

HI-FOG® case study

BBC TV Studio, Cardiff Bay, UK



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Minimizing fire a



HI-FOG® for BBC TV Studio

» At a Glance

- Sprinkler class OH1-OH3
- Modular Sprinkler Pump Unit (MSPU9+1)
- 344 Sprinklers
- Wet pipe 2 normally open section valves
- 27m³ water tank - 30 minute duration

Minimizing use of water

The volumes of water produced by a traditional sprinkler system would cause major disruption.

The HI-FOG® system quickly reduces fire temperature and limits structural damage using a minimal amount of water.

This ensures operational continuity in case of fire.

Conserving space

Thanks to small diameter tubing, a compact pump unit, a small water tank and discrete sprinklers, HI-FOG® was easy to install between filming, therefore minimizing the impact on the series' filming schedule.



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Part of the main TV set with the HI-FOG® 2000 sprinkler barely visible.

Minimizing fire and water damage

If a fire occurs in a busy TV studio, protecting both the people and filming assets is a top priority. Rapid recovery after a fire is also essential. With fast control and localized suppression of fire, using a small amount of water, HI-FOG® keeps collateral damage and downtime to a minimum.

Fire destroys valuable assets worth billions every year, with the ensuing damage caused by fire and the water used to fight it. Traditional water-based systems rely on wetting to fight fire, but the resultant flooding is often devastating and can spread far beyond the fire area. This

can lead to weeks, or even months, of downtime while the damage is repaired.

HI-FOG® uses significantly less water than traditional sprinkler systems, keeping damage to the surroundings and building to a minimum.

Thanks to small diameter tubing, compact pump units, small water tanks and discrete sprinkler and spray heads, HI-FOG® is easy to install into retrofits and new structures alike, therefore minimizing structural impact and preserving aesthetic integrity.

nd water damage



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Maintenance has been made easy in the main external plant room.

Protecting the BBC's TV Studio

Marioff has ample experience in many retrofit sites. HI-FOG® protects the Casualty set within the BBC's TV studio in Cardiff Bay, UK, and has been proficiently installed in the building as a retrofit.

The new BBC Roath Lock television production facility is located in the Porth Teigr area of Cardiff Bay, UK. It houses the productions of Dr Who, Casualty and Pobol y Cwm, and was completed in February 2011. Filming started in the autumn of the same year.

Fire protection solution

Marioff was chosen to provide protection for the critical filming area following the building's completion, and HI-FOG® was an ideal choice due to its verified performance together with low water requirements and compact water tank.

The turnkey HI-FOG® system was a retrofit on the Casualty set and was installed around the filming schedule of the weekly TV series over a 10-week period during the summer of 2012. In conjunction with Balfour Beatty Workplace, the pipe work and tubing had to be installed within some very awkward spaces of the building fabric. Continuity was of paramount



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“ Marioff's experienced and dedicated team finished the project on time and according to the plan, even though the filming studio was in use throughout.”

– Andy Marchant, Merchant,
South Wales Fire Services.

importance, as the BBC production team was restricted by the time constraints of filming. The special requirements of the tank and the plant were very high on the requirement list.

Fire risks

HI-FOG® protects all areas of the set with a mixture of OH1 on the first floor and an OH3 hazard classification on the ground floor, which is also used within the 1st and ground floor voids.

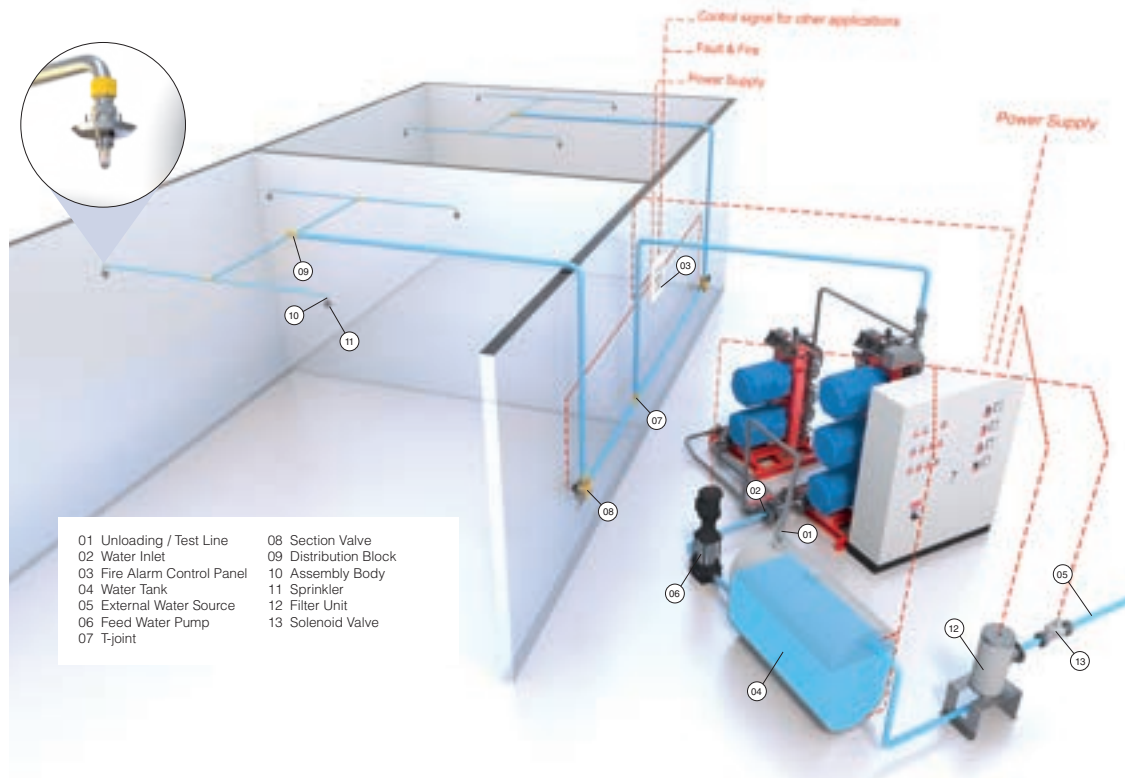
Skillful installation

The installation of small nozzles in the ceilings aided in program continuity, as some heads are designed to cover >>

» an area of up to 25m², - making them barely visible. The modular MSPU 9+1 pump unit and control panels were used in a purpose-built plant area adjacent to the set. Furthermore, a 27m³ water tank was installed to facilitate the system's 30-minute duration period. The majority of the tubing was small diameter down to 12mm with the main risers at only 60mm for the OH3 hazard classification.

“The solution suited the application perfectly as, due to the site constraints, it was difficult to provide an area large enough to house the storage tanks of a traditional sprinkler system. With the greatly reduced volume of the water mist storage tanks, this was not an issue,” said Andy Marchant of the South Wales Fire Services.

“The volumes of water produced by a traditional sprinkler system would cause major disruption to recording in the Casualty studio as well as adjacent studios. The water mist system quickly reduces fire temperature and limits structural damage with a minimal amount of water. It is anticipated that repairs could be carried out on the set and normal service resumed with a minimum delay,” said Dave Bond, Senior Building Control Surveyor, Cardiff Building Control.



Control panels and dedicated incoming electrical supply.



The modular pump units and control panels to the rear.



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