

JEG Workplan 2017 -2018

→ **International Expert Group to draft the JEG Safety Guidelines/Best Practices for Fire Water Retention**

Work-Schedule:

- 1st Meeting: 17 January 2017, Geneva
- 2nd Meeting: 20/21 June 2017, Budapest
- International Seminar Slubice, 5th September 2017
„Strategies for Fire Water Retention“ - discussing the draft with the participants
- 3d Meeting: 6 September 2017, Slubice
- October 2017 – March 2018 → discussions with stakeholders
- 10th CoP, Nov. 2018 – Guidance to be agreed by the Parties



Guidelines/Best Practices for Fire Water Retention

- *Draft* -

Legislation:

→ Seveso III Directive

Annex II, 5. Measures of protection and intervention to limit the consequences of a major accident:

(a) description of the equipment installed in the plant to limit the consequences of major accidents for human health and environment, including for example detection/protection systems, technical devices for limiting the size of accidental releases, including water spray; vapour screens; emergency catch pots or collection vessels; shut-off valves; inerting systems; **fire water retention**;

Guidelines/Best Practices for Fire Water Retention

- *Draft* -

- Fire-Fighting water is dangerous to waters irrespective of the burned material (even burned packaging material is contaminating fire-fighting waters to a water-endangering fluid)
- Most of the UNECE countries don't have any regulation concerning fire-fighting water retention
- Countries which do have regulations applying more or less complicated approximation calculations based on fire compartment area, fire load and specific risk factors
- However these calculation models are covering only up to 90% of „standard“ fires.

Guidelines/Best Practices for Fire Water Retention

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The following stepwise approach for **calculation** of fire-fighting water retention facilities is proposed:

- A. There is a direct proportionality of fire-fighting waters needed and the largest fire-compartment area which can be roughly equated to square meter compartment area resulting in cubic meter of needed retention volume (i.e. 5000 m² fire compartment area needs 5000 m³ of retention volume).
- B. Up to the factor 10 smaller retention volumes are needed if the facility is equipped according to an advanced fire protection concept (i.e. automatic Sprinkler). Accordingly and i.e. 5000 m² fire compartment area needs 500 m³ retention volume.
- C. If there are specific additional data available like i.e. density of stored goods and thermal load of potentially affected material a more advanced methodology could be used, as i.e. the German VdS or Swiss fire-fighting water retention guideline (i.e. 5000 m² → < 400 m³ (Swiss Method))
- D. If the fire-fighting water retention volume calculated according A to C is too high for realization, alternative extinguishing methods have to be taken into account.