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de  
CANTABRIA

CONSEJERÍA DE INDUSTRIA, TURISMO,  
INNOVACIÓN, TRANSPORTE Y COMERCIO



AÑO JUBILAR  
LEBANIEGO  
2023 · 2024

40 años de autonomía  
cantabria

# CTN 23/SC8 - INGENIERÍA DE SEGURIDAD CONTRA INCENDIOS

28 de Abril de 2022

UNE  
Normalización Española

tecnifuego



Encuentro UNE-TECNIFUEGO

La normalización en el ámbito de la protección contra incendios





## ISO/TC 92/SC 4

### Fire safety engineering

#### ABOUT

SECRETARIAT: [AFNOR](#)

Committee Manager: [M Benoît Smerecki](#)

Chairperson (until end 2022): [Mr Daniel Nilsson](#)

ISO Technical Programme Manager [TPM]: [Dr Anna Caterina Rossi](#)

ISO Editorial Programme Manager [EPM]: [Ms Alison Reid-Jamond](#)

Creation date: 1991

#### QUICK LINKS

##### [WORK PROGRAMME](#)

Drafts and new work items

##### [WORKING AREA](#)

on ISOTC and Public information folder

##### [ISO ELECTRONIC APPLICATIONS](#)

IT Tools that help support the standards development process

#### SUSTAINABLE DEVELOPMENT GOALS

This committee contributes with 3 standards to the following [Sustainable Development Goals](#):

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PUBLISHED ISO STANDARDS\*

14

ISO STANDARDS UNDER DEVELOPMENT

30

PARTICIPATING MEMBERS

16

OBSERVING MEMBERS



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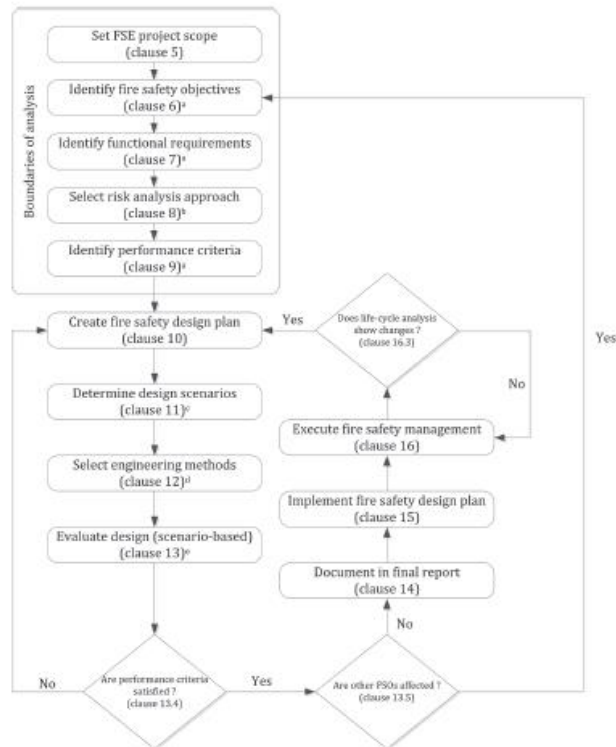
CONSEJERÍA DE INDUSTRIA, TURISMO,  
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Relevant ISO documents at the time of publication:

- a ISO/TR 16576 (Examples)
- b ISO 16732-1, ISO 16733-1, ISO/TS 29761
- c ISO 16732-1, ISO 16733-1, ISO/TS 29761
- d ISO/TS 13447, ISO 16730-1, ISO/TR 16730-2 to 5 (Examples), ISO 16734, ISO 16735, ISO 16736, ISO 16737, ISO/TR 16738, ISO 24678-6
- e ISO/TR 16738, ISO 16733-1

Documents linked to large parts of the FSE process: ISO 16732-1, ISO 16733-1, ISO/TS 24679, ISO/TS 29761, ISO/TR 16732-2 to 3 (Examples), ISO/TR 24679-2 to 4 (Example)

Figure 1 — The fire safety engineering process - Design, implementation and management

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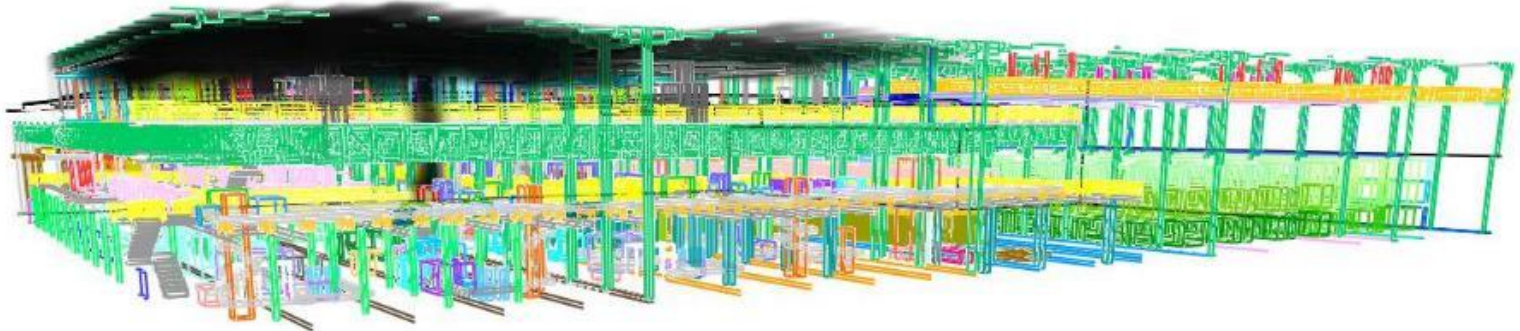
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Source: ISO 23932-1 Fire Safety Engineering — General principles

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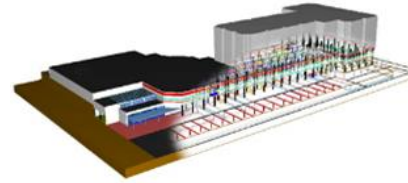
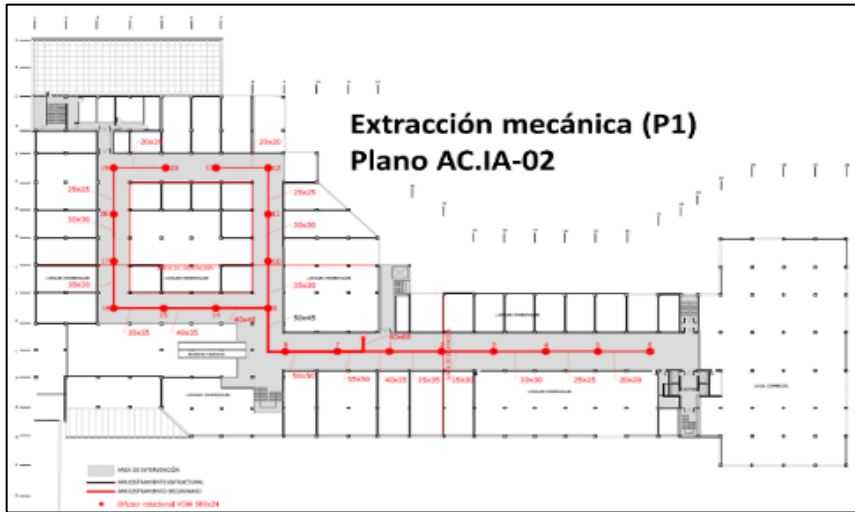
Source: Lázaro M., et al. Innovations for smoke management in passenger trains. *Journal of Fire Sciences*, 2020, 38(2) 194-211

## Modelos físicos

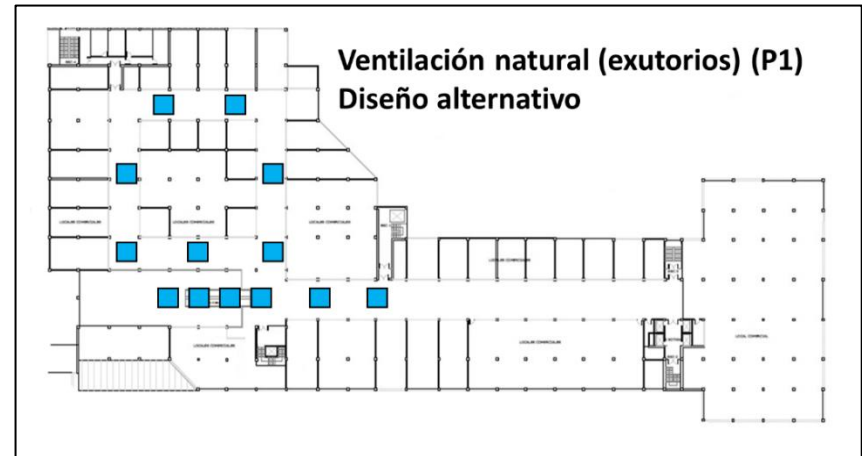


## Modelos numéricos

# CTN 23/SC8

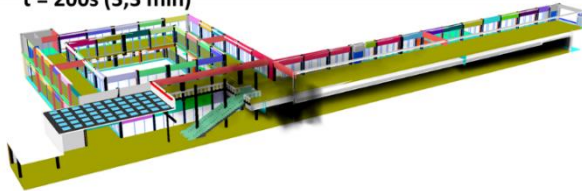


VS.

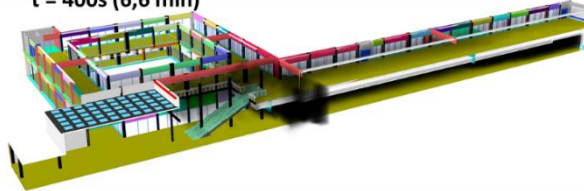


# CTN 23/SC8

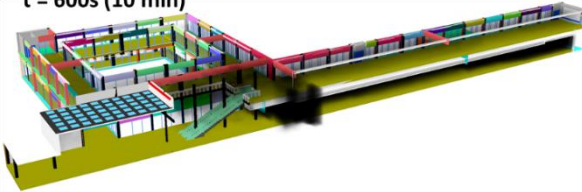
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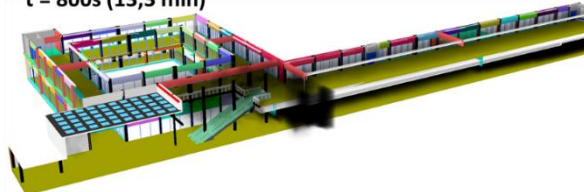
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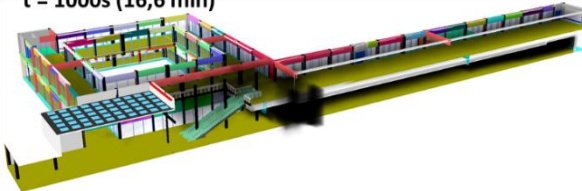
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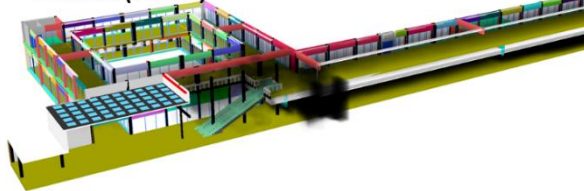
t = 800s (13,3 min)



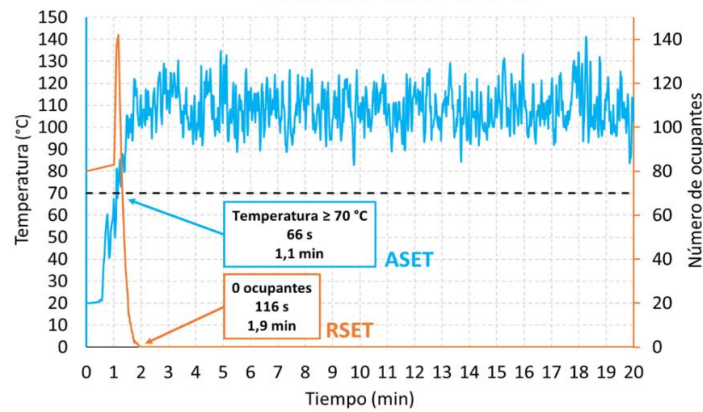
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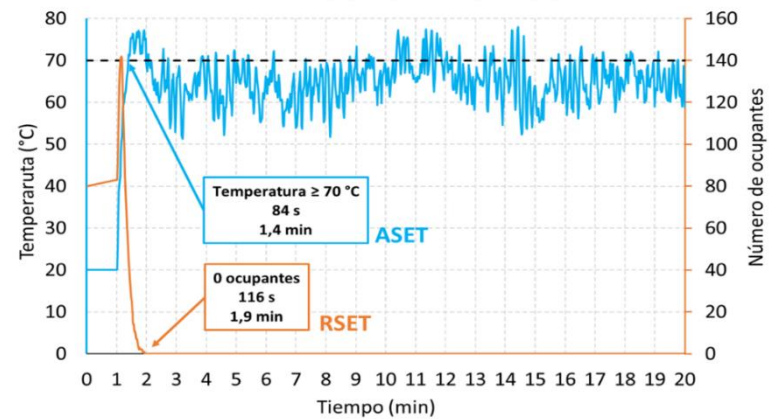
t = 1200s (20 min)



### Diseño CTE-DB-SI



### Diseño Alternativo



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