



Project Description

Wire EDM Fixture

The project is based on our Sodick wire EDM machine. We need to develop a holding fixture that allows, where possible, universal holding of a range of geometries for machining test samples. These machined test samples will be used to characterize the magnetic properties and perform quality control. The desired features of this system include:

- Fast changes of parts between machining
- Extreme repeatability of part location when taken in/out of fixture
- A robust, rigid setup that will not deflect under the high water pressure from the flushing nozzles. Even though there are no traditional machining forces with EDM, the part must be held securely.
- Ability to adapt to hold many different sizes, and shapes of raw blocks/parts

One of the current machining/fixture problems we have is a solution to hold a rough cylinder after sintering (raw material manufacture) and to re-machine the outer diameter in only one operation. Conventionally a wire EDM is unable to do this, as the wire would have to cut through the holding jig. Internally we have a couple of ideas on potential ways in which this problem may be solved. We can share them if need be, or we can just see what your students come up with.

