


Voxel Innovations is an advanced manufacturing company that specializes in applying next generation pulsed electrochemical machining ([PECM](#)) technology. Focusing on high-value metal components, Voxel Innovations enables new designs and improved performance in ways that are difficult or impossible with [competing processes](#).

Benefits of PECM

-  Pristine surfaces
-  No tool wear
-  Additive finishing
-  Thin walled features
-  Affordable microarrays
-  Hard-to-machine alloys
-  Micron repeatability

Working with Voxel

When you contact us with a 3D model of your part, we review it for manufacturability and economics. This begins an ongoing conversation about how well our process fits your part, based on PECM's strengths and weaknesses.

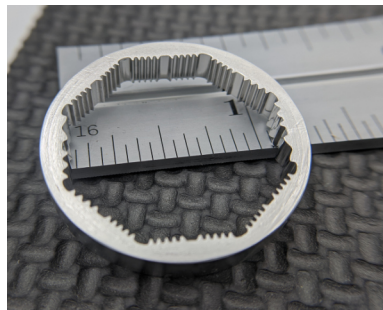
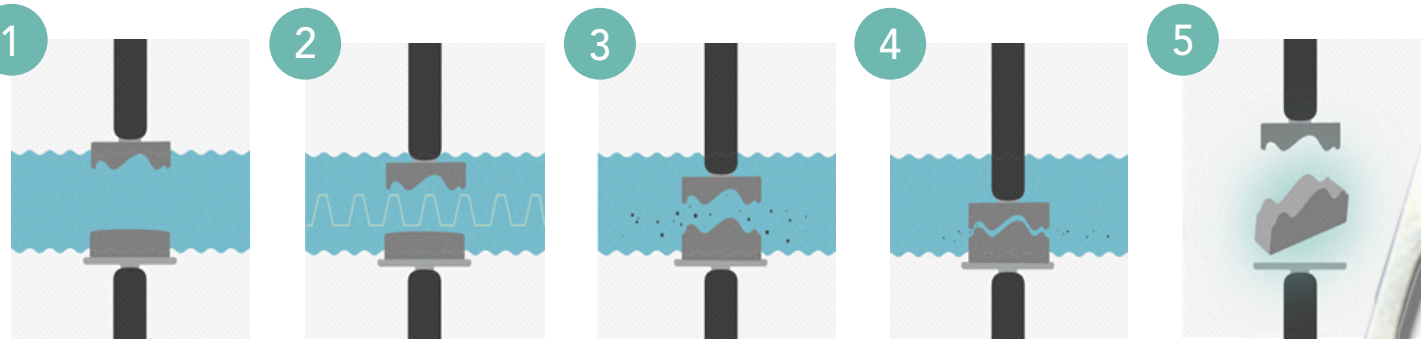


Fig. 1: Stainless steel internal gear splines



Fig. 2: Inconel 625 high temperature heat exchanger

PECM (The Simplified Version)



1
Tool and workpiece are positioned at a gap of $< 50\mu\text{m}$ with electrolyte solution between.

2
The electrode moves toward the workpiece and a pulsing DC current is applied.

3
Flowing electrolyte removes hydrogen gas and dissolved metal from the gap.

4
The workpiece is machined into the negative shape of the electrode tool.

5
The resultant part is burr-free with no thermal effects and low surface roughness.

Contact us! We're ready to exceed your expectations.
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Fig. 3:
Nitinol bone
fixture plate