

## New regulations for operators of wet scrubbers

**The 42nd regulation in the German Immission Control Act (BImSchG) for evaporation coolers will take effect in the near future. It pertains to cooling towers and wet separators. The goal is early detection of Legionella (rod-shaped bacteria) in the water contained inside systems, and to initiate countermeasures. LUFTREIN spoke with Jens Kuhn, Quality Manager at Keller Lufttechnik, about the upcoming regulation and its effects.**

**LUFTREIN:** Why is this regulation required for evaporation coolers?

**Jens Kuhn:** According to the Federal Ministry for the Environment, Nature Conservation, Building and Nuclear Safety, 110 people are annually contracting Legionella, which originate in evaporation coolers, cooling towers and wet scrubbers. The aerobic germs contaminate the air inside very fine water droplets. Personnel inhaling such bacteria may develop respiratory infections. Five percent of such cases lead to

death. The new Regulation seeks to prevent the uncontrolled propagation of Legionella in these types of systems which poses a substantial risk to individuals working and living in this environment.

**LUFTREIN:** How does this impact companies operating wet separators?

**Jens Kuhn:** Operators face a number of requirements. First, they must report their operation of wet separators to the local health authority or labor inspectorate and request a preliminary test for potential Legionella contamination. A qualified health and occupational safety professional is required to assume the responsibility of a completing a risk assessment and preparing a checklist. Following those tasks, the operator is obligated to inspect the water content every 14 days. Appropriate test strips can be used for this purpose. Additionally, an accredited laboratory will be instructed to perform inspections every three months. The results of the risk assessment, the completed checklist, as well as the continuously updated measurements and test results must be recorded on an operation log. An accredited inspection agency will check adherence to these requirements every five years.

**LUFTREIN:** How does the operator or laboratory determine whether a critical level of contamination by microorganisms has been reached?

**Jens Kuhn:** A reference value for the corresponding system is determined from six consecutive laboratory inspections. This value is measured in CFU per milliliter. CFU stands for colony forming unit. These are bacterial proliferation levels evaluated in the laboratory. If the concentration increases by a factor of 100 or more in comparison with the reference value, there exists an imminent danger and the operator must undertake immediate remediation measures. >

Jens Kuhn, Quality Manager (on the right) and Tim Daffner of Synlab agree that operators of wet separation systems must become familiar with future requirements in order to fulfill them as soon as the regulation takes effect



Tim Daffner, Synlab employee, tests the water properties in a wet separator

**LUFTREIN:** What happens if the volume of bacteria suddenly explodes?

**Jens Kuhn:** The operator must immediately ascertain the source of the significant increase and promptly initiate countermeasures. For example, this can be achieved by adding a bactericide.

**LUFTREIN:** How does Keller support their customers with fulfilling such strict requirements?

**Jens Kuhn:** We are cooperating with Synlab, which is an accredited laboratory service provider with its main office in Augsburg. Synlab is capable of servicing our customers appropriately, will perform the initial and follow-up testing of the water, and will undertake the hazard evaluation, as well as the processing of the checklist prior to the (re)commissioning, and will also handle regular reviews which are required for every five years. Our Service Department (for contact data see below) or our local service technicians will be pleased to inform you of Synlab's services, and will help to initiate contact.

We are currently working with the German VDI (The Association of German Engineers) on establishing a training course for industrial health professionals, whereby operators would have their own personnel perform the risk evaluation on site and process the commissioning checklist.

**LUFTREIN:** Do you know the exact effective date of this new protocol?

**Jens Kuhn:** A target date of March 2017 was previously announced, but this is not yet concrete. Nevertheless, we advise operators of such wet separation systems to familiarize themselves with the requirements in advance.

**LUFTREIN:** Thank you for the information provided. <

**Do you require a quotation from Synlab, our cooperating partner?**

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**Do you have any content-related questions regarding the new regulation?**

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