

The Association of Consulting Engineers Norway (RIF) wants more documentation that is relevant

RIF is the Association of Consulting Engineers, and represents a large number of engineers in the various consulting companies that work with fire safety. And what does RIF think about the use of Inergen gas in apartment complexes?

RIF has also worked with the issues of using gas fire extinguishing systems in permanent occupied buildings. Leif Tore Isaksen is a member of the RIF Fire Expert Group, and was also a member of the group who, organized by Standards Norway, tried to develop a separate standard for the use of gas extinguishing systems in residential buildings. He says that there is a broad consensus amongst RIF's member companies that currently it is too excessive uncertainty connected to the functionality of gas extinguishing systems, for making them completely unproblematic to install in buildings with permanent human residence.

"We are not against new technology, and welcome all measures that can help raise fire safety in buildings. For objects that are covered by current standards for such systems, we know that a fire extinguishing system based on Inergen will extinguish a fire if the system is properly dimensioned, and that it is also not dangerous for humans to breathe in if the air and gas concentration is correct. However, this applies to objects with control over all parameters that will affect the system's function. There are remaining many and important challenges in relation to what exists of documentation regarding the use of this type of extinguishing system in buildings with permanent human residence, and there are some issues that you do not currently have any answers to. Among other things, how to ensure that the reliability of the system functioning as expected is sufficiently high, at the same time as it is not problematic for humans to stay in the building. Currently the documentation is not good enough for installing these systems uncritically in residential buildings", says Leif Tore Isaksen.

MANY OBJECTIONS

Among other things, RIF wants clear guidelines on how to install such a system in residential buildings, ensuring that the extinguishing gas will both extinguish the fire and have such a concentration that it is not dangerous for those residing in the building.

"We believe that today there are too many parameters in a permanent residential building that is difficult to control when it comes to gas extinguishing systems. Relevant regulations for the installation of such systems describes e.g. technical rooms, storage rooms and data rooms, where we control the construction around the extinguishing zone, the doors, the ventilation systems, and where there are no permanent residents", says Isaksen.

He further states that in an apartment building it will be both an uncertain situation of whether windows and doors are open, if there are chimneys / fireplaces, how any ventilation systems will influence the extinguishing effect and if people will understand they must get out quickly when the system is released.

"In the current regulations, there are strict requirements to get out of the building in between 30 seconds to five minutes after the system has released and we think it can be difficult to secure this in practice when people may sleep. In addition, it is important that such installations are maintained regularly. When we know how difficult it is to get people to change something as simple as the

battery in the smoke detector, questions will be asked if such an installation, based on complicated controls, can provide sufficient reliability when installed in a building with great variety of use and with unprofessional users", says Leif Tore Isaksen.

Isaksen also says that such systems are not necessarily good at extinguishing fires because of electric fires or deep-seated fires.

"Then the temperature is high and the fire will be able to reignite when the extinguishing concentration in the room is reduced after the required hold time that is usually 10 minutes. This is far less than what is required to evacuate a building with sleeping people", he says.

REQUEST BETTER DOCUMENTATION

In connection with the attempt to develop a standard organized by Standards Norway, a list of 200 questions was prepared that the advisors wanted answers to. These are among other things concerns for:

- Whether it is dangerous for humans to breathe in gas that does not have the assumed concentration
- How to ensure that the concentration is correct at all times
- How to document what happens with the holding time when windows or doors are left open
- Whether the documentation already available is sufficient
- Whether the reliability of the systems functioning as expected will be sufficiently high

"Currently, there are too many unanswered questions that such installations are unproblematic to install in buildings with permanent human residence. The present documentation does not adequately answer these questions in a good enough way. Therefore, today there is no basis for continuing the work of making a standard. And today, the use of gas extinguishing systems in buildings with permanent human residence will contravene existing standards for such systems", says Leif Tore Isaksen.

He further states that it remains a great job in doing more tests and providing documentation showing that safety has been taken care of in buildings with permanent residence, in relation to both that the systems will extinguish the fires that may occur and that the gas concentration does not pose a danger to those in the building when the system is released.