



A BRAND AE-CR-MS-H



SNAPSHOT

BACKGROUND

An OSG customer was milling slots in 60 HRC bearings. They were having tool life issues and did not have the option of adjusting programming.

GOALS

The goal was to increase the customer's current tool life and reduce the number of tools purchased per year.

DETAILS

INDUSTRY

Oil & Gas

PART

Bearing

MATERIAL

Alloy Steel (60 HRC)

MACHINE

Horizontal Machining Center

SPINDLE

CT50

ORIGINAL TOOLING

Competitor End Mill
0.4724" | 4 Flute | TiAIN

NEW TOOLING

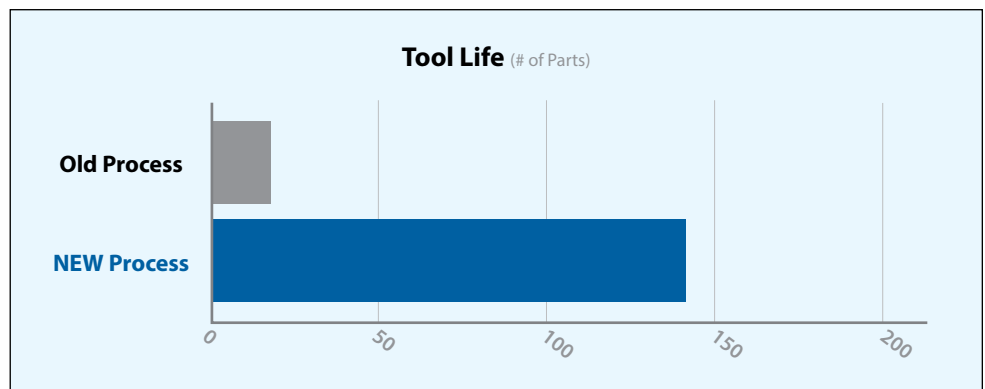
A Brand AE-CR-MS-H
0.4724" | 6 Flute | DUREY

OVER \$17,000 ANNUAL SAVINGS!

THE STRATEGY

OSG decided to test AE-CR-MS-H because of the material hardness. At higher material hardness the cutting tool geometry, tool substrate, and tool coating are very crucial. The AE-H series of end mills was specifically designed to tackle these challenges and was a great choice for this application.

	Original Process	NEW Process
Tool Diameter (Inch)	0.4724"	0.4724"
Cutting Speed (RPM • SFM)	2,104 • 260	2,104 • 260
Feed (IPM • IPT)	8.00 • 0.000951	8.00 • 0.000634
Depth of Cut (Aa • Ar)	0.4724" • 0.0245"	0.4724" • 0.0245"
Metal Removal Rate	0.09 in ³ min	0.09 in³ min
Cycle Time (Minutes)	1.90	1.90
Tool Life (# of Parts)	20	144





THE RESULTS

The customer saw the following results from testing the AE-CR-MS-H. Tool life was improved from 20 parts to 144 parts. This reduce annual tool usage from 250 tools to 35 tools.

- Tool life increased from **20 to 144 parts**
- Reduced annual tool usage from **250 tools to 35 tools**

Results Overview	
Cycle Time Saved Per Part (Minutes)	0.00
Number of Parts Per Year	5,000
Annual Cycle Time Saved (Minutes)	0
Annual Machine Cost Savings	\$0
Tool Life Improvement (Parts)	620%
Annual Tool Change Cost Savings	\$1,345.49
Total Machining Cost Saved Annually	\$17,773

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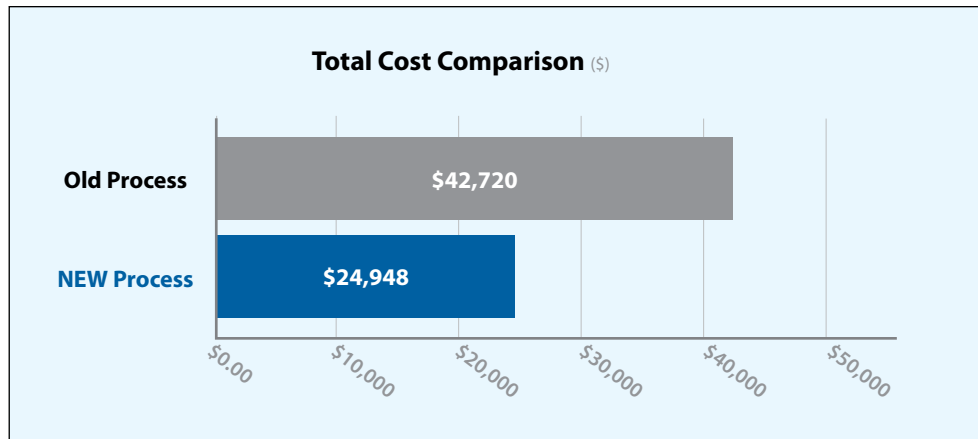
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THE CONCLUSION

This customer was able to achieve their goal of increasing tool life and reducing their annual tool usage. The increase in tool life led to savings of roughly \$16,500 on tool cost, with an additional \$1,300 savings from the reduced amount of down time for tool changes.



OVER \$17,000 ANNUAL SAVINGS!



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osgtool.com/ae-cr-ms-h-inch

