

Are you being passive toward active fire protection?

After four years of Coltraco Ultrasonics' continued efforts to make the 'ungoverned space' in the fire industry heard, understood and actioned upon, the problem is starting to be recognised by some, but not all. This haphazard approach is dangerous and often unknown to the users of the infrastructure. The ungoverned space in the fire industry must end now. You might have heard of it, but now it is time to do something about it.



Dr Carl Stephen Patrick Hunter OBE

Carl is CEO of Coltraco Ultrasonics and works to advance professionalism, performance and integrity in international business and public life. He was awarded the OBE for Services to Business and International Trade in HM The Queen's Birthday Honours in June 2019 and holds an Honorary Doctorate of Science of Durham University and is Professor-in-Practice at Durham Business School.

What is the ungoverned space?

Simply put, the 'ungoverned space' is the area in the fire industry where either the regulations or the protecting systems of the critical infrastructure are not effectively providing consistent and reliable safety. Coltraco repeatedly push for this life-threatening issue to be dealt with, with specific regard to loss of contents in fixed fire extinguishing systems.

Gaseous extinguishing systems protect urgently important infrastructure against special hazards, fundamental for the safeguarding of critical facilities.

Although many in the fire industry work towards meeting better standards, in their experience, Coltraco has numerous concerning anecdotes of non-compliance: systems portrayed and installed by contractors as NOVEC™ 1230 but filled with sand or water; room integrity testing with questionable results and with the room integrity remaining unmonitored after testing; liquefied extinguishants being confused by installers with Inert gas systems; service engineers asking how to test the liquid level in powder – the list goes on.

Hot Numbers

SOURCE: Aviva Insurance, 2012

- Every 7 seconds, a fire breaks out, worldwide
- CO₂ is stored at 49 Bar pressure, but Nitrogen-based systems up to 300 Bar – increasing risk of leakage or accidental discharge
- Annual servicing of gaseous systems is not constant monitoring

- Poorly maintained sprinkler systems leak; gaseous systems discharge
- 700 fatalities caused by fire in the UK
- £7bn is the cost of fire to the UK economy according to GovUK: every day £3.4m in costs by business disruption caused by fire – £1.3bn p.a.
- 44% of all insurance claims are caused by fire

What about the regulations?

Coupled with these anecdotes, currently the regulations are not extensive enough to deal with the risks presented in gaseous systems. In ISO 14520 9.2.1.3 the regulations explain that the storage container contents shall be checked at least every six months as follows;

- Liquefied gases: for halocarbon agents, if a container shows a loss of agent in quantity of more than 5 % or a loss of pressure (adjusted for temperature) of more than 10 %, it shall be refilled or replaced.
- Non-liquefied gases: for inert gas agents, pressure is an indication of agent quantity.

If a container shows a loss of agent quantity or a loss of pressure (adjusted for temperature) of more than 5 %, it shall be refilled or replaced. Essentially, it is known in regulations that the gaseous systems leak and need to be maintained. Given that the gaseous systems are designed specifically to the individual need of that room, building etc., a 5% loss of agent may mean that they would not fully extinguish the fire.

Can one annual check account for the probability of discharge and leakage for the other 364 days of the year between certification checks? No.

Do you protect life and critical infrastructure?

The neglect of continuous monitoring – of the fundamental protection provided by the gaseous extinguishing systems – is to the peril of the lives of occupants of the premises and at the risk of crippling financial and reputational loss to the facility comprising the critical infrastructure.

The examples of where continuous monitoring are essential are many, extensive and varied. If you protect critical infrastructure, then this article applies to you.

However to exemplify the integral nature of continuous monitoring; incidents in power power plants around the world have continued to demonstrate the vulnerability of safety systems to fire and its effects. Power generating facilities are safety critical and extremely high value assets. As a result, there is a great focus on business continuity due to the pressures and costs incurred due to accidents, faults, fires, or other temporary outage disruption. As an example, in nuclear power the International Atomic Energy Authority state clearly in the Fire Safety in the Operation of Nuclear Power Plants standards that the effects of a single failure in fire safety systems, such a system not performing its required function, can be detrimental. With fires at power plants still occurring, such as the large 2019 blaze at the Mytishchi Power Station which tragically lead to one death and eleven serious injuries, the call for advanced protection of life is of most importance.

Continuously Monitor

Focused on continued advancement of safety technology, Coltraco have now developed the Permalevel® MULTIPLEX, a fixed fire suppression monitoring device, designed for permanent contents verification. The Permalevel® MULTIPLEX is designed to ensure that fire suppression systems are always fully operational and that no accidental discharge has occurred, which could affect the effectiveness of the overall fire protection system in the event of a fire at a nuclear power plant.

The application of the Permalevel® reaches further, with customers using this equipment in alternate specialist and confidential manners to ensure safety in the station. With guaranteed systems operations, adaptability for purpose, 24/7 remote access to the systems status, an interruptible power supply and remote real-



▲ FM200 Cylinders at a Power Plant.

▶ Permalevel® MULTIPLEX installed in a FM200 Cylinder Room.



time monitoring, the Permalevel® offers the efficiency that is now a requirement for encompassing protection. The likes of the Atomic Energy Authority asked Coltraco Ultrasonics to tailor make them a solution to constantly monitor a special application using the Permalevel® Single Point for over 10 years.

Act Now

There is no use in waiting or denying the problem, continuous monitoring and Safesite technologies must be adopted now. Technological development is inevitable and that can't wait for regulations any longer. We will not

stop until the ungoverned space is fully recognised and dealt with. There is no room for the industry to fall back into old habits. The ungoverned space must be recognised, the science is clear and it shows that the risk to people and infrastructure is real and high. Constant monitoring of gaseous extinguishing systems and must be implemented, people's lives depend upon it.

Think again. Are you being passive toward active fire protection? If you are, we are here to help you ensure critical safety.

➔ For more information, go to www.coltraco.com