

# The Complete Solution to Mercury Waste Problem

## MRT

*Technologies for safe disposal /  
recycling of CFL / FTL and other kinds  
of Mercury Containing Lamps.*



# MRT TECHNOLOGY

- **MRT offers complete solution for Safe Disposal / Recycling of end of life Mercury containing lamps.**
- **MRT Technology is based on DRY process, without using any kind of chemical or water which would otherwise necessitate an additional process for neutralizing the discharge.**



# PROCESS

- **The process of “Safe Disposal of Mercury Containing Lamps” is in 2 stages, as below:**
  - 1. Crushing and separation by “Lamp Processor”.**
  - 2. Extraction of Mercury by Distillation of Phosphor Powder (Contaminated with mercury) with “Batch Process Distiller”.**

# LAMP PROCESSORS ( LP )

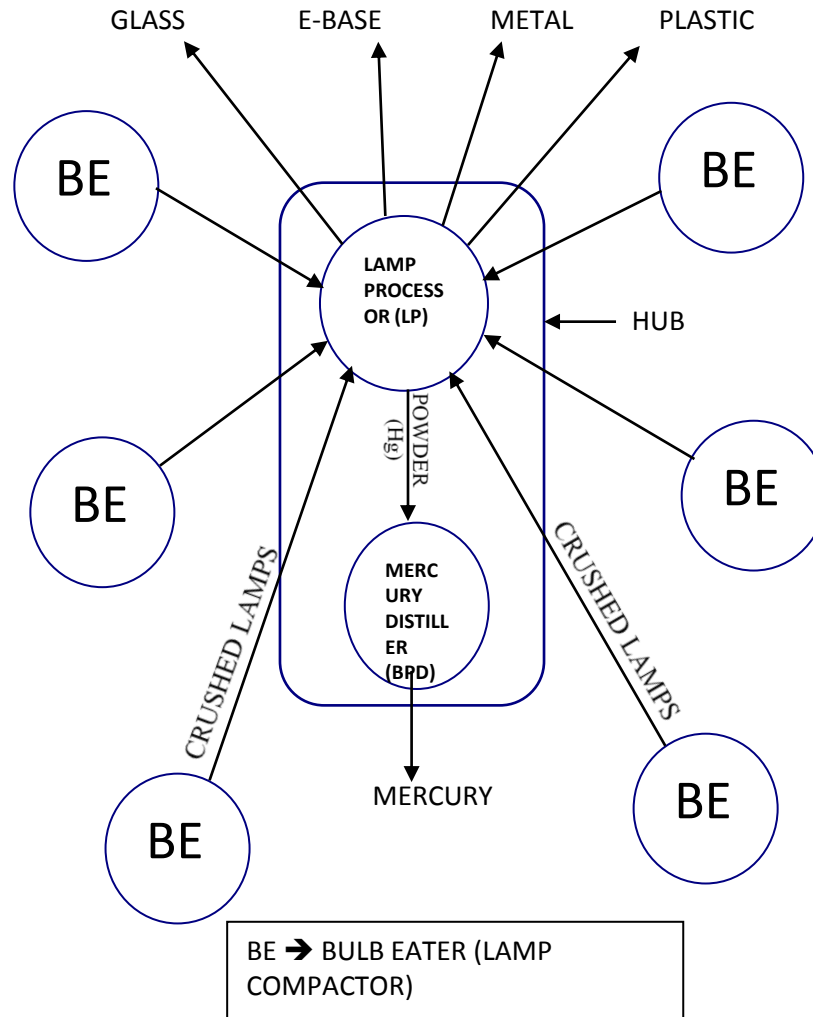
- **Lamp Processors ( LP) - This equipment is used for “Crushing and Separation” in which all the elements of CFL / FTL etc. viz Glass, E- Ballast, Metal Parts, Plastic and Phosphor Powder ( Contaminated with Mercury) are automatically separated.**



# LAMP PROCESSORS ( LP )

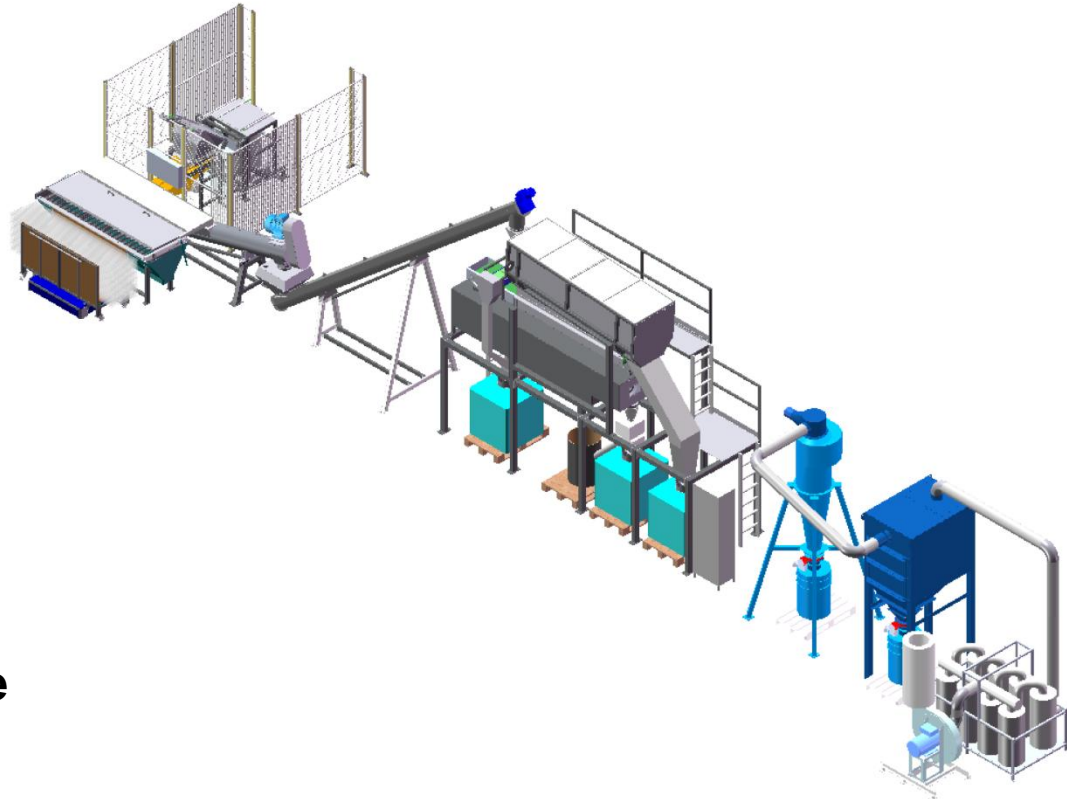
• **While Glass, Metal Parts and Plastic are disposed off for secondary use, E-Ballast are sent to E-waste recycling and Phosphor Powder ( Contaminated with Mercury) is sent to 2nd stage i.e. for distillation with “Batch Process Distiller”.**

# HUB – SATELLITE CONCEPT



# LAMP PROCESSOR - TYPICAL PROCESS LAYOUT

- Fully mechanized feeding of both tubes and bulbs
- Operated by one person
- A lamp processor with minimal manual handling of the lamp material, and with very low maintenance requirements



# BATCH PROCESS DISTILLERS ( BPD )

- **“Batch Process Distiller”** is used for extraction of **Mercury from Phosphor Powder ( Contaminated with Mercury)** - one of the outputs of **Lamp Processor**.
- **BPD** offered by **MRT** can extract mercury from other products also, like **Button Cells, Dental Amalgam, Electrical Switches, Thermometers, BP measuring instruments** etc., besides **Phosphor Powder**.
- **Mercury extracted ( 99% Purity)** with **BPD** can further be used in the industry.





# BATCH PROCESS DISTILLER (BPD)

## Standard Batch Process Distiller:

A batch of mercury bearing waste is placed in the vacuum chamber. Heat is applied, causing the mercury to vaporize.

The organic particles carried by the gases are oxidized in the post combustion chamber, prior to entering the cooling traps, where the mercury condenses into free flowing liquid mercury.



# Available Capacities of LP and BPD

- **Lamp Processors-** These are available in different capacities, from 150 Kg / hour ( LP 150) to 1000 Kg / hour ( LP 1000) and higher.
- **Required capacity of LP** can be calculated by assuming average weight of FTL as 200Gms and CFL as 100Gms.
- **Batch Process Distillers –** These are available in different capacities, from 50Kg / Batch ( BPD 50 - Suitable for Phosphor Powder only) and 100Kg / Batch( BPD 100) to 400 Kg / Batch ( BPD 400) and higher for mixed products, including Phosphor Powder.



# MRT TECHNOLOGY

- **MRT, world leaders in this field have more than 300 installations in countries such as Hong Kong, China, Taiwan, Sri Lanka, Singapore, Philippines, Poland, Sweden, U.K., France, Italy, Spain, Portugal, Russia, Ukraine, Romania, Korea etc.**



## **CONTACT**

**VIPIN JOLLY**

**ARG INFRATACH Pvt. Ltd**

**New Delhi – 110025, INDIA.**

**M- +91 9810777755**

**Mail ID - [argmwm@gmail.com](mailto:argmwm@gmail.com)**

**( Distributors for India, Bangladesh, Sri Lanka, Nepal, Bhutan and Myanmar)**



**THANK YOU**

