



DATRON DYNAMICS, INC.
454 Route 13
Phone: 603-672-8890
Fax: 603-672-8067

Application Notes

Part: Machining of a bead weld along the lead edge of a turbine blade

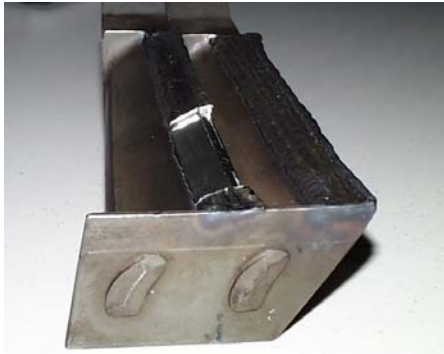
Material: Stainless Steel

Machine Used: M4

Features Utilized: "Z" Height Correction Probe and Oil Mister

Software Used: Datron Machine Software

Total Cycle Time: 30 minutes



Machining Details:

6mm micro grain carbide single lip split end mill

25,000 rpm

5 i.p.m. feed rate

.005" depth per pass machining

Trico vegetable based oil coolant

Summary of the Application:

We are able to offer a good turn-key solution for this demanding application. By utilizing our "Z" Height correction probe, we are able to measure and map in our controller the existing contour of the blade. With modifications to our software, we would then be able to project that same contour beyond the field measured. Therefore, Datron would be able to provide a totally automated solution for machining excess welds to match the original contour of the blade. Datron also has the capability to offer large format machines so that the entire part could be machined in one step without re-tooling. To achieve a smooth surface finish, smaller tools are required. Therefore the high frequency spindle offers some favorable advantages for machining time. In conclusion, with some minor modifications to the standard controller, the Datron machining system could be a very viable CNC machining solution for this application.