

Current fire protection systems do not extinguish fire

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Herton Escobar wrote an article entitled “In a ‘foretold tragedy,’ fire consumes Brazil museum” (1). Even if the Brazil museum were equipped with the current fire protection system, the conventional sprinklers cannot cease fire. In the current fire protection systems including sprinklers, as the ceiling temperature reaches a fixed temperature of approximately 75 degree Celsius, the sprinkler element is activated. The plug in the sprinkler is made of an alloy or a small glass bulb that melts at 75 degree Celsius to expand and shatter when it gets hot. The plug is meant to break and open the sprinkler as soon as a fire breaks out. However, imagine a scene of the ceiling temperature reaching 75 degree Celsius. The conventional sprinklers cannot cease or extinguish a big fire when the ceiling temperature reaching 75 degree Celsius. By lowering the activated temperature of the plug in the sprinkler, water wetting may cause unnecessary damages in buildings. Therefore, detecting the initial fire, initial fire fighting or initial fire extinguishing plays a key role in ceasing fire before it becoming a big fire.

References:

1. Herton Escobar, In a ‘foretold tragedy,’ fire consumes Brazil museum, Science 07 Sep 2018: Vol. 361, Issue 6406, pp. 960