CASE STUDY: ECA
LEGIONELLA

REFERENCE SITES

ITALY - BARDONECCHIA PROJECT

ITALY - PIEMONTE PROJECT

BELGIUM - YACHT CLUB IN NEWPORT

ITALY - TURIN

SWEDEN - LIBO PROJECT

HOLLAND - ELDERLY HOUSE DE ANLOOP

HOLLAND - ELDERLY HOUSE LEVESTE

HOLLAND - ELDERLY HOUSE TER EYCK

Executive Summary

Legionella is a type of bacterium found naturally in fresh water. When people are exposed to the bacterium, it can cause illness (Legionnaires' disease and Pontiac fever). This bacterium grows best in warm water, like the kind found in;

- Hot tubs
- Cooling towers (air-conditioning units for large buildings)
- Hot water tanks
- Large plumbing systems
- Decorative fountains

Challenges

The costs if a buildings water system becomes infected can be substantial not only in terms of **human suffering** but also **financial**ly. If a hotel is identified as a source of infection it can result in forced closure whilst the problem is treated plus possible lawsuits if people are infected. This means substantial loss of revenues and reputation. In addition in many countries if it is shown that the problem occurred due to the negligence of the hotel or ship operators and staff it can result in large financial penalties or even prison sentences for the individuals concerned. Every year hotels throughout the world are forced to close due to this problem often in the height of the tourist season.

Legionella and water temperature:

- Under 20°C low Legionella risk
- 33- 42°C ideal reproduction range
- 42-50°C reproduction no longer possible
- 50-60°C Legionella are killed
- 60-70°C Legionella are killed within seconds

How did ECA help ?

Human Safety

Problem they wanted to solve: Legionella contamination *(Yacht club).*

The club house has 40 shower rooms for women and 40 for men. In 2004 two men died because of Legionella infection they had acquired in the club. The local authorities were going to close the club if the owner would not provide an effective water treatment.

Cold and hot water is treated 24/7 & the shower water was controlled by an official lab 2 times per day. Samples were taken at the end of each shower installation and also at the hand wash places. Before treatment with **Anolyte** the results were positive with Legionella.

Ever since Anolyte' use; the results are negative for Legionella.

Cost

In 2010, the administration already had to clean the water system two times because of Legionella. They also had to change all shower- heads. The cleaning cost was more than 70.00 0€. After installation of the **Anolyte** generator in June 2010 they have not had any Legionella problem. *(Elderly house Holland)*

Eco-friendly technology

The housing complex was built with full consideration of ecological impact and therefore the builder selected the technology he considered as the most ecology-friendly. *(Libo Project Sweden)*

Testimonials & Results

"As a result of using high temperature technology the damages of the piping line were detected while Legionella contamination still persisted"

~ Hotel Europa in Bardonecchia city, Turin,Italy

"As a result of using chlorination damages of the piping line were detected while Legionella contamination still persisted."

~ Mayor of Newport (yacht club)

Industry Facts

Legionella has been identified as a major problem in multi-occupancy buildings such as hotels, hospitals, hostels, schools, military establishments, nursing homes and office blocks.

Worldwide thousands of people become seriously ill or die through infection by this potentially **deadly disease.** The costs if a buildings water system becomes infected can be substantial not only in terms of human suffering but also financially. If a hotel is identified as a source of infection it can result in forced closure whilst the problem is treated plus possible lawsuits if people are infected.