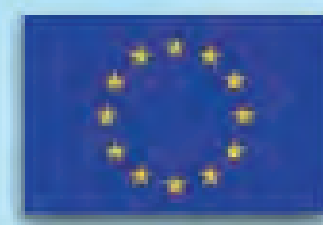




Introducing the DIFIS project

www.difis.eu



EU research project in FP6

Contact

Hans Cozijn

Senior project manager offshore

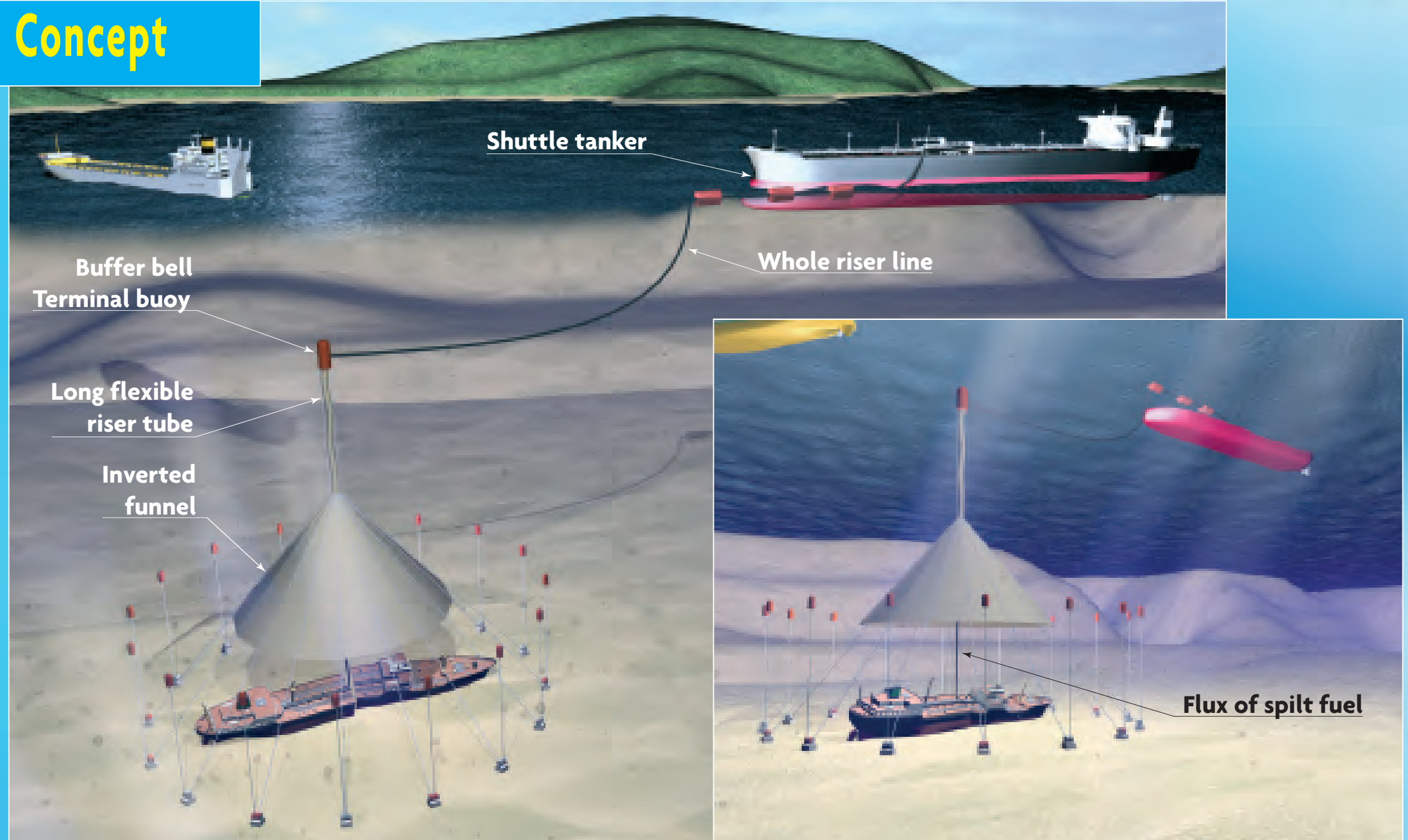
Maritime Research Institute Netherlands
2, Haagsteeg P.O. Box 28 6700 AA
Wageningen
The Netherlands

Double Inverted Funnel for Intervention on Ship wrecks

Major Objectives and Expected Results

- Study, design and validation of an EU reference method for the prompt and cost-effective intervention and remediation.
- Recuperating the fuel trapped in tanks even at considerable depths.
- General applicability as long as the tapped pollutant does not dissolve and is of lower density than sea water.
- Important impact on existing or new EU or IMO regulations.

The Concept

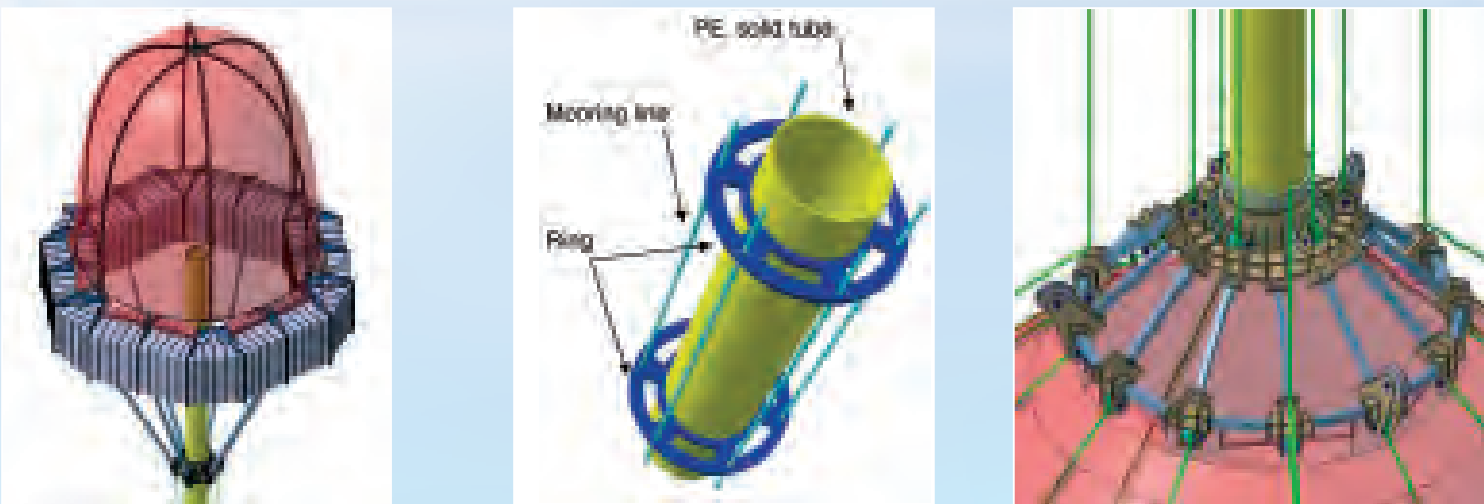


Main Project Tasks

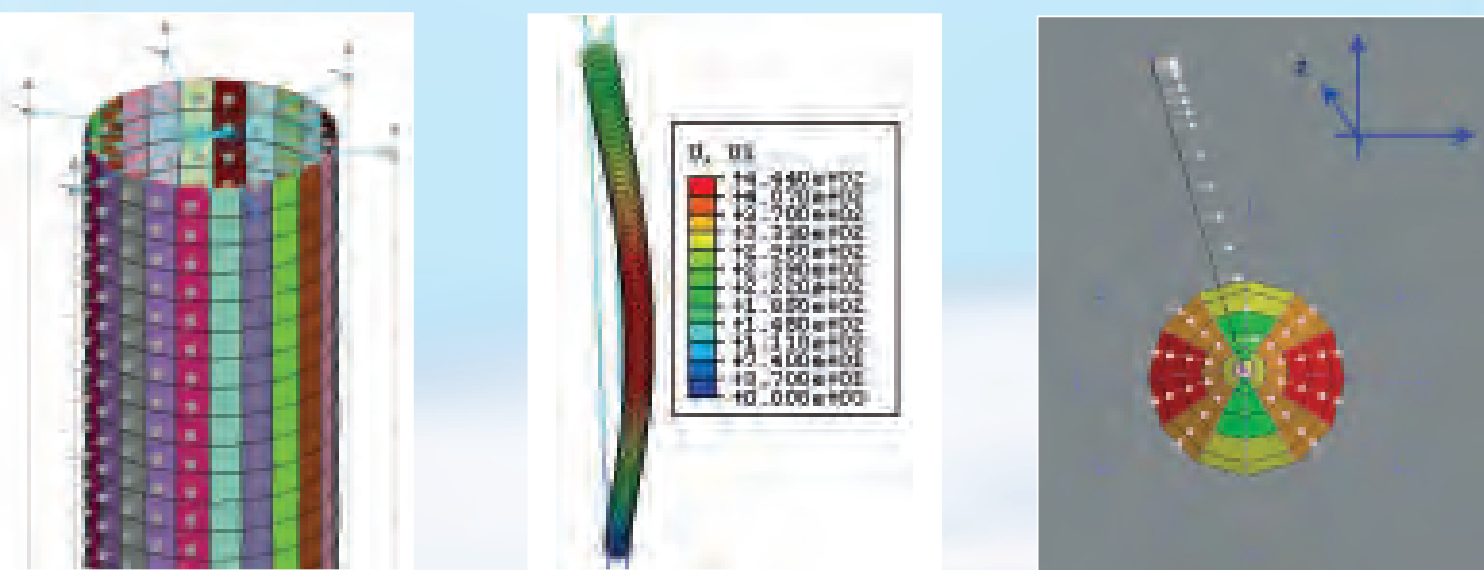
System specifications

- Wreck size: half a ULCC.
- PRESTIGE grade heavy fuel.
- Depth up to 4000 meters.

Conceptual calculations and constructive design of different elements required for intervention according to this specification



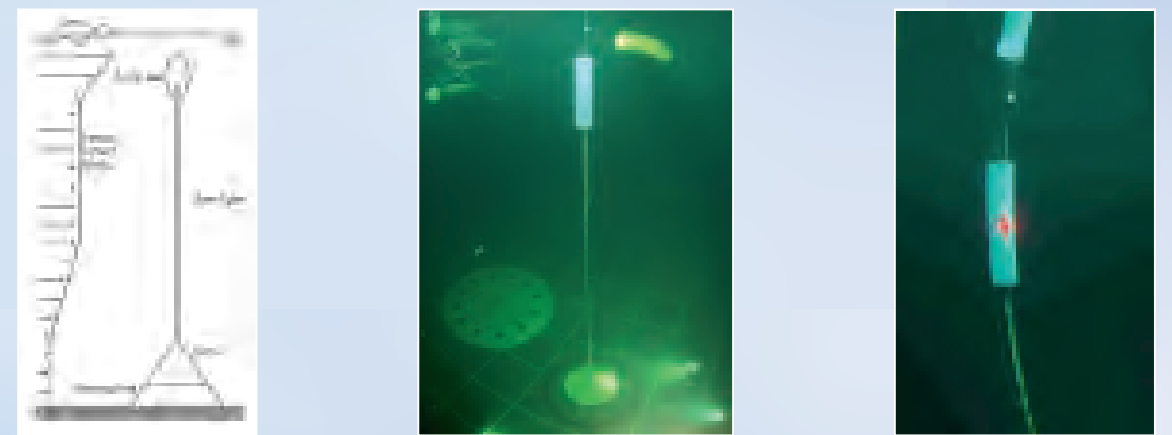
Riser FE Calculations



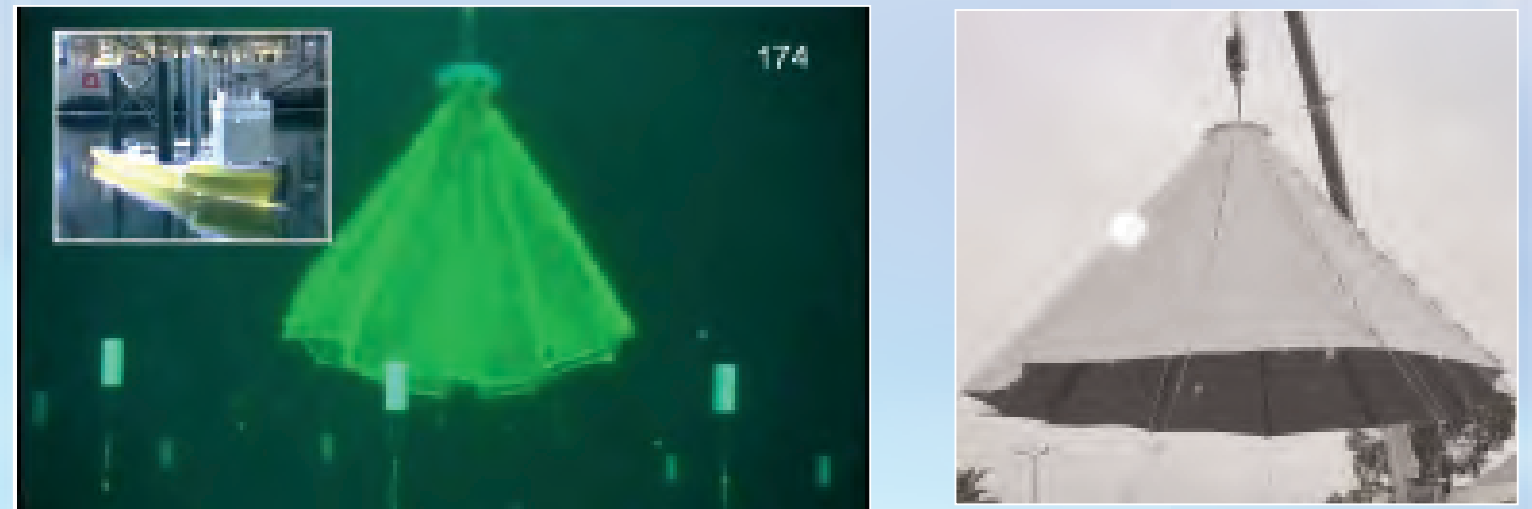
- The stability of the system is achieved by the strength action on the dome and on the riser thanks to a set of anchoring blocks laid on the seabed around the wreck.

Concept Verification and Optimisation

Model Tests



Behaviour tests in basin

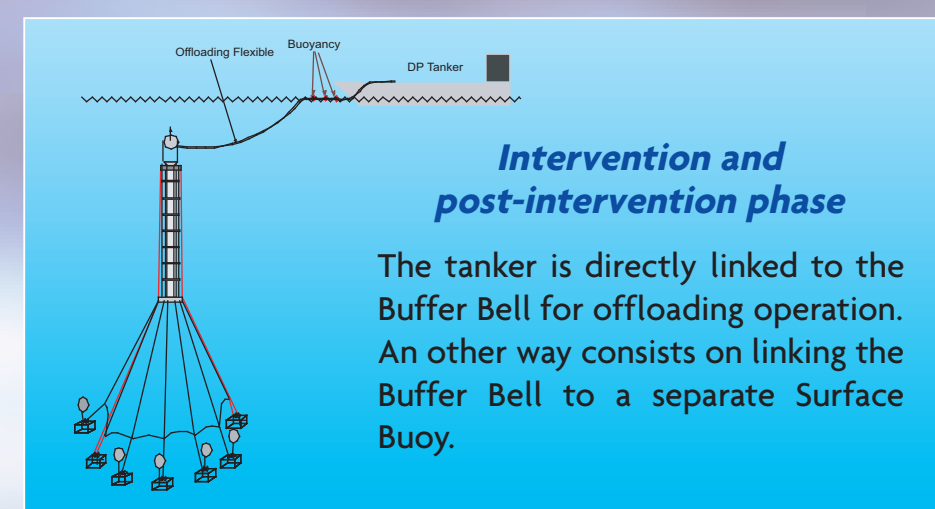


Deployment tests in basin

Unfolding test of the dome in air

Required Procedure for Deployment and Recovery Operations

- 13 phases from preparedness, deployment, maintenance and off loading operations, and decommissioning operations, complying with regulations and safety constraints.



Intervention and post-intervention phase

The tanker is directly linked to the Buffer Bell for offloading operation. An other way consists on linking the Buffer Bell to a separate Surface Buoy.

Operational Manual, Reference Guide for Intervention and Costing

Business Exploitation Plan Commercial Consortium Agreement



PERMANENT EXPERTS

JRC • Advisor to the Project
CEDRE • Subcontractor to Ifremer