

# Activities for a Recycling-Oriented Society

## Recycling of By-products

At Daido Steel, by-products such as slag generated during melting and refining process of steel amount to 920,000 tons per year. (500 thousand tons of by-products, 420 thousand tons of home scrap)

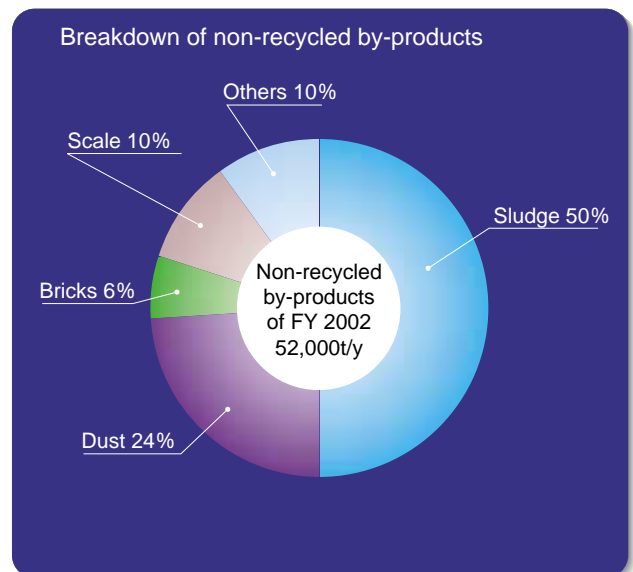
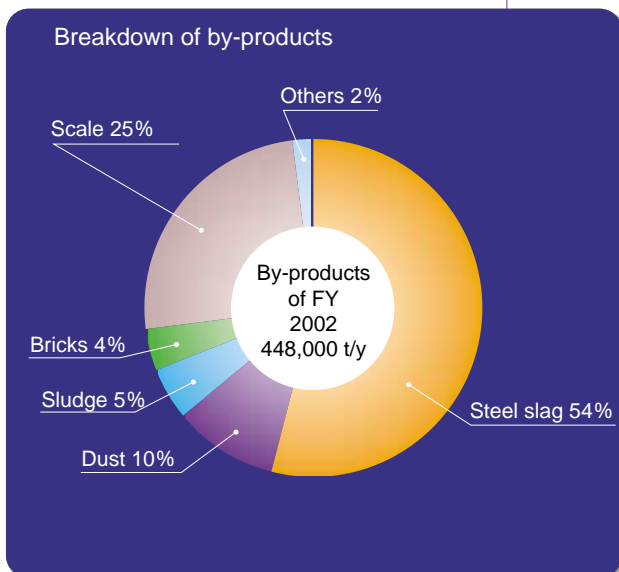
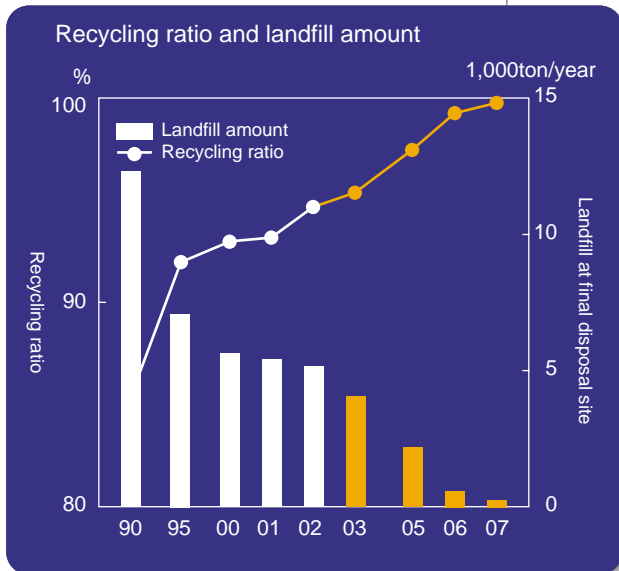
We have endeavored to develop various recycling technologies. As a result, the recycling ratio of by-products has improved up to 94% but some by-products, such as sludge remain difficult to recycle.

Striving for zero emissions at each plant, Daido Steel will promote further development of recycling technologies.

We formed a taskforce to examine the expansion of recycling and the reduction of landfill wastes last year. We decided to achieve zero emission(\*) by 2006.

We have two main tasks; one is to reduce sludge that leads to the reduction of landfill wastes, and the other is to try to improve our DSM furnace to realize 100% recycling of dust.

(\*) Amount of landfill should be under 5% of that of 1990.(DSM: pp. 15)



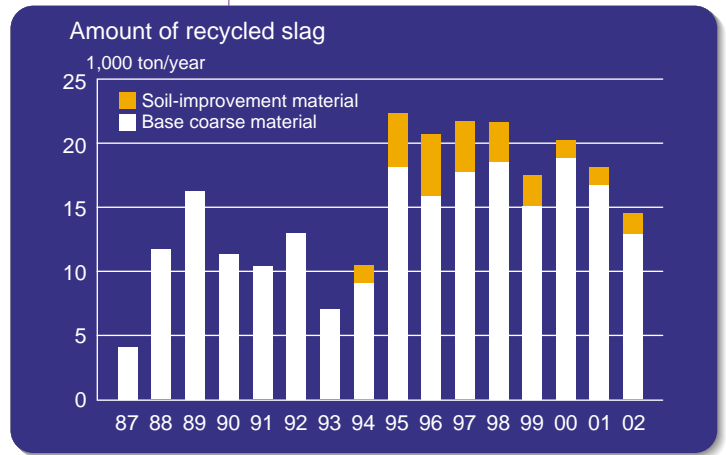
## 1. Recycling of slag

Slag has been recycled and effectively used as base coarse material (road bed material).

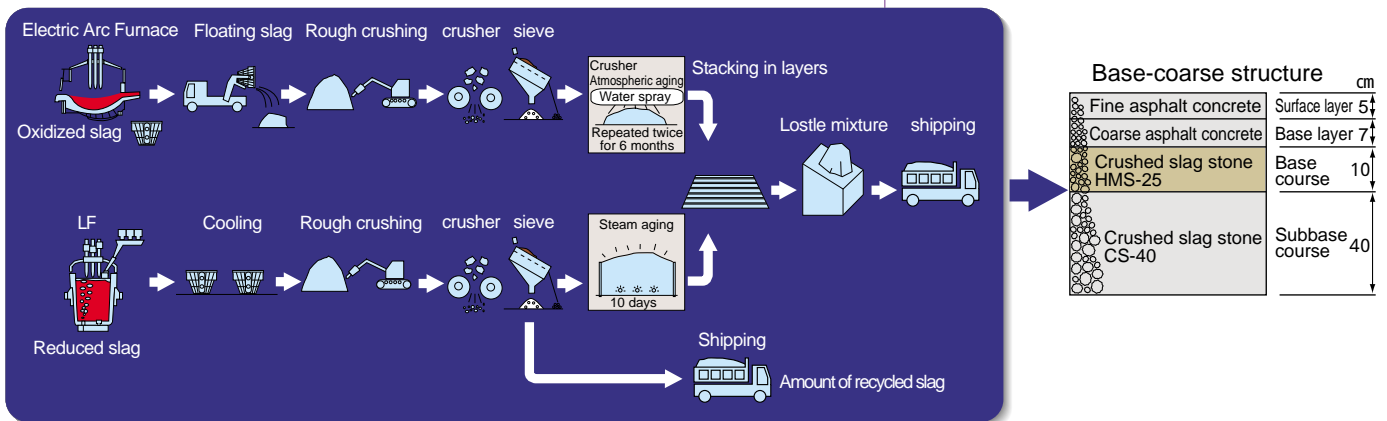
Now, it is also possible to use as soil-improvement material (for hardening of soft ground) as a result of industry-university joint research in Tokai district.

Slag is processed to be recycled as base coarse material at Daido Technica, Co., Ltd., and Daido Genryo Service Co., Ltd. which are our affiliates.

The steam expansion test, originally developed by Daido Steel, is applied to guarantee the quality of those recycled base coarse materials.

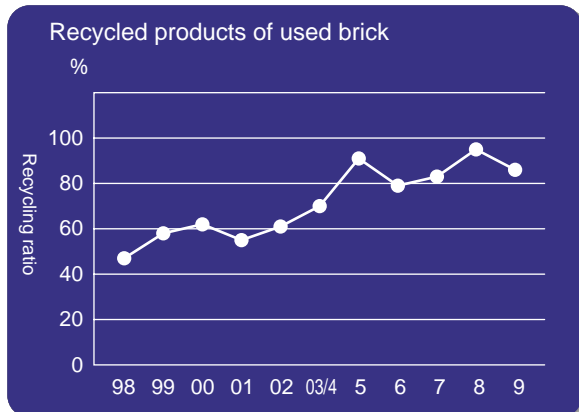


### Process for recycling slag into base coarse material



## 2. Recycling of used brick

All of used brick at Daido Steel is processed and recycled by Daido Genryo Service Co., Ltd. About 90% of the used brick is recycled now.



### Recycled products of used brick





Certification of special industrial waste processor

### 3. Recycling of dust and slag from electric arc furnace

DSM: Daido Special Method of Dust Slag Melting

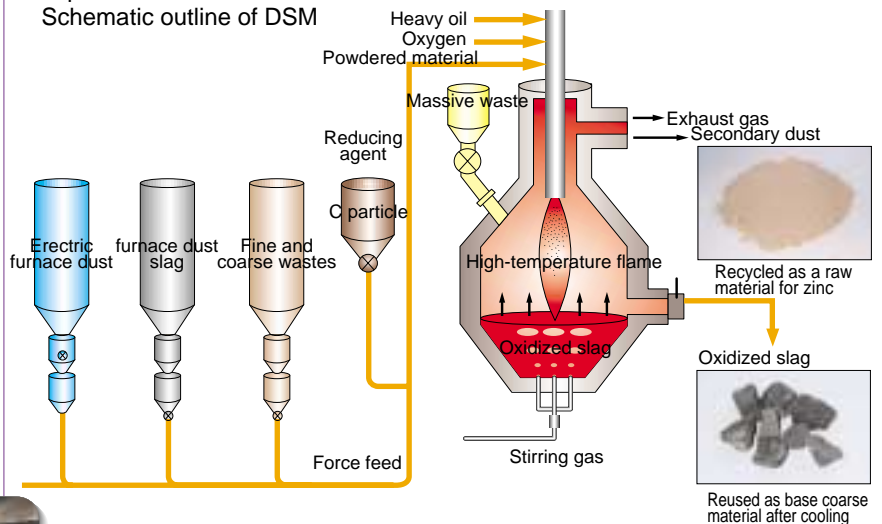
Dust collected from electric arc furnace contains metallic element that can be recycled such as zinc and lead. However, since it was difficult to separate those metallic elements from dust, dust was disposed in landfill, after changing it to harmless waste by special treatment. To promote further recycling of dust/slag, Daido Steel developed its own innovative technology / process named DSM (Daido Special Method of Dust Slag Melting) in April 1996, which capacity is 3,000t/month. DSM has effective functions of;

- changing dust from harmful to harmless by high temperature combustion (burner flame temperature = 2,800 )
- remarkable reduction of dioxin in the dust by the rapid cooling of exhaust gas

The slag from DSM can be used as base coarse material and secondary dust containing concentrated zinc and lead can be utilized / recycled for producing zinc and lead.

Daido Genryo Service Co., Ltd. is certified as a special industrial waste processor.

Schematic outline of DSM



A machine which compost leftover foods (Chita Plant)



Disposing for recycling



### 4. Treatment of daily wastes

We introduced a machine which compost leftover foods at all our plants.

At Chita Plant, 90 kg/day of leftover is composted every day. Those are spread as fertilizer in the site of plants, and employees bring back to spread them to their garden.

Papers, glasses, cans and others are 100% recycled.

### 5. Green purchase activity

Daido Steel has been active in green purchasing.

For example, 100% of copying paper and printing paper are now replaced with recycled papers.

Daido Steel will continue further purchase of environment-friendly products in accordance with guideline of the Green Purchasing Law.