

IMPROVED MACHINABILITY STEEL



Setforge



SIMPLIFICATION

Reduction of technical intervention during machining.
Machining tools lifetime up to 3 times longer.



PRODUCTIVITY

Reduction of cutting forces.
Increase of the cutting velocity up to +30%.
Better chip fragmentation.



OPTIMISATION

Finished parts less expensive due to lower machining costs.

Improved machinability steels can significantly optimize the machining operations of forging parts by controlling the type and number of inclusions present in the steel. Their use allows a significant increase in productivity thanks to the increased cutting speed, machining tools lifetime up to 3 times higher and a better chip fragmentation.

Mechanical properties required for the application do not change.

Prerequisite

Adjust machining parameters to maximize machinability improvement.
POSSIBLE SUPPORT FROM THE STEEL MAKER

Improved machinability steel can be used for a large range of mechanical parts and particularly for large series of production where machining rates are very high.



Axle shafts for off-highway applications, automotive and truck gears, gear shafts for automotive applications

IMPROVED MACHINABILITY STEEL



EXISTING SOLUTIONS ON THE MARKET

Setforge is working in close collaboration with **the most innovative steelmakers on the market to develop the solutions of tomorrow**. Our purchasing and engineering teams are at your disposal in order to assess the potential metallurgical and economic gains of these solutions for your business.



Steel range MECAMAX

MECAMAX® MB

Extract from Sidenor documentation

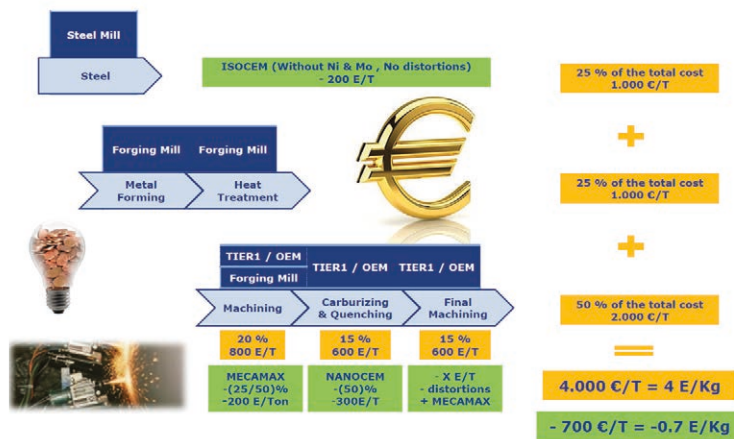
- **MECAMAX® MB** was developed by GERDAU to **reduce machining costs (20-50%)** by **Bismuth addition**, a **non toxic** element
- Recommended for **high performance automotive applications**: **no influence in mechanical properties and process**.

Benefits of Bi alloyed steels:

- ✓ Self-lubricating
- ✓ Promote chip fragmentation
- ✓ Reduce cutting forces and temperatures
- ✓ Reduce adhesive tool wear



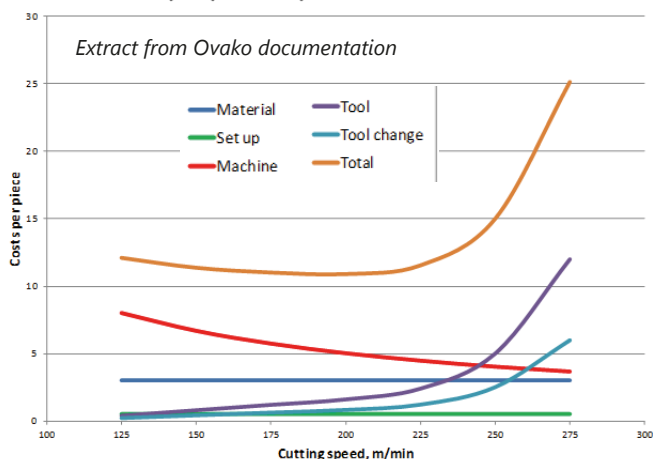
Process of a Gear Box. Cost analysis.



Steel range MSTEEL

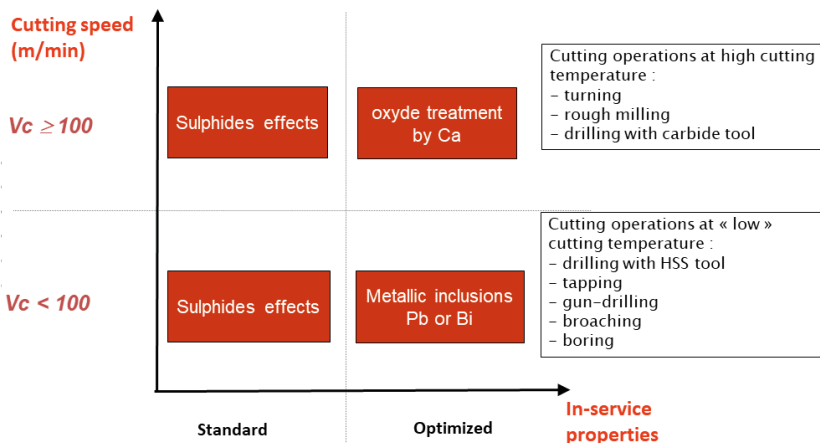
Costs per piece in parts machined with carbide tools

Extract from Ovako documentation



Steel range VITAC

Extract from Ascometal documentation



Approforge

FOCUS ON INNOVATION

APPROFORGE, purchasing specialist of raw materials for Setforge Group, one of the leading group in Europe in the production of forged components, has set-up a co-development team to provide innovative solutions to their customers in order to bring them a competitive advantage by reducing the overall cost of acquisition of their parts.

Ask for more : innovation.approforge@setforge.net