NATURALLY TREATING WATER

UET'S ZERO LIQUID DISCHARGE

LUXEMBOURG

Background

Luxembourg is a chemical manufacturing company located in an industrial park located in the desert, where the municipality in charge of the park does not allow discharge water, apart from sanitary waste.

UET received a request for quotation for treating their cooling tower without any liquid discharge. UET designed a pre-RO system that does not introduce any chemical additives as a pre-treatment for the RO, and produced a very effective RO system, with 82% recovery. 18% of the process is reject and is collected separately and pumped through the toilets. The cooling tower circulates the water through a UET-CT and does not blow down the cooling water. So practically, the factory stood behind its commitment and does not discharge any wastewater, except for sanitary drain.

The RO system that removes minerals from the water using a UET-SR pre-RO system and an RO system that has a yield of 82% recovery

On the right side there is a UET-SR-CT unit, which circulates water from the basin to the UET unit, after which the treated water returns to the basin without any blow-down.

On the left-hand side, we can see the RO system that removes minerals from the water to the cooling tower, and the reject water is collected in tanks. The water from the tanks is pumped to the toilets to fill all of the flushing tanks, so this system is a full zero-liquid discharge system.

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