

Planned experimental work on BLEVE: how  
will experiments answer the questions  
arising from modelling

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## BLEVE experiments

Main aim:

- Can a storage tank containing LH2 give rise to a BLEVE and if so what are the consequences?



## BLEVE experiments

- BAM test site Horstwalde (other test pad)
- 3 vessels of 1 m<sup>3</sup> volume
- BLEVE triggered by external propane fire

## BAM test site Horstwalde: one of the test pads



## BLEVE Experiments

### Preliminary vessel configurations

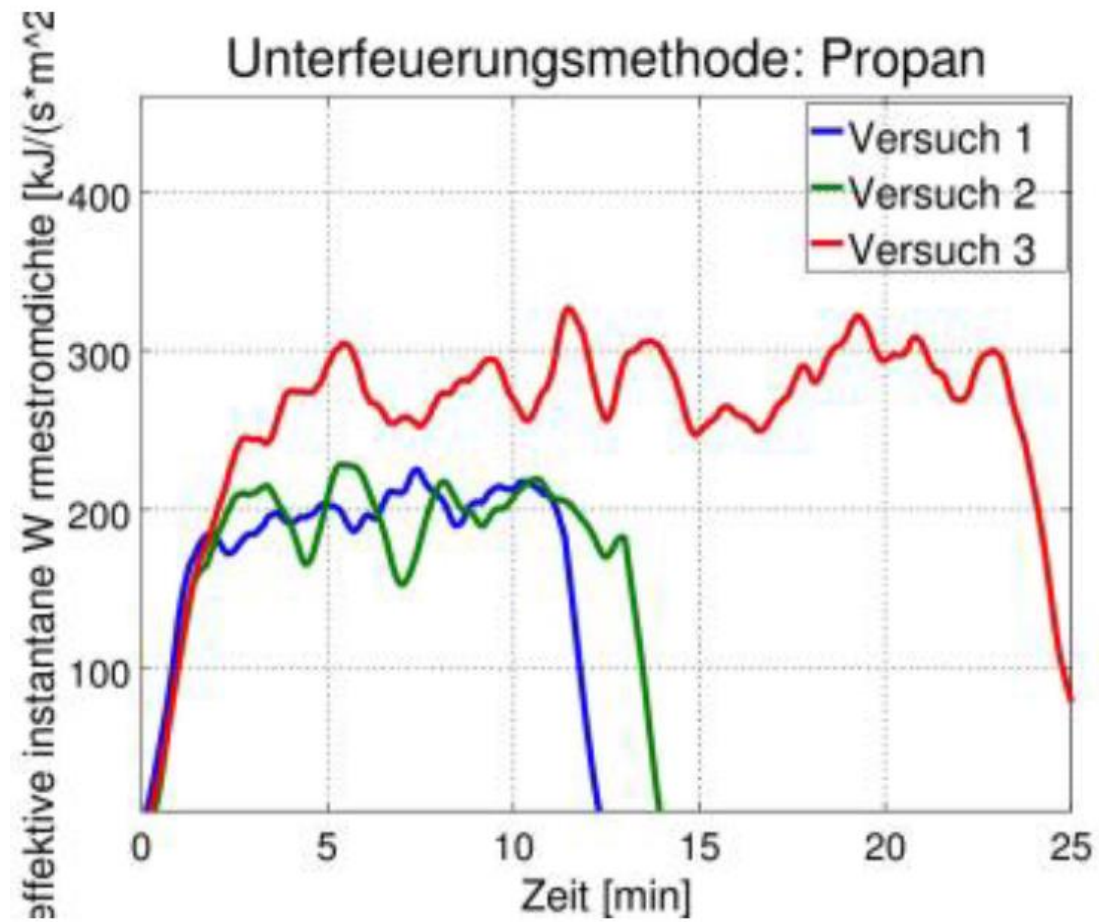
| Parameter                  | Configuration               |
|----------------------------|-----------------------------|
| Vessel volume              | 1m <sup>3</sup>             |
| Vessel insulation          | Double walled, MLI/perlite  |
| Vessel strength            | Standard and industrialized |
| Safety valve configuration | No safety valves            |

## BLEVE Experiments

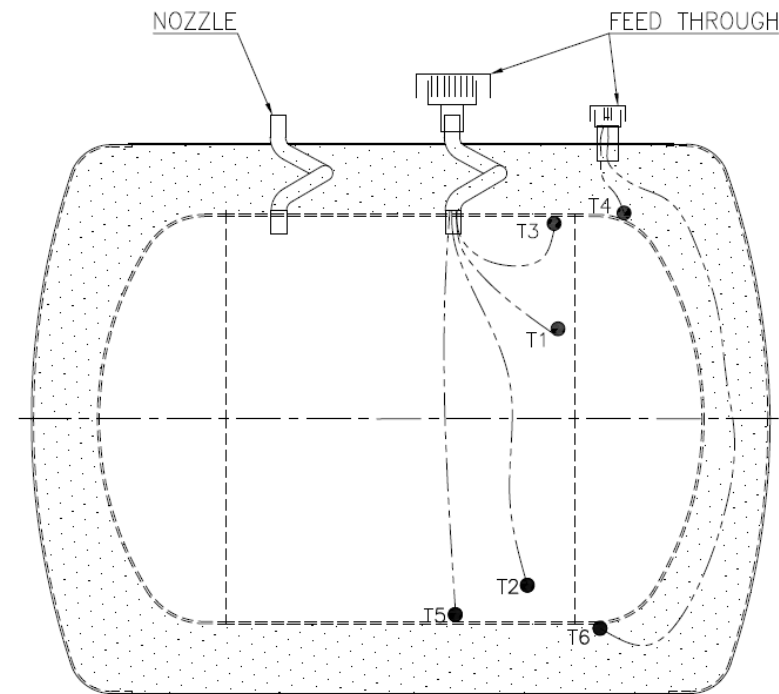
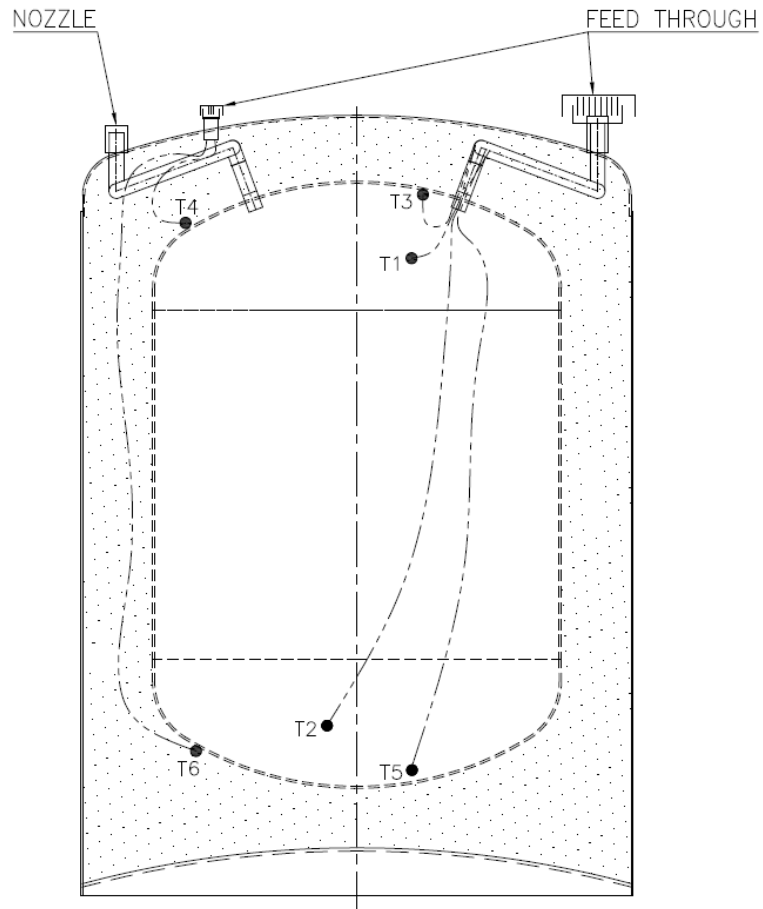
Programme of work: 3 tests, variation of vessel parameters

| Degree of filling level [%] | Vessel orientation | Insulation material |
|-----------------------------|--------------------|---------------------|
| 50                          | Upright            | Perlite             |
| 50                          | Horizontal         | Perlite             |
| 50                          | Horizontal         | MLI                 |

## Controlled propane fire for heating



## Vessel instrumentation (2 orientations)





## Time schedule

The experiments will be performed in September (slot between 6 September 2021 until 1 October 2021)

## Current situation

- Storage vessels for performance of the BLEVE experiments are prepared and instrumented. Expected arrival in Germany in course of May
- All instrumentation is available
- Details regarding delivery of LH2 and filling of storage vessels cleared

Thank you very much  
for your attention!

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