

## Protection of ordinary hazard compartments with sidewall water mist nozzles

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### Abstract

Fire tests protocols are well established for the protection of ordinary hazard risks with pendent water mist nozzles. Within the category of ordinary hazards are occupancies that include hotels which often require the use of a sidewall nozzle, either due to building construction, or room aesthetics. Unfortunately the fire test protocols for pendent nozzles do not allow for configuration in a sidewall position. There have been different approaches taken from some approval agencies and no development from others. Often tests are comparison tests against a sprinkler for the same application. As a result there is no consistency meaning that it is virtually impossible to design a nozzle to pass all agency fire protocol permutations. Thus a qualified fire engineer cannot make an informed decision as is possible with other established water mist fire test protocols. Arguably the fire scenarios are not realistic and we propose that the correct methodology would be to define a repeatable fire test scenario (as is the case in existing protocols for pendent nozzle arrangement), with a clear objective pass/fail criteria. This should equally extend to other water based solutions such as sprinklers to maintain consistency across the applications and remove doubt from the qualified fire risk assessors and engineers that have to make performance based decisions based on fact.

**KEYWORDS:** sidewall, water mist systems, fire test protocol, ordinary hazard