

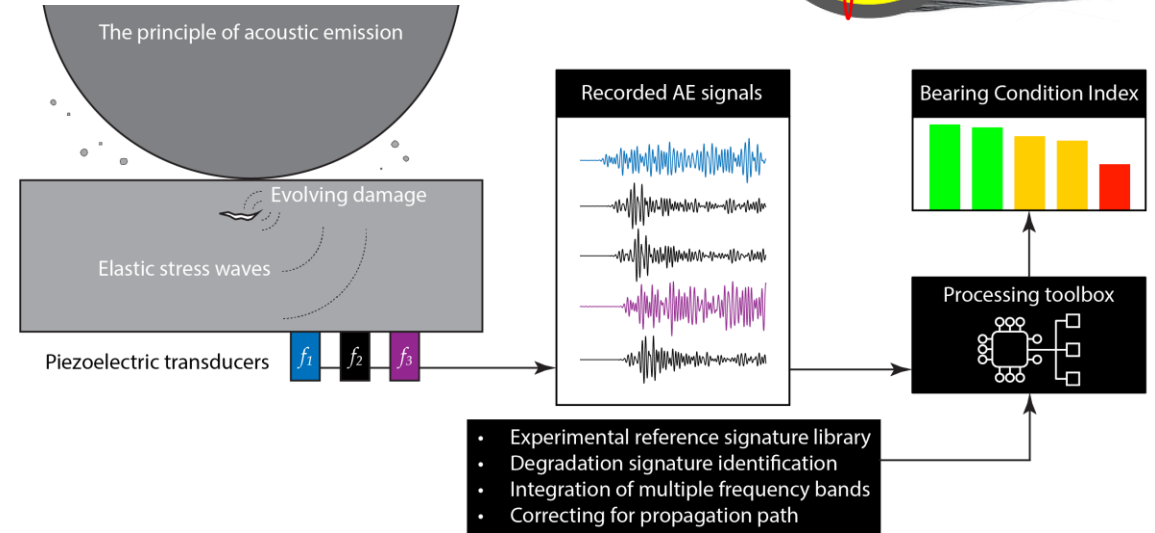
# The Problem

- 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



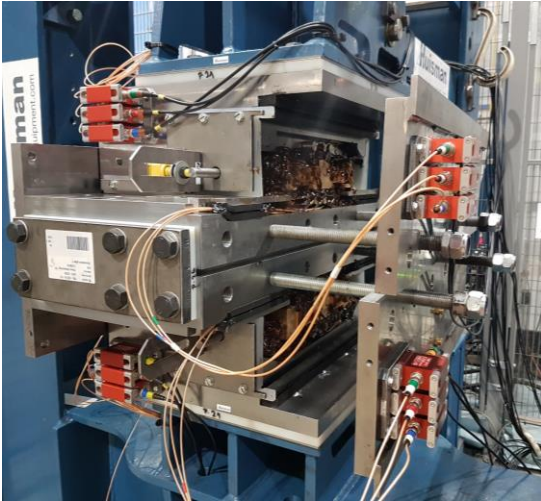
# The Solution by HiTeAM JIP

- Patented technology developed at TU Delft based on ultrasound emissions from degradation within the bearing
- Rapid inspection and continuous monitoring
- No baseline needed, retrofittable
- Comprehensive Bearing Condition Index





# Fundamental Research in HiTeAM JIP



Signal identification tests  
Huisman  
(2020–2021)



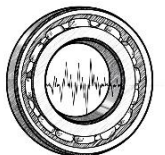
Natural degradation test  
Allseas  
(2021–2022)



Linear bearing tests  
Huisman  
(2023)



Turntable laboratory test  
SBM, ANCAP  
(2025)



HiTeAM  
Systems

Huisman

SBM  
OFFSHORE



bluewater

Allseas

sofec

TU Delft

# Heavy-lifting Field Verification in HiTeAM JIP and Beyond



Sandpiper  
Offshore Mast Crane  
Allseas  
(2023, Singapore)



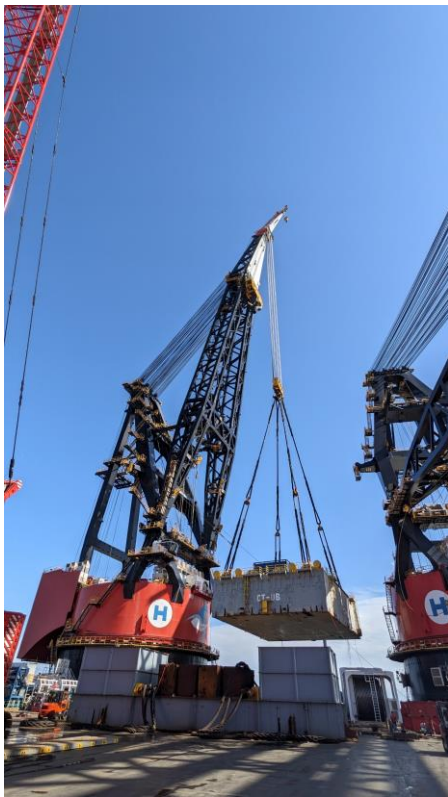
Pioneering Spirit  
Topside Lift System  
Allseas  
(2023, Rotterdam)



Pioneering Spirit  
Tub Mounted Crane  
Allseas  
(2025, Rotterdam)



Sleipnir  
Auxiliary Crane  
Heerema  
(2024, Rotterdam)



Sleipnir  
Tub Mounted Crane  
Heerema  
(2024, Rotterdam)



# Turntables Field Verification in HiTeAM JIP



Glas Dowl FPSO, Bluewater (2023, Indonesia)



José Ignacio Buoy, SBM, ANCAP (2025, Uruguay)



# BEARING JIP

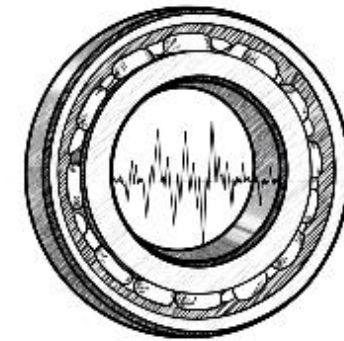
Benchmarking of Acoustic emission Reliability for Inspection Guidelines

## 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 organization

- Duration 1 year
- Start date 1<sup>st</sup> of September 2025
- Total budget 100kEUR
  - Participation fee: 15kEuro
  - In-kind possible (Class)
  - Reduced participation fee for former HiTeAM partners



HiTeAM  
Systems

## Contact

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