Nickel Microstructures and MEMS Components

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Tecan is a microstructure component foundry, but instead of working in silicon, we use metal (predominantly nickel). We use 300 mm substrates for making MEMS and microstructured devices but have the ability to go up to 600 mm x 765 mm for less critical applications as well. Our technology is a hybrid of three different industries; we have taken technology from the CD & DVD master manufacturing world, some from the tooling world for micro lens arrays, holograms, diffraction gratings, etc., and lithography from the silicon industry. This gives us is the ability to make micro-structures in metal to the dimensions and tolerances that are usually found only in silicon.

This is purely a process. The industries we provide products and support to are wide ranging—in fact, we hardly have any standard products whatsoever. One of the great benefits we get from this is that we can take technology from some totally unrelated industries and allow them or make them jump the chasm into totally different worlds; e.g., medical to aerospace, volume CD and DVD manufacturing to HDI electronics, SMT to RFI/EMC shielding, etc…