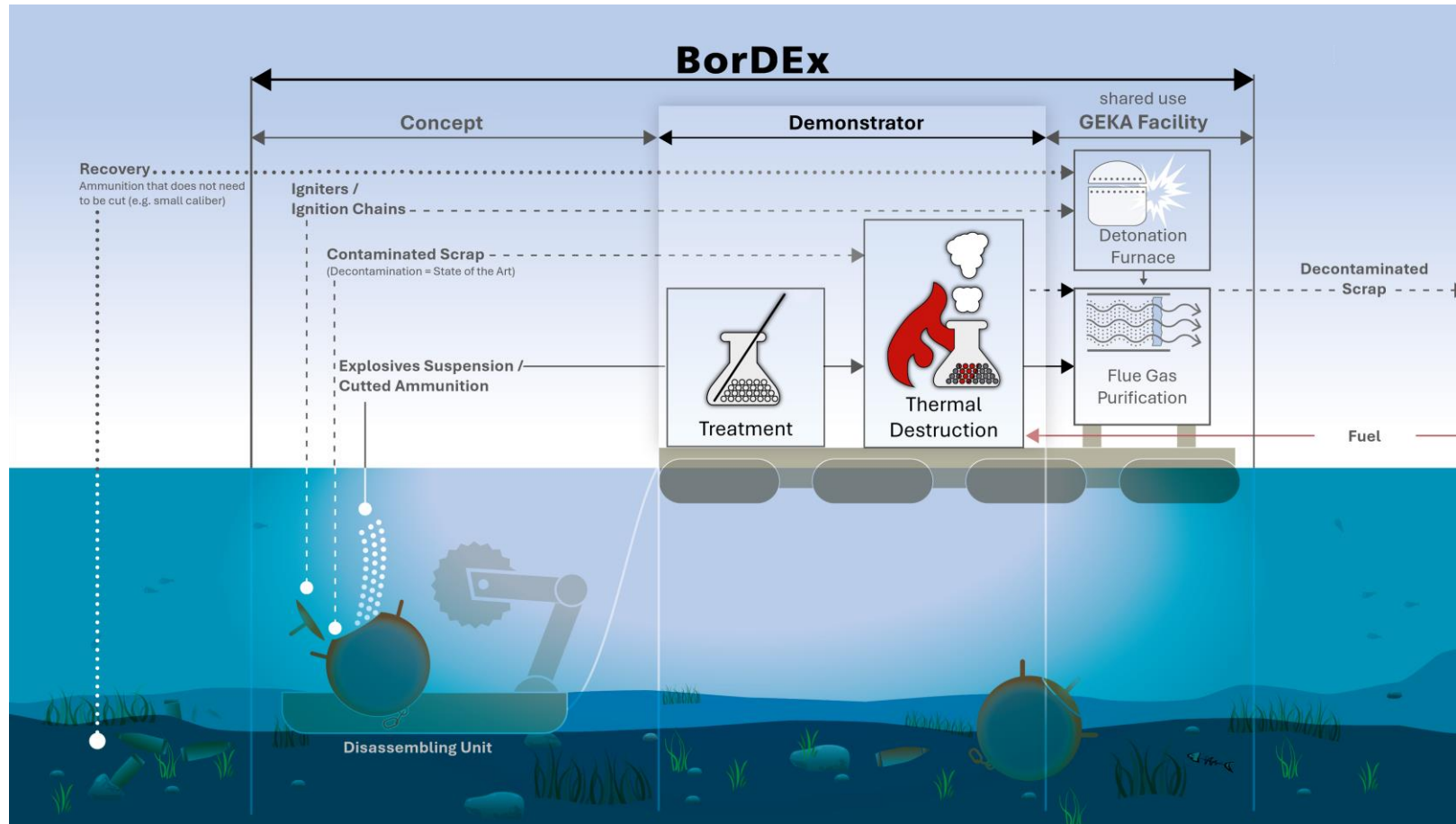


Construction of a mobile demonstrator for thermal disposal of large-calibre munition





BorDEX - mobile demonstrator for thermal disposal of liquified explosives

Source of explosives:

- Conventional, large-caliber, difficult-to-transport ammunition

Objectives are:

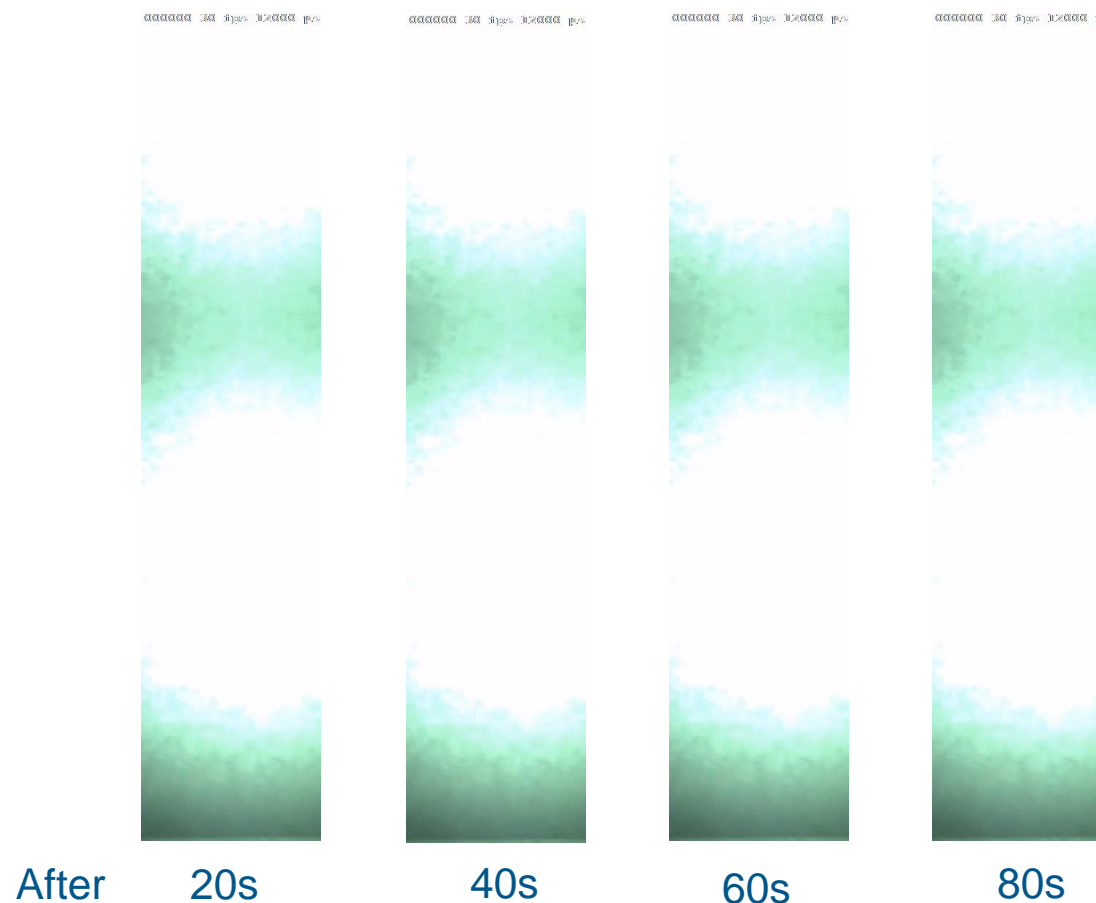
- 1) Convert explosives into a liquid state
- 2) Thermal disposal without manual intervention
- 3) Develop a safe solution for disposal of munition dumped in the sea



Sedimentation of TNT – water suspension

Video (15 fps, 2x-speed)

- Separation in 3 phases
- Fast sedimentation of heavy parts
- Foam building parts ascending directly
- ~ 140 seconds for main separation



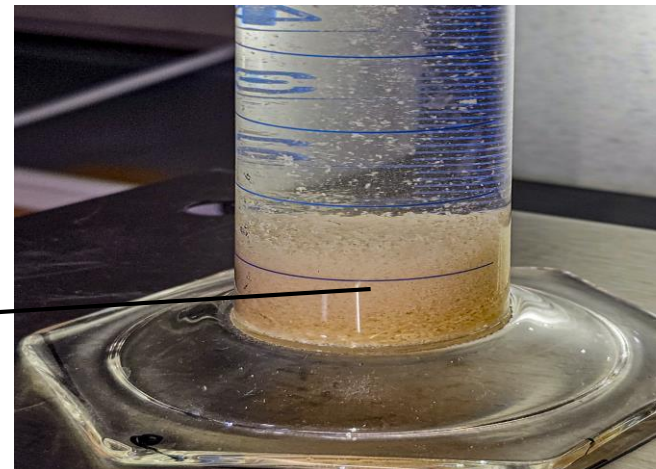
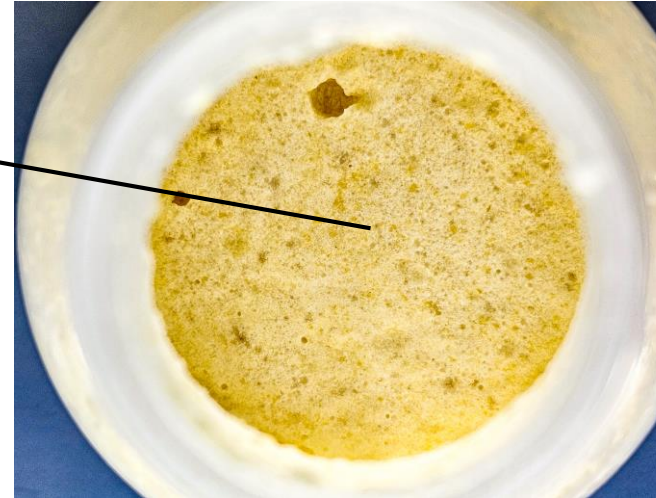
Difficulties to solve for liquid injection in thermal disposal

- foam may prevent injection in system
- liquid phase mainly consists of water
- solids may clog hoses
- combustion process might be impaired



foam

solids



Gefördert durch:

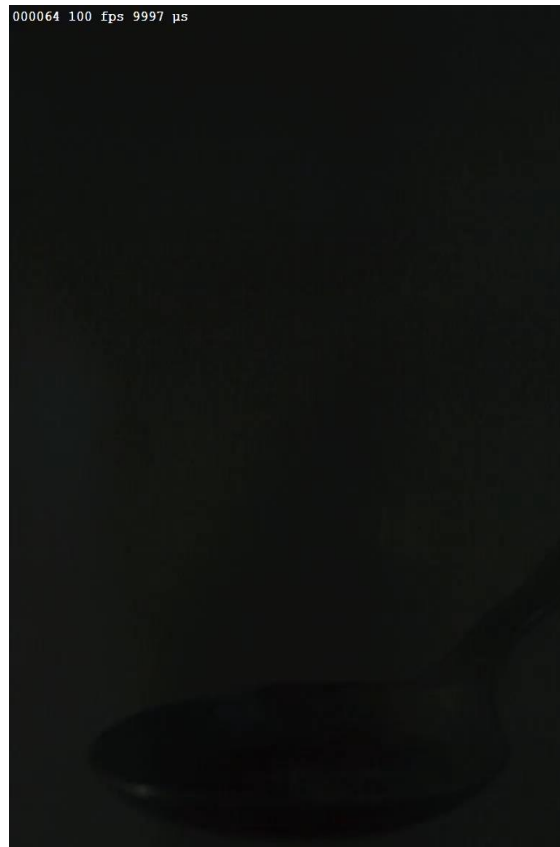


aufgrund eines Beschlusses
des Deutschen Bundestages



Combustion Tests of Explosives - Water suspensions -

- Placed on cold surface
- Intense combustion
- Reaction more spontaneous



- Dropped on hot surface
- Less strong combustion
- More controllable reaction



Combined expertise by



Industrial
Automation



Associated Partner

