Investment

Tru-Lon continues to invest for the future in line with the forward thinking strategy of the Stevenage Circuits Group of companies. During the previous three-year period a further £500,000 has been spent upon new plant and control systems at Tru-Lon alone. Further investment is reserved for years 2002-2003. Consequently, we have a purpose built factory, housing the latest in processing / electrical test technology suited for both very thin and very thick board requirements (0.050 – 15mm thick).

Key Equipment

Data Transfer

DXF (preferred), Barco DPF, Extended Gerber, / Gerber. Genesis 2000 Front-end software now being integrated within our CAM area for the future provision of ODB++ files. Multi-seated Barco U-Cam software remains our mainstay for it's powerful editing functions.

Laser Photo-plotting

This task completed in house within a climate-controlled area utilising our Barco Graphics laser plotter operating at up to 10,000 DPI.

Drilling

Recent investment has yielded the utmost capability with the introduction of our new Wessel Pro-Sys 2 drilling machines, capable of producing through and blind holes at 0.2mm diameter (0.1mm when plated). Used to compliment our thick metal backed drilling machines.

Multilayer

Computer controlled Burkle multi-daylight vacuum assisted laminating press used for bonding the full range of core / "B" stage materials including the fusion bonding of PTFE layers for homogeneous Rf board construction. Additional presses available for the lamination of regular FR4 panels / heat sinks / metal backing plates etc.
Custom built Billows CCD imaging, Edge Tooling Punch for the precision punching of all laser photo-plots, this machine utilised in conjunction with our Billows CCD imaging Post Etch Punch system for the optimisation of internal layer registration prior to bonding.
Multiline X-Ray drilling machine to locate the internal layers of bonded panels thus ensuring optimised drilling of through / blind holes to the internal layer positioning.

LP Rf Plasma

With a specifically designed panel handling system we use the regulated properties of Rf plasma to prepare the surface of flexible materials and to permanently, chemically modify the surfaces of PTFE for Electroless copper plating. Additionally, the computer driven process can be utilised for cleaning purposes or particle removal to form "3 point" internal interconnects to plated through holes of multilayer circuits incorporating all dielectric combinations.

Electroless Copper

Fully automated plating line for high build Electroless copper deposition capable of plating 0.050mm thick layers, or panels with very small diameter (high aspect ratio) through or blind holes.

Photomechanical

Orc UV energy, water cooled exposure units utilising custom machined
Glass tooling beds for first generation photography use. Climate controlled areas ensure s the mechanical stability of the process.
New (Jan 2002) Adam Pill ultra fine line, thin core handling Developing Machine to complement the photographic process. Tru-Lon can reliably reproduce 50 micron line / gap (0.002") situations upon core layers as thin as 50 microns thick subject to Contract Review.
Fabtech Multilayer / inner layer pre-cleaning / Chromate removal line with 0.050mm core handling capability newly introduced summer 2001.

Etching

PLC controlled etching line from Hollmuller GmbH designed to provide consistent etching rates from side to side and across the panel surfaces. Consequently, we can provide line widths / gaps accurate to + / - 5 microns for the extremes of design limitations currently up to 100Ghz.

Electroless Nickel / Palladium / Gold Plating

Additional investment afforded during the summer of 2001 to add this process to our portfolio of finishes. This finish type is suited for Aluminium / Gold wire bonding in addition to conventional / surface mounted finishes. Please telephone for specific details.

Electrical Test

Further investment during the winter of 2001 realised the introduction of our Emma Systems Roving Probe test machine. Capable of testing 0.003 square pads upon a 0.005" pitch upon 0.050mm substrates!

Machining

Specially manufactured for Tru-Lon, our high-speed machining centres are used to profile metal backed circuit boards / antennas. In addition, these machines have the capability to machine pockets referenced from either the track or the substrate surface.

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