Conserving the Global Environment

Efforts to Prevent Global Warming

Toward the reduction of CO_2 output

A significant portion of CO_2 emissions, which is the greatest factor in global warming, stems from production activities. Production sites can have the most effect in reducing the amount of CO_2 by devising energy conservation measures and implementing them.

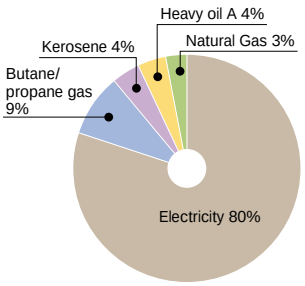
Through the "Monozukuri reforms" occurring at NTN's various operating sites both inside and outside of Japan, we promote efficient production and various energy conservation measures are encouraged to further reduce CO_2 emissions.

Our efforts to date include: changing the fuel for heat treatment furnaces, collecting waste heat, maintaining centralized control of compressors and air conditioners, and utilizing illumination equipment with inverters. Each workplace is steadily producing results.

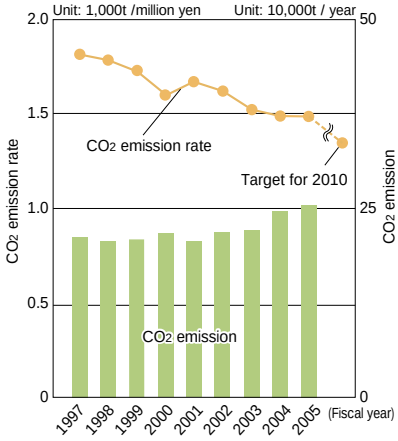
In addition to these efforts, we are making simple changes. For example, turning off unneeded illumination during lunch helps raise the energy conservation awareness of employees.

Recently we have been actively working to use renewable energy sources such as wind and solar energy.

NTN's CO_2 emission by Energy Source



Annual trends in CO_2 emission rate



Energy Consumption (Yearly)

Electricity		532,358,000 kWh
Petroleum	Heavy oil A	4.055 kl
	Kerosene	4.134 kl
Gas	Butane/propane	7,224 t
	Natural gas	4.032 km^3

Implementing diverse energy conservation measures

Reducing CO_2 emissions through the "Cool Biz" program

NTN has been at the forefront of the industry and has adopted the "Cool Biz" approach (no-necktie, no-jacket) at our head office and all company offices in Japan. Spearheaded by the Ministry of the Environment, office air-conditioner temperatures will be set at 28°C during the summer months and cool clothing worn to reduce CO_2 emissions.

It is difficult to calculate the exact effect of Cool Biz, but based on a 16% reduction in electrical consumption in June at NTN's head office compared to the previous June (during peak demand), the company-wide electrical power savings is estimated at approximately 52,000 kWh/month and a reduction of 31 tons/month of CO_2 .

Promoting radical energy conservation measures with the aid of NEDO

Since the last fiscal year, we have received assistance from The New Energy and Industrial Technology Development Organization (NEDO), an independent administrative agency. Using NEDO's "Guidance for introducing energy conservation measures (energy conservation diagnosis)" as a stepping-stone, we are moving ahead with dramatic energy conservation measures. Last year, the operating sites with the greatest energy consumption - including Kuwana Works, Iwata Works, and Okayama Works - received energy conservation diagnoses. These sites received suggestions for effective improvements such as using waste heat with cogeneration, energy conservation in heat treatment furnaces, and the appropriate operation of compressors. Each site is going forward with energy conservation modifications.

Energy conservation at NTN Driveshaft (USA)

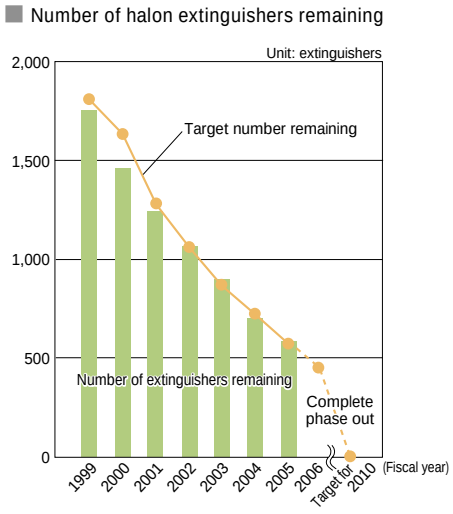
NTN Driveshaft, which manufactures constant velocity joints in Indiana, USA, recently changed the covering on their plant roof from a black material that traps solar heat to a white material that reflects it, reducing the 80°C surface temperature of the roof by more than 20°C. The lower roof temperature prevented the air conditioners from over-cycling, saving approximately 90,000kWh/month of power and eliminating 34 tons/month of CO_2 .

Efforts to Prevent Air Pollution

Eliminating halon extinguishers and coolants containing chlorine

Halon compounds used to be common in fire extinguishing agents. Because it became clear that the brominated fluourocarbons in these compounds are harmful, NTN established a plan for the total elimination of halon extinguishers and is working to replace them with alternative extinguishers. In fiscal 2005, we replaced 110 units. There are 570 halon units left in the entire company but replacement at a steady pace will eliminate them by 2010.

On the other hand, there are no legal restrictions on coolants containing chlorine which can generate harmful dioxins during disposal. In 2000, however, we voluntarily decided to eliminate these coolants by 2006 and expect to meet this target.



Preventing ground and water pollution

Remediating minor VOC pollution at Kuwana Works

Soil contamination can cause serious health and environmental problems if left unaddressed. NTN regards preventing such ground and groundwater pollution as a vital responsibility and is engaged in forward-facing efforts in this regard.

In November 2002, during a periodic inspection of the groundwater at Kuwana Works, slight volatile organic compound contamination was discovered in one of the wells. This finding did not violate the Soil Contamination Countermeasures Law, but we are voluntarily working to decontaminate this site. At the Works, the well water in question is extracted and decontaminated. Since 2004, a ground investigation method called the "Kimitsu method" has been used to carry out a detailed investigation of Kuwana Works.

The results show that in the area around the well there was minor VOC contamination at three locations. We began decontamination work at the points with the highest concentration (the hot spots), utilizing ground air suction and groundwater pumping. We expect to complete decontamination during fiscal 2006.

The contaminated locations all exist under existing buildings, but by sending air and ground water through pipes set underneath the floors to the remediation equipment located outside, we have been able to get results without interrupting normal operations.

Since the start of this investigation, we have been reporting our voluntary remediation to Mie Prefecture and have had them monitor things. We plan to continue to periodically report our progress.


Taking ground samples


Piping for decontamination


Remediation equipment

What is the "Kimitsu method"?

This is a ground contamination investigation and decontamination method developed in Kimitsu City, Chiba Prefecture. Through this unique investigation method, contaminated areas are determined with pinpoint precision, allowing total decontamination to take place efficiently. It allows investigation and decontamination to take place without interrupting operations. NTN previously used this method with two shuttered sites.