

ABSTRACT

The Centre for Best Available Techniques (BAT) is founded by the Flemish Government, and is hosted by Vito. The BAT centre collects, evaluates and distributes information on environment friendly techniques. Moreover, it advises the Flemish authorities on how to translate this information into its environmental policy. Central in this translation is the concept “BAT” (Best Available Techniques). BAT corresponds to the techniques with the best environmental performance that can be introduced at a reasonable cost.

On 9 February 2007, the Flemish Government approved the Decision on *Legionella*. This decision stated that temperature control is the standard measure for prevention of *Legionella* in new sanitary systems. The water provision systems in all high and medium risk installations need to be built and operated according to Best Available Techniques (BAT). In this BAT-document, a structural basic concept that is in line with BAT is developed for new installations.

The socio-economical analysis discusses those sectors that have most of the high and medium risk installations. The study provides a survey and financial strength analysis for the following sectors: care institutions, catering industry, education, youth tourism and sports accommodation. The sanitary installations are part of the basic investment for new installations and BAT conclusions focus on good practice measures for such installations. These do not necessarily generate an additional cost. Therefore, the financial strength of existing installations is not a decisive criterion in the BAT evaluation.

In determining the necessary measures a variety of national and international instructions apply. They form the basis of this BAT-study. The document describes and evaluates techniques in relation with

- instructions for design:
 - o structural requirements for sanitary installations;
 - o requirements for material selection;
 - o requirements for dimensioning;
- instructions for the construction of the installation;
- instructions for operation and maintenance.

The techniques result in the creation of conditions in which the growth and development of *Legionella* is prevented or minimised. They involve temperature control, optimised water flow and the reduction of biofilm growth. The techniques vary from control and operational measures to worked out instructions for dimensioning. In several paragraphs examples calculations are given, to clarify the formulae and calculation methods.

The BAT-conclusions result in recommendations for *Legionella* risk control in the construction and operation of new sanitary installations.