

1.0 Purpose

This instruction provides guidelines on the best practices to be adopted for controlling resource consumption of operation activities.

2.0 Scope

This instruction is applicable to the resource consumption (water, electricity, chemicals and other materials) due to daily operations in HKGEC.

In electroplating, large amounts of chemicals are used and many rinsing processes are performed during the production process. In particular, degreasing, electro-degreasing, acid dipping, copper, nickel, silver, gold and palladium-nickel plating all use a lot of chemicals while rinsing uses large amounts of water.

3.0 Procedure**3.1 Water**

- All taps are turned off when water is not required.
- All leaks in pipes are repaired once they are identified.
- Fit taps and hoses with flow restrictors, spray nozzles where possible.
- Improve rinsing efficiency by properly use of counter-flow rinsing system / timer control system / conductivity-controlled rinse system / spray rinsing where possible
- Ensure water use is not excessive.

3.2 Electricity

- Shut off plating baths / heaters / oven / other powered equipment when not in use.
- Select energy efficient lighting (e.g. use energy saving bulbs instead of fluorescent tubes), plant and equipment.
- Reduce non-essential load.
- Re-route cable and switches for lighting in stair areas such that guards can turn off specific areas in daytime.

3.3 Chemicals and Other materials

- Ensure chemicals (e.g. palladium-nickel salts, degreasing agents, HCl etc. used during production) / materials (e.g. filter cartridges for bath solution filtering during the palladium-nickel plating process) are handled and stored in good conditions to prevent deterioration and wastage.
- Ensure chemicals / materials are not over-applied.
- The plating bath solution lost from bath by carryover is the dragout, reduce the quantity of dragout by providing sufficient drain time above the process bath, use

of lower concentration bath, and proper control bath surface tension by adding wetting agents.

- Influence suppliers / contractors to take away and reuse surplus material.

4.0 Monitoring and Checking

The Finance and Administration Department shall maintain bills and purchase records to monitor the resource consumption status.

5.0 Records

Record Description	Record Location/ Retention Responsibility	Minimum Retention Time
Bills and purchase records (Refer to individual receipt and purchase records)	Finance and Administration Department	3 years

6.0 Appendix

Nil.