



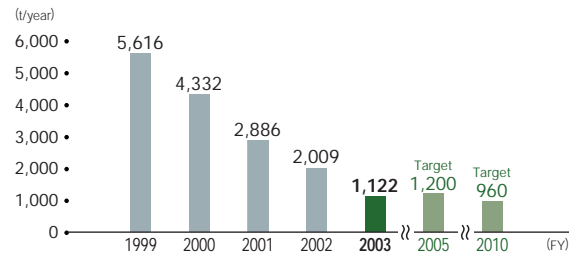
Controlling emission of organic solvents

Target is achieved two years earlier

To reduce the amount of organic solvents emitted into the air, Nitto Denko has taken the measures to narrow the outlet by installing deodorizing furnaces and other equipment since fiscal 1990. As a result, the amount of the emissions has decreased year by year. It marked 1,122 metric tons in fiscal 2003, meaning that we achieved the target for fiscal 2005 (1,200 metric tons or less) two years earlier than the original plan. The solvent consumption per product unit (solvent consumed per production unit) improved 51% from fiscal 1990.

The total amount of organic solvents consumed, however, is as much as approximately 40,000 metric tons (including 11,000 metric tons to be recycled). We will strive for further improvement in the recycling rate and innovation of production processes.

Emission of organic solvents



Treatment of organic solvents

We introduced the following equipments to treat organic solvents generated at the production processes. Each equipment has a processing efficiency of 98% or more, and no major difference is found between the types of equipments. On selecting the equipment, we consider the constituents of the solvent to be treated, and the energy balance between factories to fully utilize the characteristics of the equipment.

	Direct combustion deodorizing furnace	Regenerative deodorizing furnace	Solvent collector/absorber
Solvents to be treated	Can be used for a wide range of solvents, excluding some specific chloric solvent.	Sometimes inappropriate for some constituents of organic solvents.	Can be used for a solvent that cannot be burned. Collection of water-soluble solvents is difficult.
Energy balance	Requires auxiliary fuel but can be a source of thermal energy, including steam.	Requires almost no auxiliary fuel during operation.	Requires thermal energy such as steam for absorption and desorption.

TOPICS

Deodorizing furnace of the 13th factory in Toyohashi

Emission reduced and energy saved by controlling the operation of the deodorizing furnace

The Toyohashi Plant uses a number of organic solvents in its production processes. To minimize the emission of the solvents into the air, the plant is very positive about the installation and replacement of deodorizing furnaces and solvent collectors.

Especially, in the 13th factory (started operation in 2001), the operation of the furnace is delicately controlled. It is designed to allow users to choose the most appropriate combustion condition from four stages according to the product type. This realized not only a significant restraint on the emission of organic solvents but also the efficient utilization of heavy oil as

auxiliary fuel, resulting in saved energy.

Also, the real-time operation status can be monitored on a network, and problems are promptly dealt with if any, which are strengths of the system.



Hideharu Shigyou and Hiroshi Matsuo in charge of designing



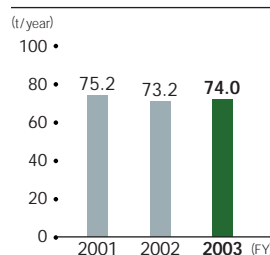
Deodorizing furnace of the 13th factory

Other air pollutants (NOx and SOx)

Executing the control and measurement for the concentration of NOx and SOx, based on laws and regulations

All plants in Japan measure concentrations of the other air pollutants, NOx and SOx, and control them based on the emissions standard.

NOx Emission



SOx Emission

