

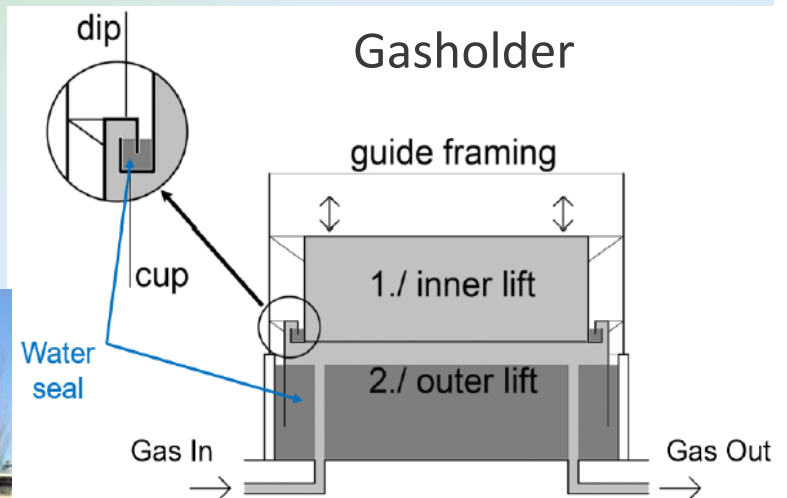
Release from a Gasholder

EPSC Learning Sheet July 2020



What Happened:

Vinyl Chloride Monomer (VCM) leaked from a gas-holder of 5000 m³. The gas cloud ignited, resulting in 24 fatalities



Aspects:

- Gasholders can store large quantities of hazardous gases at low pressure. VCM is toxic and can form an explosive cloud.
- The inner (top) lift was tilted and got stuck. When it fell down 2000 m³ of VCM gas was released through the water-seal. The cloud was ignited 130 meter away from the gas holder.
- Lubrication, so the top-lift does not get stuck, is essential. A lack of maintenance resulted here in the malfunctioning.
- Validate the horizontal position of the top-lift with e.g. radar or laser measurement as early warning for tilting.
- Pressure deviations initiate critical alarms, that need operational action. Eventually an inert gas can be added automatically at low pressures to avoid such an incident.
- Evaluate gas release consequences (e.g. with QRA or OBRA), and minimise presence in the identified hazardous area. In this case many truck drivers died sleeping in their cabins.

Maintain gasholders well