

Translation of SINTEF Test report and explanation of redesign

1. Translation of Conclusion

The following translation is done from the SINTEF Test report #102201.38 of October 3, 2007.

[Start of Conclusion]

The report contains an evaluation of the results reached with Q-Fog AB's system Q1 in trials performed at SINTEF NBL in October 2005. The tests was performed as a part of the project: "Water mist systems in care homes – A mapping of what effect mobile and easy movable water mist system has on fire safety in care homes".

The evaluation is based on the requirements given in a guideline published by the DSB and SRV in June 2006.

It can be concluded that the Q1 system tested in 2005 satisfies the test requirements in seventeen out of eighteen measurement values. The eighteenth measurement value, CO-dose, in fire case "Simulated furniture with open door" did not satisfy the requirement.

However, it is also concluded that a faster reaction time would give better results.

[End of conclusion]

The translation is done by a non professional translator and is slightly modified. E.g. the report refers to TB Innovation AB but the product is now developed and sold by Q-Fog AB hence TB Innovation AB in the text is changed to Q-Fog AB.

DSB is the Norwegian abbreviation of "Directorate for Civil Protection and Emergency Planning".

SRV is the Swedish abbreviation of "Swedish Rescue Services Agency".

2. Redesign of the prototype

From November 2005 till August 2006 Q-Fog AB redesigned the prototype system tested at SINTEF.

The test result showed surprisingly good results but we were determined to make the system even better.

- All delays in the system were removed.
- The detector was changed to a more robust and fast detector. (It might seem contradictory but we now use a two-criteria detector that sense both temperature as well as smoke).
- With these alterations to the system we have more than halved the time from fire ignition to start of suppression.

We also:

- increased the water pressure
- increased the water flow
- enlarged the water container to allow for up to 15 minutes of discharge time

With these alterations we have a system that meets the requirements with margin.