

#1028 Brite Microfinishing/Recast Layer/ Sizing

Industry: Aerospace

Mfg/Method: EDM

Alloy: 15-5 Stainless Steel



Before

Problem: Customers main objective was to remove the recast layer on parts that might interfere with other moving parts. Also, parts were not falling into specified range tolerances as called out by the blue print

Solution: Electropolishing successfully removed the recast layer and smoothed the surface, but as a by-product also sizes the part to adhere to strict tolerances required for the industry. These parts have to be 100% inspected before and after processing.



After

Note to engineer: Detailed high magnification analysis of recast layers on EDM or laser cut parts indicates significant deposition of foreign debris. Recast layer problems have been traced to a host of corrosion and base metal fractures under high stress or high cycle applications. In many instances, the recast layer can be safely removed and product quality improved with electropolishing.