

# Environmental performance

## Reduction of emission to zero level

### Achieving zero emission of industrial wastes

At Kubota, we have established the treatment system as shown in the flow chart below, to handle wastes generated as a by-product of our business activities. This system increases our recycling rate, promoting zero emission activities.

In fiscal 1999, the amount of industrial wastes discharged was 158 thousands metric tons, 46 thousands metric tons of which we treated and disposed. The remaining 112 thousands metric tons were recycled by outside vendors. In addition, we sold 42 thousands metric tons as valuable substances. As a result of efforts to recycle these wastes, our

recycling rate increased by 4.5 points, compared with previous year, to 77.0%.

We are going to increase our recycling rate to 90% by fiscal 2000, promoting the recycling of sludge, waste plastics and waste oil.

### The definition of zero emission and our goals

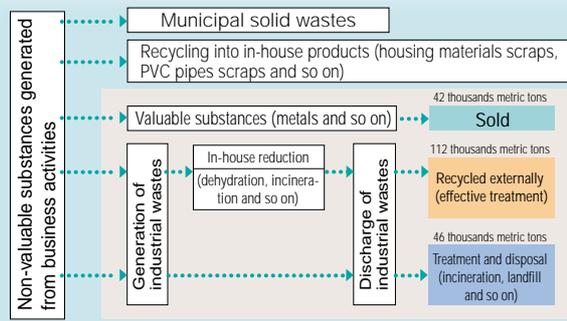
Definition: the amount of wastes that were dumped into landfills shall be "zero" inside and outside of the company

- "zero" means that the amount of wastes that were dumped into landfills should be less than 1% of wastes discharged, in general.
- Only wastes discharged by the company concerned, are targeted.
- The wastes collected at distribution stage are not targeted.

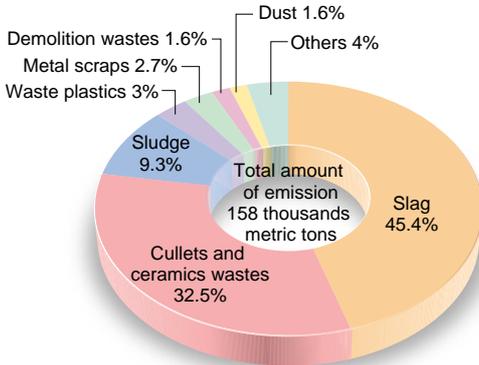
Our goals:

- Model plants (Funabashi plant, Okajima plant and Amagasaki plant): by fiscal 2000
- Cast iron products manufacturing plants and machinery manufacturing plants: by fiscal 2003
- Other plants: by fiscal 2005

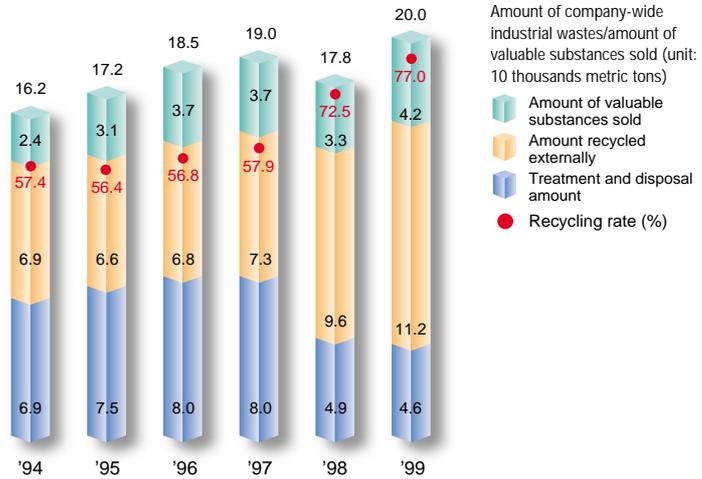
### Amount of company-wide industrial wastes discharged in fiscal 1999 and treatment flow chart



### Amount of company-wide industrial wastes and its breakdown in fiscal 1999



### Transition of the amount of company-wide industrial wastes, valuable substances sold, and transition in recycling rate



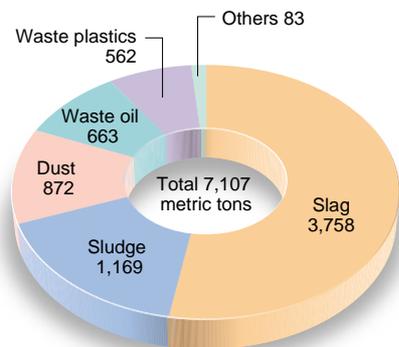
• Amount of company-wide industrial wastes = Treatment and disposal amount + amount recycled externally  
 • Recycling rate (%) = (Amount recycled externally + Amount of valuable substances sold) ÷ (Amount of company-wide industrial wastes + Amount of valuable substances sold) × 100

**Reduction and recycling of wastes**

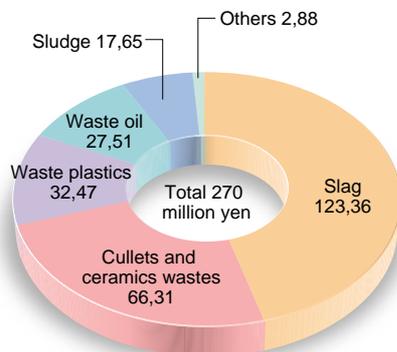
In fiscal 1999, slag accounted for 45.4% of our industrial wastes. And slag is recycled externally, for use as roadbed material and raw material for cement. As a result of reduction and recycling activities, the amount of wastes treated or dumped into landfills decreased 3 thousands metric tons in fiscal 1999, compared with previous year.

We reduced our annual costs by more than 270 million yen, by the reduction of costs of industrial wastes treatment commission, and procurement of raw materials.

**Weight Reduction of industrial wastes and its breakdown in fiscal 1999**



**Cost reduction and its breakdown in fiscal 1999**



Molding sand recycling equipment (Mukogawa plant)

**Explanation of reduction of industrial wastes**

**Slag**

- Furnace slag and molding sand crushed, separated and reused
- Changing from sand blasting to shot blasting

**Sludge**

- Volume reduction by secondary dehydration
- Increase of raw material recycling rate by improvement of facilities

**Waste plastics**

- Wastes generation control by defect rate reduction activities
- Recycle of fragments as raw material by crushing

**Cost effect by industrial wastes reduction and external recycling**

**Culletts and ceramics wastes**

- Cost reduction of industrial wastes treatment commission by external recycling

**Slag**

- Cost reduction of industrial wastes treatment commission by external recycling
- Reduction of procurement cost of new sand by recycling molding sand

**Sludge**

- Cost reduction of industrial wastes treatment commission by external recycling
- Cost reduction of industrial wastes treatment commission by secondary dehydration

**Waste plastics**

- Cost reduction of procurement of raw materials by recycling into products