

CHAPTER 6 - WATER QUALITY

400

406.01 LEGIONELLA BACTERIA AND BUILDING WATER SYSTEMS



INTENT

To control and reduce the effects of Legionella Bacteria in the water-based system.

REQUIREMENT

All new and existing buildings must comply with the technical guidelines issued by Dubai Municipality, which includes:

- A. All water systems and networks which create a water spray or aerosol including but not limited to cooling towers, evaporative condensers, hot and cold water systems, showers, evaporative air coolers, spas, fountains, misters, etc., must be periodically maintained, cleaned, disinfected and checked to minimise the risk of legionella bacteria or germs contamination. This must be in accordance with the technical guidelines issued by Dubai Municipality, regarding the control of legionella bacteria in water systems.
- B. All water systems equipment and accessories, including but not limited to potable water network, hot and cold water systems, water tanks, pumps, pipes and fittings must be properly maintained, cleaned and disinfected.
- C. Sampling and testing must be carried out for the presence of bacteria / germs and legionella bacteria.
- D. All equipment and devices used for swimming pools, spa pools, whirlpool baths, hydrotherapy pools and Jacuzzi, must be maintained, cleaned, disinfected and checked, periodically.

Specialised laboratories approved by Dubai Municipality shall carry out the water tests and sampling. All test results must be recorded and kept along with the records for maintenance and remedial works, at site. This would be checked by Dubai Municipality.

SIGNIFICANCE

Legionnaires' disease is a potentially fatal form of pneumonia which can affect building occupants. It is caused by the bacterium *Legionella pneumophila* and related bacteria. The collective term used to cover the group of diseases caused by legionella bacteria is legionellosis.

Legionella bacteria is found naturally in water sources such as rivers, lakes and reservoirs, usually in low quantities. They may also be found in purpose-built water systems such as cooling towers, evaporative condensers, hot and cold-water systems and spa pools. Legionella bacteria can survive under a wide variety of environmental conditions and are found in water at temperatures between 6°C and 60°C. The legionella growth is most favourable between the temperatures of 20°C and 45°C.