

MAGCARE 2021

CLIENT

Manufacturer of automotive parts



>25% savings
Less water lost to the sewer



12% reduction
in make-up water consumption for cooling towers.



Bacteria
Reduction in bacterial count (from 100,000 CFU to non-detectable)



Automation
Improved program effectiveness

CONTEXT

At the beginning of the project with an automotive parts manufacturer in October 2019, the main objectives were to reduce the amount of water consumed by the cooling towers while combating scale accumulation, corrosion, and microbiological proliferation. The facility management was also looking for better ways to monitor the water treatment program.

SOLUTION

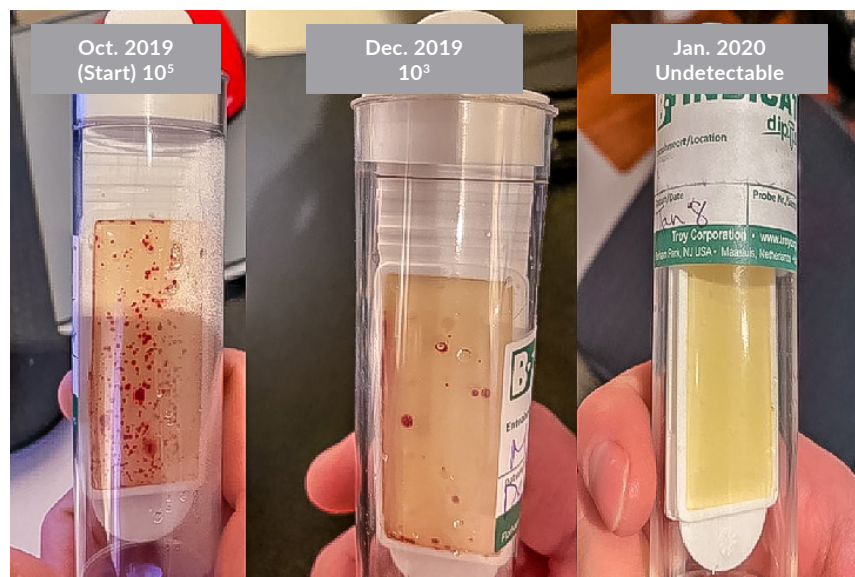
Magnus implemented the following solutions:

- Advanced cooling water technology, MAGCARE 2021, was deployed, which increased the number of cycles from 3.9 to 4.6.
- The new chemical treatment program significantly reduced water consumption and the risk of scaling.
- 4-20 mA ultrasonic level sensors were installed on the chemical feed tanks to remotely monitor chemical consumption.
- The biocide treatment program was optimized to minimize microbiological contamination.

RESULTS

One year after Magnus began working with the client, the cooling towers consumed 12% less water than the previous year. In addition to this saving, scale and corrosion were under control. Microbiological populations (photo) in the cooling tower were reduced to minimal levels within three months.

Magnus is able to remotely monitor the water treatment program and promptly inform the facility manager of disruptions in the system.



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As part of its commitment to the client, Magnus provides weekly, monthly, and annual mass balance reports to the facility manager.



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Mass Balance		Period	T4 2020
Cooling Towers			
Parameter	Value	Unit	Target
Average conductivity	1182	µmhos	1100 à 1300
Maximum conductivity	1228	µmhos	1100 à 1300
Minimum conductivity	1108	µmhos	1100 à 1300
Make-up water	755,738	American gallon	Depending on the load
Purge	183,958	American gallon	Depending on the load
Cycles	4,1	-	3,75 à 4,5
Rate of supply in Magcare 2021	141	mg/l	130 à 150

CONCLUSION

In this case, the use of advanced MAGCARE 2021 inhibitor technology significantly reduced water consumption in cooling towers while combating scale buildup and corrosion. Magnus' automation program also improved control over all critical water treatment parameters. *Results may vary from one system to another. Several factors can influence the results.*