



SHIP EFFICIENCY 2017

by STG

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Presentation on:

Energy efficiency improvements for PCTC vessels, present and future

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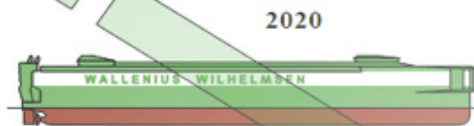


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**Energy Efficient PCTC Vessels
Present and Future**

Martin von Sydow

ZERO (Zero Emission ROro) – Wallenius Roadmap

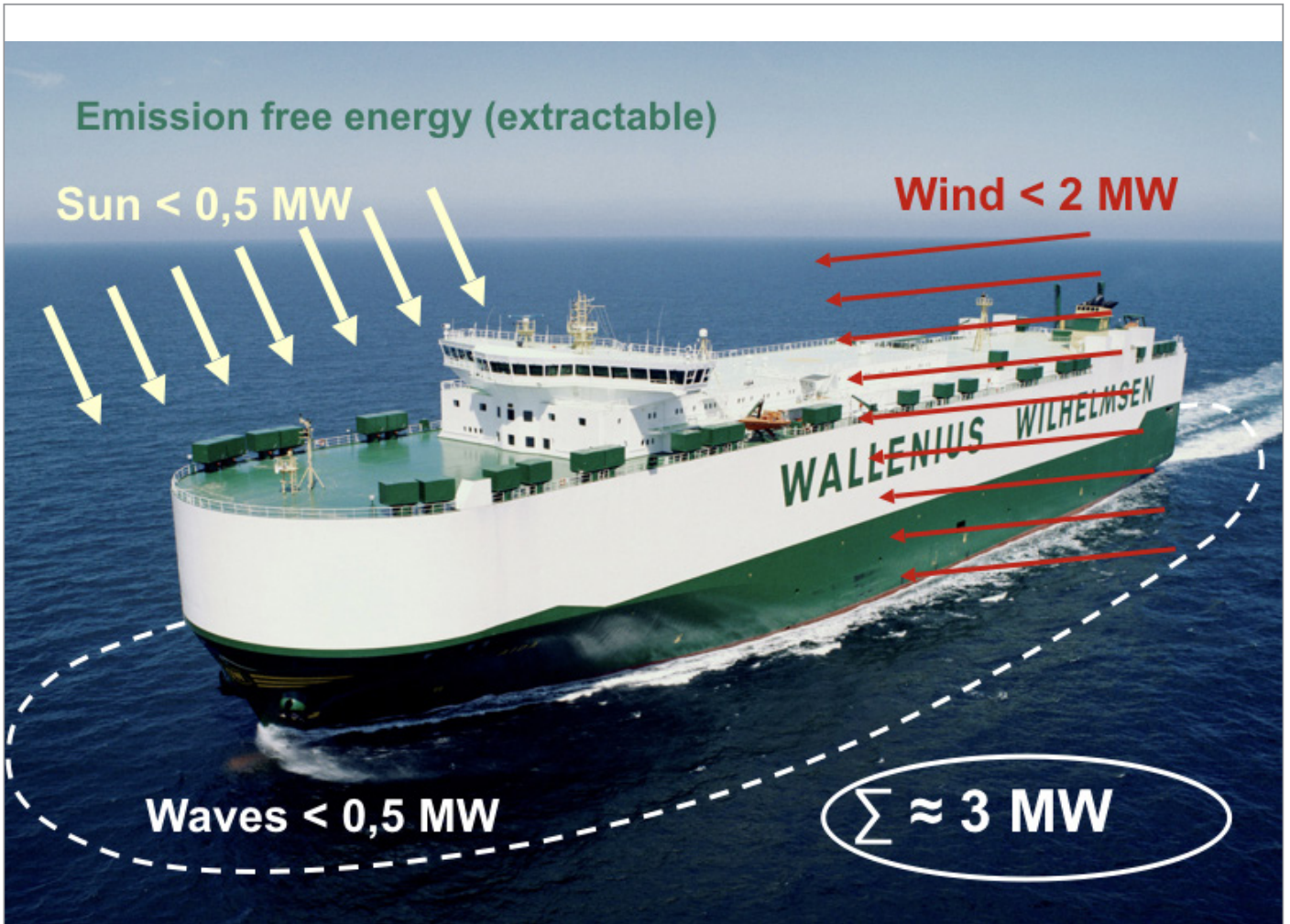


Roadmap towards the zero emission vision.

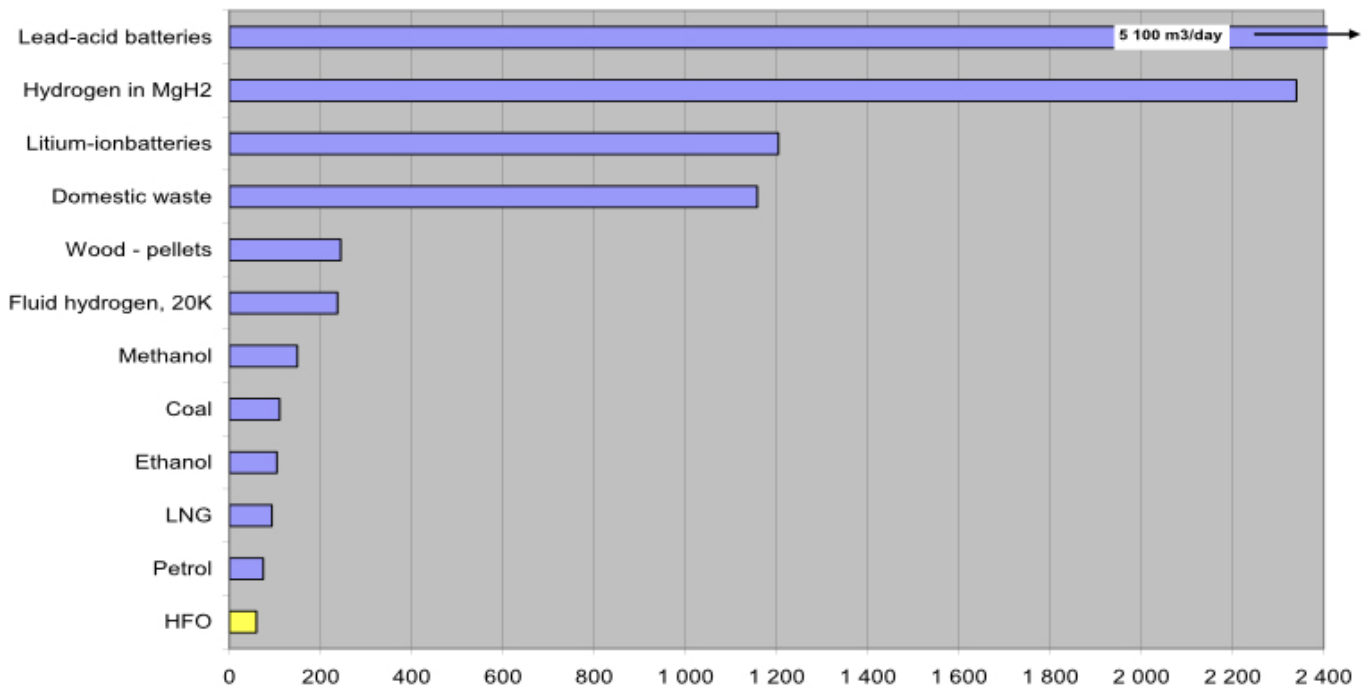
Basis for:

- Future ship designs
- R&D planning

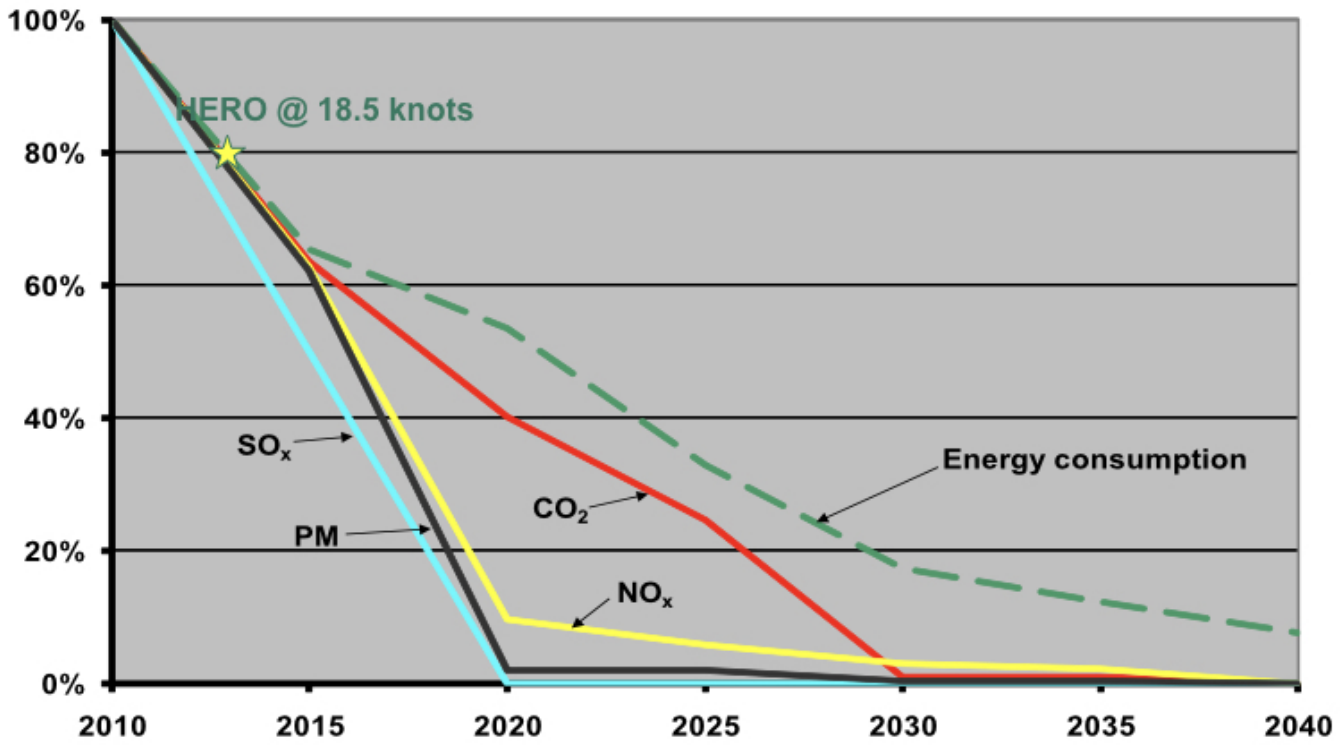




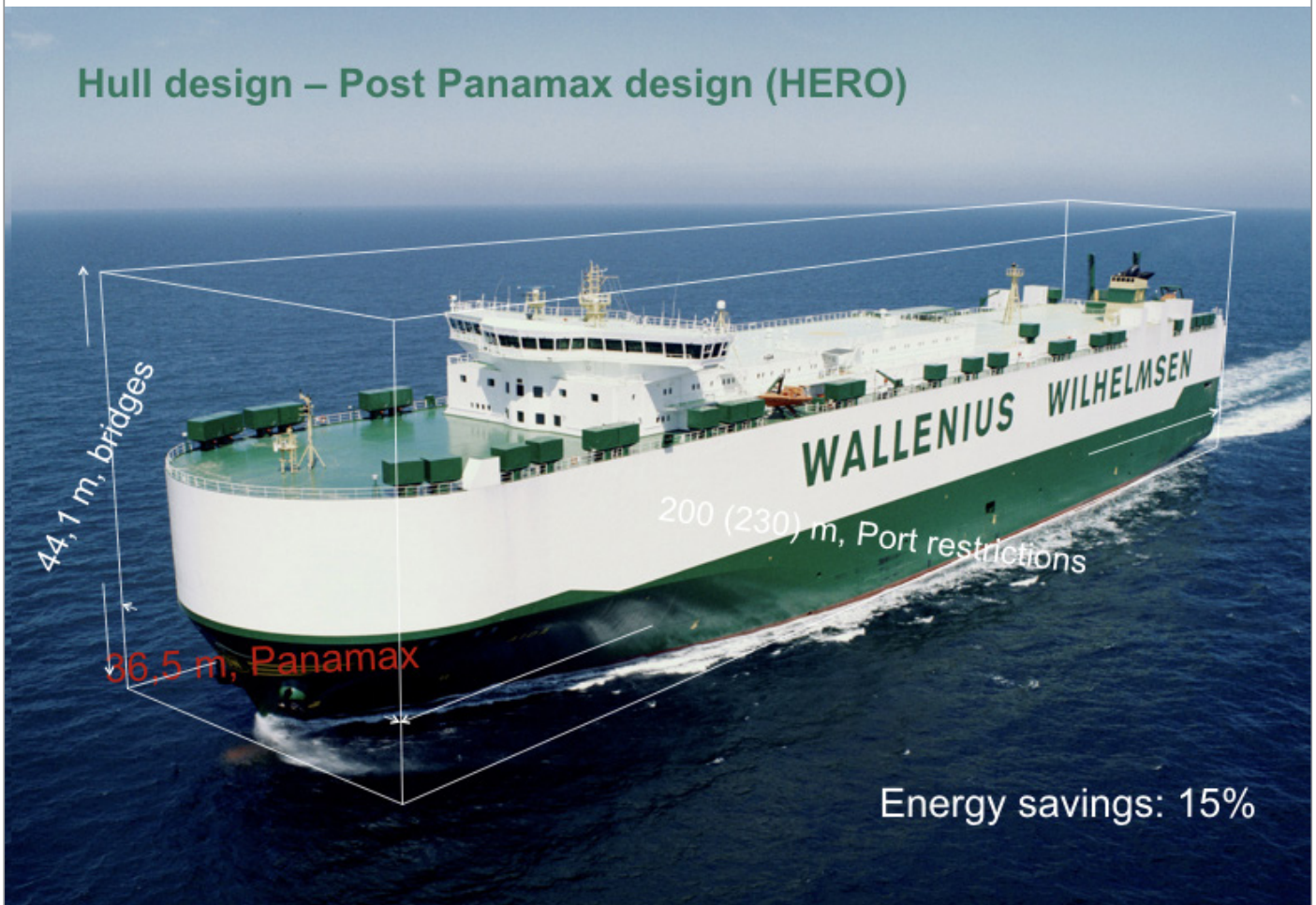
Energy storage – m³/day, PCTC @ 19 knots



Road map for emissions



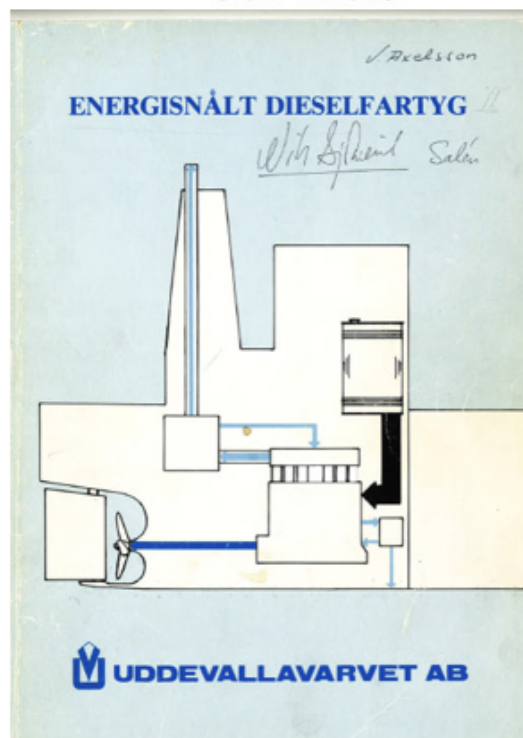
Hull design – Post Panamax design (HERO)



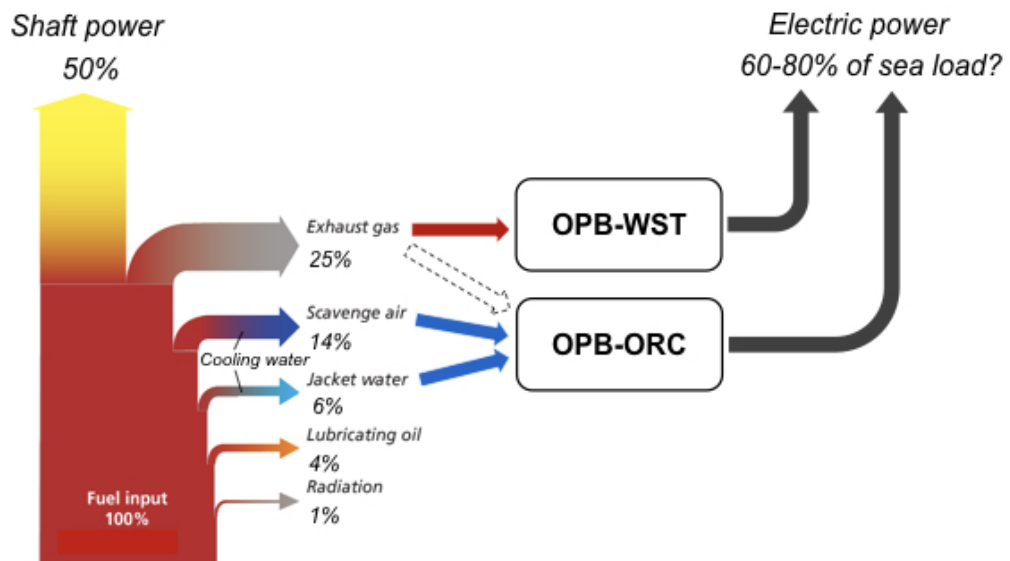
Shaft generator factory acceptance test (HERO)



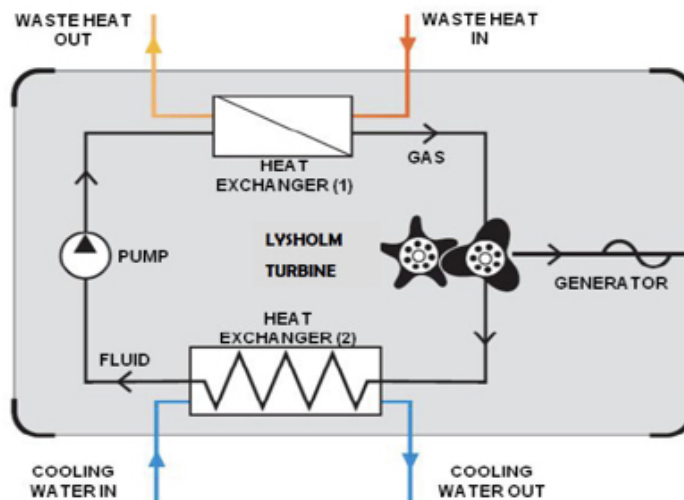
Energy efficiency Our Bible



Waste Heat Recovery, ORC



Waste Heat Recovery, ORC



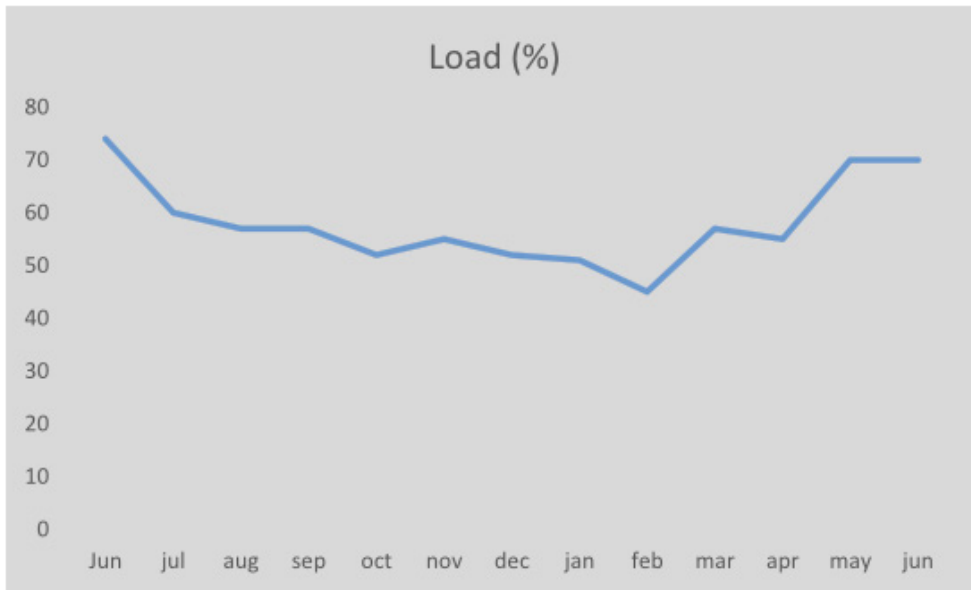
600 KW ORC for M/V Figaro



Waste heat recovery (ORC)



Waste Heat Recovery, M/V Figaro M.E. load June 2015-June 2016



Carmen bulb retrofit at Remontova



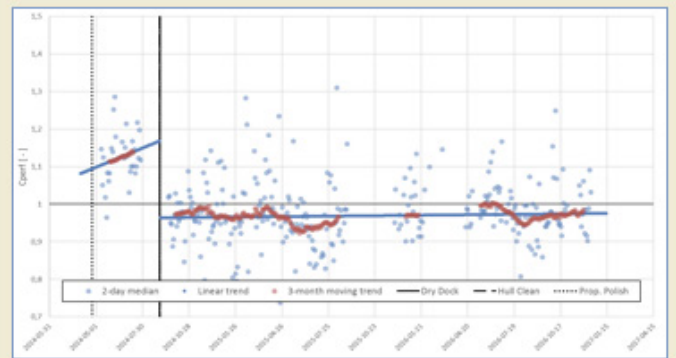
Supporting efficiency

Follow-up effect of improvement initiatives

Full-spade rudders replaced with high efficiency flap rudders with twisted leading edge.

Better performance than baseline after dockings.

Confirmed saving of HFO approx. 4 % or 500 mt/per year.



BALTIC class - UECC

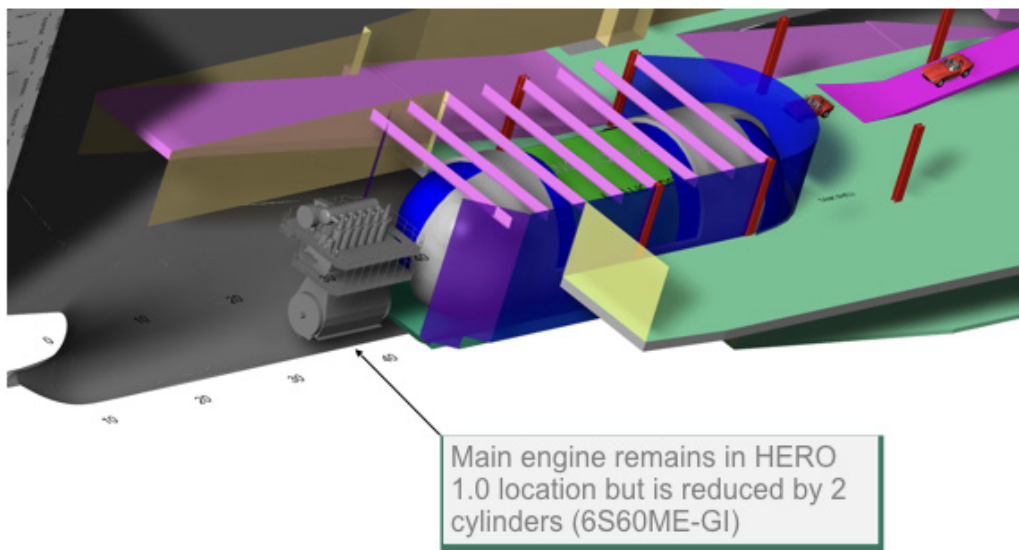


Length over all	180 m
Breadth	30.0 m
Design draught, TD	9.0 m
Speed	18.5 knots
Fuel consumption @ 16.5 knots	equal to 33 ton HFO/day
Cargo deck area	36,500 m ²
RT Capacity	4,200
Ice class	1A Super
Controllable pitch propeller, stern thruster	

HERO (2.0)



HERO (2.0)





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Thank You for listening!

Martin von Sydow