

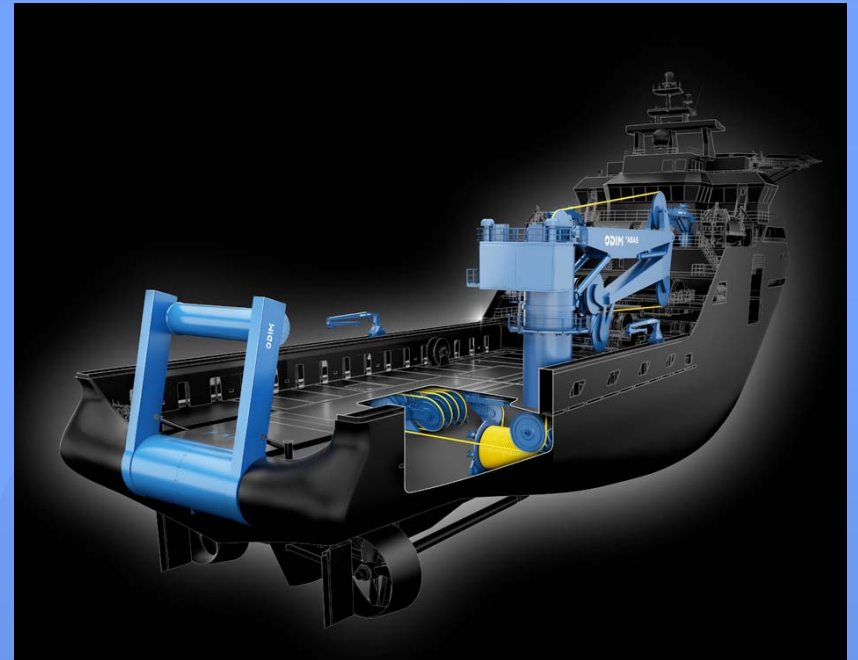
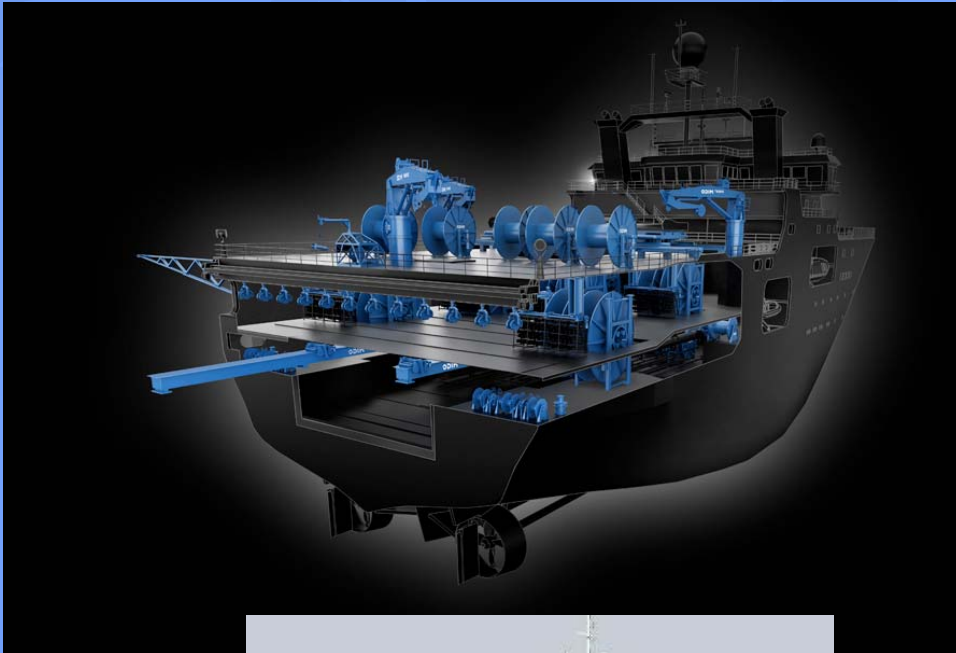
Advanced Technologies for Research Vessel Operations

Jan Kjærstad , ODIM AS

Geoff Lebans, ODIM Brooke Ocean Ltd.



ODIM supplies automated handling systems



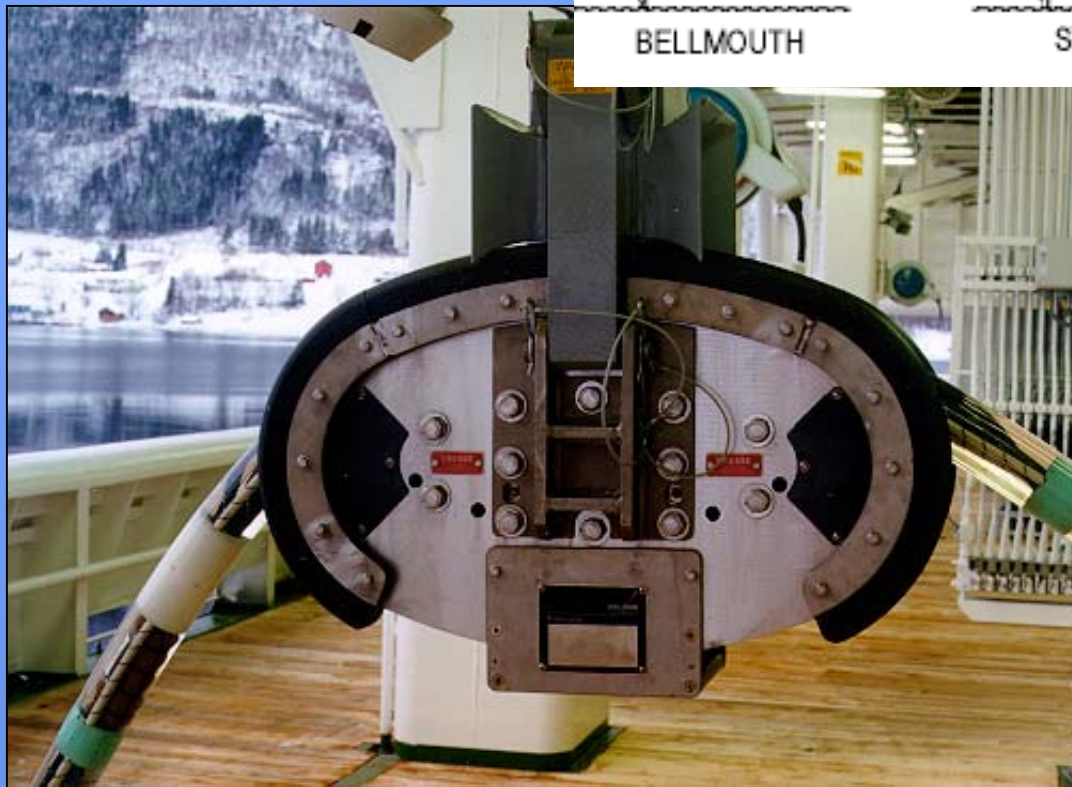
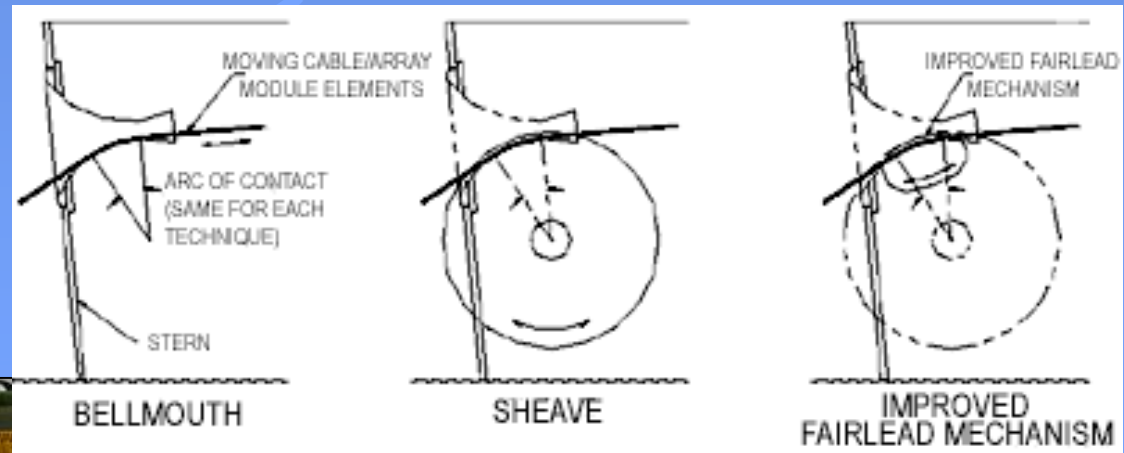
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ODIM Brooke Ocean

- ◆ Supply sensor platforms, launch & recovery systems, cable handling systems, instrumentation and engineering services
- ◆ Located in Dartmouth, Nova Scotia, Canada near the Bedford Institute of Oceanography
- ◆ Sister companies Brooke Ocean technology (Mass.) and ODIM Spectrum (Ontario)



ODIM Spectrum fairlead – alternative to sheave



Launch & Recovery Systems



AUV launch and recovery system

Monterey Bay Aquarium Research Institute



Docking head for AUV launch & recovery system

Monterey Bay Aquarium Research Institute



CTD rosette handling system

Fisheries & Oceans Canada & University of Laval

Launch & Recovery Systems



Containerized handling
and towbody system for
towed acoustic projector

Australian Navy



Ship of opportunity adaptable
AUV LARS with containerized
storage and transport

Fugro, USA

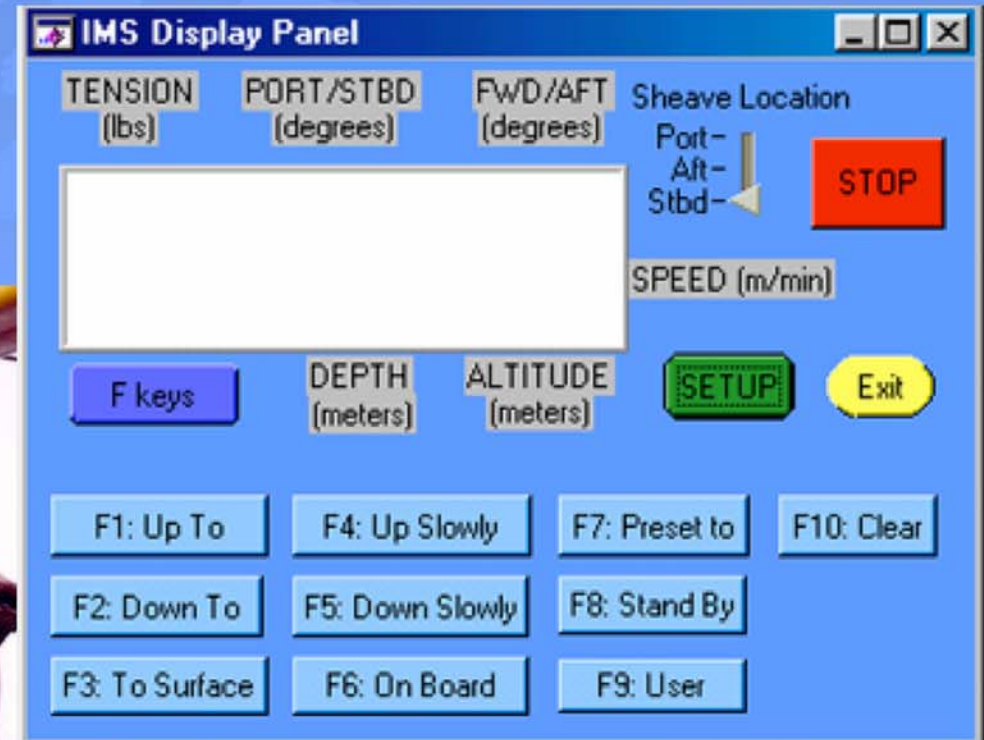
Containerized Towing/Handling Equipment

- System with ISO base can be anchored to deck with bolts or ISO corner fittings to provide ability to reconfigure to suit the mission



Cable Metering Sheave

- ◆ Measures:
 - Cable out
 - Cable speed
 - Cable load
 - Cable angles
 - **Depth**
 - **Altitude**
- ◆ Readout Locations:
 - Bridge
 - Winch
 - Lab
- ◆ Permits messages to be sent from lab to winch operator



Safe Anchor Handling System

- Addresses all of the major risk elements to crews involved in anchor handling
- Enables remote control of operations from the bridge

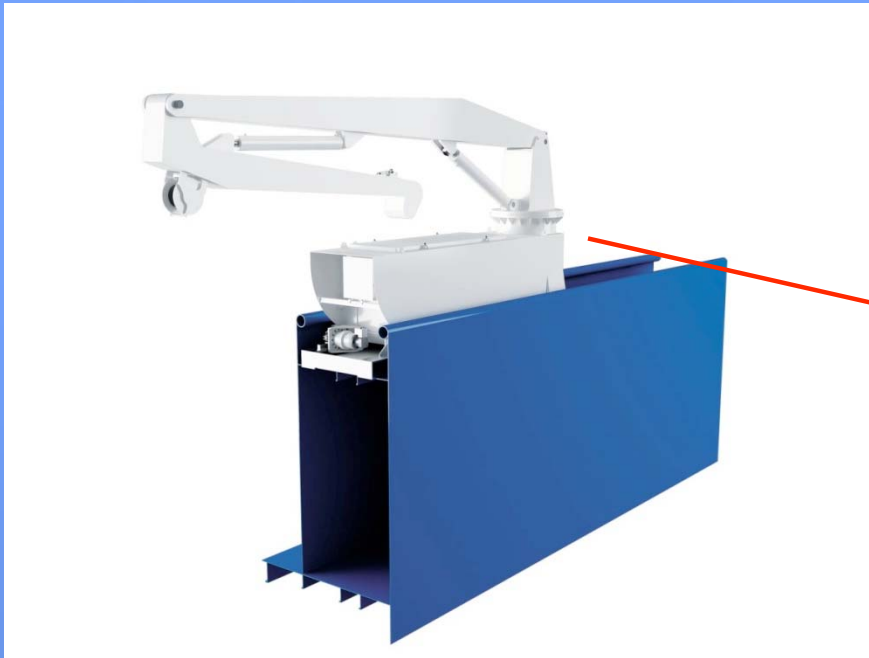


Bourbon ORCA Incorporates Advanced Handling Equipment

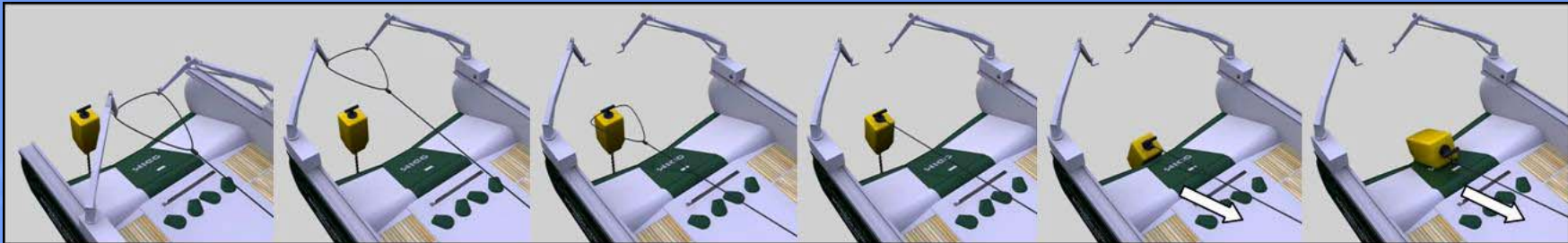


Bourbon ORCA Mobile Cranes

- Can run along the length of the deck



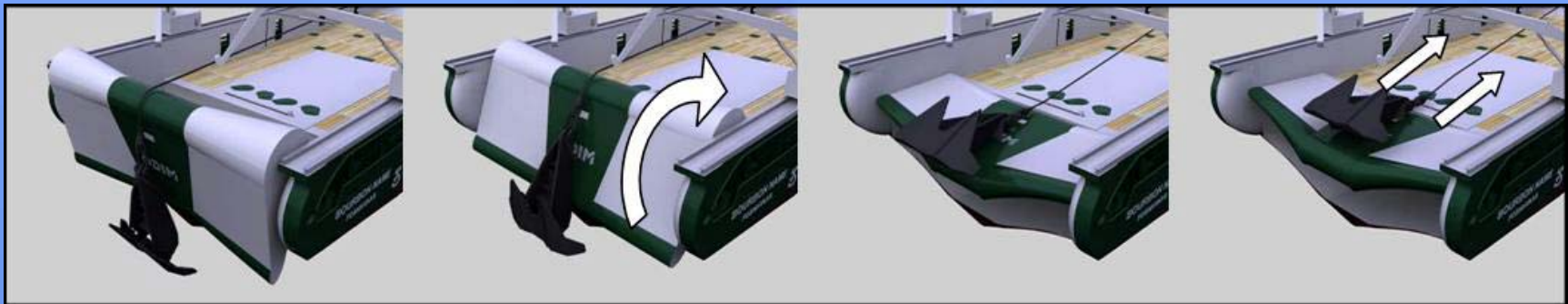
Bourbon ORCA Safe Handling System



[Odim Boye.avi](#)



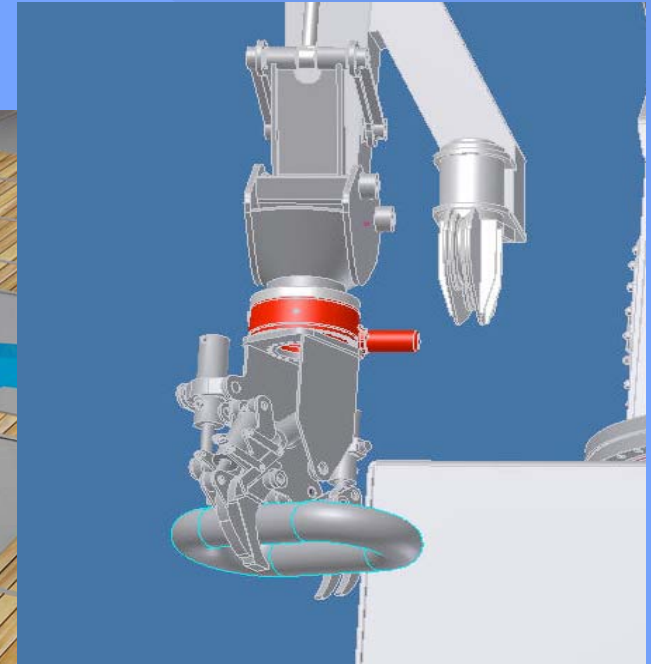
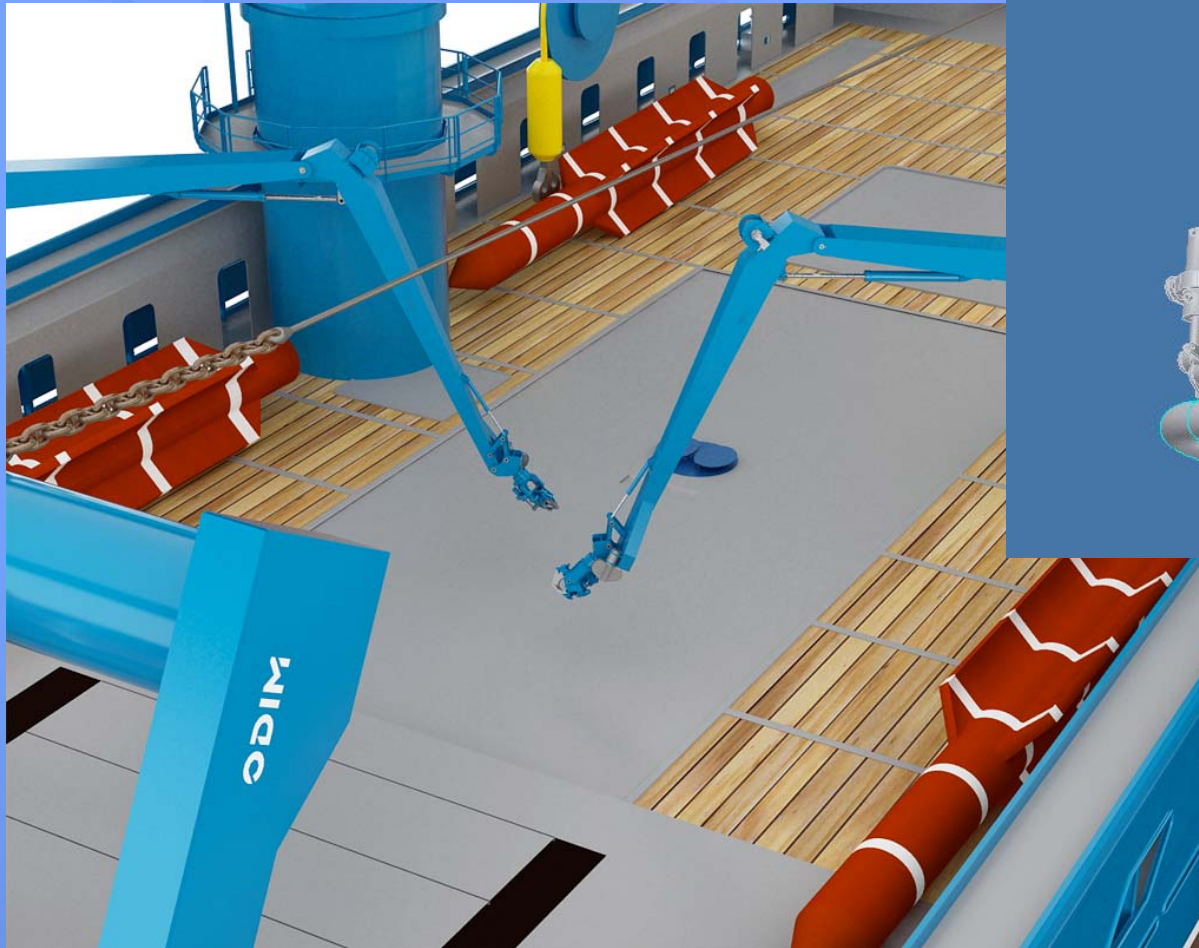
[Odim Pennent.avi](#)



[Odim Anker.avi](#)

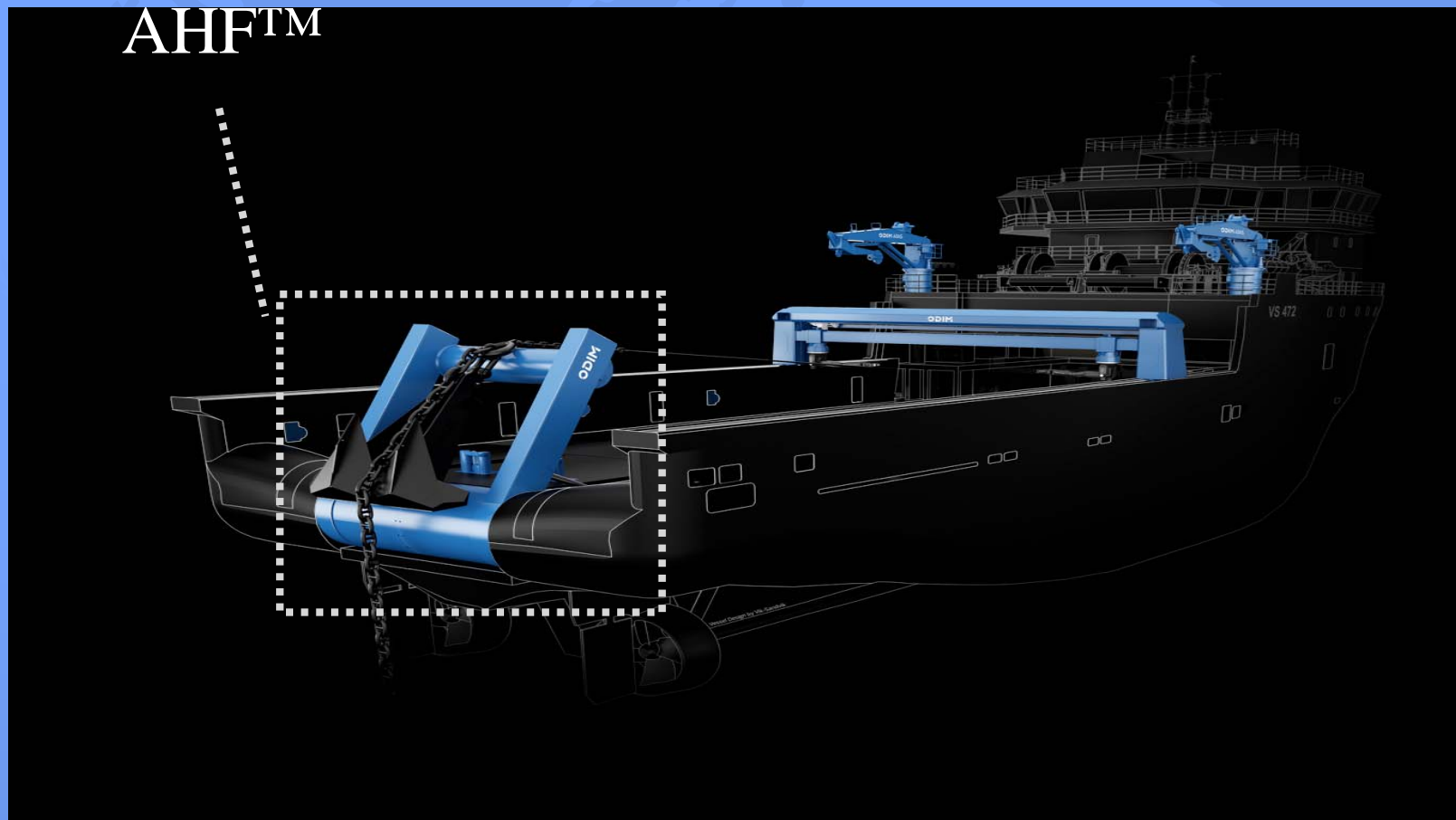


Cargo Rail Crane with Manipulators



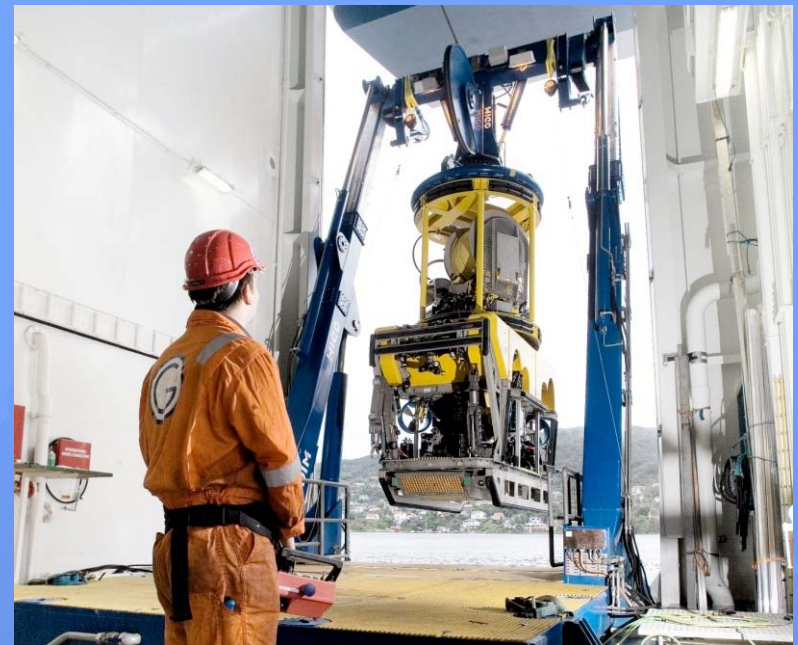
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Anchor Handling Frame is Flush with Deck when Stowed



ODIM ROV LARS™

- Active Heave Compensation (eliminates 90 – 97% of vessel motion)
- Can be deployed over-the-side or through a moon pool
- Can be operated in 4.5 m seas



ODIM

Future Launch/Recovery Systems

Future systems installed aboard offshore supply and naval vessels may be automated or semi-automated and will incorporate automation and robotics. This will increase safety and reduce the number of crew required on deck.

Remote Anchor Handling System (RAHS)

RAHS – utilizes 2 large manipulator arms with master slave control to eliminate the requirement to have crew on the deck of supply vessels during handling operations.



ODIM

Remote Anchor Handling System (RAHS)

- Bridge mounted control station with unobstructed view of the deck
- With minimal training operator is able to think of the arms as an extension of their own arms



Remote Anchor Handling System (RAHS)

- User friendly
- Force feedback
- Accurate handling & control
- Manipulator a key factor to success
- Arms have 600 kg SWL and 5 m reach



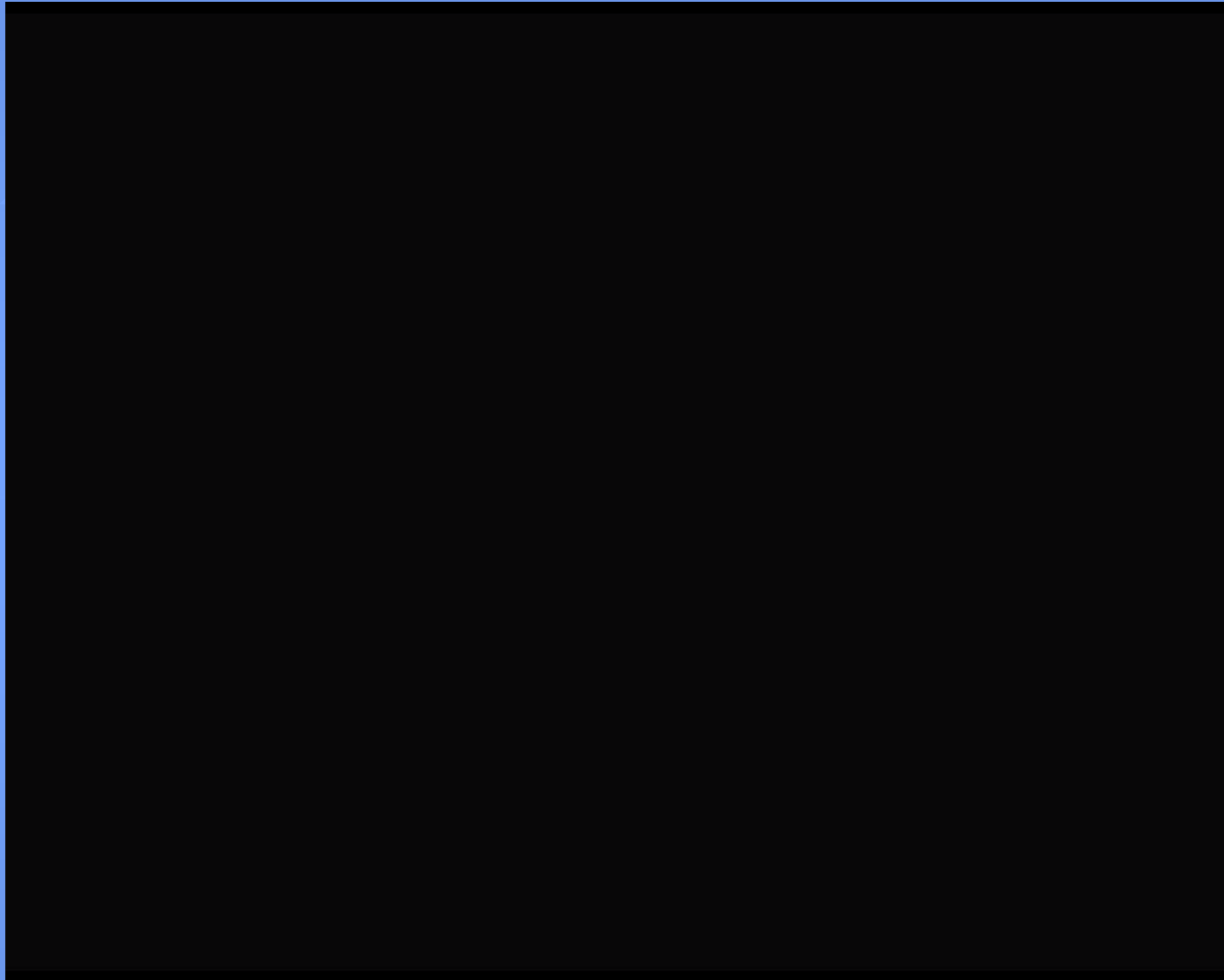
Remote Anchor Handling System (RAHS)



First order
received
from Maersk



Remote Anchor Handling System



..\versjon01.w
mv

High-Tech Launch/Recovery System for Small AUVs

