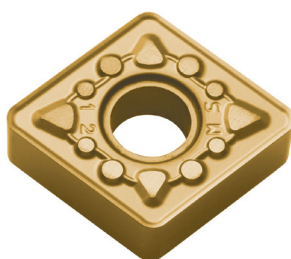


CA6515

CVD Carbide Turning Inserts for Medium-Roughing Stainless Steel



Material
718 Inconel Heat-Resistant Alloy

Part Type
Fuel Cell Housing

Application
Turning: Roughing

Machine Type
Doosan

Kyocera Holder
MCLNR164D
EDP: [THC89161](#)

Kyocera Insert
CNMG432MS CA6515
EDP: [TJU00922](#)

Existing Product
Competitor (CNMG)

Goal

An aerospace parts manufacturer was running very short tool life on a roughing operation in Inconel 718 and needed an insert that could deliver more parts per cutting edge while bringing down total machining cost.

Strategy

The previous insert was wearing out after a single part per edge in the demanding heat-resistant alloy. Kyocera engineers recommended the CNMG insert with the MS chipbreaker geometry paired with the CA6515 grade, a CVD-coated carbide engineered for stable, reliable turning in tough materials like Inconel

Result

The new insert delivered a 300% increase in tool life, a 113% improvement in material removal rate, and an 81% reduction in tool running cost. The customer saved more than \$46,000 annually.

Tools	Depth of Cut (Ap)	Cutting Speed V/c (sfm)	Cutting Feed f (ipr)	Coolant
Kyocera (CNMG432)	0.1200"	85	0.0150	External coolant
Competitor (CNMG)	0.1200"	75	0.0080	External coolant

Tool Life (pcs/edge)

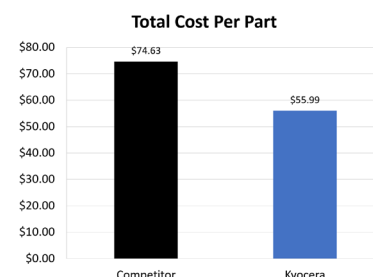
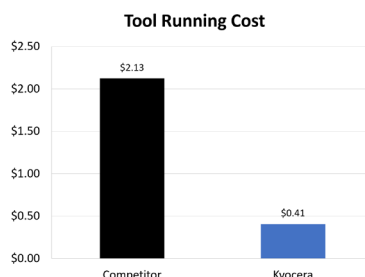
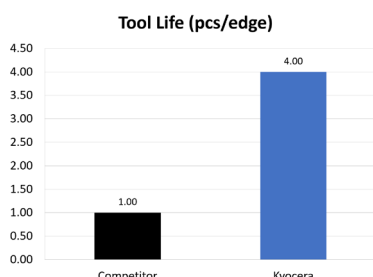
↑ **300%**

Tool Running Cost

↓ **81%**

Total Cost Per Part

↓ **25%**



Total Cost Savings

\$46,589

Tool Life (pcs/edge)

↑ **300%**

Tool Running Cost

↓ **81%**

Total Cost Per Part

↓ **25%**