



EXEM STEEL

IMPROVED MACHINABILITY

Conventional types of steel contain numerous inclusions which negatively impact machinability. Our various grades of EXEM steel (extreme machinability steel) are produced in our steelwork in accordance with a special EX procedure which transforms hard aluminium oxides, which are the main cause of tool wear, into plastic calcium aluminates with an outer layer of calcium sulphide. The sulphide layer transforms itself during machining process into a lubricating layer between the cutting tool and the machined part what results in better machinability.

By replacing of conventional steel with our EXEM steel can be cutting speed increased **by 25 to 50 %** and at the same time is there also noticed longer lifetime of cutting tool. In case that the cutting speed remains unchanged increases lifetime of cutting tool **up to 4 times**.

But the fact is also that by increasing of the machining speed decreases lifetime of cutting tools.

With the aim to assure our customers always the same cutting properties are all types of EXEM steel before shipment machinability tested and the result reached (V15 value) is written in our test Certificate.

The advantage of EXEM steel is that its good machinability is not deteriorated during process of hot forming (forging).

In the table are shown only some grades of steel with regard to purpose of use, but in practice it is possible to produce EXEM type of steel in accordance with chemical analyses required by our customers.

<https://www.econsteel.de/>