

The Method for Calculating the Steel Can Recycling Rate

Following is the method for calculating the steel can recycling rate.

Amount of Steel Can Consumption

Calculation Method

The weight of domestically produced steel cans shipped, weight of steel cans used for import/export of canned food and weight of steel cans imported as empty cans between January and December of 2016 were monitored based on the Ministry of Economy, Trade and Industry Statistics and "Japan Exports and Imports" from the Ministry of Finance, as well as the surveyed weight of steel cans.

Calculation Results (① + ② + ③ + ④): 463,076 ton

- ①Weight of domestically produced steel cans shipped : 352,162 tons
 - Figures in tons from the Ministry of Economy, Trade and Industry Statistics were used for Beverage cans, food cans and general cans.
 - The weight of 18-liter cans is calculated by multiplying figures in tons from the Ministry of Economy, Trade and Industry Statistics by the (food) ratio announced by the National Federation of 18 Liter Cans Manufacturers Corporative Union.
- ②The weight of steel cans used for exporting canned food : 1,653 tons
 - Calculated based on "Japan Exports and Imports" from the Ministry of Finance.
- ③The weight of steel cans used for importing canned food : 108,759 tons
 - Calculated based on "Japan Exports and Imports" from the Ministry of Finance. We assumed that the main types of cans used for manufacturing in Japan were used for food, tomatoes/vegetables and pet foods imported in "air-tight containers" (including not only cans but also other containers), and we estimated the number of cans and calculated the weight of containers by multiplying by the unit can weight.
 - Exported pet food cans: 14,981 tons (*Calculated based on the data from the Pet Food Manufacturers Association, Japan)
- ④Weight of steel cans imported as empty cans : 3,808 tons
 - Figures in tons from "Japan Exports and Imports" from the Ministry of Finance.

Amount of steel can recycling

Calculation Method

- We assumed that 3 months elapses between the sale of steel can goods and the collection of the cans for recycling and we sent a survey form regarding usage amounts of scrap steel cans during the period from April 2016 to March 2017 to a total of 74 manufacturers including furnace manufacturers, blast furnace manufacturers, Pellet manufacturers, and casting manufacturers.
- In addition, we estimated, according to the survey data, the amount of steel cans for steelmaking raw materials recycled under the standard other than C Shredder through shredding process of iron scrap dealers across the country, and incorporated it into the subject calculation.
- We subtracted the weight of aluminum caps for beverage cans included in the scrap steel cans and foreign substances such as iron scraps except steel can from this total value.

Calculation Results (① - ② - ③) : 434,977 ton

- ①Weight of scrap steel cans used : 456,802 tons
- ②Weigh of foreign substances such as aerosol cans, iron scrap included in ① above : 2,982 tons
- ③Weight of aluminum lids for beverage containers included in ① above : 18,843 tons

The Steel Can Recycling Rate in FY2016

$$\frac{\text{Amount of steel can recycling (434,977 tons)}}{\text{Amount of Steel Can Consumption (463,076 tons)}} = 93.9 \%$$

Distribution Diagram of Steel Makers (Electric Furnace & Blast Furnace) and Pellet Works

* The research conducted by
Japan Steel Can Recycling Association
(As of July 2017)

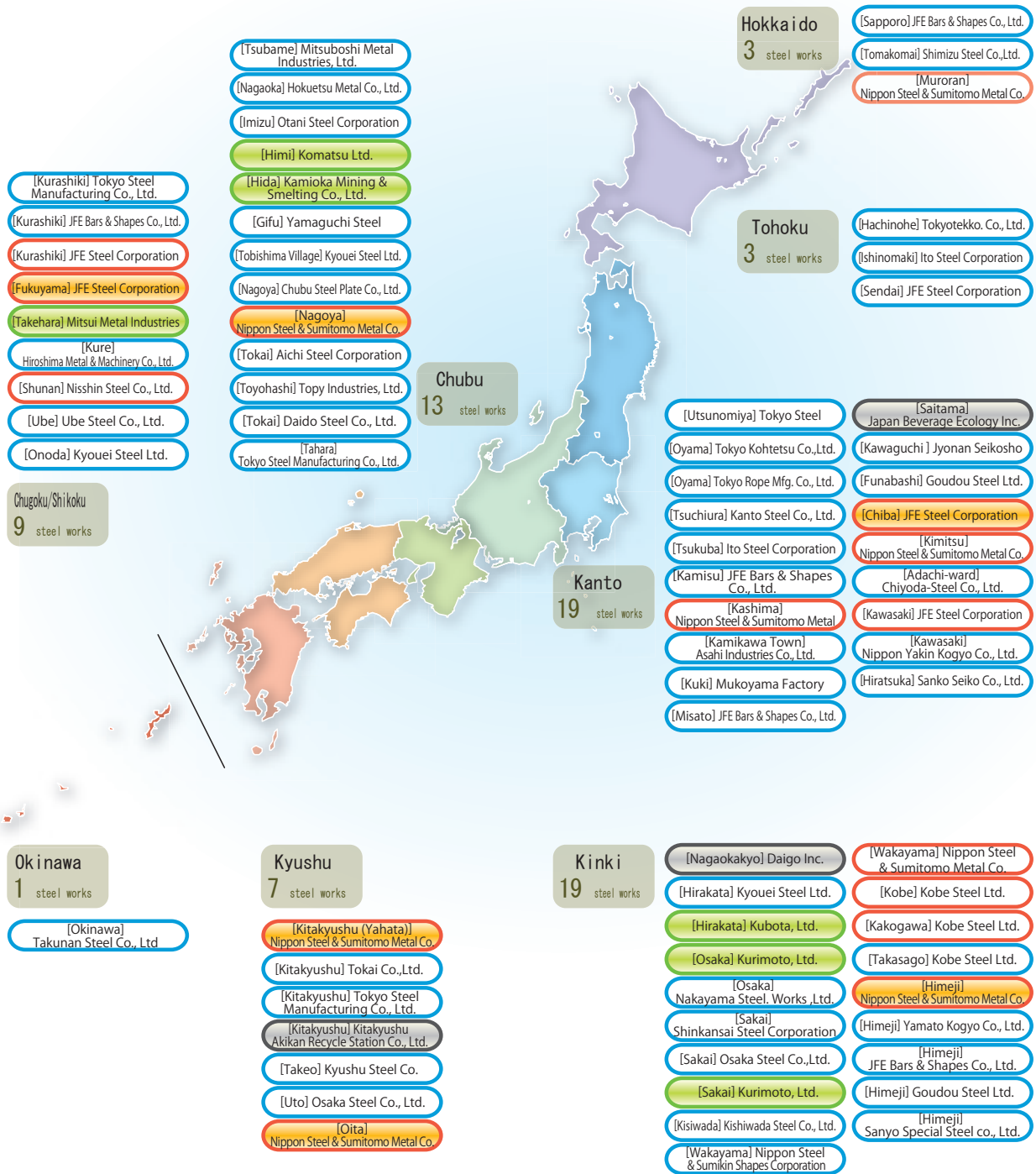
Total
in Japan
74
Steel Works

- Blast furnace steel works ... 15
- Electric furnace steel works ... 50
- Casting works, etc. ... 6
- Pellet works 3
- Manufacturing plant of
steel sheets steel for cans 6

■ Steel cans are recycled in most of these steel works and foundries.

■ Recycled products are produced in nearest plant in each region to recycle efficiently.

At 6 works (included number of 74 works), steel sheets for cans are produced to make steel cans.



Activities of the Japan Steel Can Recycling Association (October 2016 ~ September 2017)

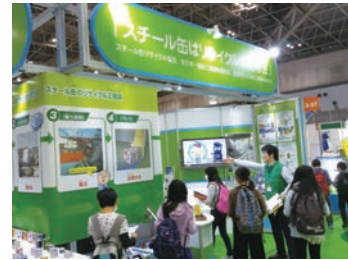
■ Research

- April ~ September, 2017 : Survey of steel can recycling conditions

■ Exhibited at events on environments in nationwide.

Performed promotion and PR for beautification and 3Rs.

- October 2016 : "JFE Chiba Festival" in Chiba
- November 2016 : "JFE West Japan Fair in Kurashiki" in Okayama
- November 2016 : "Tokai Autumn Festival 2016" in Aichi
- December 2016 : "EcoPro 2016" in Tokyo
- May 2017 : "JFE West Japan Fair in Fukuyama" in Hiroshima
- July 2017 : "Eco-Products Kawagoe 2017" in Saitama
- September 2017 : "Environment Festival for Children 2017" in Chuo-ku, Tokyo
- September 2017 : "Can Art Festival in Otaru" in Hokkaido



Eco-Products 2016

■ Practiced "Campaigns for Anti-Littering and Beautification"

- October 2016 in Yokohama, May 2017 in Sapporo, and September 2017 in Fukui
- Performed 502 times at 359 sites in total 45 years from 1973 till September 2017



Practiced "Campaigns for Anti-Littering and Beautification" in Yokohama

■ Performed "Excursion at Steel Plants"

- January 2017 : Taisho University visited "JFE Steel Corporation East Japan Works"
- July 2017 : School teachers (elementary, junior, and high school) in urban area visited "JFE Steel Corporation East Japan Works"
- July 2017 : Keio Girls Senior High School visited "Nippon Steel & Sumitomo Metal Corporation Kimitsu Works"
- August 2017 : Pupils living in Chuo-ku visited "Nippon Steel & Sumitomo Metal Corporation Kimitsu Works"

■ Supported elementary and junior high schools for practicing environmental education

- January 2017 : Commended and Supported 50 elementary & junior high schools

■ Supported groups practicing group collection

- February 2017 : Commended and Supported 42 groups performing group collection of steel can

■ Held "Poster Contest on Steel Cans Recycling"

- January 2017 : Commended 1 Grand Prize, 4 Sectoral Highest Award, and 36 Honorable Mention. Total of 41 Prize and 1 School Activity Prize (new)

■ Published periodicals etc. and distributed to nationwide

- March 2017 : PR magazine "Steel Can Age vol.37"
- August 2017 : PR poster "Steel cans are "infinite recycling" Re-born and being active throughout the country!"

■ Others

- October 2016 : Published "Annual Report on Steel Can Recycling 2016"
- October 2016 : Held "Press briefing" at Tekko Kaikan
- Practiced delivery sessions, lectures and invited for lecture (on demand)
- Practiced join projects to promote 3Rs of recycling containers and packaging by the Liaison Committee of Associations Promoting 3Rs

Promoting efforts toward partnership among the actors for making recycling society