

Environmental Management

As a responsible member of society, JSW regards operating in harmony with the environment as an important corporate responsibility. In our pursuit of production activities and environmental technologies that respect environmental integrity, we engage in business activities that contribute to the ecologically sustainable development of society.

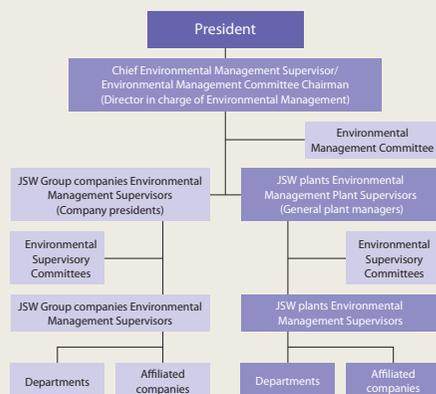
Ever since we formulated a medium-term environmental plan in fiscal 2001 for the first time, we have been proactively promoting environmental management activities throughout the company. In fiscal 2018, we formulated the Fifth Medium-Term Environmental Plan (fiscal 2018 to fiscal 2019) and widened the scope of environmental activities to include the entire JSW Group. Accordingly, we are engaged in activities to achieve the goals set out in the plan.

Action Plan

- We aim to carry out environmental tasks in an organized way, and to implement environmental preservation activities continuously.
- We will set appropriate objectives and targets for reducing the burden our activities impose on the environment with conserving biodiversity.
- We aim to provide society with products and services that contribute to the preservation of the environment.
 - We endeavor to increase the social value of our products in terms of environmental protection, safety and hygiene.
 - We will provide products and services that reduce environmental loads by obtaining a clear grasp of environmental needs and developing technologies.

Environmental Management Structure

The Environmental Management Committee, headed by the director in charge of environmental management, determines matters such as annual environmental management policies and programs of environmental activities for the whole company. Each plant has its own Environmental Supervisory Committee, which promotes environmental management activities and works hand in hand with other Group companies including affiliates to reduce the environmental impact of the Company's activities.



ISO 14001 Certification Progress

The Company's Muroran, Hiroshima, and Yokohama plants and its Group companies, Meiki Co., Ltd., Fine Crystal Precision (S.Z.) Co., Ltd., and NIKKO-YPK SHOJI CO., LTD. (Head Office, Saitama Office, Kansai Branch, Kansai Sales District Office, Chubu Branch, Sendai Sales District Office, Nagano Sales District Office, Toyama Sales District Office, Kyushu Sales District Office), have obtained certification under ISO 14001, an international standard for environmental management systems.

We leverage third-party certification bodies and internal inspections to conduct checks at least once annually to ensure that ISO 14001-certified business sites are endeavoring to maintain and improve their environmental management systems.

The Company and Group companies have adhered strictly to laws and ordinances, and there were again no violations in fiscal 2018.

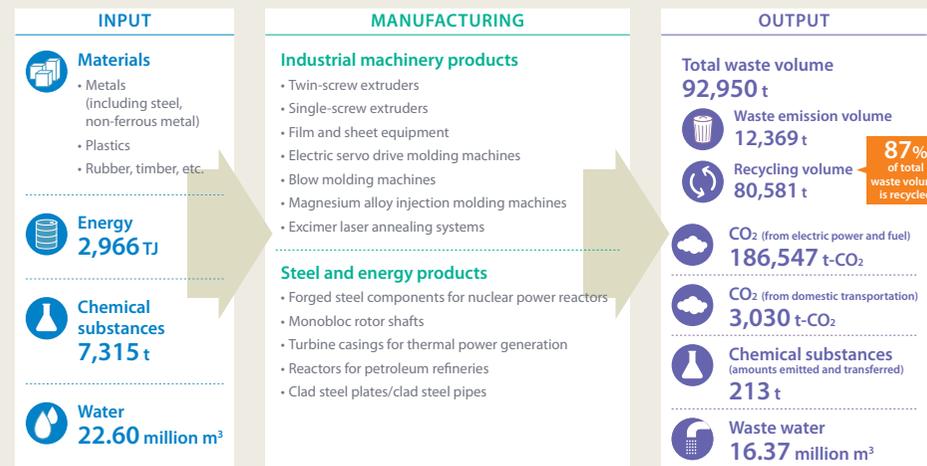
ISO 14001 Certifications of Business Sites

Business Site	Certification Date	Current Certification Body
Muroran Plant	December 18, 1998	Lloyd's Register Quality Assurance
Hiroshima Plant	December 18, 1998	Japan Quality Assurance Organization
Yokohama Plant	September 4, 2006	Lloyd's Register Quality Assurance
Meiki Co., Ltd.	March 4, 2005	ASR International Corporation
Fine Crystal Precision (S.Z.) Co., Ltd.	March 7, 2007	Intertek
NIKKO-YPK SHOJI CO., LTD.	February 7, 2005	Japan Value-Added Certification Co., Ltd.

Business activities and environmental impact

In the process of manufacturing activities related to our core business sectors, steel and energy products business and industrial machinery products business, the environmental impact status is shown below.

We measure both inputs (consumption of energy, water, and the like) and outputs (such as waste, carbon dioxide, and water resulting from manufacturing processes), and use the data in our environmental improvement activities.



ECO Magnesium Alloy Injection Molding Machines

With emission regulations becoming ever more stringent all over the world to curb global warming, it has become a pressing issue to reduce body weight for both internal-combustion and electric vehicles. To achieve this goal, carmakers are considering the use of various lightweight materials. Among such materials, magnesium is drawing much attention as an eco-friendly material for its light weight and excellent recyclability. In particular, an increase in its applications in the automotive field is anticipated. Compared with aluminum alloy, which has been similarly drawing attention as a lightweight material, magnesium alloy weighs approximately one-third less. In addition, depending on the product design, magnesium alloy makes it possible to reduce the overall weight of the product even further, and thus is expected to bring significant effects.

JSW has been involved in the magnesium-related business for more than 25 years. Our core product, magnesium alloy injection molding machines, is the only machine in the world that enables the molding of magnesium. The machine melts magnesium in a sealed cylinder. This makes it unnecessary to use non-flammable

gas (mainly sulfur hexafluoride, a potent greenhouse gas that has a high global warming potential), which was needed in the conventional die casting method to prevent molten metal in the furnace from being exposed to the atmosphere. In this way, magnesium alloy injection molding machines contribute to the protection of the environment in terms of the manufacturing method.

We have now commenced sales of large molding machines for the production of large magnesium parts, which are expected to achieve a greater effect on weight reduction. JSW will remain committed to developing eco-conscious products.

