

Kawasaki Machine Industry Co.,LTD. Environmental Initiatives

川崎機械工業株式会社

We will introduce our environmental activities as follows:

Status of Certification Acquisition

Certification body : Japan Defense Procurement Structure Improvement Foundation (BSK)
 Certification no. : BSKE0043
 Applicable Standard: JISQ14001:2004 (ISO14001:2004)
 Date of registration: April 14, 2005 Certification transferred date : July 16, 2010
 Expiration date of registration: April 13, 2017 Certified place: Head office and Kisshoin Factory

Environmental load-reducing activity at each site

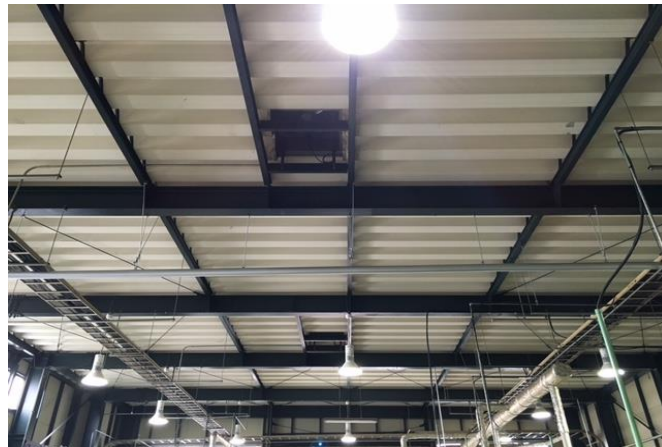
—Kisshoin Factory—

<Introduction of LED lighting>

It is prospected that the Minamata Convention on Mercury will be effective in 2016 and that exportation and importation of some products including mercury will be prohibited after 2021.

In order to respond quickly to this change as a company with ISO14001, we changed all mercury lamps in the Kisshoin factory into LED lighting.

In anticipation of changing into LED lamps, we have been studying the effect and costs in our environmental initiatives project (see the right page). Parts of the studied contents are presented here.



[Mercury Lamp (1 piece)]
 Electricity Consumption : 415W
 CO₂Emission : 338 kg-CO₂/year
 Rated Life : 12000 h

• Electricity consumption, CO₂ emission:
 Reduction of approx. **70%**
 • Rated life: more than **3 times**

[LED lighting (1 piece)]
 Electricity consumption : 125 W
 CO₂Emission : 101 kg-CO₂/year
 Rated Life : 40000 h

[CO₂ Emission Reduction Effect]

• Total in Kisshoin Factory per year ... **4,029 kg-CO₂**
 • 15 years, a rated life of the LED lighting ... **60,436 kg-CO₂**
 (Calculated by CO₂ emission factor 0.294kg/kWh)

CO₂ total reduction through 15 years is equivalent to
 • annual CO₂ emissions of a general car ... **79 cars**
 • annual CO₂ absorption amount of cedar trees ... **4.262 trees (7.8 ha)**

<Introduction of an Energy-saving high efficiency air-conditioner>

We introduced the newest air-conditioning equipment, which achieves high energy-saving performance with high efficiency close to the central air-conditioning. Its air-conditioning performance covers large space and it controls the appropriate temperature of the factory and contributes to the improvement of the working environment as well as the product quality.

In April 2015, the "CFC emission regulation" was revised and used equipment of CFC users also became subject to the regulation. In order to correspond to this change, we established a guideline for simplified regular inspections and a procedure for response during refrigerant leakage.

Environmental load-reducing activity at each site

—Head office—

After introducing a fuel-efficient car of high energy-saving performance as our commercial vehicle, we registered it in Kyoto City's "Eco-drive promotion office" and Kyoto prefecture's "Eco-drive declaration office".

By expressing our efforts to reduce and prevent the emission of CO₂ and air pollutants, and by supporting these institutions that promote voluntary and specific efforts, we take the following concrete actions.

[Actions for Eco-drive]

- Setting and management of numerical targets on Fuel consumption and fuel usage.
- Making rules for temperature settings of the AC.
- Prohibition of sudden braking and sudden acceleration.
- Practice of idling stop.
- Policy for the eco-drive promotion, development of systems.
- Implementation of training and education for employees.
etc.

Kyoto City :
Eco-drive promotion office



Kyoto Prefecture :
Eco-drive declaration office



Activity for environmental load-reducing

—Company wide basis—

<Reduction of used amount of electricity and paper>

Here, we will introduce our main approaches to reduce the use of electricity and paper.

[Electricity]

- Turning off the light during lunch time and at night.
- Limitation of air conditioning usage.
- Efficiency of machine operation.
- Using energy-saving systems: LED lamps, Effective AC usage.

[Paper Resource]

- Recommendation of the use of backing paper.
- Use of recycling paper.
- Reduction of internal FAX in the company.
- Paperless by developing digitization.

<Promotion of Green Procurement>

Our company is trying to preferentially purchase products that have a smaller burden on the environment by considering its necessity when ordering office supplies such as stationery. In 2015, we treated its purposes and significance in our environmental study sessions for the purpose of awareness about Green Procurement. By sharing the awareness of all employees, we will strive to promote and strengthen Green Procurement.

<Implementation of environmental study sessions>

At our company, we hold regular environmental study sessions to enhance workers' understanding towards environment-friendly guidelines and environmental contribution. Also, for further improvement, each division participates in small groups for our environmental project and implements the following activities:

[Example of our activities]

- Reduction of paper tag usage at the time of delivery.
- Temperature control of the laboratory.
- Establishment of procedures for managing and operating CFC-used equipments.
- Hygiene environmental improvement of the water faucet by water plug piece replacement.
- Improvement of backing paper usage.

Scene of environmental study sessions

