

# Subsea application of dispersants

Already in the 1980's SINTEF evaluated the possibility of injecting oil spill dispersants into a blowing well. During the MC-252 Deepwater Horizon incident, subsurface dispersant injection was for the first time used extensively in a real case. About 3000m<sup>3</sup> (800.000 US gallons) was totally injected:

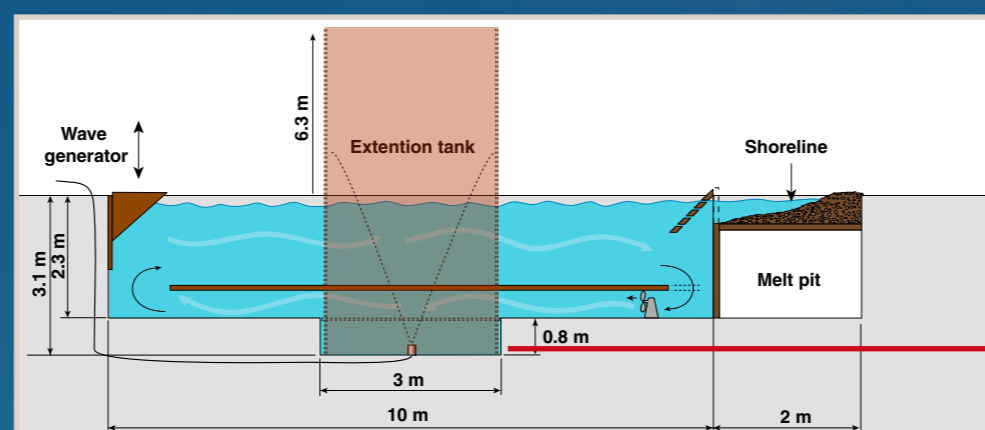
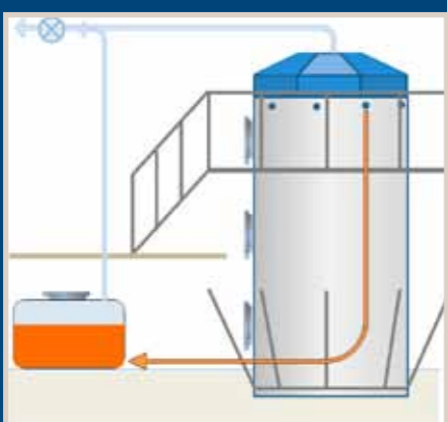
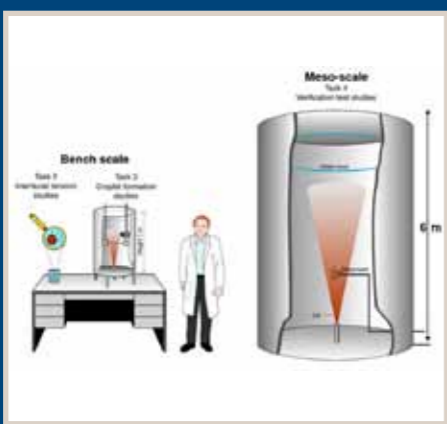
- In the first period of the release, the dispersant was injected down-hole into the damage riser
- After cutting the riser, the dispersant was injected into the oil-gas plume



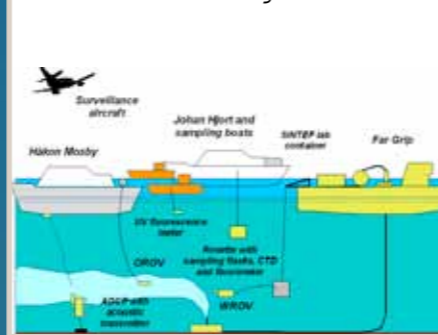
## Objective

Establish a JIP to assess the effectiveness of deep water application of chemical dispersants, primarily by using the injection techniques, conditions and oil type of the Deep Water Horizon (DWH) incident.

- JIP: Phase 1: 2011 – 2012: Laboratory / Basin experiments:
  - Meso-scale test tank / tower in SINTEF Oil Spill Basin Laboratories (6 m high, 3 m diam. 40 m<sup>3</sup> sea water)
  - Instrumentation for monitoring: oil droplet size distribution, concentrations (LISST 100X, Particle Visual Microscope, Macro-camera / laser in-situ UVF)
  - Bench-scale tests will be conducted to investigate a broader range of conditions (different oils and dispersants)
  - Development of algorithms for prediction effectiveness of sub-sea dispersant application
- JIP: Phase 2: 2013: Planning for a Full-scale Field experiment



Schematic picture from deep spill release in the Norwegian Sea



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