"Clean" Plants: Efforts in the Production Stages

(1) Since fiscal 2003, we have achieved both zero emissions and the target levels for reducing waste materials every year.

POINT

(2) We plan to further reduce CO₂ emissions by installing two cogeneration systems in the Gunma Manufacturing Division's Oizumi Plant.

(3) We achieved all the targets set for "Clean" Plants under the Third Voluntary Plan for the Environment.

Amount of Resources Input and Total Emissions at Plants

This figure shows the amount of resources used and emissions in fiscal 2006 at Gunma Manufacturing Division, Subaru's main automobile production plant in Japan.



Amount of Resources Input and Emissions

Outline of Waste Materials Generated and Treated

FHI's all manufacturing plants have achieved zero emissions for waste materials in 2004, and have maintained a level of zero waste materials landfilled ever since 2004.

Outline of Waste Materials Generated and Treated at All Manufacturing Plans and Gunma Manufacturing Division in fiscal 2006



Reducing Waste Materials

Efforts to Reduce Waste Materials

Achieved Target Levels for Reducing Waste Materials Every Year since Fiscal 2003

Since FHI considers that the generation of waste materials itself is a "waste", we have been making a continuous effort to achieve "zero emissions" and to curb the generation of waste materials. We have been striving to effectively utilize resources by improving the yield ratio of raw materials used in the production stages and enhancing coating efficiency at paint factories. The following graph shows the indexes obtained by dividing the ratio of the amount of byproducts (scrap metal and non-ferrous scrap metals such as aluminum) generated by the automotive division by the value of shipped products. Although the amount of by-products slightly increased in fiscal 2006, we have achieved the target levels (of the amount by-products should be reduced, as determined by the Laws for the Promotion of the Effective Utilization of Resources) every year since fiscal 2003



Trends of Amount of Bv-products Generated to Amount of Products Manufactured

Reduction of Water Consumption

Efforts to Reduce Water Consumption Total water consumption was reduced by 7% compared with the previous year at all manufacturing plants

Total water consumption was about 3,380,000 m³ at all our manufacturing plants in fiscal 2006 and this is a reduction of 7% compared with the previous year. The effort of implementing strict measures such as checking for leakage from water pipes and replacing water pipes with aerial pipes at each manufacturing plant have led to reduction of water consumption by about 270,000 m³ compared with fiscal 2005. We will continue to make every effort to reduce water consumption further at all manufacturing plants.

Environmental Improvement Case Study Presentation Presentations of environmental improvement case studies are held twice a year at the Utsunomiya Manufacturing Division. Particularly exceptional case studies that other manufacturing plants can use as references have been introduced to improve the environmental performance of all manufacturing plants



he Environmental Improve ent Case Study Presenta tion at the Utsunomiya Manufacturing Division

Initiatives to Prevent Global Warming

Activities to Save Energy

CO₂ Emissions Expected to be Reduced by 14,000 Tons at the Oizumi Plant

In February 2007, two natural gas cogeneration systems were introduced at the Oizumi Plant of the Gunma Manufacturing Division. Since these systems started full operation in fiscal 2007, we expect to reduce CO₂ emissions by approximately 14,000 tons and energy use by the equivalent of approximately 2,700 kL of crude oil per year. In fiscal 2007, an additional natural gas cogeneration system will be introduced at the Yaiima Plant of the Gunma Manufacturing Division. We will continue to carry out actions aimed at reducing CO2 emissions and energy usage even as we further accelerate activities to improve business processes at all manufacturing plants.



Cogeneration start-up ceremony at the Oizumi Plant

Reduction of Substitute CFC (HFC134a) Emitted to the Air (Reduced HFC134a by 97% Compared to Fiscal 1996

To reduce atmospheric emissions of HFC134a used as a coolant from the vehicle manufacturing line at Gunma Manufacturing Division, we have continued effort to minimize leakage while pumping and recovering gas in air conditioner. As a result, we have succeeded to reduce emissions by over 95% compared to fiscal 1996 levels since fiscal 2003 and achieved a reduction of 97% in fiscal 2006.

Reduction of Environmental Pollutant

Management of Chemical Substances (the PRTR Law) Reduced 30 tons of Chemical Substances Subject to the PRTR Law FHI uses 17 chemical substances subject to the PRTR Law. Use of such chemicals at all our manufacturing plants totaled 869 tons in fiscal 2006, achieving a reduction of about 30 tons compared with the previous year. These achievements result from activities such as changing paint gun used in the vehicle body painting process and reducing the amount of thinner for cleansing.

VOCs⁻¹ Generated in the Painting Process at the Gunma Manufacturing Division

Harmful Substances Generated in the Painting Process have been Reduced by Over 60%

In fiscal 2006, we reduced emissions of VOCs per painted surface area of vehicle bodies to 43.8 g/m² (in the previous fiscal year we achieved 46.2 g/m²), an emissions reduction of 60.8% compared with fiscal 1995 levels. The main contributing factors included reducing the frequency of paint color changes and improving thinner collection rates, both of which have been continuously conducted since the previous fiscal year. We will continue to strive toward further reductions in order to achieve the targets laid out in the Fourth Voluntary Plan for the Environment.

Air Pollutants

(Reduced both Nitrogen Oxides (NOx) and Sulfur Oxides (SOx)

In fiscal 2006, emissions of both NOx and SOx decreased due to several factors such as the change of boiler fuel from heavy oil to natural gas. FHI established and controls its own voluntary standards, which are even stricter than the relevant legal standards (in principle, 80% of the levels stipulated by the relevant laws and regulations or lower). Periodical measurement results^{*2} in fiscal 2006 show that our voluntary standards are satisfactory at all locations measured.

Trends in Amount of NOx and SOx Emitted at All Manufacturing Plants



Preventing Soil and Underground Water Pollution Continuously Conducting Underground Water Sampling Surveys

FHI has voluntarily conducted soil and underground water surveys at all manufacturing plants since 1998 and has reported the results to the government. We are continuously conducting sampling surveys of underground water even at manufacturing plants where purifying measures for soil and underground water have already been taken, such as the Utsunomiya Manufacturing Division, and continue to report the results to the government.

Water Pollutants

(Continuous Activities for Reducing Water Pollutants)

Trends in the amount of nitrogen, phosphorous and BOD discharged into water at all our manufacturing plants are as shown in the graph. In fiscal 2006, one case was reported at the Saitama Manufacturing Division, where the results of periodic measurements^{*2} exceeded the BOD levels set in our voluntary standards. For cases of other substances in violation of limits including our voluntary standards, please see "the The Number of Cases Where Limits Set in Environment-Related Laws Were Exceeded and Details" on p. 32.

Trends in Amount of Nitrogen, Phosphorous and BOD Emitted at All Manufacturing Plants





Storing equipments containing PCB accordance with laws and regulations (Utsunomiva Manufacturing Division)

Storage of Equipment Containing PCB Applied and Registered for Disposal of Equipment Containing PCB with Professional Company

FHI stores PCB appropriately and notifies the authorities of possession of PCB in accordance with the related laws and regulations every year. Regarding the equipments (such as transformers and condensers) we store that contain a high concentration of PCB, we already applied and registered for their disposal with the Japan Environmental Safety Corporation (JESCO) in March 2006.

*1 'VOC' stands for 'Volatile Organic Compounds', such as toluene or xylene, which easily become volatile at room temperature.

*2 Detailed information on the results of these periodic measurements can be found on our website, under the Supplementary Volume for Data related to the 2007 S & E Report.