

EDM Department

Engineer. Develop. Manufacture.

EDM Department Inc. Helps Department of Energy (DOE) Further Technologies

CLIENT PROFILE

SLAC National Accelerator Laboratory is one of 10 Department of Energy (DOE) Office of Science laboratories and is operated by Stanford University on behalf of the DOE. They built the world's longest particle accelerator, discovered some of the fundamental building blocks of matter and created the first website in North America.

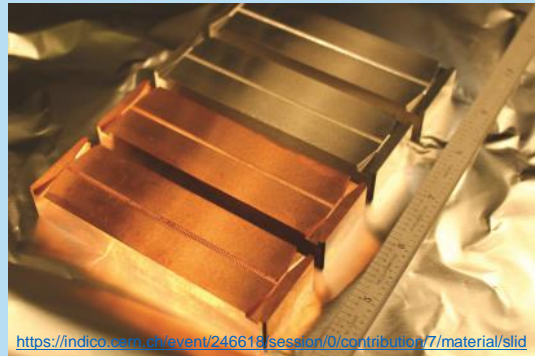
(<https://www6.slac.stanford.edu/>)

WHAT'S THE CHALLENGE?

According to SLAC's website, accelerators form the backbone of SLAC's on-site experimental program. They are complicated machines, with hundreds of thousands of components that all need to be designed, engineered, operated and maintained to achieve the highest energy acceleration with the best possible particle beam properties. To test these particle accelerators, SLAC requires precision and micro manufacturing of copper and stainless steel.

HOW DID EDM HELP?

EDM was able to utilize micro manufacturing capabilities to manufacture the necessary components for SLAC testing experiments. Specifically, copper and stainless steel structures were micro manufactured to study effect of "material on rf breakdown at short pulse, 100 GHz"-SLAC. EDM Department is capable of aspect ratios up to 38:1 feature sizes as small as 40µm and tolerances as low as 1 micron which, in this instance, allowed for extremely precise experiments and testing.



ABOUT EDM DEPARTMENT INC.

EDM Department is an engineering firm renowned for micro manufacturing capabilities. Our vertically integrated manufacturing process produces high quality products to extremely tight tolerances – up to 50x smaller than the width of a human hair – meeting the tight tolerances required for a multitude of applications within major manufacturing industries including: medical, defense, telecommunications and interconnect industries. Despite our name, we offer a full suite of engineering, development and manufacturing services.

Currently, we are working as an active partner in the US Government's Digital Manufacturing & Design Innovation Institute to continue to lead manufacturing technologies. Our commitment to quality and implementation of the newest and best electrical discharge machining (EDM) technologies on the market allows us to consistently meet and exceed our customers' needs for tighter tolerances, better finishes and reduced costs.

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Contact us at 630.736.0531 • info@edmdept.com • edmdept.com