OSK Cutting Technology

Introduction to the application of aviation industry

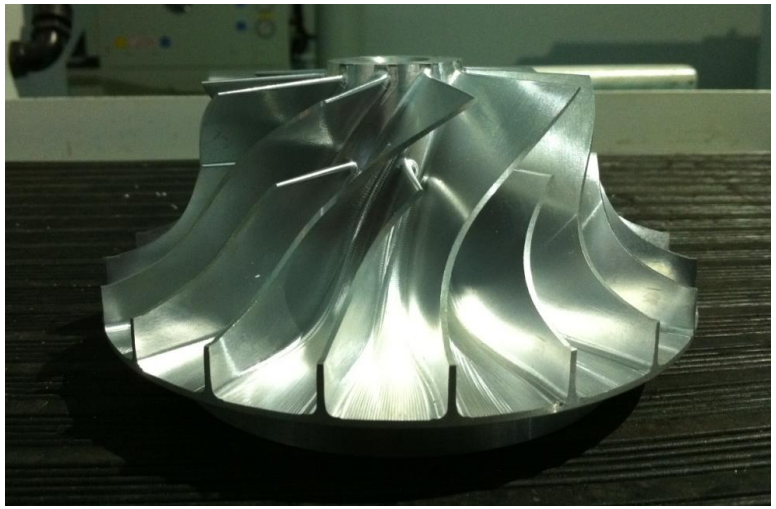
Customer: a certain aviation engine parts factory

Part name: compressor turbine

Workpiece material:
T2965(titanium alloy)

Workpiece hardness: ： HRC32-36

Processing equipment:
HERMLE C20U
Five axis vertical machining center



Tool: SM2BR0500L150S10

Diameter: 10mm

Blade number: 2

Arc: R5

Processing method: surface profile machining

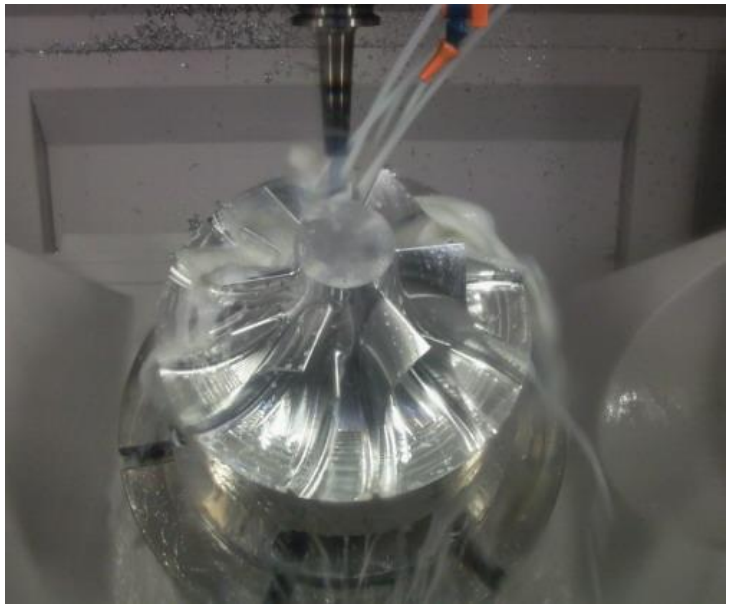
Cutting parameter:

S=1400r/min， Vc= 44m/min

fz=0.12mm/z， F=340mm/min

Ap=0.2mm， Ae=4-10mm

Processing life: 16h



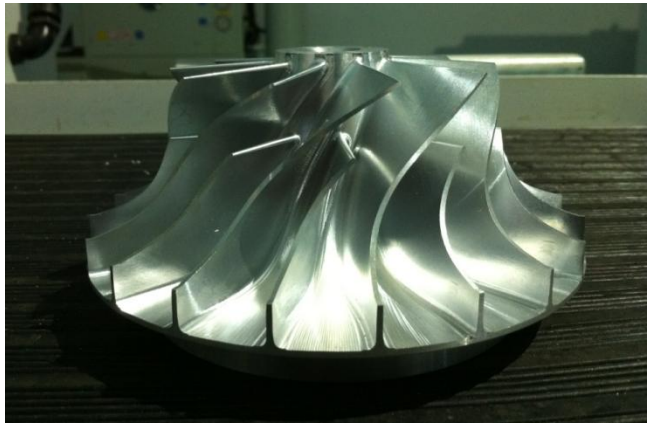
After machining the workpiece:

Workpiece surface roughness:

Ra3.2

Chip, chip breaking, chip removal

Tool surface coating off, knife body integrity and fine collapse



Rival tools: a well-known Japanese brand cutter

Diameter: 10mm

Blade number: 2

The arc: R5

Processing method: surface profile machining

Cutting parameter:

S=1400r/min, Vc=44m/min

Fz=0.12mm/z, F=340mm/min

Ap=0.2mm, Ae=4-10mm

Processing life: 9.6h

Overall life expectancy increased by 66% compared to competitors

The End

Thank You Very Much