Water Mist Fire Protection
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Application Opportunities and Development Issues

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Abstract

The current water mist fire protection industry was started almost 30 years ago after halon was phased out for use in fire protection due to its depletion of ozone layer. After the relatively fast development of mostly marine-focused fire protection applications in the first twenty years, and subsequent sporadic forays into some land-based applications, the water mist industry in recent years appears to have slowed down the pace on developing new applications and markets. It is seen that from time to time the industry has ventured into protection areas where water mist is difficult to compete with other alternatives in terms of effectiveness and cost, resulting in low or no return on the investment. To avoid such unpleasant outcomes, before deciding on a new protection offering, the water mist industry should always evaluate the strength and weakness of water mist relative to other fire suppressants for the targeted application. By constantly refreshing such awareness, the industry will then be able to make smart decisions on new developments, to maximize water mist's full potential on the suppression or extinguishment of different fire hazards, and consequently to carve out an unflappable presence in the fire protection industry.

With the above background, this presentation is to: 1) refresh the mechanisms and issues for water sprays to suppress or extinguish solid, liquid and gas combustible fires; 2) address the key water mist spray requirements for fulfilling the pertinent mechanisms for the targeted fire hazards, and 3) highlight fire hazard areas where water mist has a great potential to succeed.

KEYWORDS: fire extinguishing mechanisms, water mist applications