



MTRE 32-3/3 installed in a central coolant system

Large energy savings with E-pumps

Adjustment of pump performance is a must in many applications today. No doubt the best performance adjustments is achieved by means of a frequency converter as this gives a large number of advantages.

Grundfos provided

- › Energy savings
- › Reduced noise and stress in the system
- › Built-in flexibility
- › Built-in motor protection

The situation

A central system for storing, cleaning/filtering and distribution of the coolant to all the tooling machines is crucial for the operation of a tooling machine factory. Approximately 16 m³ of coolant is stored in a storage tank. An immersible pump, which is connected to the common coolant supply, is placed in the tank.

All the 42 tooling machines are connected to the supply line via a solenoid valve, which is activated when the machine is in operation. The coolant is then lead to a receiver tank, where a built-in level controlled valve will ensure that the tank always is filled. The flow to the individual machines varies, depending upon the use and the load of the machine.

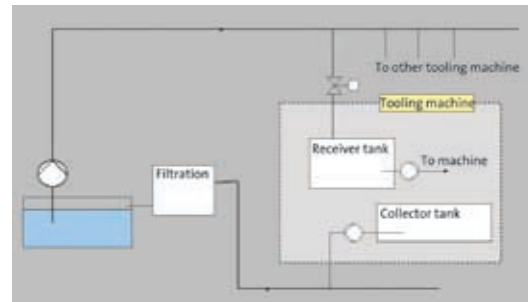
The Grundfos solution

A MTRE 32-3/3 pump is placed in the tank and connected to the common coolant supply line. The MTRE-pump is set up for constant pressure operation, controlled by a pressure transmitter placed within the installation. The operation information can be put into a load profile. The MTRE pump results in reduced power consumption as well as reduced pressure in the system.

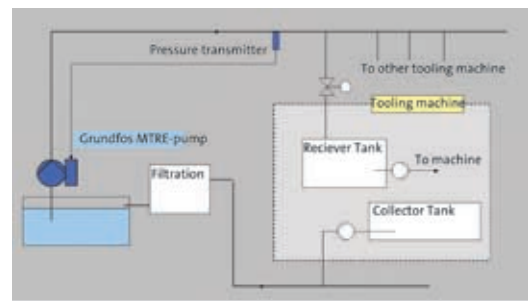
Taking the load profile into account, a calculation of the annual energy consumption of the MTRE-pump can be compared to the consumption of the non-speed regulated pump. The speed-controlled MTRE solution will only consume 8,642 kWh. This represents a saving of 11,754 or 58% compared to a MTR solution.

The outcome

Production takes round-the-clock, keeping the pump in operation for all three daily shifts. The factory is furthermore only shut down a few days each year. The benefits of this type of application includes, energy savings, a soft start, which reduces noise and stress in the system. A built-in flexibility, making pump selection easier, built-in motor protection and communication with the surroundings via RS 485 interface or standard digital/analogue in/outputs.



Central Coolant System Installation with MTR pump



Central Coolant System Installation with MTRE pump

The benefits

- > Large energy savings
- > Enhanced comfort
- > Longer life for systems as well as for individual components
- > No appreciable loss of efficiency
- > Reduced water hammer
- > Fewer starts/stops.

> **Read more about Grundfos MTRE at**
www.grundfos.com

> **Contact**
For further information please contact your local Grundfos office.