

HYATT CAPITAL GATE IN GUINNESS WORLD RECORD TOWER BENEFITS FROM RAYCHEM HWAT SYSTEM

PROJECT DETAILS

Client:	Hyatt Capital Gate Hotel
Location:	Abu Dhabi, U.A.E
Completion Date:	Late 2010
Contract Scope:	Design, Supply, Installation
Applications:	nVent RAYCHEM Hot Water Temperature Maintenance (HWAT) System
Technology:	nVent RAYCHEM self-regulating electric heat-trace cables RAYCHEM HWAT-ECO controllers



KEY CHALLENGES

The development of a prominent landmark site like the Capital Gate Tower by the Abu Dhabi National Exhibitions Company (ADNEC), in the heart of Abu Dhabi, called for a multifaceted solution. Hyatt Capital Gate Hotel occupies the 18th to the 33rd floors of this 35-storey iconic structure. The Consultants RMJM were seeking a robust solution to efficient hot water distribution throughout the area of the hotel. Energy efficiency was a key criterion for the water distribution system.

SOLUTION

RMJM decided on a centralised, single pipe system to deliver hot water throughout the hotel. nVent provided the solution to hot water temperature maintenance through its RAYCHEM Hot Water Temperature Maintenance (HWAT) System. HWAT-R self-regulating electric heat-tracing cable was installed, along with simple RayClic connection components and HWAT-ECO controllers. With half the pipework, this single-pipe HWAT solution provided the required energy efficiency in the hot water system, achieving substantial savings compared to a conventional recirculation system and, by reduced overheating of the building, the air conditioning load was lowered. Its compact design eliminated the need for recirculation pipes and accessories, enabling the system to be installed in restricted spaces quickly and easily. The single pipe design also avoided the problem of balancing, as can be typically encountered in recirculation systems. Approximately 4500 meters of the HWAT-R cable was installed.



PRODUCTS

RAYCHEM HWAT system is comprised of self-regulating heating cables that adjust their power output to compensate for variations in water and ambient temperatures. They replace supply-pipe heat losses at the point where the heat loss occurs, providing continuous, energy-efficient hot water temperature maintenance and eliminating the need for a recirculation system.

RAYCHEM HWAT-ECO controllers provide 24/7 programmable pipe temperature set points, to allow for maximum energy efficiency and the greatest user flexibility as it is ideal for limited hot water distribution systems and can control a single heating cable circuit.

BENEFITS

- Energy efficient, economical systems
- Single source solution for diverse electrical heat tracing requirements
- Overall reduction in running and maintenance costs
- Responsive smart control systems
- Fast installation



Hyatt Capital Gate, is a premium business hotel in the "leaning" Capital Gate Tower. It offers 189 five-star hotel rooms and luxury hotel suites occupying the 18th to 33rd floors of the building. The Capital Gate Tower has been recognized by Guinness World Records as the "furthest leaning man-made tower" in the world. Leaning at 18 degrees, it is over four times the angle of Italy's famous Leaning Tower of Pisa.

It is estimated that the customer will save on energy costs considerably, with the installation of the single pipe HWAT system as compared to the conventional recirculation system.

North America

Tel +1.800.545.6258
 Fax +1.800.527.5703
thermal.info@nvent.com

Europe, Middle East, Africa

Tel +32.16.213.511
 Fax +32.16.213.604
thermal.info@nvent.com

Asia Pacific

Tel +86.21.2412.1688
 Fax +86.21.5426.3167
cn.thermal.info@nvent.com

Latin America

Tel +1.713.868.4800
 Fax +1.713.868.2333
thermal.info@nvent.com



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