

APPLICATION

Grinding machines

Lubrication Costs Cut & Slip-Stick Effect Eliminated for Print Finishing Company

CUSTOMER TESTIMONIAL

UNGRICHT GMBH + CO KG, Roller and Engraving Company

Customer Profile

UNGRICHT GMBH + CO KG is a company specialising in rollers for embossing, printing and finishing.

Application

NAXOS cylindrical grinding machines

Challenge # 1: Slip-Stick Effect

The company was experiencing slip-stick effect during the roll grinding process with low feed (chatter marks on the roll). After the overhaul, the machines were put back into operation with the manufacturer's recommended CGLP way lubricant oil.

For the finish grinding of the rolls, they run with a very slow feed rate of approximately 80 to 100 mm/min. The grinding slide has a net weight of approximately 4,500kg. The company tried ISO VG 220 CGLP oils from various manufacturers. They also tried a CGLP oil with ISO VG 68 viscosity and Teflon. For all oils used, a slip-stick effect was experienced at low feed rates after approximately two to three days of use. The heavy side could not be brought into a safe sliding phase with the oils that were tried. Higher feed rates cannot be used for fine grinding operations in the μ -range.

CHALLENGE

Excessive lubrication consumption and slip-stick on Naxos grinding machines

SOLUTION

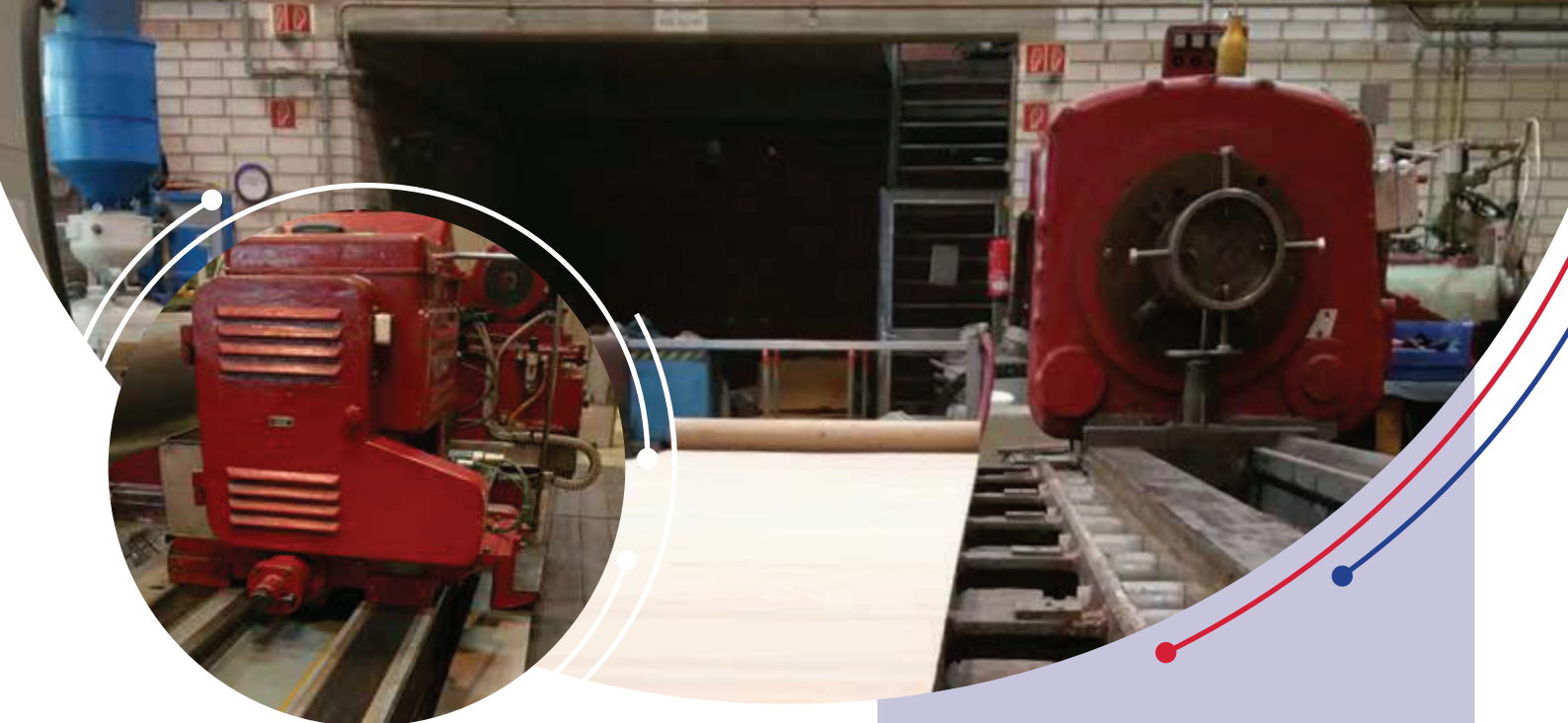
Monolec® Way Lubricant (6315)

RESULTS

- Reduced lubricant consumption by approx 90%, from 600 litres to 60 litres
- Eliminated slip-stick effect during roll grinding process with low feed
- Eliminated infeed jumping problem on grinding slide way track and gear lubrication system

LE SOLUTION # 1

In November 2016, the company completely cleaned the V-track and flat-track of the NAXOS cylindrical grinding machine and filled them with 60 litres of Lubrication Engineers' Monolec Way Lubricant (6315). Since this oil change, the customer has not had further problems. In the meantime, the oil has been checked twice for wear by LE Germany without any visible findings.



Challenge #2: Infeed Jumping

On other NAXOS cylindrical grinding machines there were problems with the infeed of grinding stones. As soon as the grinding wheel was moved to make contact with the roller, and the grinding stone was moved further inwards via a handwheel with digital display in the μ -range, the infeed jumped uncontrollably in the range of 2 to 3/100 mm. As a first procedure, the existing grinding slide spindle was replaced by a fine thread spindle on the affected machines to guarantee an even more sensitive infeed of the grinding stone to the roller. Unfortunately, the problems could not be solved, even after replacing the mechanical components.

LE SOLUTION # 2

The company converted the combined grinding slide way track and gear lubrication system to Monolec Way Lubricant (6315) on a trial basis. Typically, a way lubricant cannot be used as a gear oil in circulation lubrication systems. However, the LE way lubricant has solved this problem and led to the permanent elimination of the issues.

The machine has now been running smoothly for more than 11 months. LE Germany filtered the oil and changed the oil filter; a September 2017 oil analysis confirmed the quality of the oil is still good.

Thanks to UNGRICHT GMBH + CO KG, and LE lubrication consultant Silvia Schmid (pictured), from LE Germany, for helping to provide the information used in this report.



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