# Recycling, Reducing Waste, and Green Distribution

## **Achieving and Maintaining Zero Emissions**

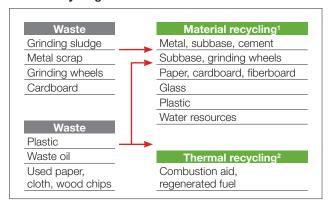
The aim of zero emissions is to recycle waste generated during production processes, switch to beneficial materials that can be put to other industrial uses, and get as close to discharging zero waste as possible. We promote zero-emissions activities through controlling the use of direct and indirect materials, emissions and final waste, and reusing and recycling.

The waste produced by our business activities includes metal scrap, oil and liquid waste, grinding sludge, packaging, and plastic waste. By thoroughly separating our waste, we reuse or transform waste into usable materials, such as by turning steel scrap into steel-making material, sludge with grinding wheel dust into cement material, and oil and plastic waste into fuel.

As we work to conserve resources and promote zero emissions, we achieved an emissions rate (volume of

waste disposed/total discharged) of 0.09% in 2021, once again reaching our annual target of less than 0.50%.

#### **Waste Recycling Methods**



- <sup>1</sup> Material recycling: Reusing waste as raw material for another product
- <sup>2</sup> Thermal recycling: Using waste as combustion material

### **Initiatives for Green Distribution**



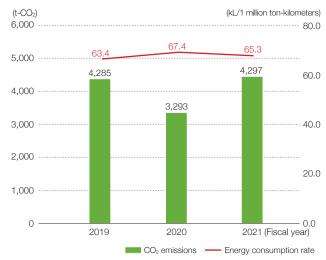
- 1. Propose shipping methods that minimize CO<sub>2</sub> emissions while considering customers' due dates
- 2. Consider load efficiency and labor efficiency in logistics
- 3. Reduce CO<sub>2</sub> emissions year on year and reduce fuel consumption rate by 1% (per ton-kilometer of shipping)

Distribution departments\* are constantly considering shipping methods to reduce CO<sub>2</sub> emissions while giving top priority to meeting customer delivery dates. Since June, we have switched some overseas shipping from the conventional air freight to transport by ferry.

From the next fiscal year onward, we will actively utilize DX to reduce CO<sub>2</sub> emissions through more efficient shipping, such as by using advance understanding of shipment volumes to determine optimal loading on pallets. In addition, we will use Al to review operations and implement initiatives to save labor.

\* Distribution departments: Two distribution centers (Chubu and Yamaguchi); three factory centers (Yamagata, Kofu, and Mie); and THK NIIGATA

#### CO<sub>2</sub> Emissions and Energy Consumption from Transportation



Data collection period: January to December

Data includes five production facilities in Japan (Yamagata, Kofu, Gifu, Mie, and Yamaguchi); two distribution centers (Chubu and Yamaguchi); and three factory centers (Yamagata, Kofu, and Mie).