



Reducing the Environmental Impact of Business Activities

Control and Reduction of Chemical Substances Used at Production Sites

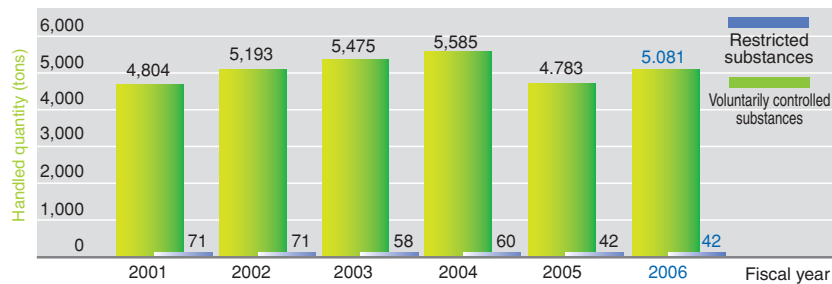
One of the environmental impacts of production activities is the emission of chemical substances. Although chemical substances are indispensable for the production process, they can have a grave effect on the environment if they are not controlled in an adequate way. The OKI group is working to control and reduce chemical substances in consideration of their effect on the environment.

Control of Chemical Substances

We identify chemical substances used at production sites with a serious effect on the environment and control them by classifying them into three types: prohibited substances (95 substances), restricted substances (92 substances) and voluntarily controlled

substances (389 substances). The quantity of chemical substances handled in fiscal 2006 grew slightly compared to fiscal 2005 due to an increase in production quantities.

Transition in the Quantities of Chemical Substances Handled

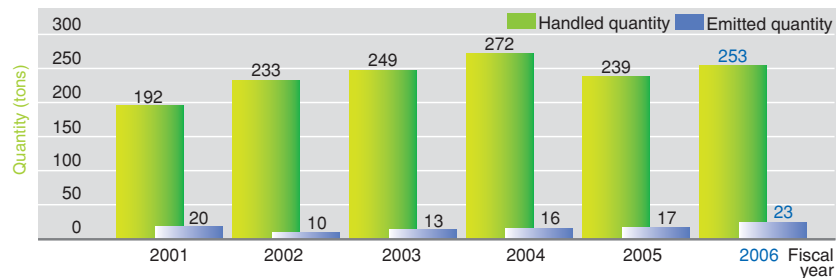


Efforts for the PRTR System

The PRTR (Pollutant Release and Transfer Register) system is a method to control the emission of substances with a serious effect on the environment. The OKI group started efforts for the PRTR system in 1997, following the "PRTR Guidelines" published by four organizations in the electric equipment and electronics field ahead of the law. The quantity of substances subject to

PRTR that we handled in fiscal 2006 grew slightly due to an increase in production quantities. We will continue our efforts and promote reduction also in the future, for example, by substituting chemical substances with types that have a low impact on the environment, or by optimizing their usage quantities.

Transition of PRTR Results



PRTR Results of Fiscal 2006 (Applicable Sites in Japan)

Chemical Substance	Handled Quantity	Emitted Quantity				Transferred Quantity	
		Air	Public Water	Soil of Operational Sites	Sub-total	To the Sewage System	To the Outside of Operational Sites
Hydrogen fluoride and its water-soluble salts	167.32	0.08	0.82	<0.01	0.91	13.00	166.40
2-aminoethanol (monoethanol)	30.35	5.11	0.01	<0.01	5.12	<0.01	25.23
Xylene	18.71	6.98	<0.01	<0.01	6.98	<0.01	10.90
Nickel compounds	12.52	<0.01	0.02	<0.01	0.02	<0.01	2.39
Toluene	9.29	9.07	<0.01	<0.01	9.07	<0.01	0.08
Pyrocatechol	6.87	0.29	0.03	<0.01	0.32	<0.01	6.56
Formaldehyde	3.66	0.12	<0.01	<0.01	0.12	<0.01	<0.01
Lead	2.27	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
N,N - dimethyl formamide	2.15	0.39	<0.01	<0.01	0.39	<0.01	1.76
Total	253.14	22.04	0.88	<0.01	22.92	13.00	213.31

(Unit: tons)

Controlling the Selection of Chemical Substances

We built a mechanism to evaluate the effect of a chemical substance from safety, disaster prevention and environmental aspects before we employ it. Chemical substances that do not comply with the employment standards are not purchased. We further built a system to grasp how much of the chemical

substances that we input into the manufacturing process are ultimately emitted in waste gas, waste water or waste material. On the basis of these data, we pursue activities to reduce their use through process improvements, to switch to substitutes with a lower environmental impact, or to completely stop using them.



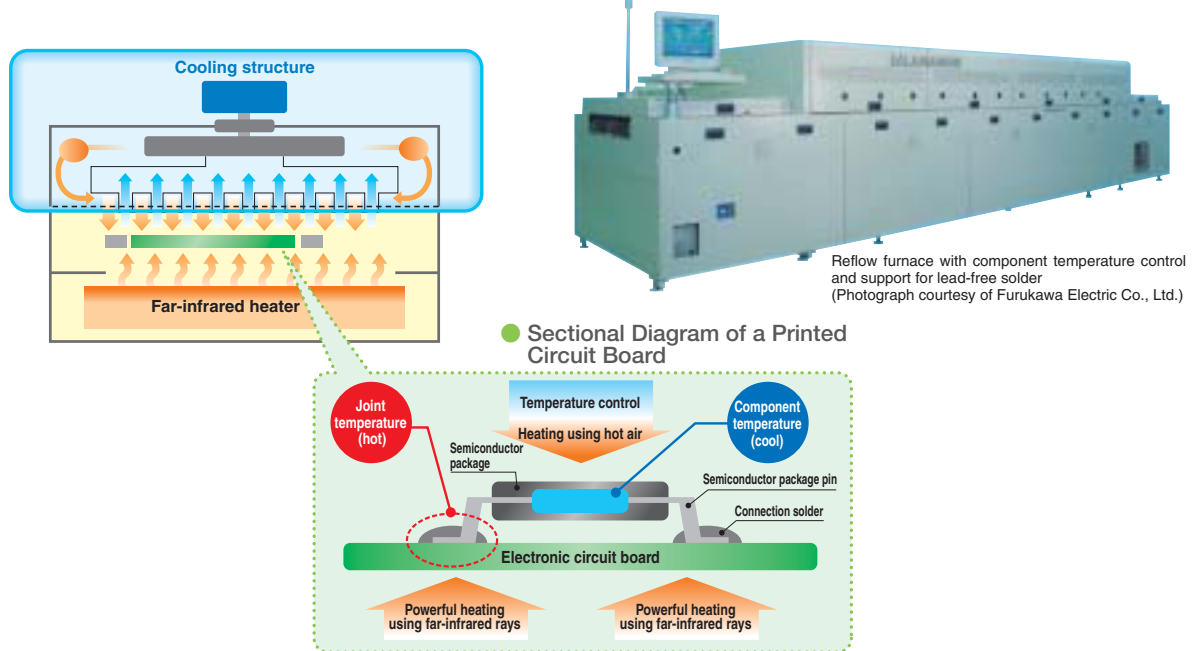
Reducing the Environmental Impact of Business Activities

Control and Reduction of Chemical Substances Used at Production Sites

Reflow Furnace with Component Temperature Control

Together with Furukawa Electric Co., Ltd., we developed Component Temperature Control Reflow Technology, a new heating technology that allows automatic soldering of electronic components with low heat resistance using ordinary lead-free solder with a high melting temperature. With the new method, conventional designs and components can be switched to lead-free solder consisting of tin, silver and copper at low cost, without having to change the manufacturing process.

● Structure of a Reflow Furnace with Component Temperature Control and Support for Lead-free Solder



Control of Impurities in Lead-free Solder

When performing lead-free soldering, it happens that metal from the lead plating of the electronic components melts and mixes with the solder, so that impurities in the solder bath reach concentrations exceeding the standards. Products with a concentration of hazardous substances exceeding the limits set by the RoHS value are prohibited for export to Europe. And when specific impurities increase, cracks, etc. may appear in the

soldered portions, and this results in unreliable connections. To prevent this, Nagano Oki Electric Co., Ltd. introduced equipment that constantly monitors metallic impurities in lead-free solder used for soldering equipment, ensuring control on a daily basis. They further regularly perform a component analysis using energy-dispersive X-ray fluorescence spectrometers (EDXRF) in an effort to improve the quality in the soldering process.



Energy-dispersive X-ray fluorescence spectrometer



Equipment to detect impurities in lead-free solder