



# Environmental Conservation Activities

## Environmental Education

### Lead-free Soldering School: Accelerating the Fostering of Technicians for Environmentally Friendly Manufacturing

To realize lead-free products, Oki was the first in the industry to introduce a "Lead-free Soldering Skills Certification System". Lead-free soldering requires a higher level of technical expertise of technicians than conventional soldering, because the melting temperature is high and soldering needs to be done at this high temperature and within a short time. This leads to a higher risk of breaking heat-sensitive parts or bad soldering. This is where we evaluate lead-free soldering skills with regards to fifty items and certify the technicians on five levels based on the total score. The introduction of this internal system helps to foster specialists who are well familiar with the special technology needed for lead-free soldering of products, reinforcing our capability of environmentally friendly manufacturing. Oki Human Network Co., Ltd., a group company in charge of human resource development, operates the "Oki Soldering School", a certified school and also a certification test site of the Japan Welding Engineering Society. For the future, we plan to commercialize also the "Lead-free Soldering Skills Certification System" and to open a school.



● Students Attending the Lead-free Soldering School



#### <Outline of the Lead-free Soldering Skills Certification System>

Target: Employees of companies involved in soldering, and individuals

Certification period: 2 years

Certifications: Top, Superior, Intermediate, Beginner, Basic

(Ranking based on the outcome of actual soldering work)

Certification institute: Oki Human Network Co., Ltd.

Evaluation items: basic theory, practical skills

(insertion and mounting technology, surface mounting technology, lead), 50 items each

## Environmental Consulting Business

### Assistance in Chemical Substance Surveys for Green Procurement

To reduce substances with a strong impact on the environment or the 6 substances (lead, hexavalent chromium, cadmium, etc.) subject to the RoHS directive (regulations of the EU (European Union) to restrict the use of hazardous chemical substances in electric and electronic equipment) used in products, surveys on the chemical substances contained in each part making up a product are necessary. Surveys on chemical substances contained in parts are indispensable also for green procurement. Oki Engineering Co., Ltd., a group company in charge of measurement and analysis, does not only investigate the existence of chemical substances, but also shows customers how to solve problems. Taking advantage of the know-how in reliability evaluation, Oki Engineering calculates how much and where chemical substances exist, and then makes a proposal as to why a chemical substance was mixed into the part, and what process needs to be improved to eliminate the chemical substance in question.



### Information System for Chemical Substances Contained in Products: Assistance in Aggregation

Oki built a company-wide system to instantly grasp the quantities of chemical substances contained in products. It connects the parts database with design systems that have information on what parts a product consists of, to aggregate the total quantities of substances in products. Users can easily look up in what part(s) of the product the aggregated quantity of a substance exists. This means that we can easily grasp, for example, the substances subject to the RoHS directive, which are prohibited for use in products, and substitute them with other parts that do not contain the substance in question in the design phase. We are now also able to respond rapidly to inquiries of customers that implement green procurement. In the future, we plan to expand sales of this system as a tool for the comprehensive evaluation of the environmental impacts of a product. For details, please see page 15.



## Environment Solution Business

The Oki group is engaged in a variety of environment solution businesses, leveraging the know-how on environmental measures accumulated up to now. In fiscal 2004, we will aim to enhance our environment solution business by establishing an environment business team. (Inquiries: Environment Business Team, Global Environment Division, Phone +81-3-3581-2330)

#### Environment Solutions Business Menu

