

Recovers gas, oil, iron and carbon from tires for use in ironworks.

Tire gasification recycling facility

Features

- The amount of processed tires is 60,000 tons per year, accounting for 6% of the tires recycled in Japan.
- The 60,000 tons of tires processed per year reduces CO₂ by 94,000 tons.

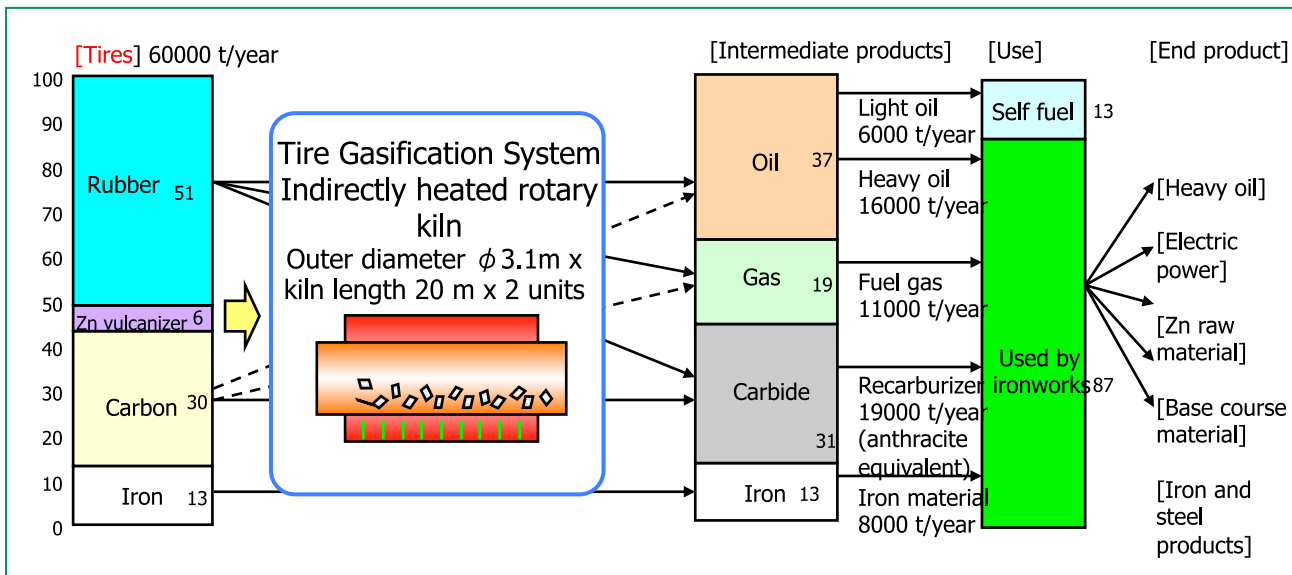
Overview

(Technical principles, actions, etc.)

The material tires are fed into an indirectly heated rotary kiln at the facility, pyrolyzed in the kiln, separated into oil, gas, carbide and iron and recovered. The products are used as raw fuels at Nippon Steel & Sumitomo Metal Hirohata Works or other ironworks. Approximately 87% of the tires are recycled, and the remaining approximately 13% is used as a kiln heating fuel. This eliminates the need for the facility to purchase fuels such as oil, gas or coal.

Kansai Tire Recycle K.K., which operates the facility, was approved by the Hyogo Eco Town Project as the first project member in the Kinki area on April 25, 2003. After the business was launched in July, 2004, the company was awarded the "1st Eco Products Award, Minister's Prize, the Ministry of Economy, Trade and Industry," "the Award for Excellent Companies in the 14th Grand Prize for the Global Environment Award," "the Global 100 Eco-Tech Award," and "the Minister of the Environment's Commendation for Global Warming Prevention Activity."

The amount of tires processed per year is 60,000 tons. The company contributes to environmental protection by improving raw fuels for iron-making and reducing CO₂ by reducing the amount of fossil fuel purchased.



Material flow

Effects

- Recycling effects achieved by processing 60,000 tons of tires per year:
 - Iron ore – 11,000 tons per year
 - Coal – 19,000 tons per year
 - Fuel gas – 10 km³ per year
 - Oil – 26,000 liters per year
 - Zinc ore – 4,000 tons per year
 - CO₂ reduction – 94,000 tons per year



Facility external view

Applicable field
Tire processing system
Energy refining system

Water

Energy saving/Energy/recovery

ENERGY
Energy storage/Energy creation

New energy

Waste disposal/
Recycling/
Resource saving

Air

Soil

Other

Nippon Steel & Sumitomo Metal Corporation

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