

Recycling Technology Supporting a Sustainable Society

Recycling Fluorescent Tubes

JFE established factories in Yokohama City and Sendai City, and promotes recycling of fluorescent tubes in those two sites.

Fluorescent tubes contain a small amount of mercury for illumination. The fluorescent tube recycling practiced at JFE safely recovers this mercury and also recycles the glass and metallic cap portions as well.

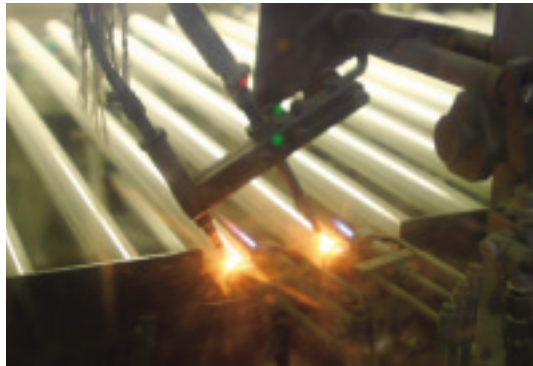
We also pay particular care when carrying fluorescent tubes, using special cargo boxes and cardboard boxes. The fluorescent tubes are sorted by size and shape and fed into a processor. After completely preventing any external leakage of mercury vapor and

fluorescent powder, we take care of cap cutting, fluorescent powder collection, glass crushing, cleaning, and high-purity separation of mercury from collected fluorescent powder (99.9% mercury) in an entirely automatic process.

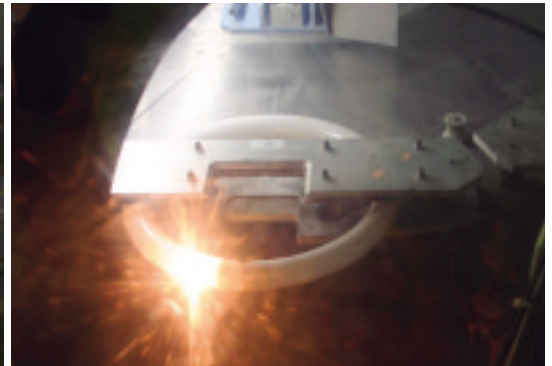
We developed and made viable the first automatic processor able to handle round tubes as well as straight tubes. The glass tube and cap portion are automatically sorted by material type after crushing and recycled into raw glass, raw metal, and raw plastic. Fluorescent powder, from which the mercury has been removed, is processed with a soil covering and used.

Amount of fluorescent tubes processed (Total tube length is calculated in terms of straight 40W tubes)

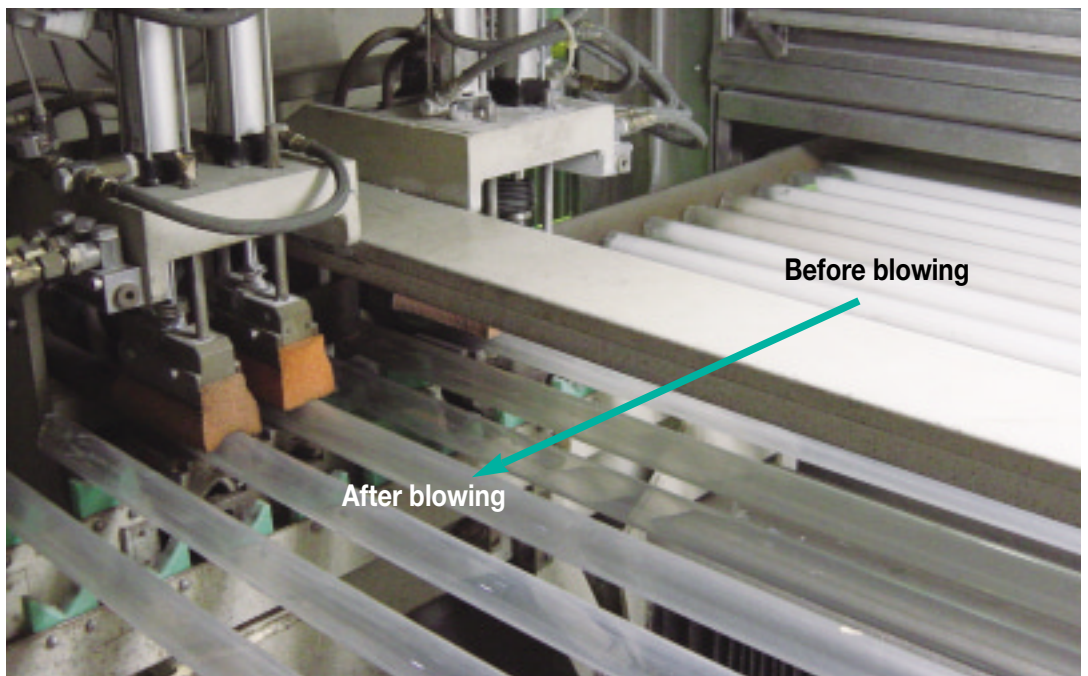
20
million tubes



Automatic cutting of straight tube cap portion



Automatic cutting of round tube cap portion



Air-blow processing

The mercury is sent to a specialist factory in Germany, refined further, and recycled into inorganic chemical products and the like.

The Sendai factory, which began operation in 2006,

boasts cutting-edge equipment. It sports fluorescent lights with unique formats such as liquid crystal back lights, which are becoming increasingly popular.



Collected glass



Collected metal

Recycling Different Kinds of Used Products

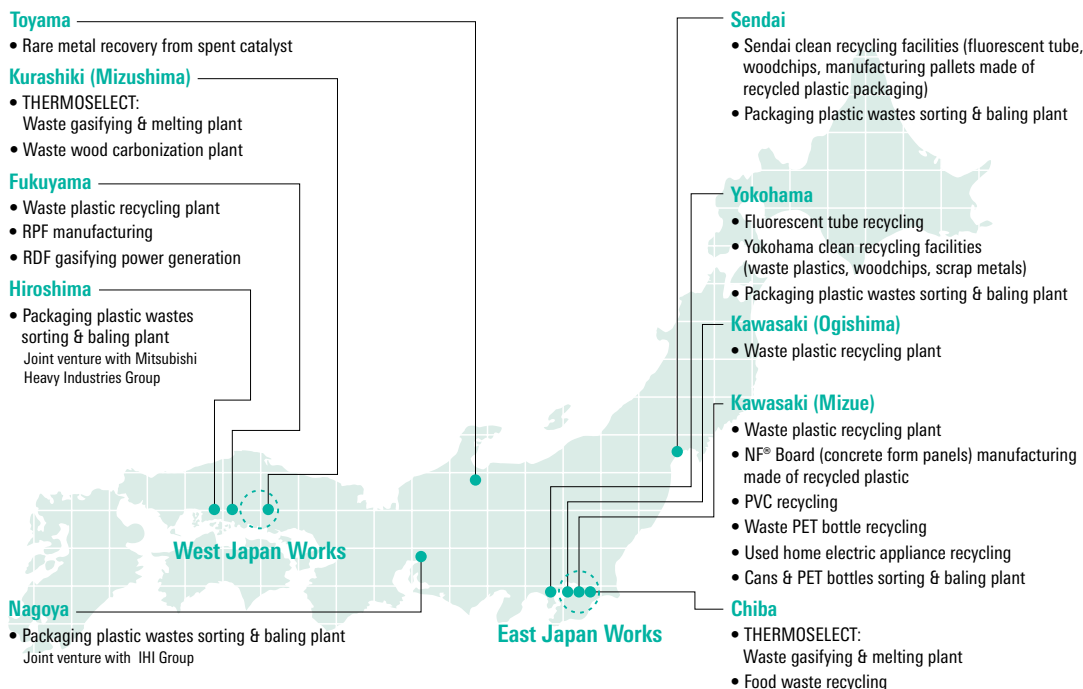
JFE is also involved in recycling various kinds of waste materials. We are playing our part in building a recycling-oriented society by recycling and effectively using a wide variety of used products. Our efforts include converting waste plastics into raw material for

blast furnaces through the sophisticated utilization of our steelworks infrastructure, recycling used home electric appliances and food waste, and manufacturing NF® boards from waste plastics.

Amount processed of the 4 regulated types of discarded home electronic appliances

720
thousand products

JFE Group's Recycling Businesses



Year ending March 2009: Container and packaging plastic (Other plastics) Amount successfully bid on

84
thousand tons