Water mist usage growing in Middle East

Demand is fueled by a boom in construction of unique high-rise structures and other buildings such as museums and libraries

By Tess Nacelewicz

The MECCA Royal Hotel Clock Tower is the world’s second-tallest building. But the edifice in Mecca, Saudi Arabia also stands out because a water mist system protects its uppermost reaches from fire.

The Middle East is experiencing a construction boom, and many of the structures being built are tall, unique buildings, including the recently constructed clock tower complex. And such new buildings are increasingly turning to water mist for fire protection, according to Ruediger Kopp, general manager, fixed systems, for FOGTEC, a Germany-based manufacturer of water mist systems. A FOGTEC system protects the Mecca clock tower.

Kopp said water mist systems are in demand because they use less water and have other benefits ideal for high-rises and for buildings like museums with valuable contents. “A lot of special buildings are being built in the Middle East region,” he told SSN Gulf. “And for these types of applications, water mist has been recognized as a very interesting alternative to a sprinkler system.”

Kopp continued, “This really has triggered a

New Underwriters Laboratories standard will rate camera performance

UL 2802 out this month called ‘essential’ for community surveillance

By Martha Entwistle

NORTHBROOK, Ill.—Underwriters Laboratories is launching a digital-camera performance standard this month that will be particularly important to authorities in the Gulf region who oversee community surveillance programs, Bob Jamieson, UL general manager, life safety and security industries, told SSN Gulf.

“Many of the Gulf countries have adopted the UL standards for their use, and more importantly this is the first-of-its-kind standard,” he said.

Some cameras should be certified in time for ISC West, which takes place in Las Vegas in early April.

“We’ve had a lot of discussions with manufacturers,” Jamieson said, “and for the most part they’ve been very enthusiastic ... [the standard] will help prevent false claims.”

Called UL 2802, the new standard is in the final review and comment period. In the works for more than a year, the standard will be used to grade digital cameras on a scale of 1 to 5 for a number of characteristics including image sharpness, field-of-view confirmation, signal-to-noise ratio, TV distortion, relative illumination, color fidelity, dynamic range, maximum frame rate, gray level, sensitivity, bad pixels, veiling glare and housing tamper protection.

UL’s in-house experts worked with “industry, government [and other stakeholders] quantifying performance characteristics of digital cameras,” Jamieson
Water mist systems proliferate in Middle East

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success story in the Middle East region, where in the past years a number of libraries, museums but also special buildings, like the Mecca clock tower ... have been protected by a water mist system.

Kopp recently gave a presentation on water mist at the Intersc 2013 exhibition, held Jan.15-17 in Dubai, United Arab Emirates. FOGTEC was one of approximately 1,000 exhibitors at the event, which the company described as “the largest fire protection venue for the Middle East region.” Kopp was a featured speaker at a seminar hosted by the International Water Mist Association (IWMA).

Kopp’s topic was water mist system recognition in the Middle East. Is that region a key market for FOGTEC?

“Definitely an important market for us, and for the water mist industry in general it’s a very important market, because obviously there is a lot of construction going on, high-rise buildings where this technology offers great benefits,” Kopp said.

Among them is using 90 percent less water than a conventional sprinkler system, Kopp said.

Ragnar Wighus, chairman of the IWMA, which is based in Hamburg, Germany, said that’s a key feature in the Middle East.

“In the Middle East, building technology is among the most advanced in the world, with high-rise buildings and large covered spaces,” he explained to SSN Golf in an email interview. “Water supplies are also costly due to climate and the high concentration of inhabitants in high-rise buildings. Bringing water from ground level to the highest buildings is challenging for traditional water-based firefighting systems, which normally operate at relatively low pressure. The reduced water supply requirement for water mist systems leads to less water to be pumped to the different levels of a high-rise building, and it requires less water in the reservoir and supply lines.

Kopp in his talk said that a FOGTEC system now protects the upper 200 meters of the Mecca clock tower’s steel and glass frame. He said 2,700 nozzles and 83 high-pressure wall hydrants were used.

In addition to high-rises, other building owners also are choosing water mist systems, Kopp told SSN Golf.

“The standard office building today obviously is protected by a conventional sprinkler system, and it’s a good technology that does the job,” he said. “But when it comes to water-sensitive areas like in a library, an archive or museum, or high-class hotels where downtimes are an issue, or you would damage equipment like valuable books or some other valuable exhibits by using a large amount of water, this is where water mist is seen today as an interesting alternative.”

A FOGTEC water mist system with 630 nozzles was installed at the Sultan Qaboos University library in Muscat, Oman, the largest library in that country, Kopp said at his presentation.

Discovery Gardens, a residential apartment community in Dubai, is another location where FOGTEC has installed a water mist system. In this case, a system with 1,200 nozzles and 82 section valves is protecting the service tunnels where the community’s power supply is located.

Kopp explained that the apartments and offices in Discovery Gardens “need quite substantial power supplies and these power supplies are routed underground via cable tunnels. These cable tunnels are quite an important part of the power supply to the building. If it were to happen that there was a fire in this cable tunnel, they would be out of power. Therefore these areas, which have been identified as high-risk areas and very important, have been protected by water mist systems.”

A traditional sprinkler system could flood the tunnels and cause short-circuits, Kopp said. With water mist, “using less water and not spraying water but forming this fine water mist by atomizing the water, the risk is far more limited,” he said.

Water mist technology, introduced about two decades ago and employed in the marine industry, also is in demand in industries prevalent in the Middle East.

“In the Middle East there are many small water droplets, reducing damage to a minimum. In combination with some gaseous firefighting systems, water mist can be released immediately after detection of fire, with any hazard to personnel.”

The Sultan Qaboos University library in Muscat, Oman, is protected by a FOGTEC water mist system.