



# THE WATER MIST TECHNOLOGY

## CEN TS 14972 – Current Developments

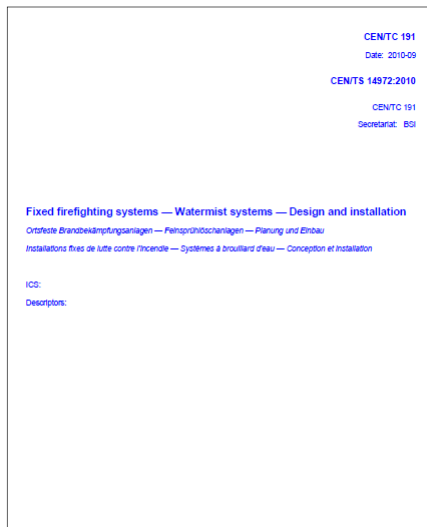


Luciano Nigro



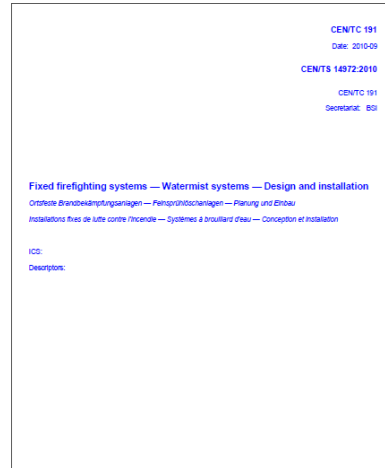
## The starting point

- We have a document – TS 14972 - that has been prepared by the working group - dated September 2010.
- It is already a first revision of the first document, that was dated back to 2008
- It includes a main part, for design and installation, and a set of fire test protocols (7 in total) ranging from combustible liquid fires to deep fat fryers, and also including office spaces and cable tunnels.
- We do not have anything yet for components.



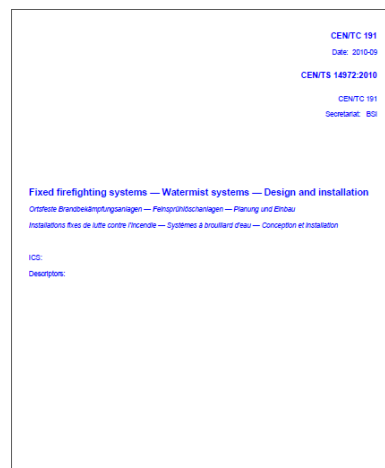
## The standardization process

- The water mist fire fighting systems are not included (yet) in the mandate M109 given by the commission to TC 191 to answer to the CPD. ... that means we do not go towards any CE marking
- The current document has been published as Technical Specification, that is a sort of “Tentative Document”, pretty similar to the DD used in UK to develop new standards. It must be transformed into an EN within 6 years, or canceled.
- Otherwise it can be published as a TR



## What about the real world

- How is the TS 14972 received by the real world and how it is considered?
- We may say that it is not generally well accepted!
- Some countries are developing their own standard, because they do not “like” the European ones;
- others are using it because they find it a “better than nothing” document to deal with water mist fire protection
- Definitely the standard is not well considered in the United States... but in that country the entire water mist technology is having problems....



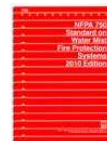
## What about the rest of the world

- UK has published a Draft for Development document, concerning Design and Installation of commercial water mist systems, followed by a series of test protocol documents
- France has published the D2 document, concerning installation of water mist systems
- NFPA has published already the 4<sup>th</sup> edition of NFC 750 dealing with design and installation, that only mention the test protocol as an appendix.
- FM publish a DS 4-2 and the approval document 5560



## Could we do anything better?

- It appeared quite clear that the current status of the European Document was a bit “too weak” versus the other documents available.
- An action was to be taken to try to get at least at the same level as the others, whether not ahead a little bit.
- It was a strong decision of the Chairman of the European Working Group to reconsider the work done so far and to put it under discussion.
- It was also a good decision (we hope) to trust the IWMA proposal to create a task group to re-draft the standard, at least for the design and installation part.



## The summer 2011 TG

- The problem was brought to the attention of the IWMA Board
- A tentative was made to ask a “specialist” to do the re-drafting activity on a fee basis.
- We soon realized that the standard writing is an expensive activity nobody wants to make...
- And then an internal working group was set up that included a number of persons small enough to be “agile” in the discussions and the decisions.
- We met quite a few times, in the period between the spring 2011 and last september



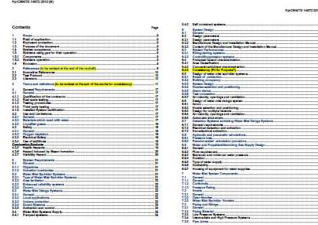
## The Drafting process

- Because of the very short time available, we soon decided to have a “volunteer” doing the “dirty job” of writing it!
- Therefore we created a structure for the new draft, having the characteristics of a Design and Installation standard.
- We took all the contents of the already developed TS14972 into the new structure.
- Then we examined all the other available documents and the comments received by other members of the CEN group that had not the possibility to directly participate
- We mixed it all together...



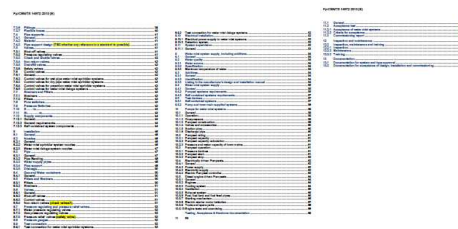
## The Document was completed

- In September the document was completed.
- It has been delivered to the secretary of the working group for distribution about 10 days ago and it is now available to the group members.
- Here the index is shown... just as an evidence of the work done.
- It will be discussed in the next week meeting in Cologne and after that I think it will become publicly available and I hope everybody will have something to say about it...
- **Except: "Why didn't find a better way to spend the 2011 summer holidays!!!!"**



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## The innovations

- As mentioned there are two main innovative chapters in the new documents, that were considered important to better address the scope of the document.
- Chapter 5 – System Requirements
  - It includes the definition of the different systems and the performances that are expected from the different water mist systems in term of fire fighting
- Chapter 10 – Pump for water mist systems
  - It included a series of basic (very basic) requirements for the fire pumps to be used to supply the water mist systems.
  - It is largely copied from the EN 12845
  - It introduces the concept of fire pumpsets that is made of one or more pumps linked together to supply the system

## The innovations

- **Chapter 5 System Requirements**
- The main consideration is coming from the kind of water mist systems that are defined by the standard versus the type of systems that are installed day by day
- There are two main type of systems:
  - The closed automatic nozzle ones that are installed and works mostly like a **sprinkler system**
  - The open nozzles ones that operate like a water spray **deluge system**
- This differentiation is more important than the pressure or the droplet size
- It is the differentiation used in the new draft.



# THANK YOU

# IWMA

International Water Mist Association