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Material flow analysis and recycling system of mercury-containing fluorescent lamps in Korea

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As fluorescent lamps are frequently replaced at households, large amounts of used or waste mercury-containing fluorescent lamps are generated each year. Improper disposal may pose a serious threat to human health and the environment. Thus, environmentally sound management of used fluorescent lamps is very important. In Korea, used fluorescent lamps have been included in the extended producer responsibility (EPR) policy since 2004 to more effectively recover and recycle them from consumers and reduce their impacts on the environment. This paper examined the material flow analysis (MFA) of fluorescent lamps in Korea to determine the flow of fluorescent lamps and mercury by life cycle stages. The results were based on field site visits to the used fluorescent lamps recycling facilities, the review of available literature and interviews with the recycling companies and environmental regulatory authorities.

Biography

Yong-Chul Jang is a Professor in the Department of Environmental Engineering at Chungnam National University in South Korea. He has completed his PhD in 2000 and Postdoctoral studies from University of Florida, USA. He is an Editor-in-Chief in Korean Journal of Waste Management and Associate Editor in Journal of Material Cycles and Waste Management. He has published more than 50 scientific papers in reputed journals.

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