

Striving to reduce the Group's environmental load not only at production plants but also through responsible procurement and environmentally friendly products

M Message A message from the executive officer overseeing environmental initiatives



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Managing executive officer

Aluminum is regarded as an environmentally friendly metal because it is easy to recycle and, in recent years, increasingly expected to be a useful material for reducing vehicle weight as automakers comply with stricter environmental regulations. With demand for aluminum on the rise, the UACJ Group is focusing on supplying a wide range of aluminum materials and products by leveraging its entire group-wide network of operations, including R&D facilities. These activities have been designated as priority measures under our mid-term management plan launched in April 2018.

Over the past few years, we have initiated various environmental measures in our manufacturing operations. For example, a group company in the United States recently began operating a new furnace for melting scrap aluminum at its factory, enabling most of the can stock it manufactures to be made of recycled aluminum.

As a world-class aluminum manufacturer, the UACJ Group intends to continue making the most of aluminum's diverse properties to help reduce environmental burden and contribute to society through its manufacturing processes and products.

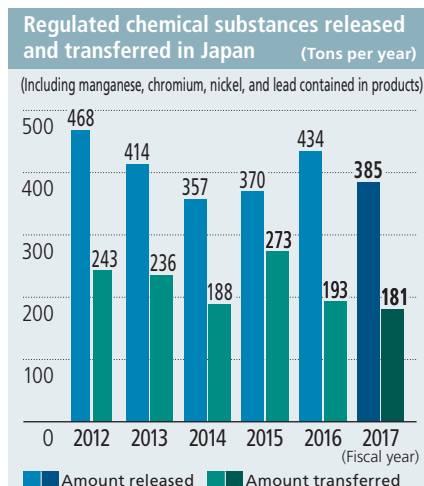
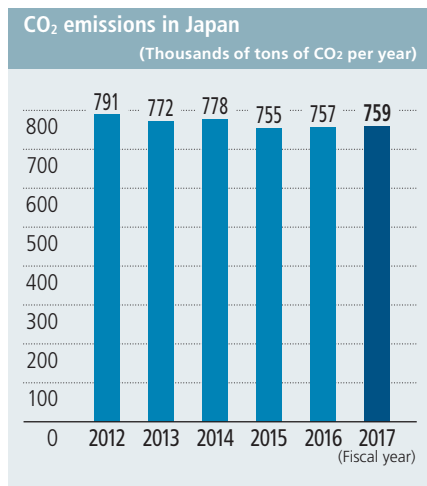
Considering the environment at the manufacturing stage

In accordance with its basic environmental policies for reducing CO₂ emissions and controlling chemical substances, the entire UACJ Group makes active efforts to reduce its burden on the environment, pursuing targets set every year for important environmental indicators. The Group's environmental load is particularly substantial at the manufacturing stage, so group-wide initiatives along with independent measures at each

production plant are actively carried out each year.

Measures for fighting global warming

Although the UACJ Group's operations do not include aluminum smelting, which consumes vast amounts of electricity, a substantial amount of electricity is consumed by its main business of flat-rolled aluminum production, accounting for much of the total environmental load of manufacturing operations. Therefore, the Group has been carrying out measures for reducing energy consumption at each of its production plants, including initiatives



Scope of operations covered: UACJ Corporation (Nagoya Works, Fukui Works, Fukaya Works, and Nikko Works), UACJ Color Aluminum Corporation, UACJ Extrusion Nagoya Corporation (Nagoya Works and Anjo Works), UACJ Extrusion Oyama Corporation, UACJ Extrusion Gunma Corporation, UACJ Extrusion Shiga Corporation, UACJ Foundry & Forging Corporation, UACJ Foil Corporation (Shiga Works, Nogi Works, and Isesaki Works), and UACJ Copper Tube Corporation



for raising efficiency and switching to cleaner fuels. Despite such efforts, total CO₂ emissions and emissions per ton of aluminum in Japan were higher in fiscal 2017 than in the previous fiscal year*, mainly due to a year-on-year increase in production volume.

Measures for preventing discharge of hazardous chemical substances

In addition to complying with legal requirements related to the discharge of hazardous chemical substances in manufacturing processes, UACJ enforces its own standards that are even stricter than such laws. It also works to reduce the use of chemical substances regulated under Japan's Law Concerning the Pollutant Release and Transfer Register, and properly monitors and reports on those substances in accordance with the law.

Regrettably, certain chemical substances in wastewater were found to exceed legal limits at a factory operated by UACJ Copper Tube Corporation in fiscal 2017. The excessive levels did not affect the nearby river, and were caused by consumption of carbon dioxide underwater by algae growing in a pond. Measures have been taken to limit the growth of the algae in order to prevent a recurrence of this problem.

Reducing waste matter from manufacturing operations

UACJ strives to reduce waste matter from its manufacturing operations with the goal of practically eliminating waste sent to landfills. At its production plants, which generate particularly large amounts of waste matter, waste management subcommittees have been set up to share information on effective methods for reducing and processing waste. In fiscal 2017, UACJ's main production plants in Japan succeeded in reducing the amount of waste matter compared with the previous fiscal year.

* Based on a fixed rate of emissions from electrical power generation

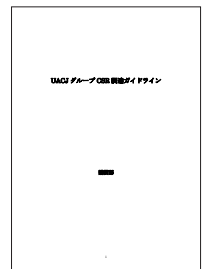
TOPIC

Recycling furnace brought online to help reduce environmental burden

In the United States, the world's biggest consumer of beverage cans, Tri-Arrows Aluminum Inc. manufactures flat-rolled aluminum for can stock at its Logan Mill, and recycled aluminum accounts for about 80% of the raw materials it uses to produce the can stock. Aiming to raise that recycling rate even higher in anticipation of growing global demand for can stock, the company began operating a new furnace for melting scrap aluminum in fiscal 2018, thereby boosting Logan Mill's production capacity of can stock made from recycled aluminum.

Socially responsible procurement with the environment in mind

The UACJ Group strives to procure materials and goods that have comparatively less impact on the environment in accordance with its UACJ Group CSR Procurement Guidelines, which specify how the environment and other issues should be considered across the entire supply chain. Moreover, in compliance with ISO 14001 standards, the Group requires suppliers of raw materials and secondary materials to confirm whether such materials contain regulated chemical substances and provide evidence that such substances are not used. If materials contain such substances, the Group makes efforts to switch to alternative materials containing smaller amounts. It has also been working to reduce the environmental burden of its administrative operations by cutting down on packaging materials used during shipments and by procuring office supplies that have been certified as environmentally friendly.



UACJ Group CSR Procurement Guidelines

Developing and producing environmentally friendly products

As part of UACJ's future direction, the Group explores ways to help solve environmental issues through its products. One way is to supply aluminum materials that feature the same functions as conventional products but are lighter in weight. That allows automakers, for example, to reduce the weight of their vehicles, which improves fuel efficiency and helps reduce CO₂ emissions. At the product finishing stage, the Group has been switching to cleaning solutions and coatings that are easier on the environment in order to improve the environmental friendliness of its products, such as colored aluminum and flat-rolled aluminum for can stock. Furthermore, it takes advantage of the diverse properties of aluminum to develop products that contribute to a lighter environmental load.

Objectives of improving products

Product development and innovations	Benefits to the environment and society
Develop and produce good-quality recycled aluminum for can stock	Reduce the volume of new can stock to save resources and cut costs
Develop and produce high-performance heat exchanger pipes	Improve the performance of heat exchangers so they can be made more compact to save resources
Develop and improve aluminum materials for automobile air conditioners to comply with the European requirement to use CO ₂ as a refrigerant	Promote the adoption of CO ₂ as a refrigerant to help fight global warming
Develop and improve aluminum materials for hybrid vehicles	Save resources and improve fuel economy by helping make vehicles lighter in weight