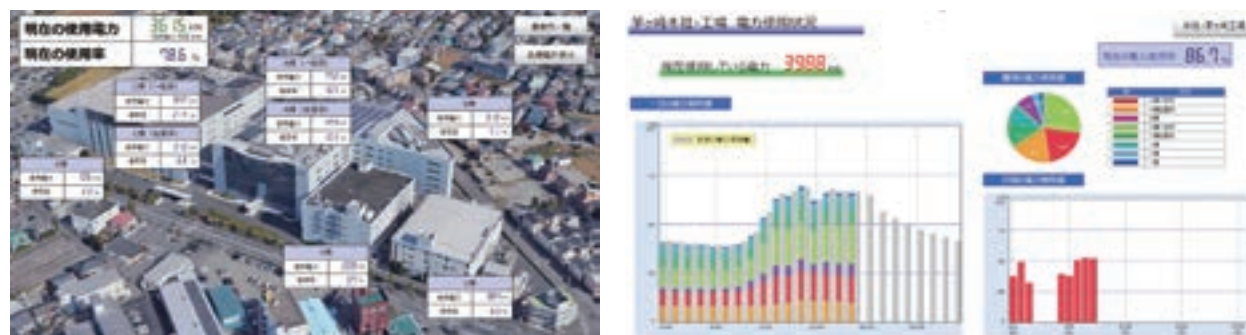
ULVAC, Inc. has pursued various initiatives to reduce electricity consumption. Specifically, while giving due consideration to the impact on business activities and employees, we have increased the space between lights, converted cleanroom lighting to LED fixtures, standardized air-conditioning temperature settings, curtailed use of cleanroom air conditioning, and improved cooling and heating efficiency through thermal insulation measures and have worked to raise employee awareness of energy conservation.

In the previous fiscal year, we cut electric power consumption by 2.45% year on year by reducing consumption 343 MWh through conversion of lighting to LED fixtures and 183 MWh by updating office air-conditioning equipment.

We have set a target of a 1% annual reduction in energy intensity* beginning in the current fiscal year and will eradicate waste by such means as reinforcing the system we have instituted requiring that an application be submitted for permission to operate equipment during three or more consecutive business holidays.

At the Chigasaki Head Office/Plant, we visualize energy use for the entire plant and for each unit of equipment and, as a further measure, ensure there is no wasteful operation and promote energy saving in the operation of equipment by ascertaining in real time the status of operation of selected plant equipment on a trial basis. In this way, we review our methods of equipment operation and engage in activities that lead to energy savings in equipment use and the development of energy-saving products. Going forward, we will promote group-wide deployment and integration of these activities.

*Energy intensity: Energy consumption per unit of output (calculated as electric power consumption divided by sales)



Electric power visualization system screen

Social Contribution Activities

The ULVAC Group will continue to contribute to local communities and the global community by effectively utilizing its technologies and human resources to help resolve various social issues.



Japan

Chigasaki Space Lesson Vacuum experiments

In March 2019, Chigasaki Space Lesson, an event organized by the Chigasaki Education Committee (Kanagawa Prefecture) to foster dreams and aspirations about space among children, was held at ULVAC, Inc. Chigasaki Head Office/Plant. Since the previously held space lesson was so popular that a draw was held to select from among the many applicants, this time the capacity was increased, and a total of 116 primary and junior high school students and their parents participated. The lesson consisted of various vacuum experiments and a plant tour, and the children's eyes sparkled at the sight of the strange phenomena demonstrated in the experiments. In addition to simply showing the experiments, the number of hands-on experiments was increased this year, and the smiling faces of delighted children when they accomplished a task made a powerful impression. We will continue to create opportunities for children to enjoy studying science through exposure to vacuum and peripheral technologies.



China

Donation of a liquid nitrogen generator to Chengdu Research Base of Giant Panda Breeding

ULVAC has donated a liquid nitrogen generator capable of generating liquid nitrogen from the surrounding air to Chengdu Research Base of Giant Panda Breeding in China. The director of the facility expressed his gratitude, indicating the intention to use the liquid nitrogen generator for preserving panda sperm, eggs, stems cells, and other materials as well as for protecting and breeding rare animals other than pandas.

The liquid nitrogen generator is an essential apparatus for the facility, where demand for liquid nitrogen is expected to further increase in the future. ULVAC will continue to utilize vacuum and cryogenic technologies for the purpose of contributing to causes including the protection of rare animals around the world.



Japan

Participation in Kanogawa river cleanup activity

More than 100 employees of nearby companies and local residents participated in a river cleanup activity organized by the Kanogawa Water System Water Quality Conservation Committee (Shizuoka Prefecture). Participants from ULVAC, Inc. spearheaded by new employees, engaged in cleanup activities near Goryu Falls.

Shizuoka Prefecture is undertaking plastic waste reduction through 6R activities, adding refuse, return, and recover to the 3Rs of reduce, reuse, and recycle. River cleanups are a form of recovery activity. ULVAC, Inc. will continue helping preserve nature in Shizuoka through river cleanup activities.



Taiwan

Donation of firefighting equipment to Tainan City Government Fire Bureau Nanke Station

The Tainan Plant (Taiwan) holds a fire drill once every six months, receiving tremendous cooperation from the Tainan City Government Fire Bureau.

To show its appreciation, in May 2019 the Tainan Plant donated firefighting equipment to the Fire Bureau Nanke Station, which covers the Southern Taiwan Science Park, where the plant is located.

The Tainan Plant will continue to deepen ties and cooperation with the local community and engage in activities contributing to disaster prevention and safety.

