

Building Environmentally Friendly Plants

Four key issues for building plants that are kind to the environment and community

Isuzu's Approach to Building Environmentally Friendly Plants

Vehicle production impacts the environment across a wide range, from local communities to the earth.

At Isuzu, the Plant Environmental Committee leads us in tackling four key issues aimed at ideal production plants under its plant management philosophy "Think Globally, Act Locally." To make our plants friendly to their local communities, too, we work with our affiliate companies, as well as our group companies at home and abroad.



Message from the Chairperson of the Domestic and Overseas Plant Environment Committees—Environment and Plants



Haruki Mizutani, Committee Chairperson and Executive Officer

is working to improve product quality and production efficiency, while at the same making a great effort towards environmental protection. For example, Isuzu tackles environmental preservation as it does in Japan where production is transferred overseas as an independent operation and promotes such activity from a global viewpoint.

Isuzu as a Global Leading Company

To build an environmentally friendly plant, it is one of our important tasks to minimize the consumption of energy and material. We are addressing this challenge through a two-way approach designed to take measures for equipment, such as the introduction of a co-generation system and to foster a spirit of improvement at plants. We are also implementing horizontal operations globally, with the emphasis on efficiency improvement.

*IMM: Isuzu Manufacturing Management

Consolidated Activities of Groups and Environmental Preservation Efforts

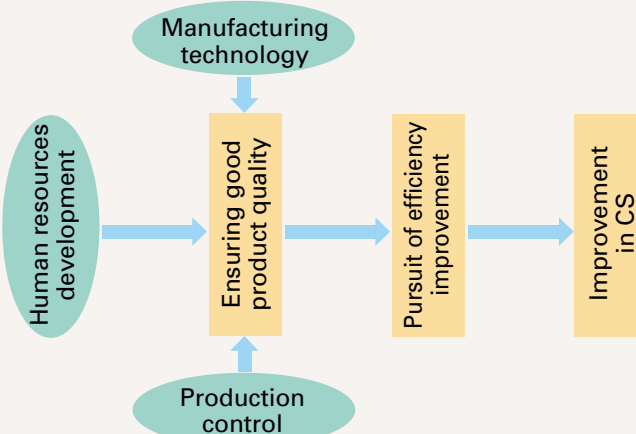
Isuzu draws up an Isuzu Production Management System (IMM*) for its overseas affiliate companies in Japan and abroad. Under the system, it

Expanding IMM to Group Companies

IMM represents a compilation of our wish to manufacture good products without compromise. It is the basis of our manufacturing philosophy. Isuzu is ensuring product quality through the introduction and mastery of IMM. It is introducing IMM into Fujisawa Plant and other plants at home and abroad as an essential requirement for a global leading company.

In pursuit of efficiency improvement, Isuzu is striving to eliminate waste wherever possible. It is also contributing to environmental activities such as energy conservation and zero emissions.

Equation for Victory with IMM



Prevention of Global Warming and Reduction in CO2 Emissions

Isuzu's manufacturing department plans to cut CO2 emissions by 50% from fiscal 1990 levels, by fiscal 2010. Emissions in fiscal 2006 were 186,000 tons of CO2, which represented a reduction of 9.8% per unit of production over the previous year, enabling us to meet our reduction plans and goals.

Our major initiatives include the introduction of co-generation and achievement of energy conservation with multi-can type combustor boilers, energy saving patrols by the Energy Conservation Committee, the promotion of eco-stop* and idling-stop* activities, energy conservation by attaching general-purpose oil pressure units to accumulators (pressure reservoirs) and relocation and rationalization of painting shops.

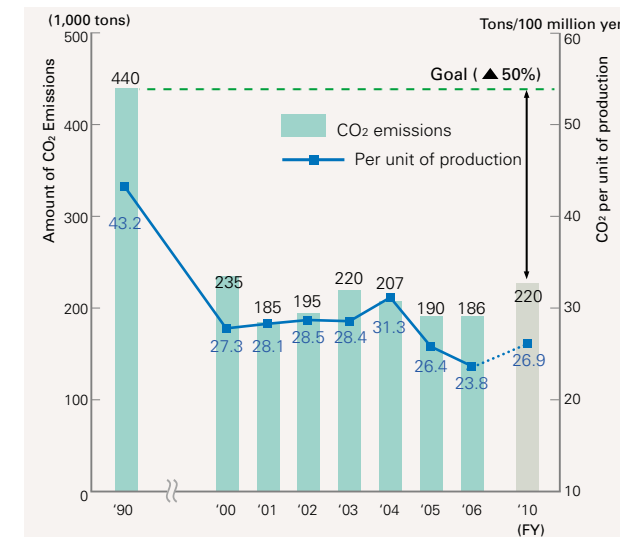
* Eco-stop: A system to turn off power sources for multiple machines collectively at the end of production
 Idling-stop: A system to automatically turn off unattended machines when parts supply is interrupted and automatically turn the machines on again when parts arrive

Eco-stop and Idling-stop Activities

We are implementing energy conservation activities to make effective use of electric energy on machine-processing production lines where a number of machines and incidental equipment are in operation.

Our Tochigi Plant, where eco-stop activities are underway, has significantly improved energy conservation by developing a system to automatically cut off oil pressure and turn off operating power sources by closing air valves. It has also introduced a batch control system that uses centralized air bulbs to improve energy efficiency. The plant has begun to provide idling-stop and start functions for unattended operating equipment. These activities, which are being horizontally expanded to our Fujisawa Plant, contribute to a reduction in CO2 emissions and the prevention of global warming.

Change in the Amount of CO2 Emissions

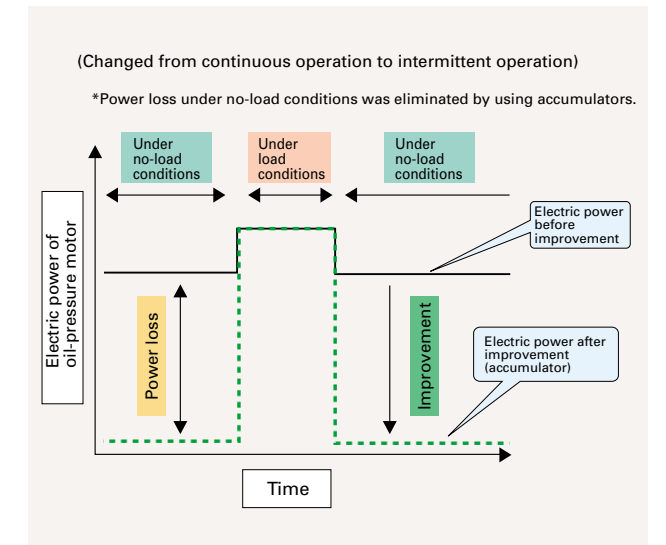


Energy Conservation by Installing Accumulators

Motors for oil-pressure machines used in production are continuously operating regardless of whether they are under load or no-load conditions. To solve the problem of energy loss resulting from such conditions, we attached accumulators to general-purpose oil-pressure units. This allows us to save energy by drawing power only when necessary.

In fiscal 2006, our Fujisawa and Tochigi plants modified as many as 110 pieces of equipment themselves. This improvement resulted in reducing power loss remarkably.

Effects of Energy Conservation by Utilizing Accumulators



Members of the Global Manufacturing Engineering & Planning Department with their recently presented Manufacturing Division Executive award.

Reduction of Waste and Efficient Use of Resources

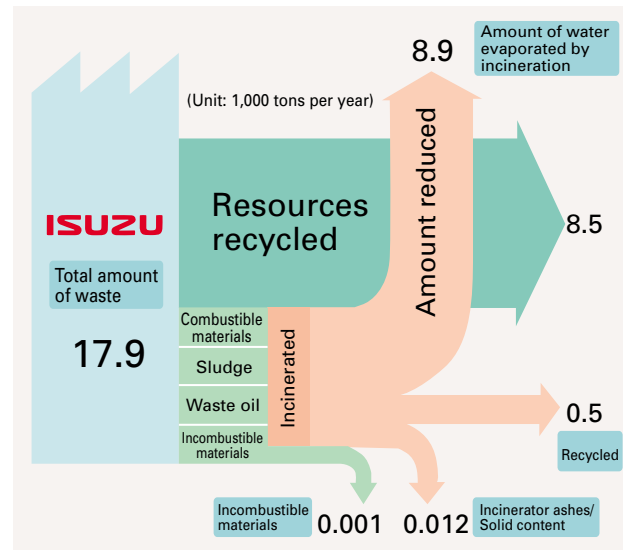
Aiming at a higher level of zero emission

Isuzu defined "Zero Emission" as a 95% reduction in the amount of landfill disposal of industrial waste, compared to that in fiscal 1995, by the end of fiscal 2001, and actively promoted waste reduction activities. As a result, it achieved Zero Emission in fiscal 2001, with a reduction of 97.6%.

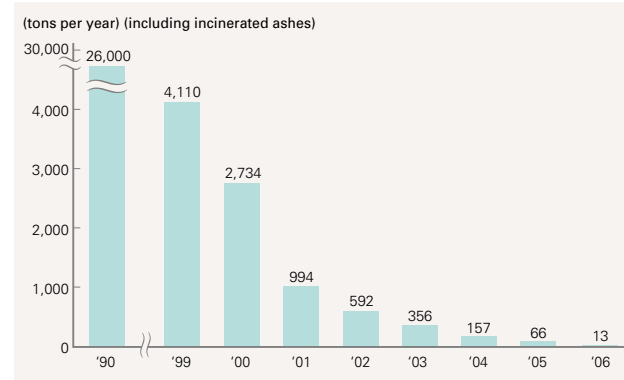
We newly set a challenging goal of lowering the amount of landfill disposal of waste for each of our two plants to one ton or lower per month, or 24 tons or lower per year in total, by the end of 2005 (including incinerator ashes), and we achieved this goal in October 2005 through cost-conscious activities.

In fiscal 2006, we continued to recycle incinerated ashes from the previous year and reduced the final amount of industrial waste to 13 tons.

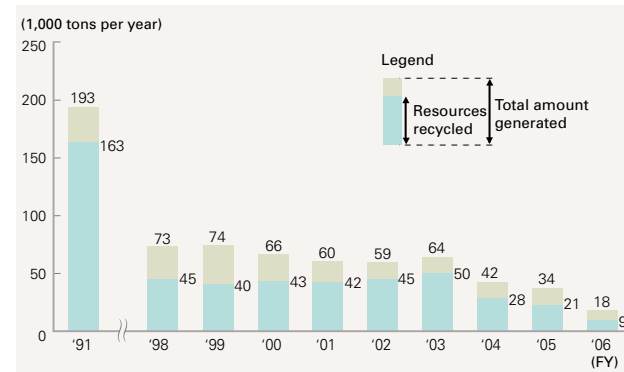
Outline of Waste Disposal (Achievement in Fiscal 2006)



Changes in the Final Amount of Industrial Waste



Changes in the Amount of Waste Generated and the Amount of Resources Recycled



Major examples of our efforts

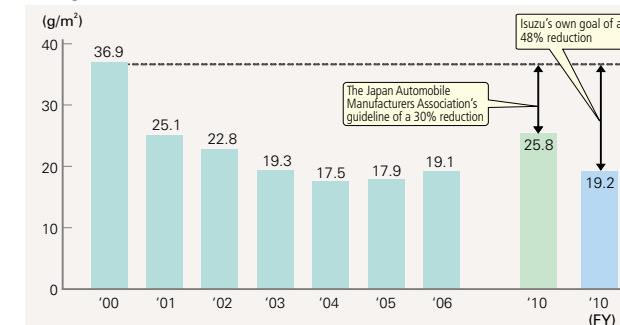
- Active promotion of separate collection; recycling of resources through decomposition and scrapping
- Campaign for reducing the amount of waste/incineration and packaging wood
- Recycling of incinerator ashes
- Cooperative activities with parties outside the company: joint environmental declaration with waste operators, construction of a Zero Emission Network, etc.

Reduction of Environmental Impact Substances and Compliance with Regulations

Reducing Volatile Organic Compounds (VOC)

Emissions of VOC, which are a cause of optical chemical oxidant, were restricted in the amended Air Pollution Control Law, implemented in 2006. Isuzu has been promoting the reduction of organic solvent used in the painting process since before the enforcement of the amended law. It set a goal of achieving a level of 19.2g/m², which is stricter than that of the Japan Automobile Manufacturers Association, and strived for improvement by reducing the use of paint solvents, collecting cleaning thinners, and introducing a dry furnace with exhaust gas combustion equipment. As a result, Isuzu has been achieving its goals of reducing VOC emissions since fiscal 2004.

Change in the Amount of VOC Emissions

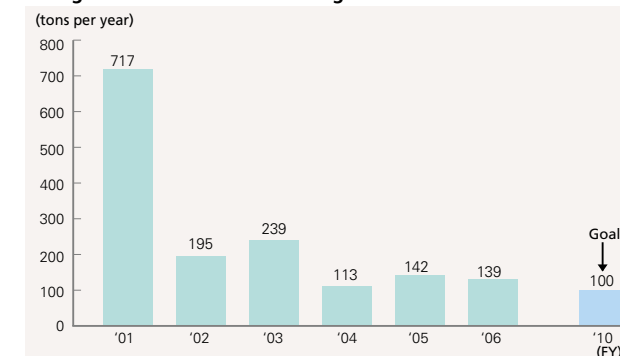


Chemical Substance Management and Response to the PRTR Law

In addition to the regulatory restrictions, Isuzu has established a management rule for controlled substances as an internal regulation. The rule classifies chemical substances into three categories: "prohibited," "conditionally available," and "available" (caution needed), in order to implement proper management and reduction in usage. In response to the PRTR Law*, we have designed a chemical substance management system that links purchase management information with the PRTR system. We have thus made efforts to understand, manage and reduce the targeted substances, which led to a reduction of 3.5% over the previous year in the amount of emissions in fiscal 2006.

* PRTR (Pollutant Release and Transfer Register) Law: Law concerning the understanding of the volumes of specific chemical substances released to the environment and the promotion of improved management.

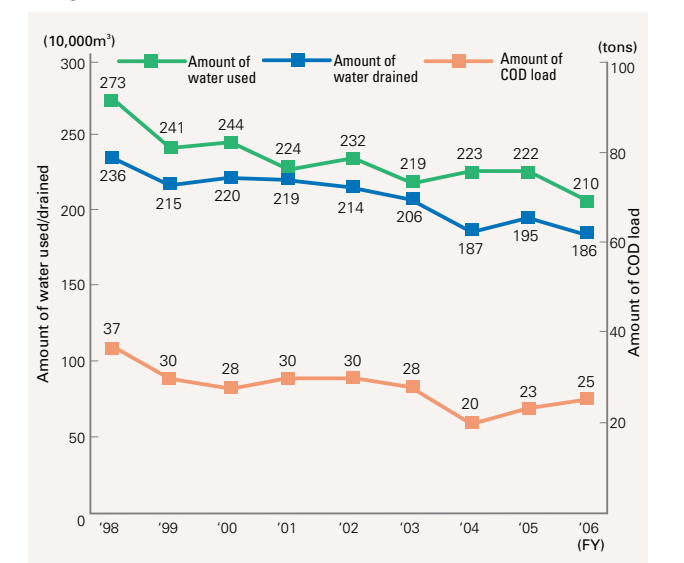
Change in the Amount of the Target Substances of PRTR



Prevention of Air/Water Pollution and Compliance with Regulations

Isuzu regards the prevention of air and water pollution as the first step of environmental preservation activities and has established its own standards, stricter than those of laws and regulations, to constantly monitor drainage and emissions. The status of management and compliance with laws and regulations are reported to the Plant Environmental Committee for proper application and management within the environmental management system.

Changes in the Amount of Water Used/Drained and the Amount of COD Load



Preventing Dioxin Emissions

Tochigi Plant suspended the use of its incinerator in 2002 and has since been committed to the disposal of waste through its contractors. Fujisawa Plant uses an incinerator generating 0.079ng-TEQ/m³* of dioxin, which is far lower than the regulated value (10ng-TEQ/m³). We will keep curbing emissions from incinerators through strict combustion control and a reduction of incinerator waste volume.

* ng: nanogram. A unit representing one one-billionth of a gram
TEQ: Toxic Equivalents Quantity

Prevention of Soil and Groundwater Contamination

Isuzu formerly used three chlorine organic solvent* substances but has already terminated their use. We have independently been studying their effects on soil and groundwater in plant/office sites since 1996, to confirm that no contamination spreads outside our premises from polluted areas. We have also taken measures to purify the polluted areas and have reported the results to public administrators.

* Three substances: trichloroethylene, 1-1-1 trichloroethane and dichloromethane

Material Balance in Production Plants (the Amount of Input and Output of Resources)

