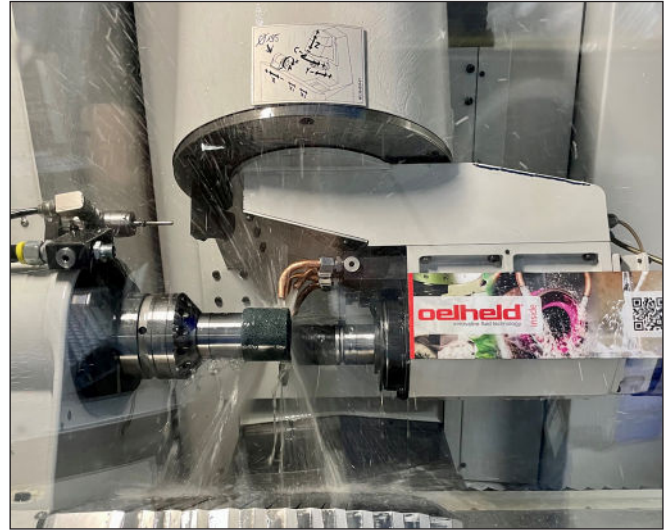


## Higher precision for long-lasting grinding processes



Coordination meeting at Präwema GmbH



Grinding and dressing process with SintoGrind TC-X 630

In more than 115 years of company history PRÄWEMA - short for „Präzisions-Werkzeug-Maschine“ – has been well established on the international machine market. When the company was founded in 1908, the initial focus was set on the production of lead screw and feed screw lathe machines. At the current location in Eschwege PRÄWEMA, with around 340 employees, has developed into a manufacturer of special gear processing machines and is globally well-known today.

As a medium-sized company and member of the DVS TECHNOLOGY GROUP in the field of hard-fine machining of gears, PRÄWEMA has developed gear honing into the leading machining method and is the global market and technology leader.

For the production of individual elements made of materials such as HSS steels and predominantly carbides, the company uses tool grinding machines, as well as a Vomat filtration system FA 960, with HSS pre-separator and energy-efficient cooling.

PRÄWEMA was looking for a grinding fluid that would significantly reduce maintenance, machine downtimes, improve filtration and filtration grade and thus ensuring clean machines. An increase in production output and high energy efficiency were particularly important.

At a trade fair, contact was established with oelheld GmbH and Vomat GmbH. After a very good and detailed product and technical consultation on site by oelheld and Vomat, a grinding test was carried out. The performance was convincing. Following improvements were achieved: lower refill quantity, better air release capacity and less misting. Further advantages were better tool life and greater precision during long-lasting grinding processes thanks to better oil temperature control.

The grinding fluid SintoGrind TC-X 630 from oelheld GmbH was used for the grinding test, which sets a new standard in the class of carbide grinding fluids. The high-performance grinding fluids of the SintoGrind range have been developed for high-speed grinding processes

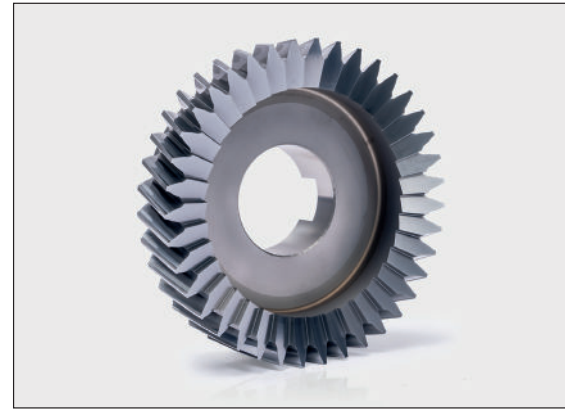
that require extreme precision and optimum cooling. The product is free of chlorine and heavy metals. SintoGrind TC-X 630 is suitable for the following applications: groove grinding, profile grinding, as well as external and internal cylindrical grinding.

Advantages of the grinding fluid are low foaming, reduced oil mist and increased productivity. Another benefit is the significant reduction in surface burning and excellent protection against cobalt leaching. Very low burr formation and improved surface quality are also guaranteed. The advantages are due to the special combination of the base oil with high-quality additives.

The high-performance grinding fluid is compatible with a wide range of materials, including carbide, HSS, PCD, CBN, cermet and ceramics. The SintoGrind TC-X range contains no hazardous elements and has high ageing resistance, as well as excellent cleaning and cooling properties.

The project, which was the result of joint planning and development by PRÄWEMA, oelheld and Vomat was characterized by high energy efficiency and productivity. In order to meet the energy and sustainability requirements, a demand-oriented, full-flow filtration with demand-controlled, frequency-controlled pumps was planned. In order to meet the requirements in terms of energy and sustainability, Vomat have also included a free-cooling function. This has enabled the project to be implemented and now meets the high requirements for energy efficiency and sustainability.

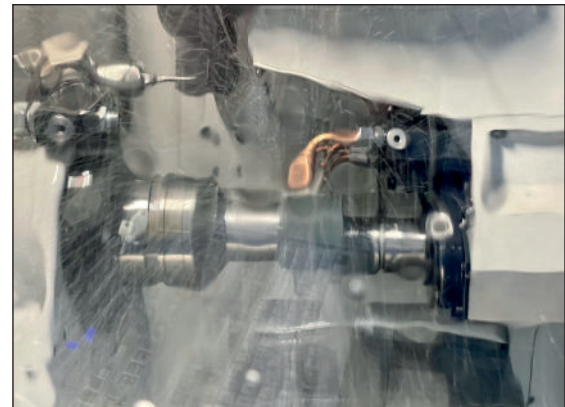
**PRÄWEMA's conclusion after the changeover of the grinding fluid is positive: „We were able to improve tool life and greater dimensional accuracy during long-lasting grinding processes.“**



Gear skiving tool manufactured by Präwema



Gear skiving tool manufactured by Präwema



Grinding process with SintoGrind TC-X 630



Source: Präwema Antriebstechnik GmbH  
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