

# Sunken Roof in Storage Tank

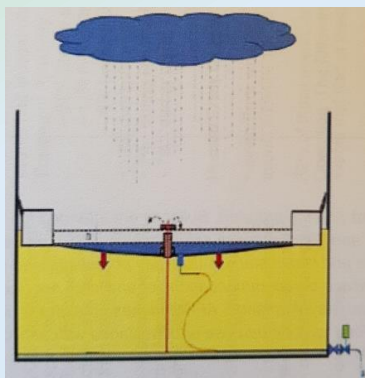
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## What Happened:

Insufficient draining of rainwater on floating roofs of storage tanks has resulted in many sunken roofs. Good draining is not easy.



## Aspects:

- Water on floating roof is hazardous as the roof deforms and eventually sinks
- Water on the floating roof can push the roof legs to the tank bottom and subsequently pressing hydrocarbons through the vacuum breaker on the roof
- Procedures often require water drains from floating roofs to be normally closed, to avoid hydrocarbon releases from the internal flexibles that can start to leak
- Typical causes for insufficient drainage of roof water are: closed drain valve, frozen drain, debris/fouling in the drain
- Roof drains that are not well indicated have been mixed with the tank water drain resulting in hydrocarbon spills
- Validate that rainwater drain capacity is sufficient
- Hydrocarbon recognising block valves (after the drain valve) can help to stop the drainage of hydrocarbons

**Avoid water on storage tank floating roofs**