

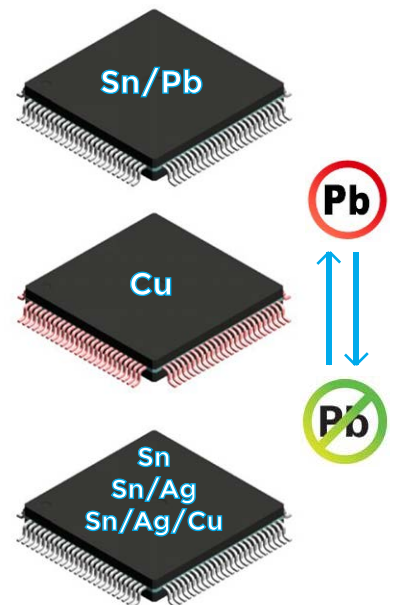
## AUTOMATED ALLOY CONVERSION & RETINNING

Our automated services ensure high quality soldering results, especially in High Reliability Industries such as Defence, Aerospace, Medical and Oil & Gas.



### APPLICATIONS INCLUDE:

- To mitigate Tin Whisker Issues
- Convert any component from Lead Free to Lead
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- Retinning of existing alloy to avoid solderability issues.
- Double dip tinning for more reliable solder joints in harsh environments; eg. where heat and vibration exist. Double dip tinning suppresses oxidation short term and therefore produces a much stronger solder joint during assembly.
- Remove Gold finish from component terminations to avoid gold embrittlement issues.



# RETRONIX

## LEADED DEVICES:

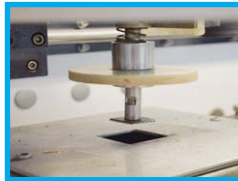
The standard process below describes how a component is managed through the process, ensuring consistent exposure to solder wave (in terms of time and temperature)



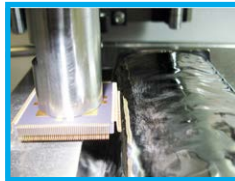
Automated vacuum pickup arm transports the device from the tray



The device is fluxed, each side in sequence



The device is pre-heated & checked for temperature with a pyrometer



Each side is dipped in the solder wave. (Nitrogen controlled environment)



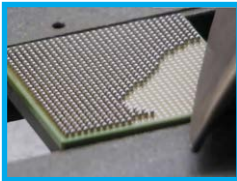
The device is returned to the tray, and the process repeats with the next device



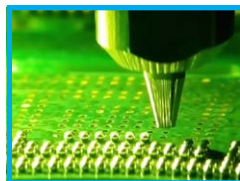
The devices are then cleaned, re-baked & vacuum packed with MSL/Dessicant

## BGA DEVICES:

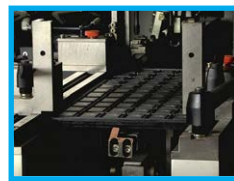
The process below is completely controllable, automatic & most importantly includes zero reflow cycles, thereby meeting the component manufacturer's specification



Existing spheres removed from device - automated process



Device is reballed using the most advanced laser reballing process exclusive to Retronix



Device is mechanically checked



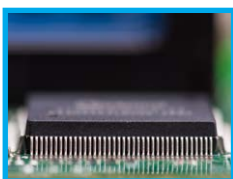
The devices are then cleaned, re-baked & vacuum packed with MSL/Dessicant

## VERIFICATION:

We offer a range of in house tests to verify process conformity



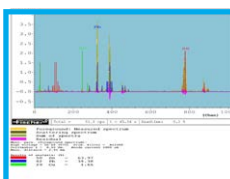
Certificate of Conformity



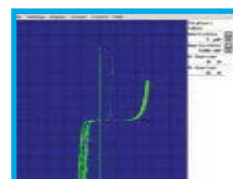
Solderability Test



Ionic Contamination Test



XRF Analysis - To verify alloy



Electrical Test - Curve Trace



Mechanical Test

Retronix, North Caldeen Road, Coatbridge, UK, ML54EF