

Case Study: Process Development CNC Fiber Laser Welding



OBJECTIVE: To integrate a HAAS mini mill CNC machine with an IPG Fiber optic Laser, creating a CNC Laser Welder. The machine produces hermetic sealed welds on "Fuel Cell Cassettes" and "Fuel Injectors".



Entire Station at Completion

Close-Up of optics, prism targeting, camera and monitor

This Cell is capable of up to 200 cm/min welding 0.3mm material. Unit could also be used for precision cutting and engraving

- **PRODUCT:** FUEL CELL CASSETTE
- **KEY COMPONENTS:**
 - IPG FIBER LASER (1000 watts)
 - Laser lens head
 - Haas CNC machining center
 - Controls interface
 - Safety interlocks
 - CDRH report/accession number.
- **IMPROVEMENTS / ADVANTAGES:**
 - Preserves all the ability of the CNC controls, programming and memory.
 - Welding capabilities under a class i contained unit.
 - Interrupted sequence ability for re-welds and repeated operations.
 - All details produced in house

PEKO Precision Products INC. specializes in system integration, assembly and test automation. The CNC fiber laser welding station is one of our latest high tech systems projects. With over 40 years in the industry, PEKO continues to combine innovative problem solving with family-like customer relationships to develop reliable, robust products for a long line of repeat clients.