Overheads down & rising reliability

with catalytic water treatment by MOL®technology

Cooling circuits are one of the most important parts in industrial production lines. However, when using water for cooling applications it is very important to take care of pipework surfaces. The change of material properties increases undesired side effects. For example microbial growth (e.g. fouling), scale deposits as well as corrosion can significantly compromise cooling effects with regard to dwell time and COC (cycles of concentration). Furthermore, increasing surface roughness and hydrophobicity require more pumping power, higher water flow rate, and ultimately higher costs of operation.

Cooling water treatment @ BAYER Bitterfeld/Germany

BAYER Bitterfeld GmbH - subsidiary of the BAYER AG group - is producing non-prescription drugs, including the world famous Asprin®. More than 50 countries are supplied from Bitterfeld.

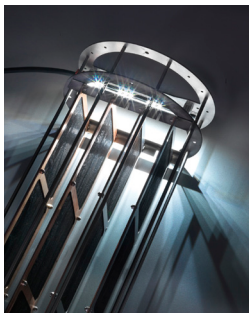
The installation consists on an air compressor station coupled to one cell cooling tower. The circulation rate is in the area of 80 - 100 m³/h. The cooling water system has a capacity of 3.5 m³ and 0.5 to 1 m³/h of make-up water is supplied. The task was to keep the plate heat exchanger surfaces free from fouling and scaling by running along the German guide lines for cooling circuits.

In 2000 MOL®CLEAN was installed in one of the compressor station cooling systems. To reduce the concentration of biocides used as well as to extend cleaning periods, a MOL®CLEAN catalyst module was installed in the cooling tower basin. Via a dosing station the consumable – MOL®aktivE30 (30% hydrogen peroxide) – was added by shock dosage directly to the catalyst. In 2006 a second cooling circuit was retrofitted with MOL®technology.

Since 2013 the light induced catalysis – so called MOL®LIK-technology – is running as a direct comparison at one of the cooling circuits. By using this technology the conventional dosage of hydogen peroxide is completely eliminated and the maintenance efforts are reduced. All circuits running with well performance without any troulbes.

Our expertise:

- **EASY INSTALLATION.** The catalyst module is installed at a suitable location of the water system based on water volume and circulation rate. The LED-daylight exposure is automatically controlled and will depend on the microbiological load of the system. A conventional cleaning of the system before installation is recommended
- **LOW MAINTENANCE.** MOL®LIK is a robust technology with a long endurance and minimal operational costs. A daily check of the LED system would be optimal, as well as a monthly manual cleaning of the module (to remove dust of the fragments of detached biofilm, just a simple brush is enough).
- **COMPLETE SERVICE.** We will provide a solution that meets your needs with focus on both effectiveness and sustainability. Installation, commissioning and periodic maintenance (inspection) is provided to ensure an efficient performance of the technology. A regular microbiological monitoring of the water system is available.



Open cooling circuit:

- System volume: 3.5 m³
- Circulation: 100 m³/h
- COC: 3.0 till 4.0
- Make-up: portable water

1 x MOL®LIK @ cooling tower basin
- Weight: 4.9 kg
- Size: Ø 250 / L: 600 mm
- Power consumption: 60 Wh/d (12 V DC)

Rising energy efficiency & saving water!

Expert advice anytime:

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MOL Katalysatortechnik - 2015/10