



**New JIP Pitches &  
Announcement  
7<sup>th</sup> FER Week**



# Coldpad

## Cold Pit Repair

FER Nov 2025 Houston



Repair kit to address durably pitting that that fall under structural issues (CoC), on the spot, with no welding.

Quicker - Safer - Better

# PITTING



## 1. What is Pitting?

Very localized corrosion with random shape.

## 2. When is Repair Necessary?

Yes, if too deep ( Class requirements)

## 3. Timing and Intervention Window

During the tank inspection window (e.g. 7-day period).



## What would be the ideal solution?

- ▶ Structural repair addressing **deep pitting**
- ▶ Repair “**on the go**”, during inspection window
- ▶ **Cold & safe** – no hot work permit
- ▶ Catalogue approach - **Pre-engineered & class approved**
- ▶ **Fast** to install (say 30min)
- ▶ Long Design life (ideally 20years)
- ▶ Economic

# OUR TECHNOLOGY CAN DO THIS



## Fusion Between ColdShield & C-claw

### COLDSHIELD Structural repair

New steel plate  
Corroded structure  
Structural polymer  
Hydrocarbon resistant seal

Permanent Status – Hull Girder Strength

### C-CLAW Bonded Mechanical Fastener

1  
2  
3  
4

Fast & Automated Installation



Safe, Reliable & Durable

# OUR SOLUTION FOR PITS REPAIR

Installation sequence



1- PIT to be REPAIRED



2 - Surface preparation (ATEX)



3 - Installation with portable tool (ATEX)



4 - After installation



5 - Final look after paint touch-up

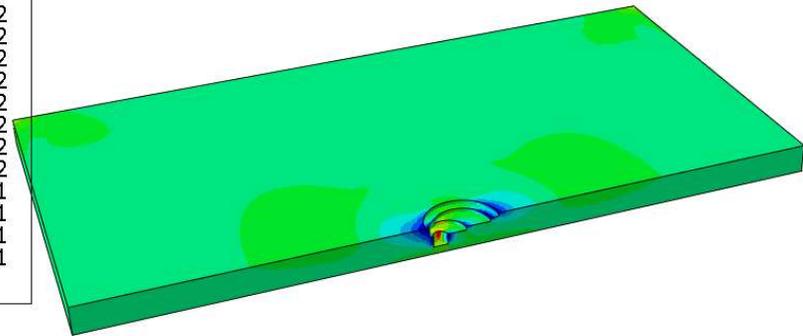
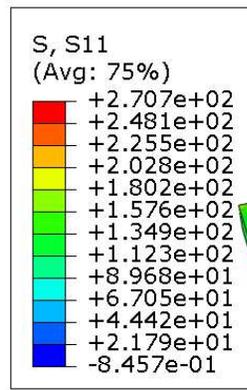
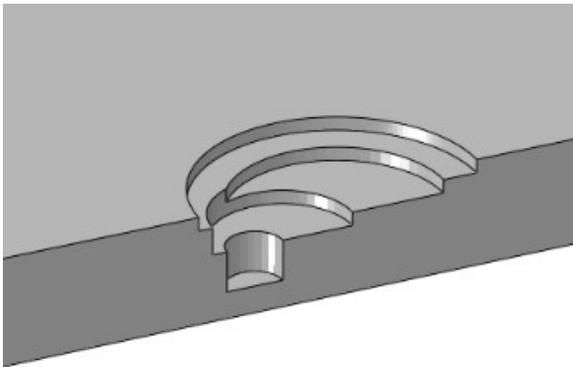
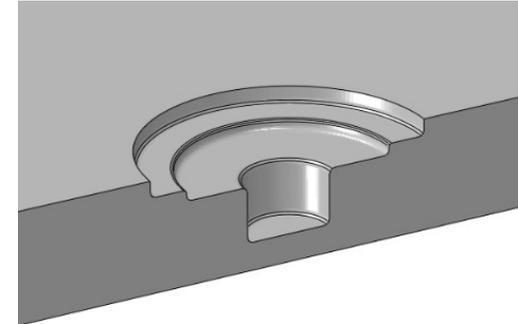
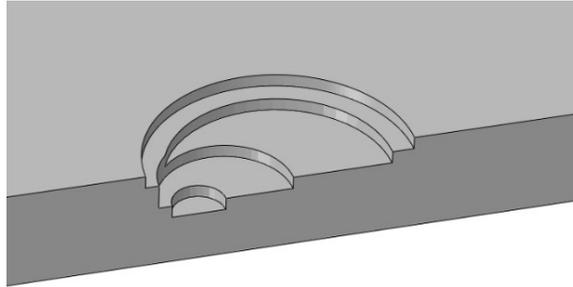
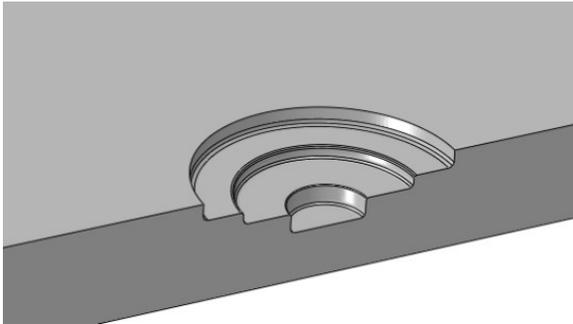


6 - Total installation time: less than 30min

Safe, Reliable & Durable

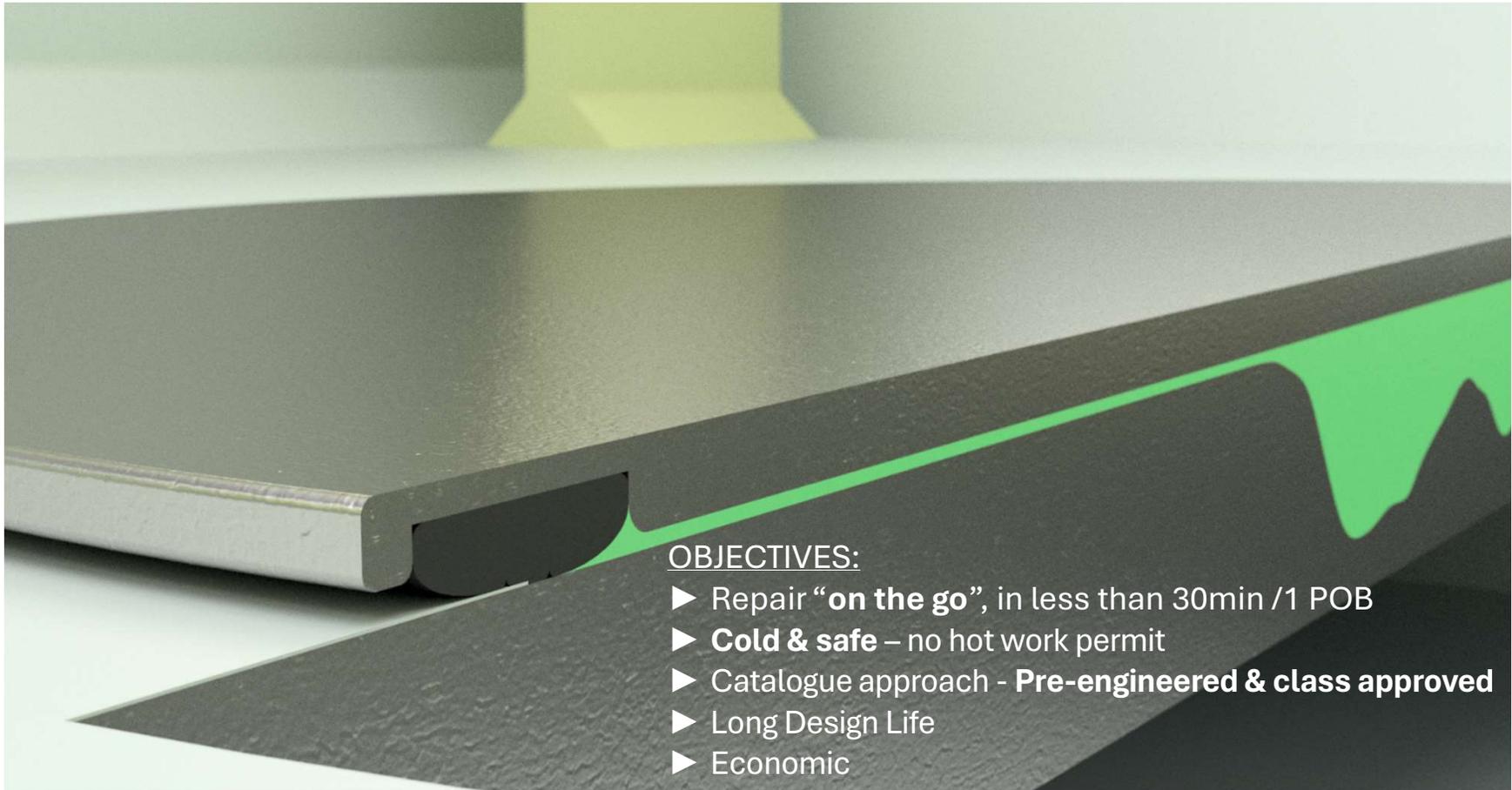
# PRELIMINARY NUMERICAL SIMULATIONS

Confirmation of efficiency & strength



Safe, Reliable & Durable

## PIT REPAIRED IN SWBT, COT, DECKS, BULKHEADS...



### OBJECTIVES:

- ▶ Repair “**on the go**”, in less than 30min /1 POB
- ▶ **Cold & safe** – no hot work permit
- ▶ Catalogue approach - **Pre-engineered & class approved**
- ▶ Long Design Life
- ▶ Economic

Safe, Reliable & Durable

# What Need To Be Done To Achieve Such Product?



## WORK PACKAGES:

- 1 - Characterization** of the **Pits** to be Addressed
- 2 - Engineering** that covers most of the **Configurations**
- 3 - Adaptation** of the **Installation Tool**
- 4 - Full Scale Tests** (mechanical & accelerated aging tests)
- 5 - Class Type Approval**

**18 months**

### PROJECT DURATION

Comprehensive timeline covering all development phases from initial development until final certification

**150 k€**

### PROJECT BUDGET

Allocated resources covering material, equipment, prototype development, certification fees, and engineering manpower



*Coldpad*

CONTACT

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# THE PROBLEM

- Offshore operations often involve low-speed roller bearings
- Inspection techniques for these bearings fall short
- Limited data to support maintenance decisions
  - Budget is limited
  - safety concerns are high

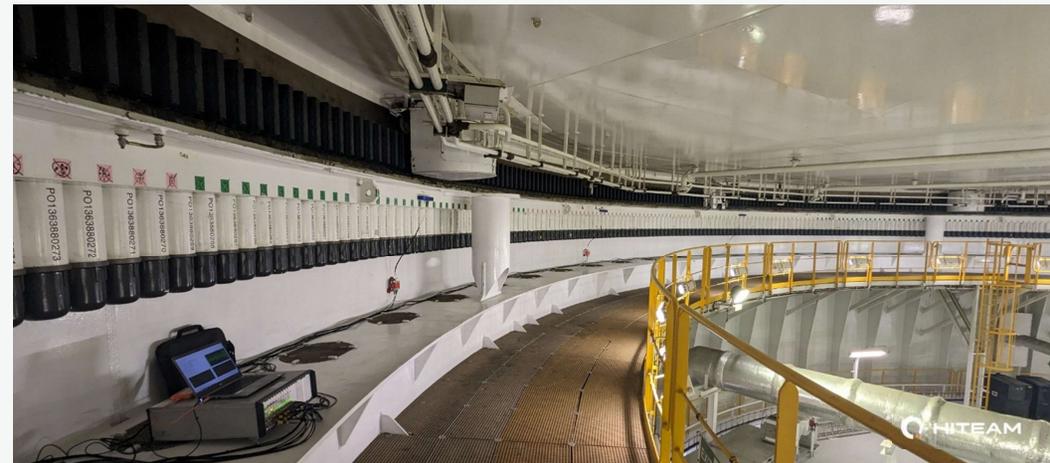
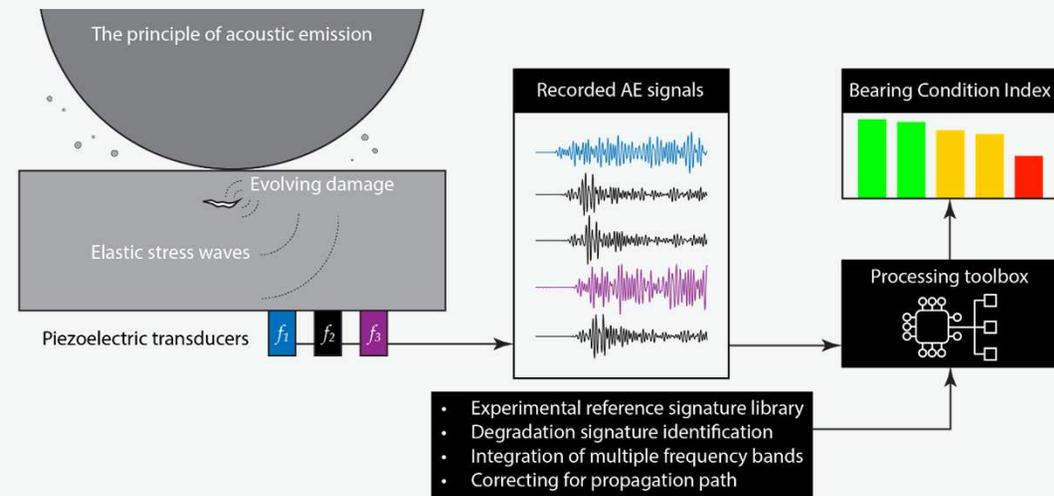
## BEARING INTEGRITY



# THE SOLUTION

## HITEAM JIP

- Based on ultrasound emissions generated by degradation within the bearing
- Patented technology, developed at TU Delft
- No baseline needed, retrofittable
- Comprehensive Bearing Condition Index



# FUNDAMENTAL RESEARCH

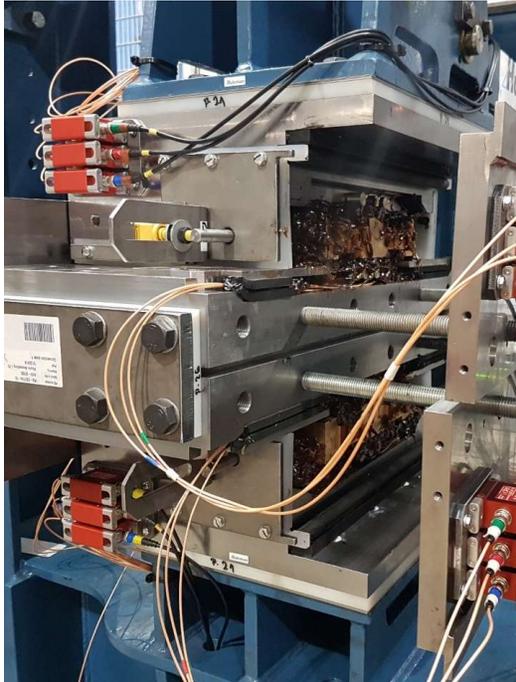


**Signal Identification Tests**  
Huisman, 2020–2021

**Natural Degradation Test**  
Allseas, 2021–2022

**Linear Bearing Tests**  
Huisman, 2023

**Turntable Laboratory Test**  
SBM / ANCAP, 2025



# HEAVY-LIFTING

## FIELD VERIFICATION

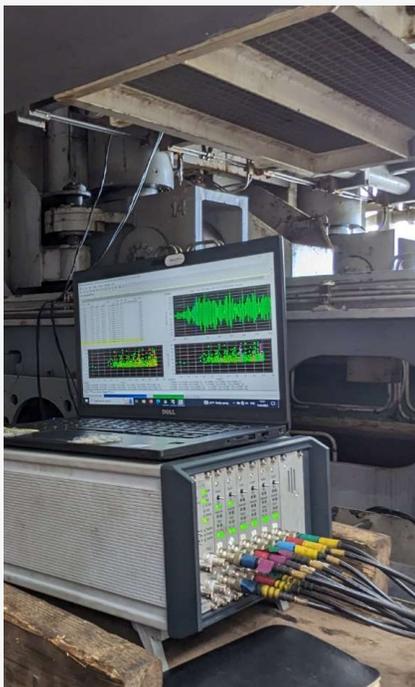
**Sandpiper**  
Offshore Mast Crane  
Allseas, 2023 Singapore

**Pioneering Spirit**  
Topside Lift System  
Allseas, 2023 Rotterdam

**Pioneering Spirit**  
Tub Mounted Crane  
Allseas, 2025 Rotterdam

**Sleipnir**  
Auxiliary Crane  
Heerema, 2024 Rotterdam

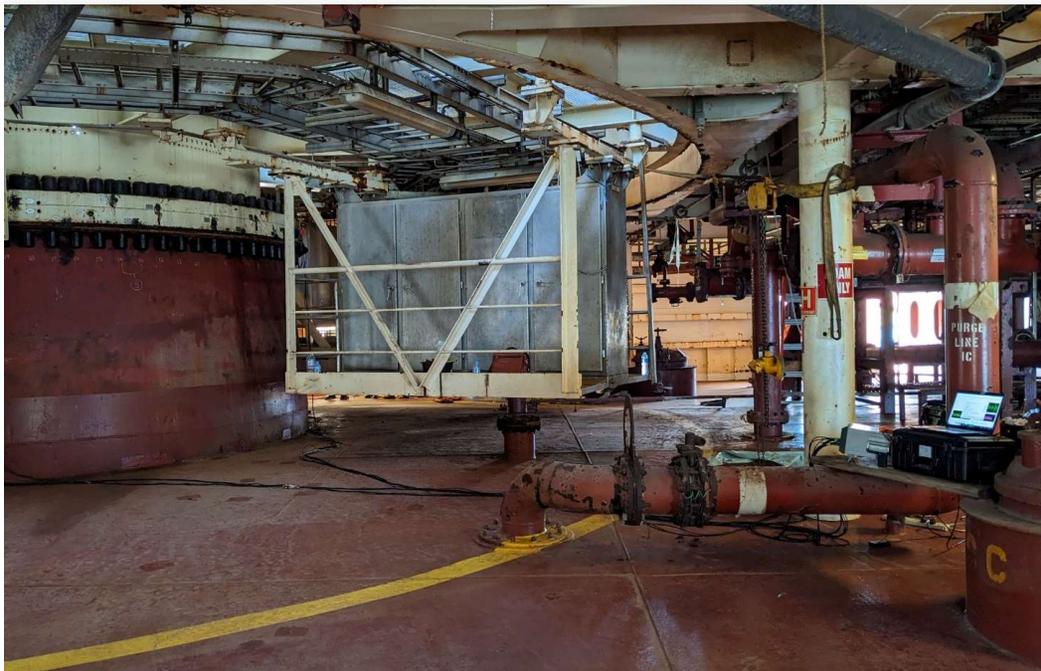
**Sleipnir**  
Tub Mounted Crane  
Heerema, 2024 Rotterdam



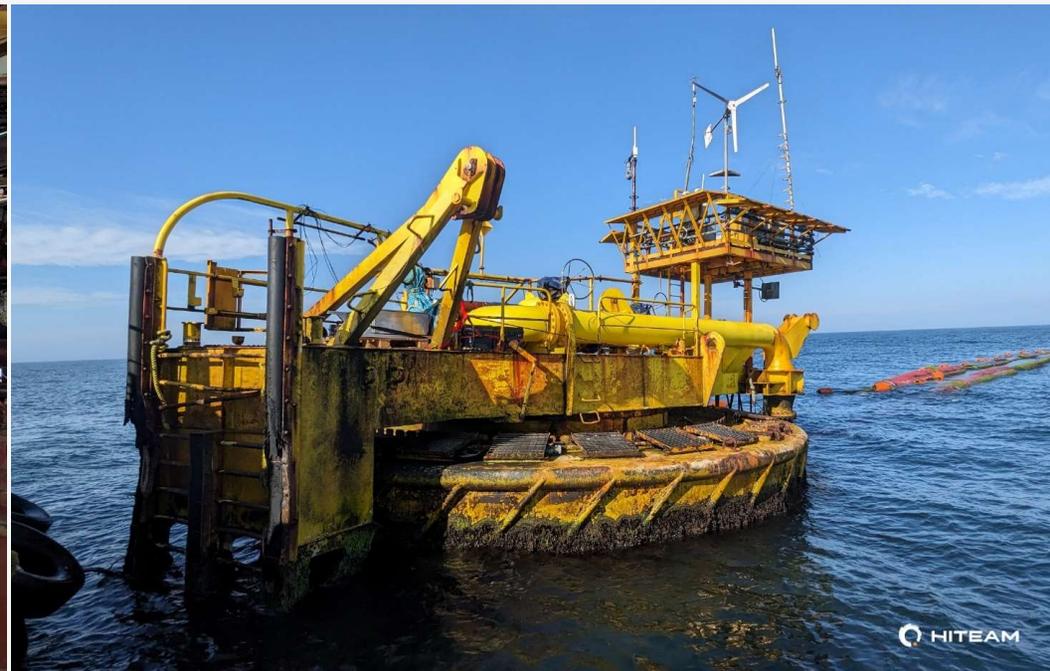
# TURNTABLES

## FIELD VERIFICATION

**Glas Dowl FPSO**  
Bluewater, 2023 Indonesia



**José Ignacio Buoy**  
SBM / ANCAP, 2025 Uruguay



# BEARING JIP

## BENCHMARKING OF ACOUSTIC EMISSION RELIABILITY FOR INSPECTION GUIDELINES

### Scope

- Development of guidelines for AE bearing monitoring
- Technology Qualification for cranes and turntables
- Development of reliability framework for operational measurement
- Investigation of operational data fusion and parameter identification

### Project Organisation

- Duration 1 year
- Start date 1<sup>st</sup> of January 2026
- Total budget 100 kEuro
  - Participation fee 15kEuro
  - In-kind participation possible (class)
  - Reduced participation fee for former HiTeAM JIP partners



#### CONTACT

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**Save the date**  
**7<sup>th</sup> FER Week**  
**18-22 May 2026**  
**Aberdeen, UK**





**FMS**

**FIRST MARINE SOLUTIONS**

# FER Forum Spring 2026

18<sup>th</sup> to 22<sup>nd</sup> May 2026 in Aberdeen, Scotland.

**Sandman Signature Hotel**  
**St. Andrew Street**  
**Aberdeen**  
**Scotland**  
**AB25 1AD**

Details and rates to follow shortly.





# ABERDEEN

