

Lessons learned *Methanol Tank fire*

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Wezerhaven

Caldic Chemie BV

Exxonmobil

brandweer



Considerations

- Extent of the fire?
- Tank fire. But also a bund fire?
- Intensity radiation?
- State and content surrounding tanks?
- Available fixed systems?
(Which and still intact?)
- (un)visibility of the risks.

Risks methanol fire

- Vapour pressure at 20°C = 128 mbar
128 mbar = 12,8 vol%.....
- Explosion limits 5,5 – 44 vol%
- *Risk of flame blowback*

Up-scaling

- 3 industrial fire trucks in total;
- 3 foam concentrate containers (10m³ each)
- GRIP-1
- Request for police helicopter with infrared camera (drones are still not allowed!)
- aerial platform

Exploring the area 1

- Bund with four tanks (8.100 m²)
- Tank 470 (diameter 20 m, height 16m)
- Roof of tank 470 next to bund
- Fire in tank 470
- No visible fire or leakage in bund.

Exploring the area 2

- Other tanks seemed intact
- Cooling system is functioning correctly (other 3 tanks)
- Semi-subsurface system activated but there was foam leaking in the bund
- Drawings were available very quickly



Tactics

1. Preventing escalation by using monitors of the industrial firetruck. First on the bund, later on the tank (roofmonitor and mobile in the bund)
2. Extinguishing the tankfire
3. Third truck on the opposite site (eyes and cooling capacity).
4. Aerial platform for our own helicopter view



Correct figures

- Surface: 8.100 m²
- Diameter tank: 28!! meter

Semi-subsurface system

Worked fine, despite of the leakage.

- ATC 3/3%
- Ca. 14 m³









Cause

Unknown.....





Questions?

Thank you!