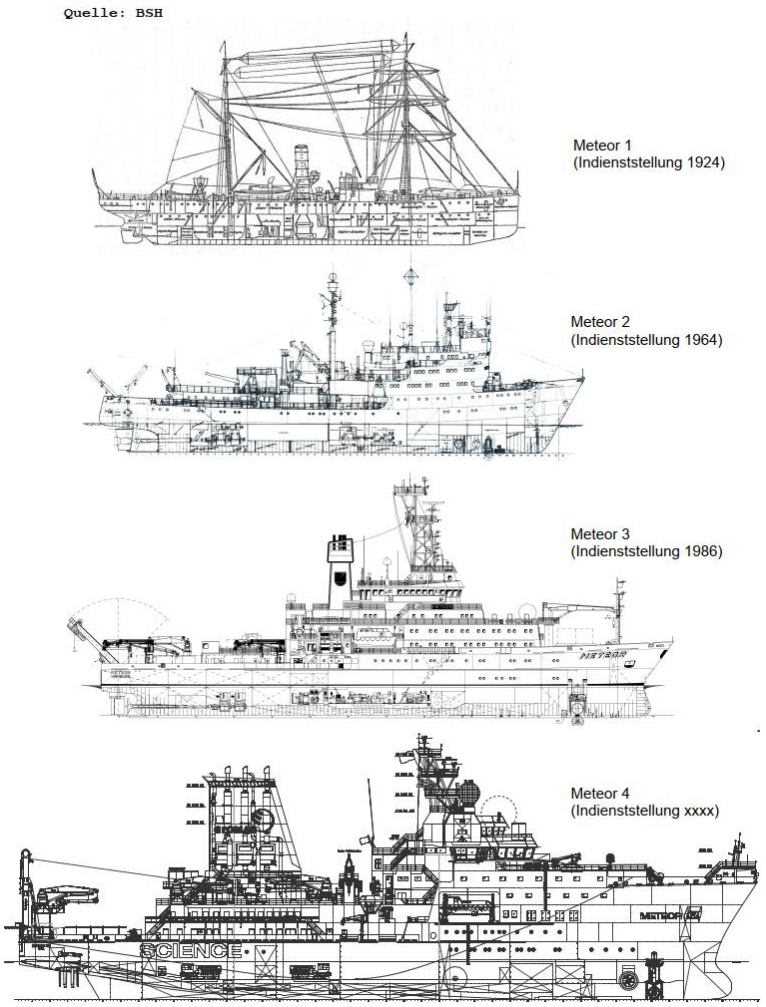
BRIESE RESEARCH
FORSCHUNGSSCHIFFFAHRT

METEOR IV

NEW BUILDING PROJEKT

Lothar Meinders
BRIESE RESEARCH • member of the BRIESE GROUP NETWORK



Bundesministerium
für Forschung, Technologie
und Raumfahrt

MEYER WERFT
PAPENBURG 1795

FASSMER
since 1850

Replacement for

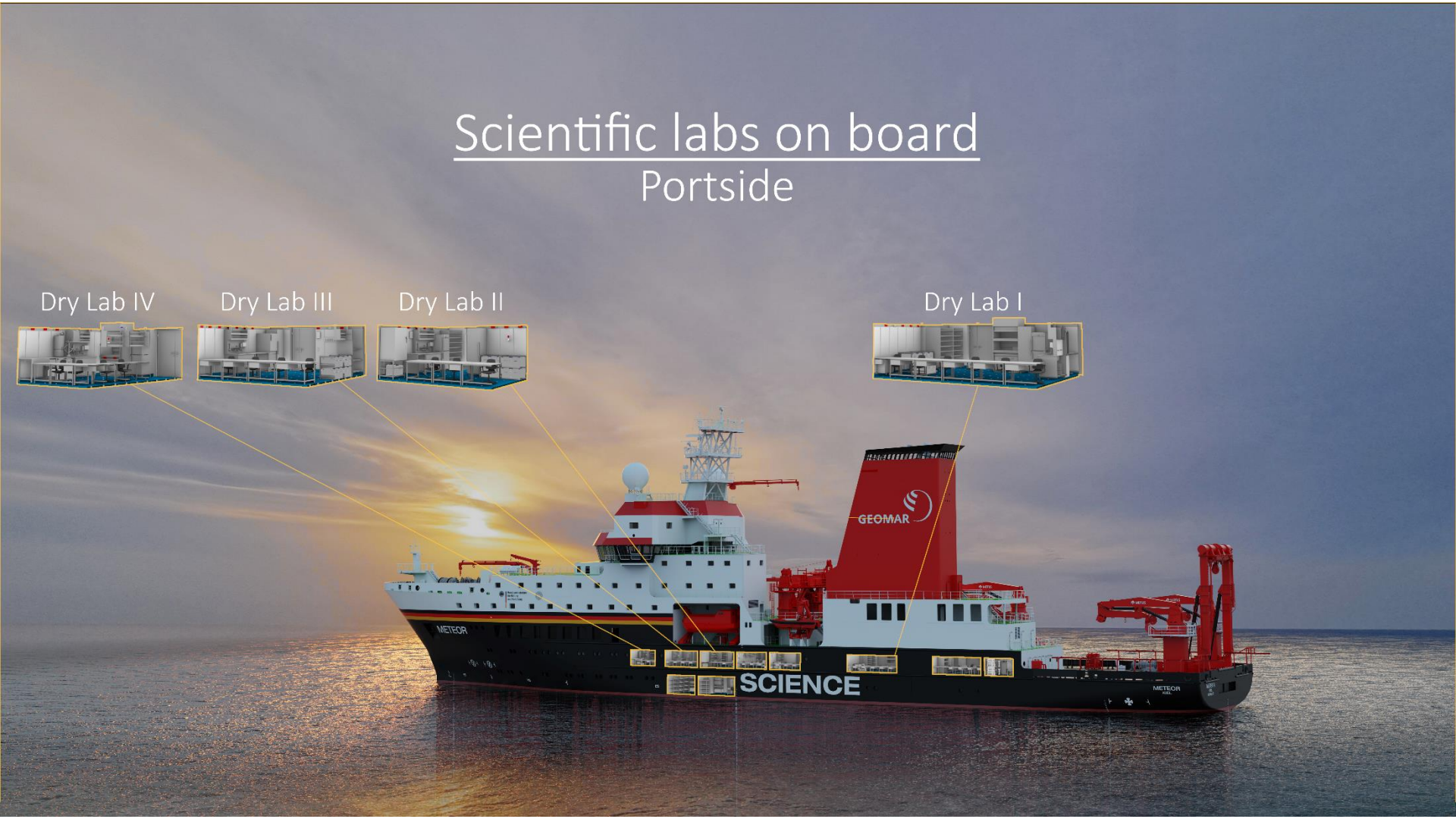
RV METEOR III and RV POSEIDON

Based on RV SONNE

- **Length over all: 125,00 m**
- **Beam moulded: 21,30 m**
- **Draught: 6,40 m**
- **Trial speed: 15 kn**
- **Service speed: 12 kn**
- **Crew: 36 persons**
- **Scientists: 35 persons**

Scientific labs on board

Portside


Scientific labs on board
Portside
Dry Lab IV
Dry Lab III
Dry Lab II
Dry Lab I
GEOMAR
METEOR
SCIENCE


Scientific labs on board
Portside
Dry Lab IV
Dry Lab III
Dry Lab II
Climate Lab II
Climate Lab I
Dry Lab I
GEOMAR
METEOR
SCIENCE
METEOR


Scientific labs on board
Portside
Dry Lab IV
Dry Lab III
Dry Lab II
Climate Lab II
Climate Lab I
Dry Lab I
Wet Lab II
Pulser Room
GEOMAR
METEOR
SCIENCE
METEOR


Scientific labs on board
Portside
Dry Lab IV
Dry Lab III
Dry Lab II
Climate Lab II
Climate Lab I
Dry Lab I
Wet Lab II
Pulser Room
GEOMAR
METEOR
SCIENCE
Scientific Freezing Storage
Scientific Cold Storage

Scientific labs on board
Starboard

Scientific labs on board

Starboard

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Scientific labs on board

Starboard


Scientific labs on board
Starboard
Wet Lab I/ Geology Lab
Geo. Saw Room
Data Center
Hangar
Observation Room
Air Chem. Lab
GEOMAR
SCIENCE
METEOR
Hydroacustic Center


Scientific labs on board
Starboard
Wet Lab I/ Geology Lab
Geo. Saw Room
Data Center
Hangar
Observation Room
Air Chem. Lab
GEOMAR
SCIENCE
METEOR
Electronic Lab
Hydroacustic Center

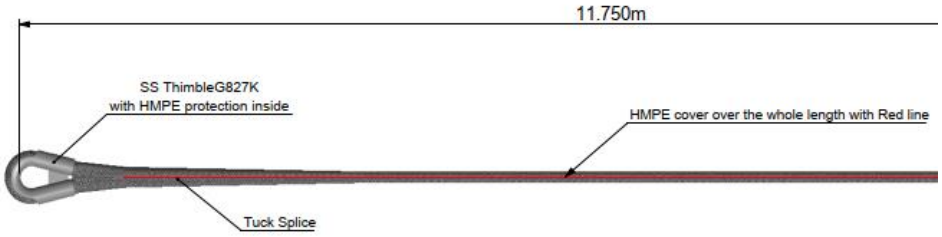
Scientific labs on board

Starboard

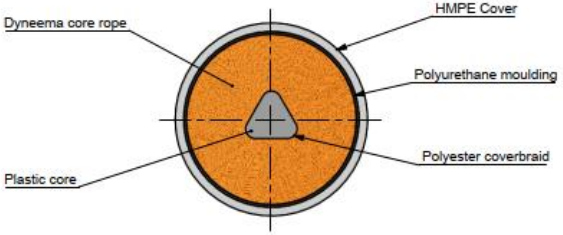
Scientific Winch Systems

Scientific Winch Systems

CABLE TRACTION CONTROL UNIT (CTCU)



DynIce Warp Cross-section



SECTION	DIAMETER	MBL (unspliced)	LENGTH	DE
	mm	ton	m	g
Main rope	21	45,2	11 750	0
Jacket	24,8	-	-	
Eye protection	-	-	-	

Customer: **Kongsberg**

Designed by	Made by	Approved by
	AM	

HAMPIÐJAN BALTIC
www.hampidjan.com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METEOR

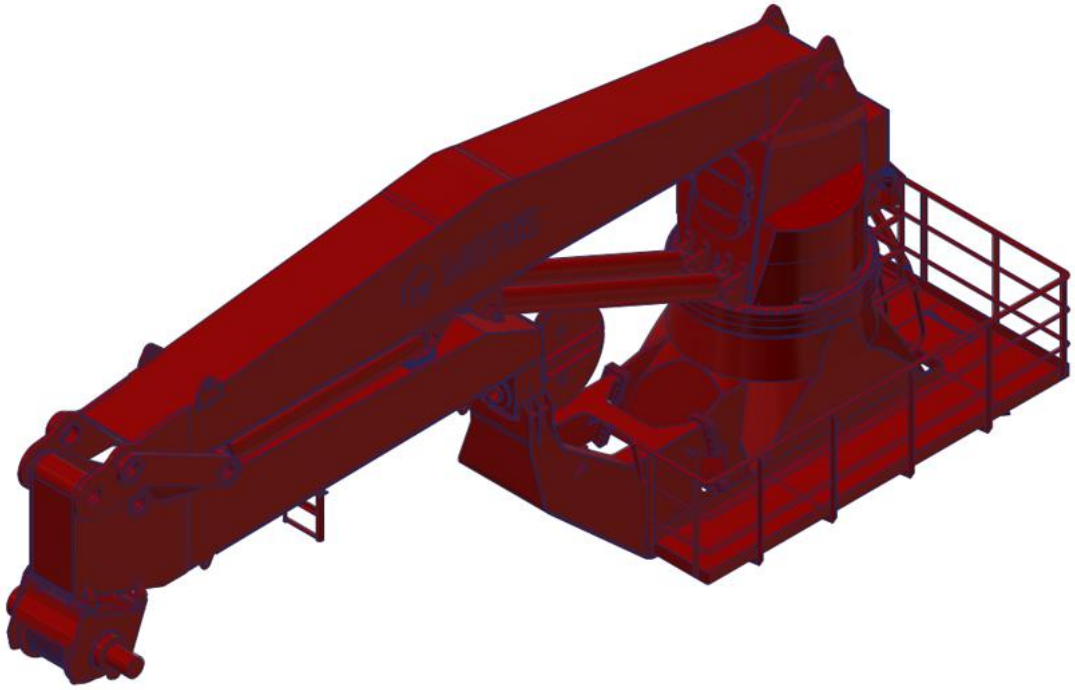
Hoisting devices

4x main cranes

- **Crane 1**
  - **SWL shipboard 12 to**
  - **SWL Offshore 6 to**
  - **Working Radius 17,2 m**

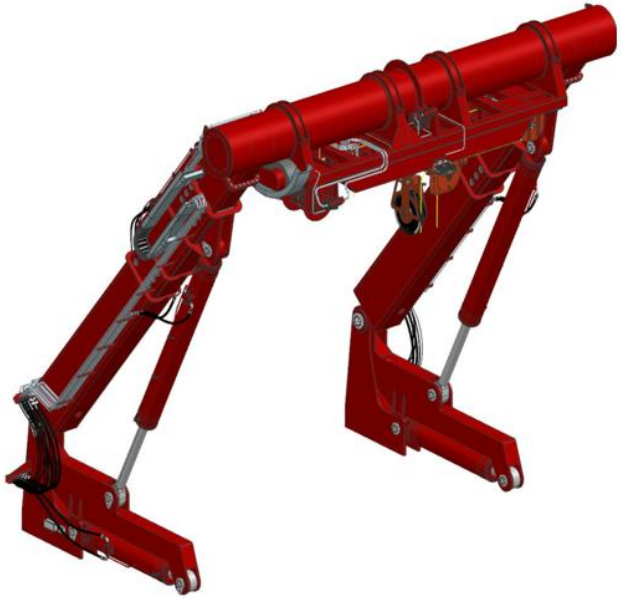
- **Cranes 2 – 4**
  - **SWL shipboard 10 to**
  - **SWL Offshore 6 to**
  - **Working Radius 15,4 m**

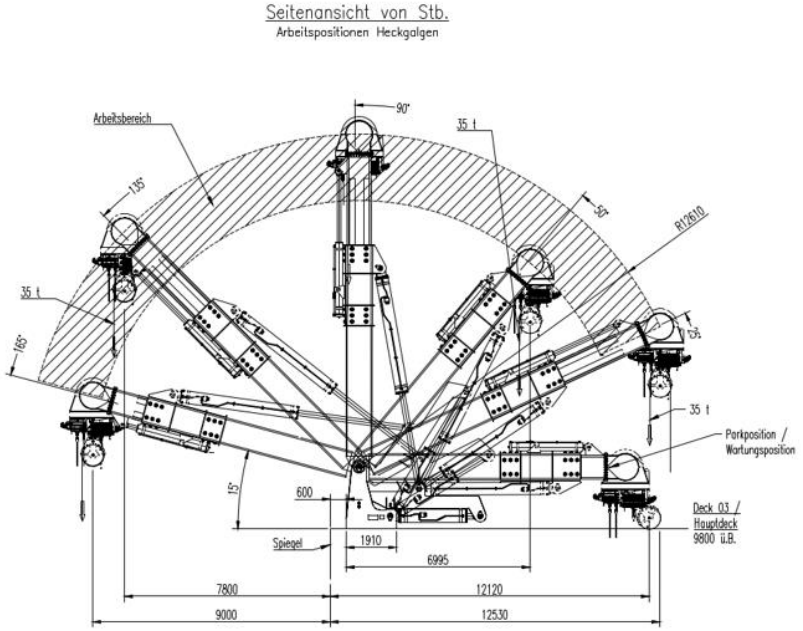
- **Cran1 and 4 certified for personnel lift**



Hoisting devices
A-Frame
35 t SWL

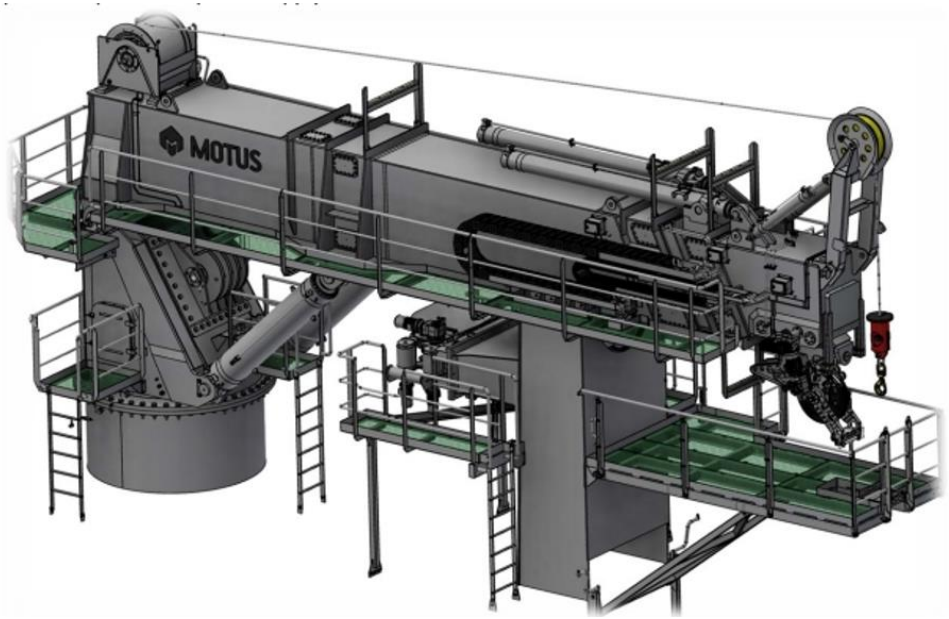
- BL 560 kN
- SWL 350 kN
- Weight 68,3 to
- Telescopic extension for increased reach and lift height
- Additional tilt to 0° inboard (deck-parallel) for maintenance (normal range: 25° in/fwd to 165° out/aft)
- 2x 10T pad eyes for sheave blocks

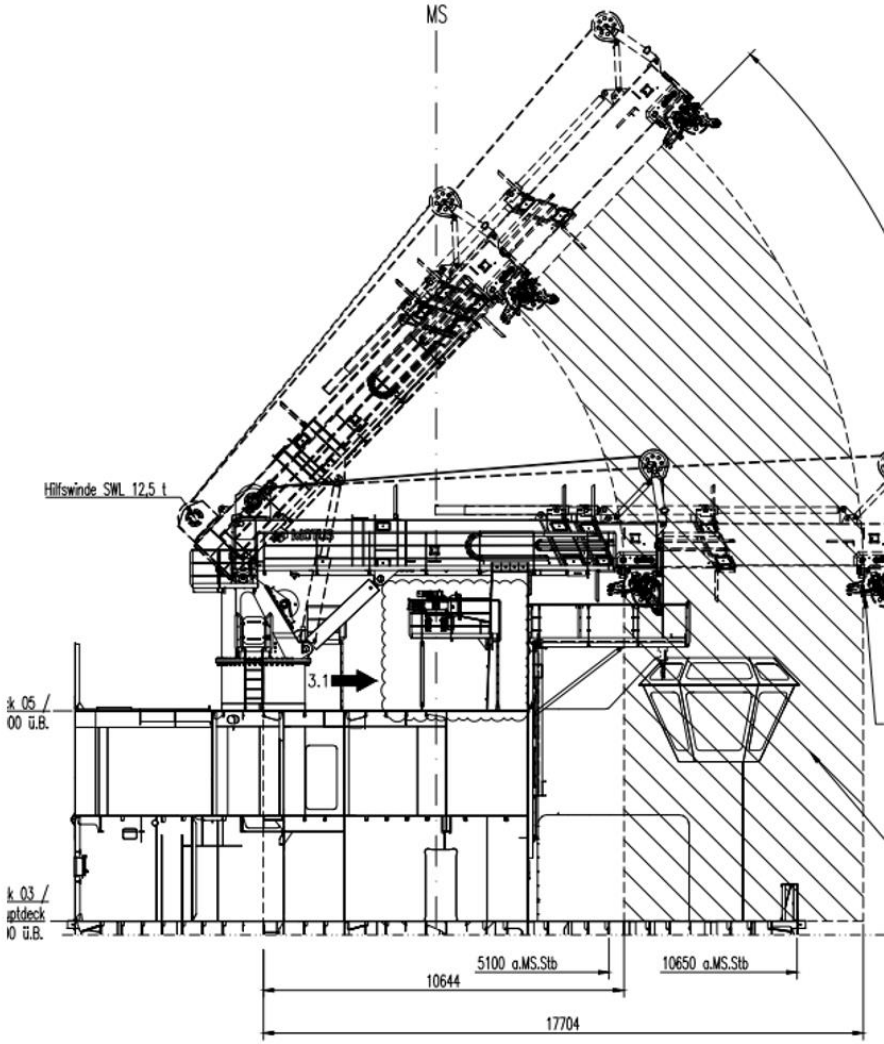




Hoisting devices – Big Sliding boom

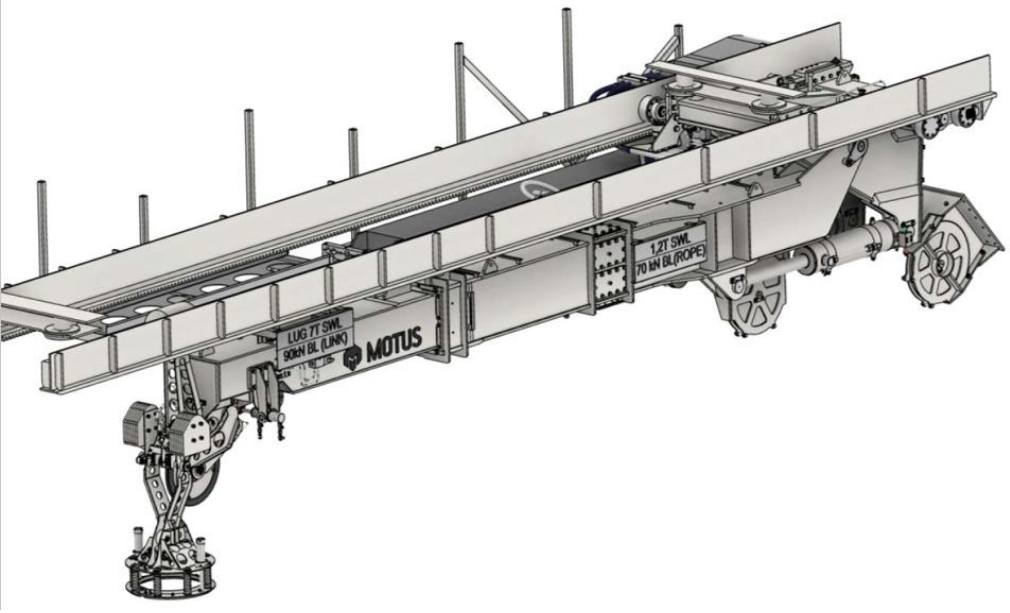
- BL 560 kN
- Aux winch 12,5 to
- Lifting lug SWL 15 to
- Weight 70,7 to
- Telescopic extension max outreach 18,8 m
- Jib function but no rotation

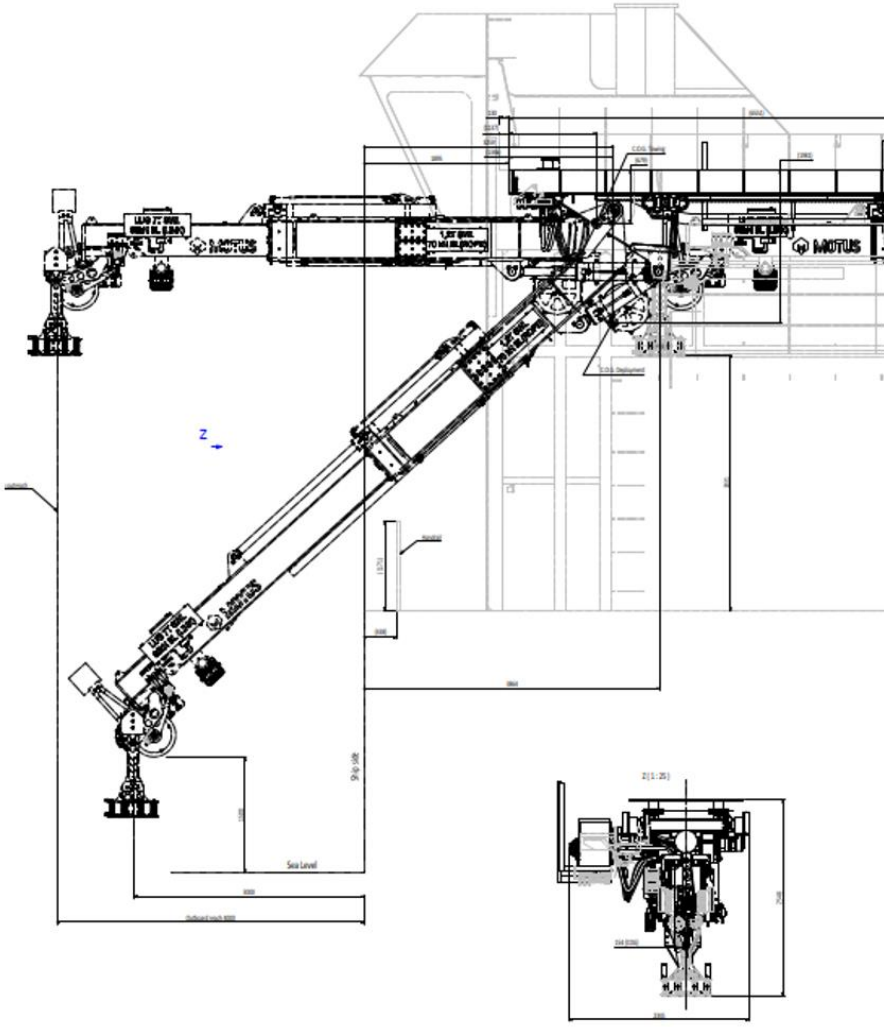




Hoisting devices – Small Sliding boom

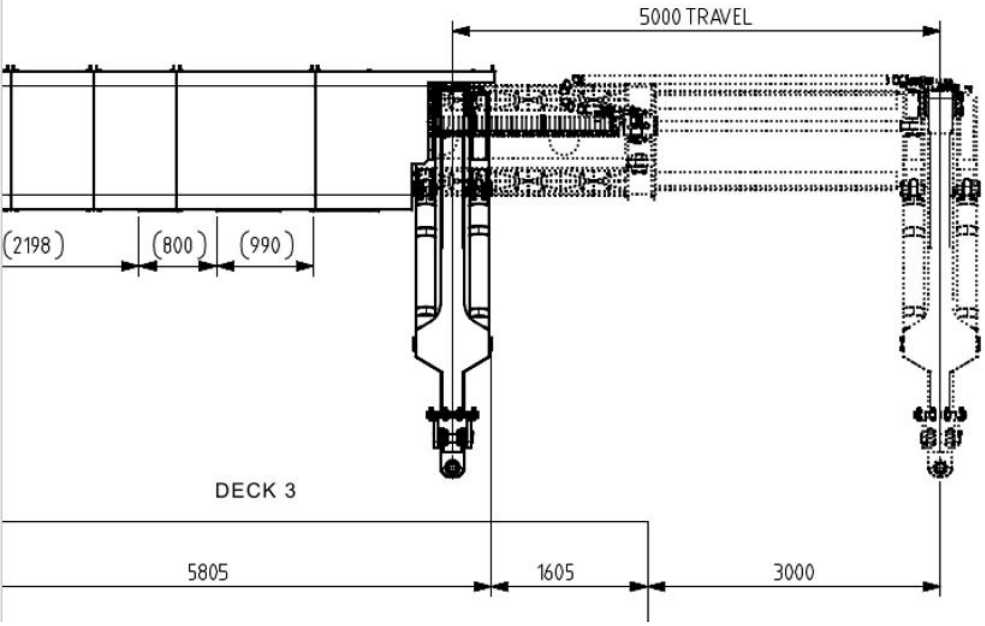
- BL 100 kN
- Lifting lug SWL 7 to
- Weight 10,2 to
- Telescopic extension max outreach 4 m overboard
- Jib function

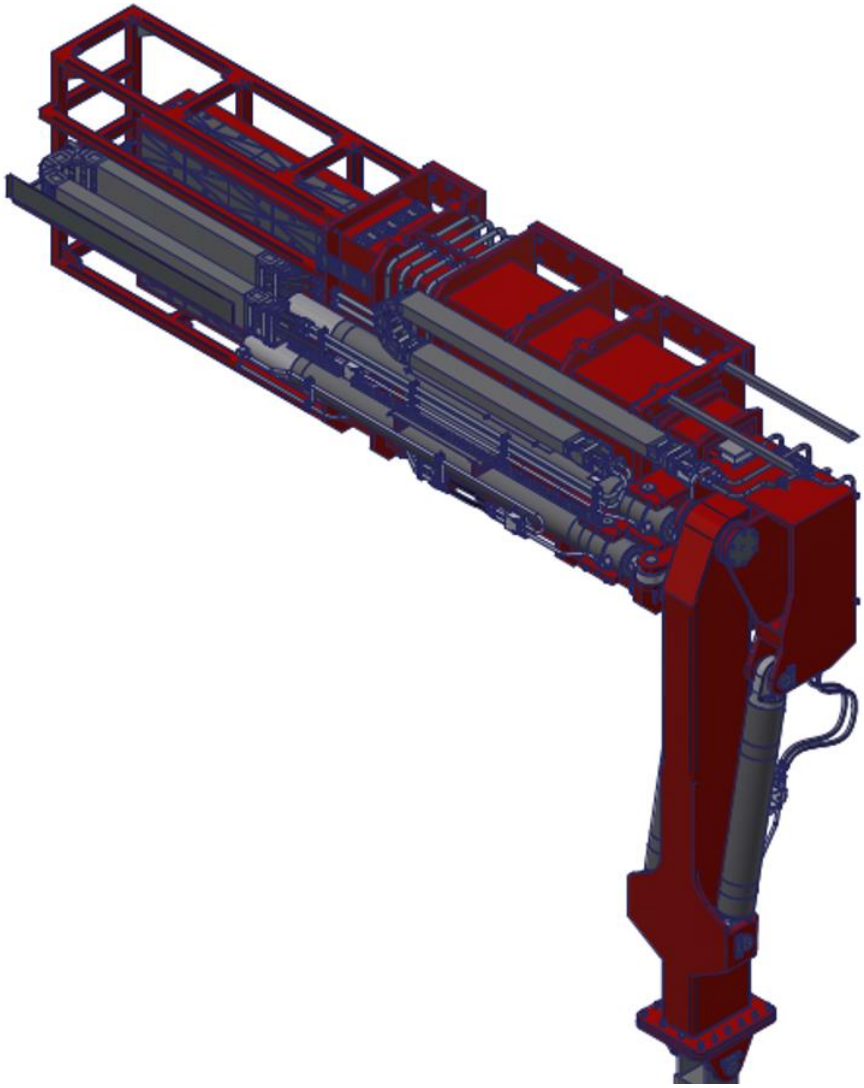




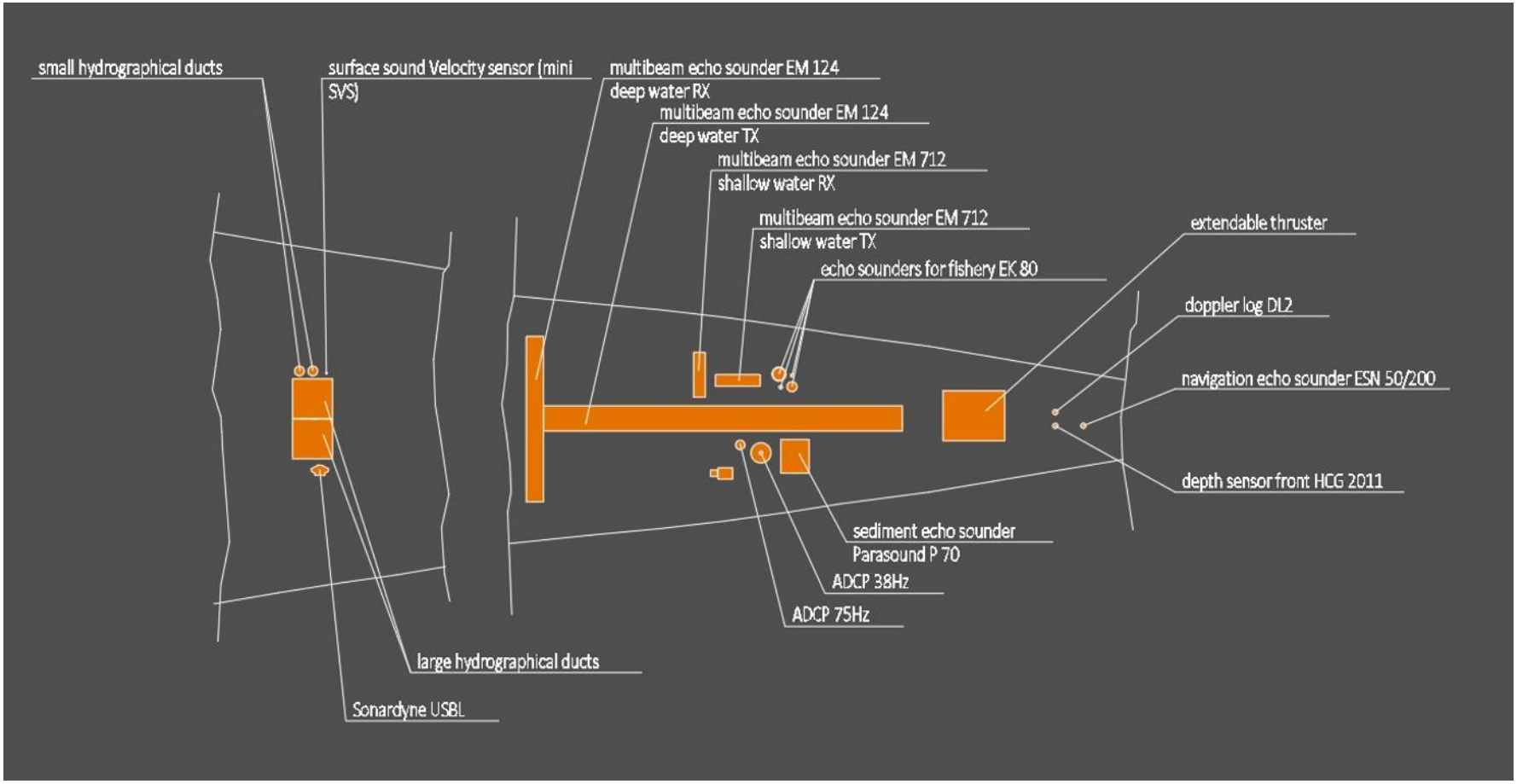
Hoisting device – Core handler

- SWL 180 kN
- Outreach 3 m overboard





SCIENTIFIC ECHOSOUNDERS

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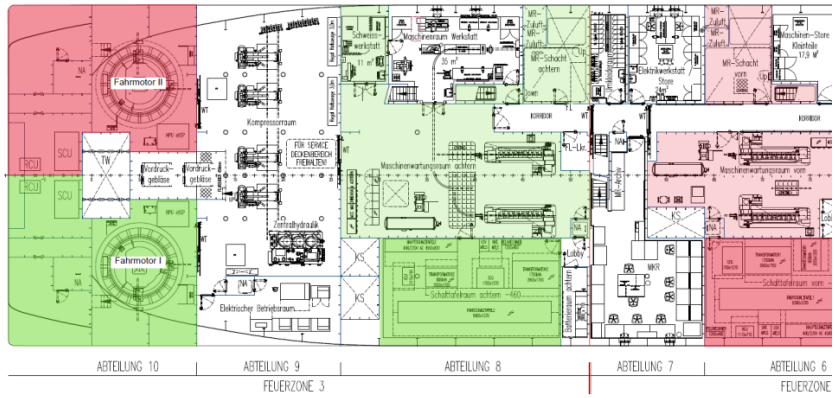
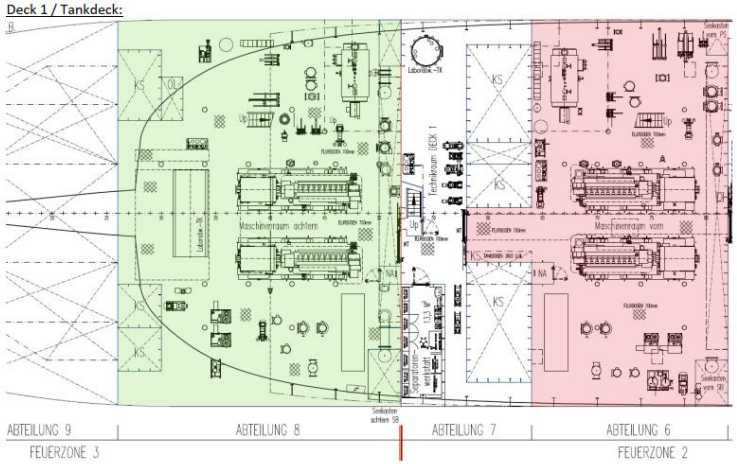
REDUNDANT MASCHINERY

Deck 2 / Zwischendeck:



Deck 1 / Tankdeck:

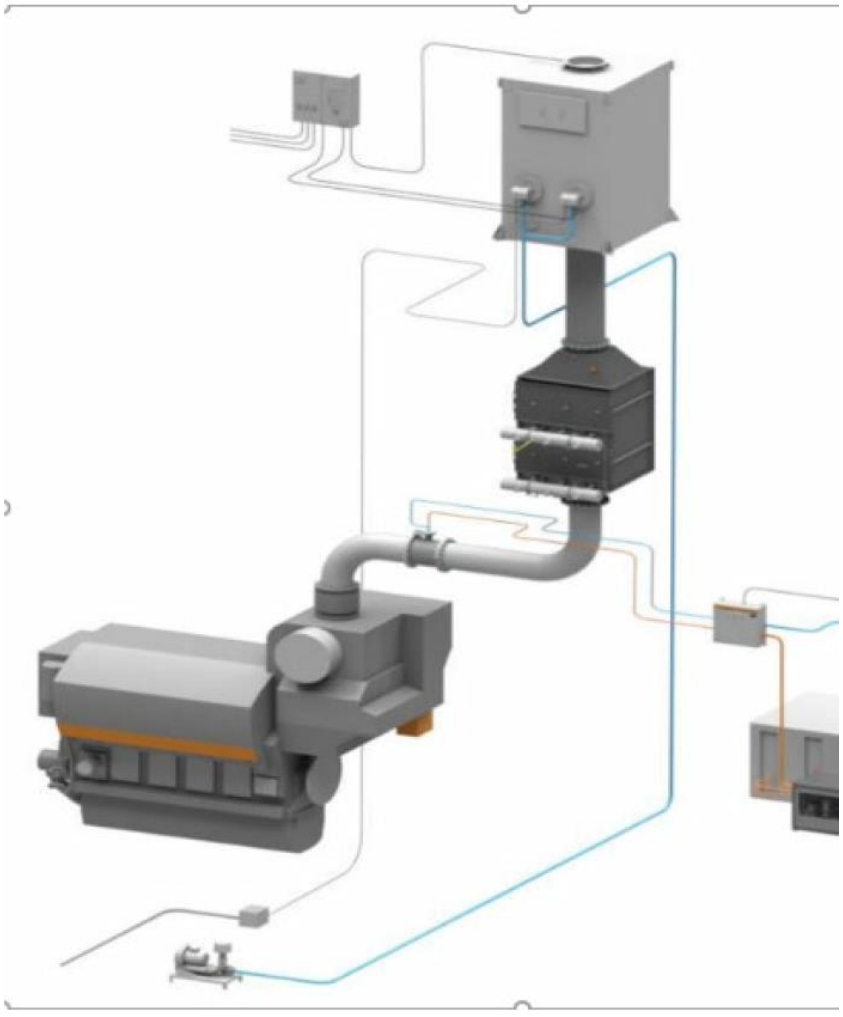


SEPARATED ENGINE AND PROPULSION ROOMS FOR INCREASED PROTECTION AGAINST FIRE AND FLOODING

4X 1980 KW WÄRTSILÄ W9L20

VARIABLE SPEED GENSETS WITH

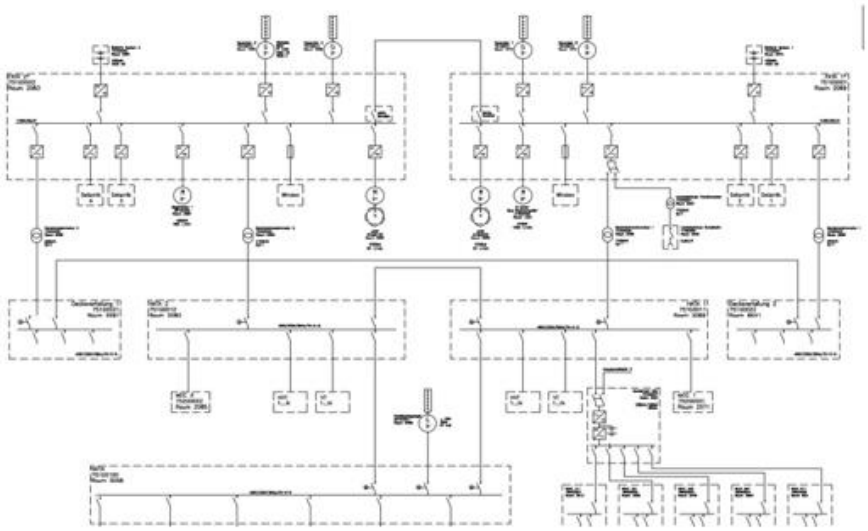
SCR REDUCTION AND PARTICLE FILTER



- Two control panels with a 1000 VDC DC supply are connected via electronic coupling switches.

- Two large energy storage systems (ESS) with a battery capacity of approx. 900 kWh

- “Peak shaving”,
- “Spinning reserve”
- “Blackout prevention”



Battery Room Installation

Leclanché Energy Storage Solutions → Corvus Energy


Electric Voith Schneider Propeller
Voith Inline Thruster
Schottel Rudder Propeller
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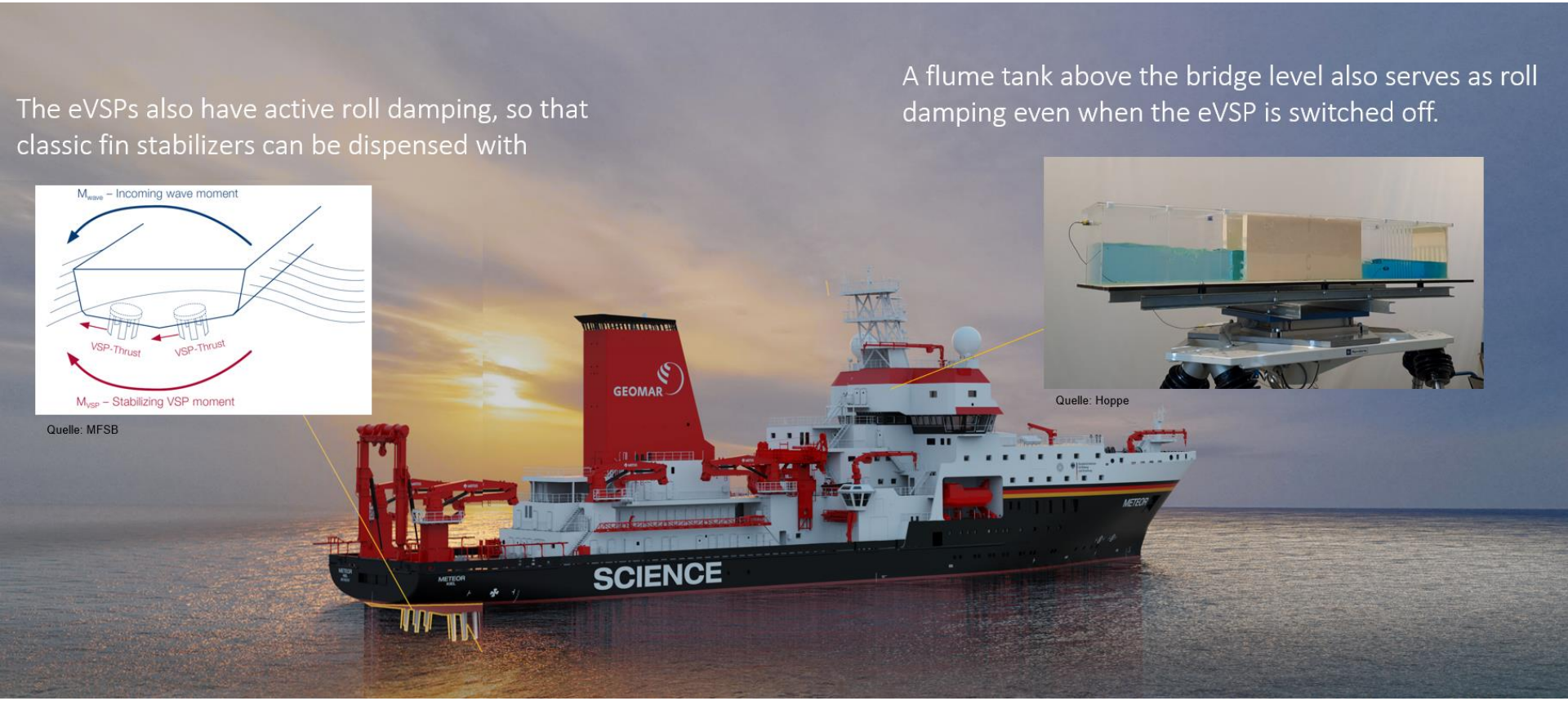
Video

The eVSPs also have active roll damping, so that classic fin stabilizers can be dispensed with

Quelle: MFSB

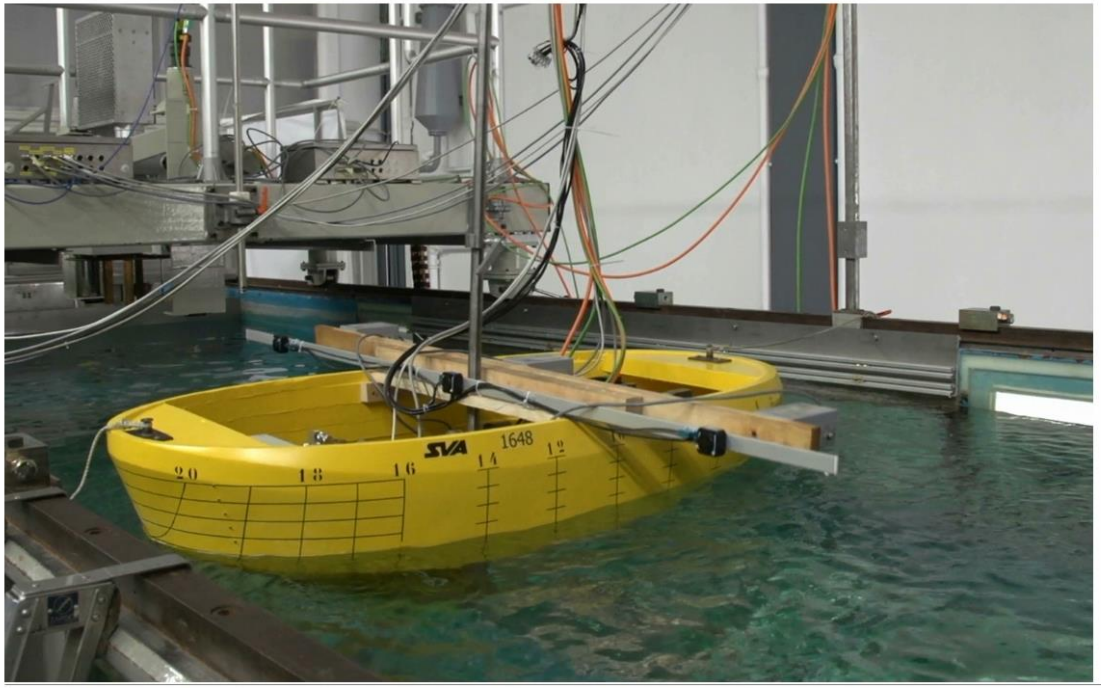
A flume tank above the bridge level also serves as roll damping even when the eVSP is switched off.

Quelle: Hoppe



Voith Roll Stabilization (VRS)
Latest model tests (optimized control algorithm)

VOITH



Results of model tests

- The optimized control algorithm was tested in many model tests before it was approved for use
- The roll stabilization is inactive

Video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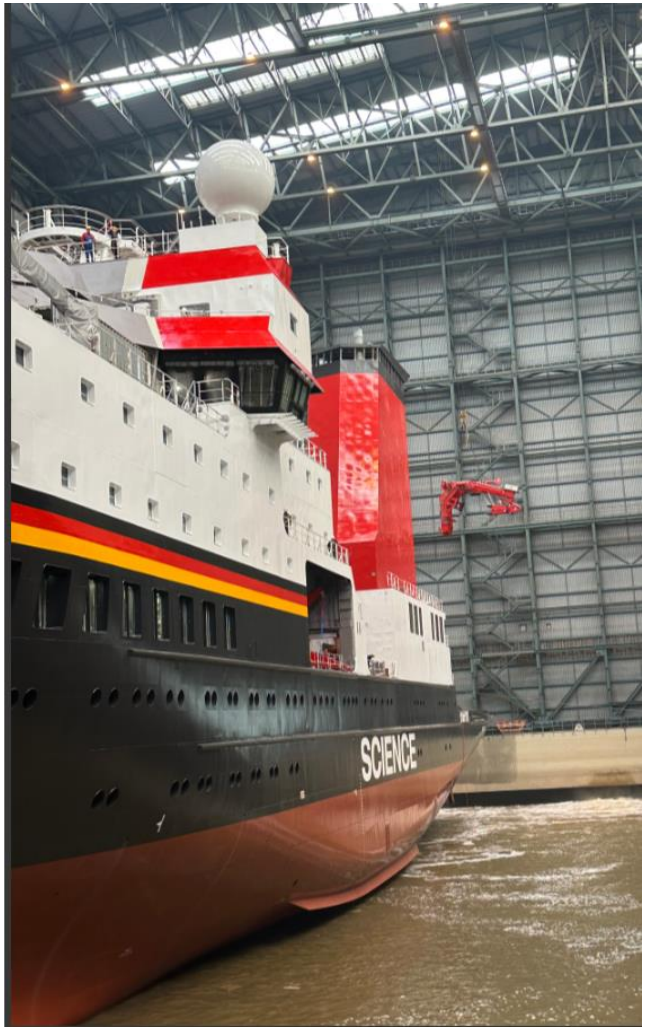
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