Hot water temperature maintenance at UAE-based wildlife park and resort

PROJECT DETAILS

Contractor: Bindarwish General Contracting
Rep/partner name: MBBM
Location: UAE
Industry/type of plant: Commercial/Tourism
Application: HWAT - Hot Water Temperature Maintenance
Scope of work: Supply, testing & commissioning
Start - end date of project: 2016-2017
Project requirements: Temperature maintenance in a hot water distribution network and elimination of the need for recirculation

KEY CHALLENGES

For this project, the biggest challenge was effectively communicating the many benefits of the nVent RAYCHEM HWAT (Hot Water Temperature) system to the consultant. The existing infrastructure consisted of large water pipe circuits of between 50-60 meters, which were serviced with hot water via a recirculation system. Supported by extensive technical data, nVent proposed replacing the traditional recirculation system with a single-pipe configuration, powered by the nVent RAYCHEM HWAT controller. After reviewing the myriad benefits of the HWAT system, the consultant was convinced to overhaul the existing circuits.
SOLUTION

The self regulating nVent RAYCHEM HWAT-M system was selected to maintain the desired temperature of 50°C throughout the extensive piping circuit, with nVent also providing installation training, testing and commissioning services for the project. The single-pipe solution, combined with the versatile, programmable HWAT-ECO controller resulted in a 30% reduction in energy and water costs. The new single-pipe infrastructure requires minimal maintenance thanks to its proactive central monitoring system. The total length of cabling used was 1.1 km and the total EHT power output needed was 10 kW.

BENEFITS

1. Maintains hot water at required temperature ensuring hot water ready for use.
2. Supplies hot water instantly, thereby reducing water wastage.
3. Lowers energy usage thanks to the use of self-regulating heat tracing cables.
4. Reduces capital costs by eliminating the need for recirculation pipes and accessories.
5. Helps control Legionella bacteria in hot water supply pipelines.