

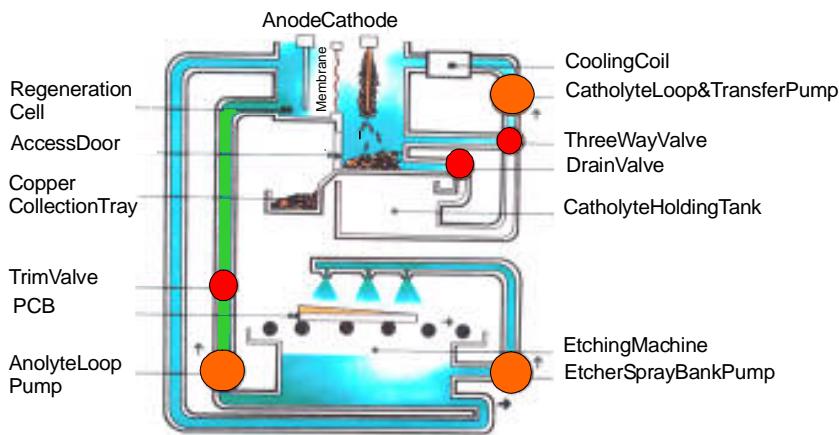
HOW DOES THE REGENERATION SYSTEM WORK?

Etchant is pumped in a closed loop between the etch module and Electrolytic Cell in high volume. A Redox Oxidation Reduction Potential controller monitors the condition of this fluid loop. The probe will activate the Electrolytic Cell dependent on the volume of work being processed through the etch module.

When activated, etchant is re-oxidised at the anodes to yield an active high O.R.P. etchant, whilst copper is being deposited at the cathodes from where it is scraped and settles in the copper collection area.

The Anodes and Cathodes are separated by a semi permeable membrane which allows current transfer between the electrodes. The solution used at the Cathode is also Acidic Cupric Chloride but in a reduced state. The Electrolytic Reaction ceases when the Redox Potential reaches its required value.

Due to the high turnover rate of the etchant bath, the reaction time to chemical change is significantly faster than conventional additive dosing systems.



BENEFITS

No chemical oxidising agent is required

No storage of fresh and spent etchant

Low copper level in etchant promotes sludge free working

The only by-product is copper powder

A profit over total running costs is made.

CELL SPECIFICATIONS

The example outlined is based on a 6 kg (13.2 lb) /per hour system.

Overall dimensions [footprint] :
1900mm x 1300mm : 74.8" x 51.2"

Holding capacity copper : 240 kg (528 lb)

Power requirements :
6000 amp 10V DC via a transformer rectifier

Cooling total :
Chilled water is required @ 10°C max.
15 litres (2.75US gallons) per minute as required @ max.
1 bar pressure.

Flow rate in Etchant loop : 250 litres (45.8 US gallons) per minute.

