



# EVACUATING IN AN **EMERGENCY**

Standardisation progress  
at ISO and CEN

# Emergency evacuation

- Work related to fire issues is carried out both at **ISO** and **CEN** levels
- CEN TC 10 / WG6 and ISO TC 178 / WG6 are in charge
- Existing texts:
  - EN 81-72 Requirements for fire-fighters lifts
  - EN 81-73 Requirements on behaviour of lifts in case of fire
  - ISO Technical Report 25743 (published soon)

# Emergency evacuation

- EN 81-72 Fire-fighters lifts are covered:
  - Controlled by firemen
  - Exclusive use
  - Secondary electrical power supply
  - Special protection of shaft & machinery
- EN 81-73 Behaviour of lifts in case of fire are covered (automatic return,..)



# Emergency evacuation

- ISO Technical Report 25743
  - Considers risk of using lift by all persons, able-bodied and disabled
  - Identifies biggest issues as building-related
  - Key to « lift solution » is an automatic or manually-operated lift evacuation system
  - All lift issues manageable, though there is considerable cost to automatic systems
  - System driven by an attendant for evacuation of disabled is realistic and practical in many cases

# Emergency evacuation

- Issues envisioned by ISO TR 25743
  - Safe, smoke-free area is needed to wait
  - Alternate escape route is needed if lift service suspended or lift on fire
  - Can automatic sensors detect everyone is evacuated?
  - Who will go first if many people need to use the lift?
  - People in need of evacuation can be disabled, injured people, pregnant women, etc.. Up to 5% of the people present
  - Using evacuation attendants solves several issues and is cost-effective

# Emergency evacuation

- Lifts can and should be part of the evacuation strategy

Rather than slowly evacuating a disabled by the stairs, the idea is to use the lift between the alert and alarm phases, **before** the fire-fighters arrive.

Trained personnel need **1 hour** to evacuate this person (100 kg) from his 6th floor, in this evacuation chair...

By lift, this takes **2 minutes!**



# Emergency evacuation

## Access also means Egress!

*« An accessibility for all European standard on design, construction and use of buildings should be developed, including provisions on fire safety and means of evacuation for people with disabilities »*

From the report:

*« 2010: A Europe accessible for all »*

(October 2003)

Summary CEN & ISO work -  
Conference 23 03 07

16 July 2003



**ACCESSIBILITY FOR ALL**

**A BUILT ENVIRONMENT  
FOR AN INCLUSIVE SOCIETY**

Report from the Experts Group set up by the  
European Commission

# Emergency evacuation

- CEN TC 10 Plenary meeting has adopted 2 resolutions:
  - Evacuation of the disabled is registered as a potential new work item in the work programme
  - Cooperation is proposed between CEN TC 10 and CEN TC 127 (Fire safety in buildings)
  - CEN TC 10 WG6 has produced a work document
  - Cooperation with TC 127 is essential as the issue requires measures at lift and building levels



# Emergency evacuation

- **Basic principles of CEN work document:**
  - Lift is NOT the way to escape: the principle remains
  - Lift will be used by « fire assistants » to assist in evacuating disabled persons
  - The scope of the document is limited to low and mid-rise buildings (offices, hotels, residences,..)
  - Lift must comply with requirements of EN 81-70 (accessibility for all), EN 81-72 (fire-fighter lift), EN 81-73 (behaviour of lift in case of fire)
  - Lift will have special control with automatic return to exit floor, by-pass & evacuation mode + special « Disabled evacuation » signalisation (in car & at landing)

# Emergency evacuation

- Evacuation phases of future CEN standard:
  - Everybody evacuates normally by stairs, except people with impaired mobility. All lifts return to exit floor
  - The evacuation lift(s) starts operating with car and landing buttons active, for use by trained assistants to help evacuate disabled
  - At all levels, above landing door, blinks a signal « Disabled evacuation »
  - Pressure on a « by-pass button » will allow the assistant to by-pass other landing calls
  - Voice link between refuge + between car and building management desk established
  - Evacuation mode stops when switched to « Fireman mode » at arrival of fire-fighters

# Emergency evacuation

- ISO thinking on the same lines: evacuation lifts can NOT be the fire-fighters lifts
- An attendant-driven system is the first and less costly option for medium-size buildings (automatic systems for high rises)
- The attendant can assist people with disabilities, prevent overloading and decide (if needed) on who goes first

# Emergency evacuation

Thank you for your attention

