The J&G Lampcare Re-cycling Process, how it works.

1. A specially designed container is delivered to our customer for the safe collection and storage of spent lamps.

2. The container with the spent lamps is collected and brought back to our site for sorting prior to being recycled.

3. The container is then placed in the site storage area to await processing.

4. We then load the lamps onto racked trolleys for processing in the crush and separation plant.

5. The plant is fully automatic and easy to operate. Its versatility allows processing of the various types and sizes of lamps, separating them into soda lime glass, aluminium end caps, lead glass /ferro metal components and phosphor powder.

6. The crush and sieve plant operates at sub pressure, thereby preventing mercury from being released into the environment as exhaust air, this is constantly discharged through the internal carbon filters.

7. The entire crush and separation plant is incorporated in a container in which a conveyor feeds the tubes to a hammer mill; the resulting combined fractions are air conveyed through a separation tower, where the glass and metal fractions are removed. The glass and metal parts are then crushed further and air conveyed to a second separation tower. Glass resulting from the sieving operation, after the first separation tower, is crushed further and air conveyed through a third separation tower. The glass fragments, removed by the third separation tower, are fed to a rotary drum feeder and transferred to a discharge conveyor to transfer the by-product out of the processing unit.

8. The air stream that has passed through the separation towers contains phosphor powder. The air stream passes through a cyclone, where the powder is collected in a distiller barrel, and then passes through two dust filters, where the remaining dust is removed and deposited in distiller barrels. The air stream then passes through four-carbon filter's to remove any mercury vapour before passing to atmosphere via a combined vent.

9. Recovered Glass, Aluminium and Metals are dispatched to other companies for use as raw material or for further processing.

10. The mercury powder is distilled on site. The appropriate programme is selected, and the distillation process commences. A vacuum is applied to the unit. The after-combustion chamber and process chamber are then electronically heated. Any organic content in the resulting vapour is oxidised in the after-combustion chamber, and the mercury vapour is condensed, in a condenser, that is cooled by a chilled glycol refrigeration unit. The condensed mercury is removed from the collection chamber and stored prior to despatch as a product.