Customer Reduces Cycle Time by 41% Using TMAC Adaptive Control Feed Rate Optimization

RESULTS – INSTALL 6120

CHALLENGE

A customer is machining compacted graphite iron engine block components. They have two large identical horizontal machining centers running the same part and process. Both machines are running 6 parts per shift. They were exploring new technology to help enhance production. With the identical machines running the same process it gave them the ability to run a controlled comparison to their original process.

TECHNOLOGY

TMAC

SOLUTION

The customer implemented Caron Engineering's TMAC system on one of the two identical horizontal machining centers. The machine running TMAC saw an immediate cycle time reduction of 25% using the adaptive control option. Adaptive control automatically adjusts the feed rate based on the material conditions to optimize cutting time.

In addition, the operators were performing multiple critical checks throughout the process. With TMAC, these manual checks were no longer needed since TMAC runs these checks in real time. TMAC automatically calls a redundant tool when it detects excessive tool wear, allowing the machine to run unattended. By eliminating these manual checks and gaining the ability to run the machine unattended, cycle time on this part was reduced by an additional 16%.

The implementation of TMAC on this machine resulted in a total cycle time savings of 41%. They are now producing 10.2 parts per shift, compared to only 6 on the identical HMC without TMAC. This customer has followed up with an order for nine more TMAC systems.

RESULTS

- *Reduced cycle time by 41%*
- *Allowed unattended operations*
- *Customer immediately ordered 9 more TMAC systems*

INDUSTRY

Transportation

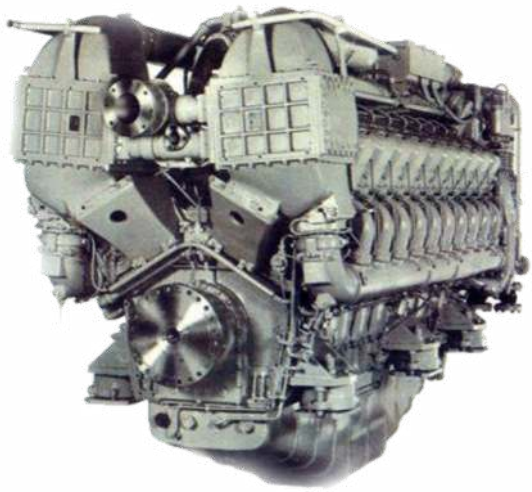
MACHINE TYPE

HMC

MATERIAL

Compact Graphite Iron

SMART MANUFACTURING SOLUTIONS



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