



A BRAND AT-1



SNAPSHOT

BACKGROUND

An oil and gas manufacturer interested in improving the overall performance and cycle time of their current thread mills. The current tool and process was 3 passes per thread.

GOALS

The customer's main goals were to reduce cost, chatter, and cycle time.

DETAILS

INDUSTRY

Oil and Gas

PART

Valve

MATERIAL

Low Carbon Steel (1018)

MACHINE

Vertical Milling Center

SPINDLE

CAT50

ORIGINAL TOOLING

NPT Thread Mill
0.737" | 6 Flute | TiAlN

NEW TOOLING

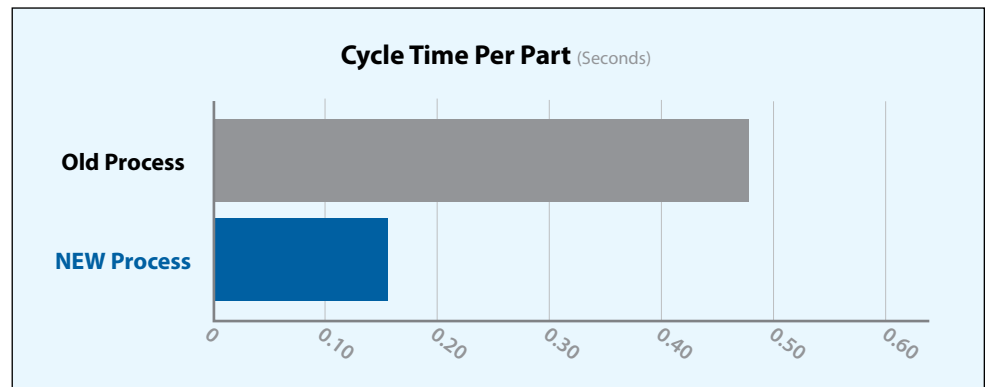
A Brand AT-1 Thread Mill
0.737" | 6 Flute | EgiAs

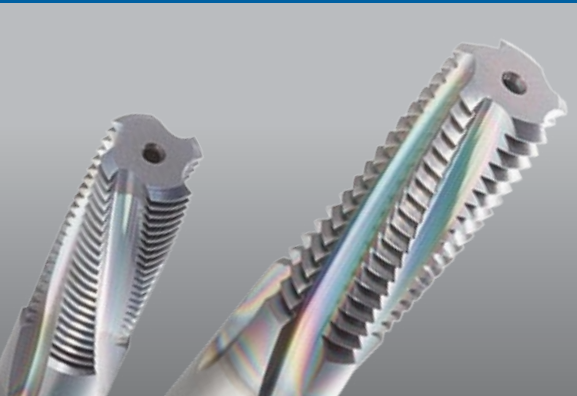
OVER \$20,000 ANNUAL SAVINGS!

THE STRATEGY

Based on the needs of the customer, OSG decided that the AT-1 thread mill would give the customer the best chance of success. With the AT-1 being designed to be a one pass thread mill OSG was able to produce an acceptable thread finish in one pass, while the current competitor tool was not able to do the same.

	Original Process	NEW Process
Tool Diameter (Inch)	0.737"	
Cutting Speed (RPM • SFM)	2,850 • 550	
Feed (IPM)	247.95	248
Thread Depth (In)	1.75"	
Cycle Time (Minutes)	0.4787	0.1596
Tool Life (# of Holes)	6,400	9,000





THE RESULTS

By reducing the number of passes from 3 passes to one, the customer's cycle time dropped by near 20 seconds per part. Additionally, because of the AT-1's anti-vibration design, the thread quality was increased by eliminating the chatter marks. These two tools were run at identical machining parameters, but even with the single pass, the AT-1 increased the overall tool life between the tools by an additionally 2,600 holes per tool.

- Increased overall tool life by **2,600 holes per tool!**
- Reduced cycle time by **20 seconds per part.**

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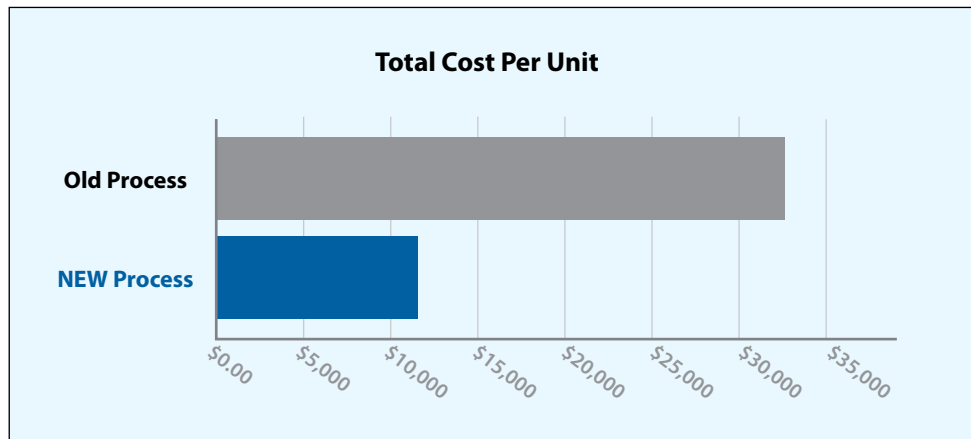
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Results Overview	
Cycle Time Saved Per Part (Minutes)	0.32
Number of Parts Per Year	50,000
Annual Cycle Time Saved (Minutes)	15,957
Annual Machine Cost Savings	\$19,946
Tool Life Productivity Improvement (%)	41%
Annual Tool Change Cost Savings	\$14.11
Total Machining Cost Saved Annually	\$20,931

THE CONCLUSION

The customer was able to save **over \$20,000 in overall machining cost** because of the AT-1's lower cycle time reduction and the increase in tool life.



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FIND OUT MORE

Click or scan for stock, features & benefits, videos and more! osgtool.com/at-1

