



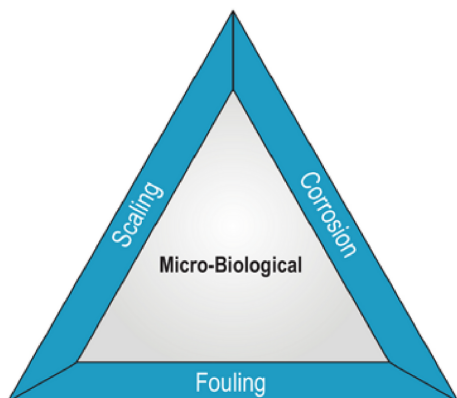
THE IMPORTANCE OF Side Stream Filtration

AND OUR WATER FILTRATION SOLUTIONS

INTRODUCTION

Cooling towers are essential components that play a critical role in various industrial and commercial operations. They serve to dissipate excess heat generated by processes and equipment. They rely on the circulation of water to transfer heat to the environment through the process of evaporation and convection. However, cooling tower water systems are inherently vulnerable to a variety of issues which can adversely affect their performance, efficiency, and lifespan.

These issues are primarily related to the accumulation of suspended solids, bacteria, and other contaminants. In addition to the above, they can lead to reduced efficiency, increased maintenance costs, environmental concerns, and shorter lifespan. Side stream filtration is a key strategy for addressing these challenges, and A.S. Filtration offers innovative water filtration solutions tailored to the needs of cooling tower systems.



Cooling tower primary treatment concerns
(graphic courtesy of U.S. Department of Energy)

CHALLENGES IN COOLING TOWER WATER SYSTEMS

Cooling tower water systems are exposed to various sources of contamination, including airborne particles, microbiological growth, and chemical additives. These contaminants can lead to several critical challenges:

- **Reduced Heat Transfer Efficiency:** Accumulation of suspended solids, such as rust, scale, and organic matter, on heat exchanger surfaces hampers heat transfer efficiency, leading to increased energy consumption and reduced cooling capacity.
- **Microbiological Growth:** Stagnant water and warm temperatures within cooling towers create an ideal environment for the proliferation of bacteria like Legionella. Microbial fouling can result in health risks, operational disruptions, and regulatory non-compliance.
- **Corrosion:** The presence of dissolved oxygen and corrosive ions can promote corrosion in cooling system components, causing equipment damage and downtime.
- **Environmental Concerns:** Discharge of chemically treated or contaminated cooling water into the environment can harm aquatic ecosystems and may be subject to regulatory restrictions.

THE A.S. FILTRATION SOLUTION

We are a leading provider of advanced water filtration solutions tailored to the specific needs of cooling tower systems. Our products and expertise offer a number of advantages:

- **Customized Filtration Systems:** Our engineers solutions that match the unique requirements of each cooling tower system, ensuring optimal performance and efficiency.
- **Cutting-Edge Filtration Technologies:** A.S. Filtration employs state-of-the-art filtration technologies, such as multimedia filters, sand filters, and cartridge filters, to effectively remove suspended solids and contaminants.
- **Microbiological Control:** Our systems can be integrated with UV disinfection or chemical treatment to control microbial growth and prevent biofouling.
- **Scalability and Modularity:** A.S. Filtration's solutions are designed for scalability, allowing industries to adapt their filtration systems as their cooling tower needs evolve.
- **Compliance and Sustainability:** We help industries meet regulatory requirements and minimize their environmental footprint through efficient filtration and water treatment.



The Marley 400/800MD Unilite Counterflow Cooling Tower

THE BOTTOM LINE

Side stream filtration is essential for maintaining the performance, efficiency, and sustainability of cooling tower water systems. A.S. Filtration's water filtration solutions offer a comprehensive approach to addressing the challenges associated with cooling tower operation.

By customizing filtration systems and implementing advanced technologies, A.S. Filtration helps industries optimize their cooling water management, reduce operational costs, and enhance environmental compliance. As industries strive for greater efficiency and environmental responsibility, A.S. Filtration's expertise and solutions are poised to play a pivotal role in achieving these objectives.

About us | A.S. Filtration was born from a small group of environmental engineers and scientists sharing the same ideal — to provide high performance and cost-effective water treatment solutions to all who need it.



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