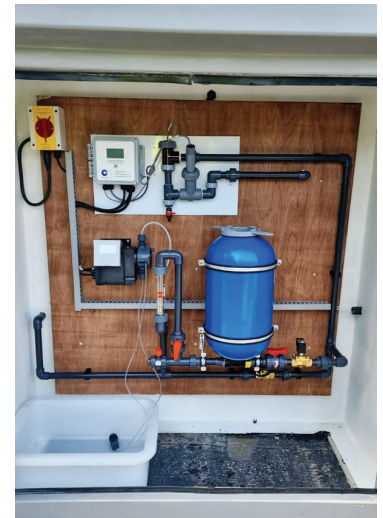


A leading drinks company - Reducing water consumption in a cooling application by 50%.



Problem

Cooling water systems are integral to many industrial processes and commercial air conditioning systems. Efficient cooling is essential, to minimise running costs and maintain production, as part of this process, water is regularly bled and replaced in the system to ensure the correct water quality for efficient running.

As such, with increasing water costs, savings can be made by reducing the amount of water going to drain, also by improving the water quality being fed into the volume of water being bled can also be reduced, again enabling cost savings.

Solution

Our client has 4 Adiabatic cooling towers which historically had bled significant volumes of water to drain in order to control the TDS. WCS Engineering team carried out a cost-benefit analysis in order to establish feasibility and potential benefits of recovering bleed water for re-use in tower make-up. This cost-benefit analysis identified significant savings that could be made in water supply and discharge costs.

The equipment was specified, designed, built, installed and commissioned by WCS engineers and consists of a bleed collection tank, pumped through particle filtration, carbon filtration and water softener before passing through a Reverse Osmosis (RO) system.

This treated water was then blended back with softened reclaimed water to give the water quality required for the system before being pumped to the towers. The towers are running on lower conductivity water and so cycles of concentrations have also been increased.

The system is currently recovering around 75% of the bleed water, which together with the improved water quality; which enables the towers to be cycled, has resulted in a reduction of approximately 50% in the volume of raw water used and discharged to drain.

Return on investment has been less than two years for this system.

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