

NON-CYANIDE ELECTRODE CLEANING PROCESS

ABSTRACT OF THE DISCLOSURE

5 An electrolytic process (70) employing a water solution
of metal lactates or lactic acid and metal hydroxides,
rapidly and safely removes metal plating bleed (42),
residual oxides , stains or the like (39), plastic flash
(36), resin bleed (36) and deflashing media (38), from
10 electrodes (16) of electronic devices. Anodic etching (72)
or a combination of cathodic (82) and anodic (72) etching
(72) is preferred. Noble metals are selectively removed
without cyanide compounds. For example, excess silver from
spot plating on copper leadframes is etched away 2-3 times
15 faster than the underlying copper. After cleaning the
device leads (16) are bright, polished, stain-free and
without scale, residual plating bleed (42), deflashing media
(38), plastic flash or resin bleed (36). The process is
effective, less hazardous, easy to use and economical.

20 (FIGSs. 4 and 5 accompany this abstract)