



In the UK, the Health and Safety Executive (HSE) has set guidelines to manage and control the risks associated with this bacterium. The marine industry, with its intricate and extensive water systems, provides a fitting example to understand the importance of these requirements. This article delves into:

- the UK's Legionella testing requirements
- · discusses common causes for Legionella's growth
- presents statistics from the International Maritime Organization (IMO)
- and introduces how test kits, particularly LegionellaMax, can bolster these efforts.



# The UK's Regulatory Landscape

The UK is extensive in its approach to managing the risks posed by Legionella bacteria. Central to this approach are regulations and guidelines that address the need for preventive measures and mandate regular monitoring and control methods. Given its unique challenges, the marine industry needs to pay close attention to these regulatory guidelines.

# The Control of Substances Hazardous to Health Regulations (COSHH)

One of the foundational regulatory instruments in this domain is COSHH. It emphasises protecting people against health risks from hazardous substances used or produced at work. In terms of Legionella;

Risk Assessment: Under COSHH, employers are required to conduct thorough risk assessments to determine the potential for Legionella proliferation in their water systems. This is crucial for marine settings where the risk of stagnation and system complexity can be high.

Control Measures: Employers must implement necessary control measures once risks are identified. This might involve modifying water systems to reduce stagnation or adjusting temperatures to make them less conducive to Legionella growth.

Regular Monitoring: COSHH mandates ongoing surveillance of control measures to ensure their effectiveness. This involves regular testing and system inspections.

Employee Training: Crucially, COSHH also addresses the human element, requiring employers to offer appropriate training to employees, making them aware of the risks and the measures to mitigate them



# The Approved Code of Practice L8 (ACoP L8)

The ACoP L8 is a more specialised document specifically tailored to the threat of Legionella. While it complements the guidelines laid out by COSHH, it offers more detailed instructions for Legionella control;



Legal Implications: Although an "Approved Code of Practice", the ACoP L8 carries a special legal status. Suppose employers are prosecuted for non-compliance, and it's found they didn't follow the relevant provisions of ACoP L8. In that case, they'd need to demonstrate that they've complied with the law in another way or face penalties.



System Management: ACoP L8 places a strong emphasis on comprehensive system management. It recommends appointing a responsible person to oversee Legionella control measures, ensuring continuity and accountability.



Maintenance: The ACoP L8 lays out specific guidelines on the routine maintenance of water systems, including the cleaning and disinfection of storage tanks, regular flushing of unused outlets, and periodic temperature checks.



Record Keeping: The ACoP L8 stipulates meticulous record-keeping for at least five years. These records should detail the state of systems, test results, potential problems, and the steps taken to address them. This is crucial for accountability and provides a reference point for future assessments.





# Common Causes for Legionella Proliferation

The growth and multiplication of Legionella bacteria in manufactured water systems is a public health concern, as it can lead to the potentially fatal Legionnaires' disease. Understanding the root causes and the factors that encourage this growth is central to its prevention. Especially in the complex water systems present in marine environments, this knowledge can be the difference between safety and a health crisis. Here's a deeper dive into what drives the proliferation of Legionella;



# **Stagnant Water**



#### **Bacterial Reservoirs**

Stagnant water provides a stable environment for bacteria to grow.
Without the flow of water to disrupt their environment, bacteria can settle, multiply, and establish colonies.





## **Marine Implications**

In marine settings, areas like unused pipework or tanks can go unchecked for prolonged periods, creating a potential risk zone.



# Optimal Temperature



### The Danger Zone

Legionella bacteria thrive in temperatures between 20°C and 45°C. This range provides the ideal conditions for rapid multiplication.





#### **Marine Considerations**

On marine vessels, water systems may be exposed to varying ambient temperatures depending on the voyage route. Ensuring that water is consistently below or above this temperature range can be challenging but is vital to prevent bacterial growth.





# Deposits and Sediments



#### **A Nutrient Source**

Rust, sludge, scale, organic matter, and biofilm in water systems can be rich in nutrients, serving as food sources for Legionella. This accelerates their growth and sustains larger bacterial populations.





#### **Marine Environments**

Given the nature of seawater and the processes involved in marine water systems, there's an elevated risk of sediment accumulation, particularly in areas like ballast tanks.



# Source Water Contamination



## **Entry Points**

Even with the best in-system controls, if the source water being introduced into the system is already contaminated with Legionella, the battle is half lost. It's essential to understand and manage the quality of source water.





#### **Marine Context**

Vessels often dock at various ports worldwide, taking water from different sources. The variability in water quality and treatment standards across these sources poses a significant challenge for marine operators.





# Inadequate Water Treatment



#### **Chemical Imbalance**

For water to remain Legionella-free, appropriate treatments, such as chlorination, are essential. However, incorrect dosing or inconsistent treatment can lead to sub-optimal results, paving the way for bacterial growth.





# Marine Scenario

The vastness and complexity of water systems aboard ships or marine platforms can sometimes lead to uneven treatment, with some areas getting lesser attention than others.









Modern problems demand modern solutions. The war against Legionella in marine and other water systems is fought through preventive measures and rapid, accurate detection. The LegionellaMax testing kits have emerged as a game-changing tool in this arena. Let's delve deeper into why these kits stand out and how they're shaping the way we tackle Legionella;

# **Immediate Insights**



#### Time is of the Essence

The earlier a Legionella contamination is detected, the faster remedial actions can be taken. Traditional testing methods often involve sending samples to external labs, leading to potential delays.







### The LegionellaMax Advantage

Designed to provide results in just a few hours, LegionellaMax ensures that crucial time isn't lost between testing and intervention, which is especially important in marine settings where immediate action can be crucial.



# **User-Friendly Approach**





## **Democratising Testing**

Historically, Legionella testing might have required specialist knowledge or expertise, potentially leading to delays or outsourcing costs.





# Why LegionellaMax Shines

Its user-centric design ensures that even individuals who have a deep technical background can administer the test, making it invaluable on ships or offshore platforms where immediate access to specialised labs is unfeasible.

# **Precision in Every Drop**





# **Accuracy Matters**

There's no room for error regarding health and safety.

The reliability of a test is as crucial as its speed.





# LegionellaMax's Reliability Quotient:

Despite its swift results, the LegionellaMax test kit keeps the accuracy high. Its precision is comparable to, if not better than, many standard laboratory tests, providing confidence in the results obtained.



# **Built-in Documentation**





# Staying Compliant

Regulations often require meticulous record-keeping to prove adherence to safety standards and to serve as a reference for future assessments.





## LegionellaMax's Proactive Design

Each kit continues beyond providing results. It comes with tools and mechanisms for easy documentation, streamlining the compliance process and ensuring operators have a clear record of each test performed.

# **Cost-Efficiency**





# **Financial Implications**

Regular testing, if reliant on external labs or specialised personnel, can prove expensive in the long run, especially for operators of large marine fleets.





# The Economic Edge of LegionellaMax

By simplifying the process and ensuring in-house testing is feasible without compromising on quality, LegionellaMax can lead to significant savings over time.





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