RV Prinsesse Ingrid Alexandra

IRSO, Brugge October 2023

Inge André Utaaker IMR / Vessel department

The IMR operated fleet

The story

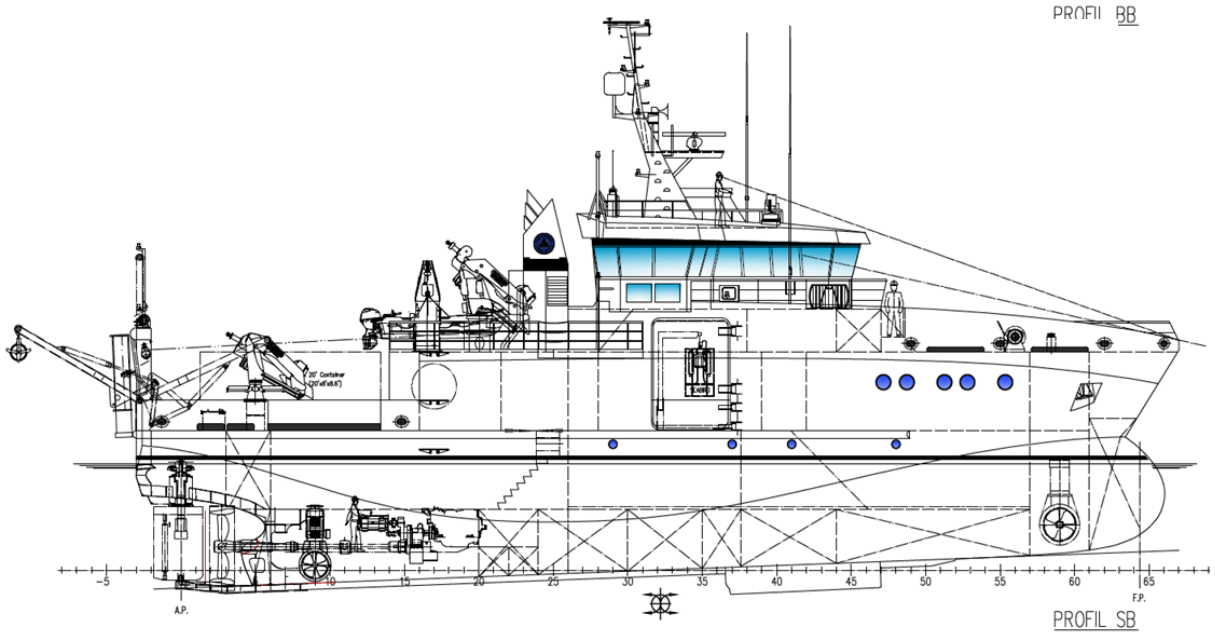
- Funded to increase capacity to do domestic coastal research
  - In part also a contribution to a renewal of the IMR fleet
- Two stage tender process
  - Design – awarded LMG Marin, Bergen, Norway
  - Construction – Holland Shipyards Group, Hardinxfeld, The Netherlands
- Delivery February / March 2023, almost on time
  - On budget, mnok 117 (very limited scientific package)
  - Some claims, but less than could have been
  - One incident during initial trials, otherwise good progress in opeeratons
- Operational, with decreasing limitations since early May
- Last major outfitting this month, trawling package


PRINSESSE INGRID ALEXANDRA

Specifications

Length over all	35,0 m
Breadth	10,0 m
Draft	3,5 m
Gross tonnage	499 t
Propulsion	749 kW
Area working deck	100 m^2
Single cabins	4
Double cabins	5

Trade area small coasting



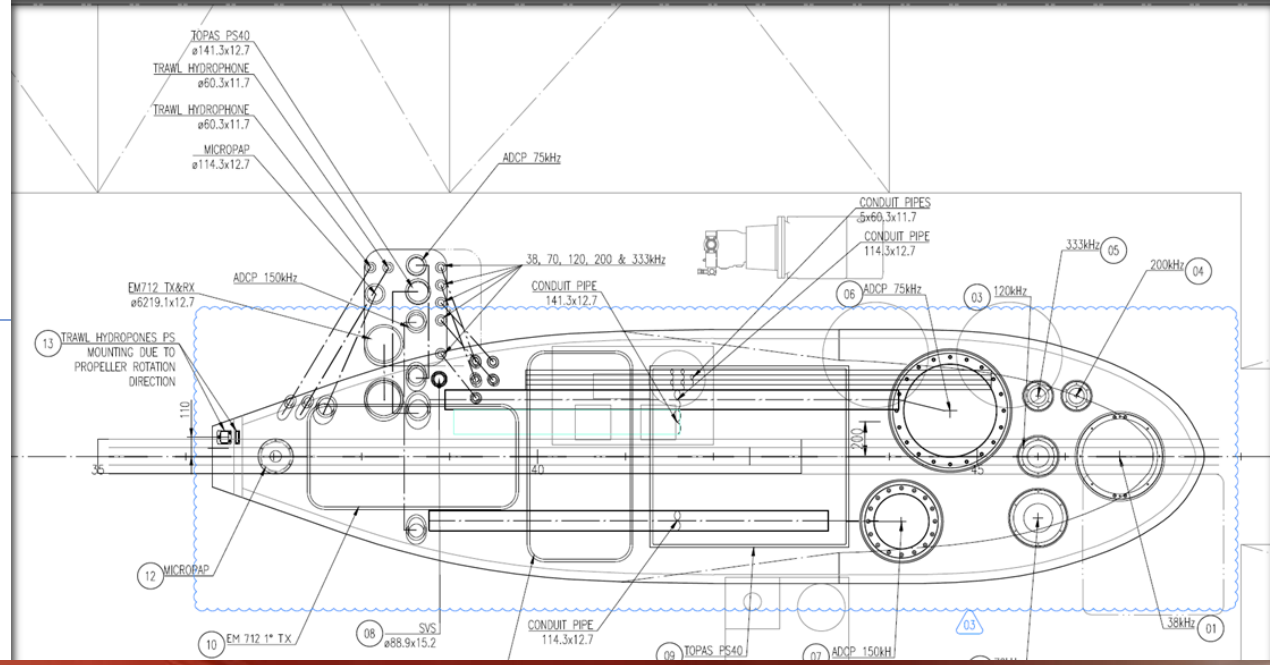
Organization

Owner	Institute of Marine Research
Operator	IMR Vessel department
Usage	IMR 90%, Nord University 10%
Crew (minimum)	3 + 1 instrument tech for 12 h days
Crew (24/7 min)	4 + 1 instrument
+ Crew	For trawling, heavy deck work etc
Availability	280 cruise days annually

Two crews, on board 183 days each

Blister / keel

- Fishery Echosounder, EK 80
  38, 120 and 200 kHz
- ADCP, RDI 75kHx
- Hydrophones, Scanmar for Scanbas 360
- Acoustic positioning system, Kongsberg HiPAP



Scientific equipment

- Winches, drum for bottom and pelagic trawls
- Dynamic positioning (DP 0)
- Dry and wet laboratory
- CTD, CTD hangar, winches for nets, L-frame
- Bolt matrix in working decks, A-frame

Emissions

- No particular measures included in itself
  - Replaces ship with larger footprint
  - Facilitates for autonomous vehicles, shift of center of gravity
- Could run on bio-diesel
  - Cost 2 – 3 times cost of MGO
  - Questionable sustainability in using vegetable oils (food)
- Easy access for shore power
- Should have been slightly larger and with battery

Experiences after 8 months

- Efficient ship, cost versus gain
  - Lean manning, low fuel consumption
  - Part of the answer to arising overarching priorities; costs, emissions
- Handy platform for coastal ROV, AUV operations
- Dynamic manning necessary and not without challenges
  - “One size crew, fits all” does not apply
  - Long transits also require extra crew (navigator) for miles per day
  - Size, operational requirements require planning and adjusting before and within every cruise
  - Necessary manning competing available space for scientists
- Designed with GT < 500t, Power < 750 kW for maximum degrees of freedom. Not really useful, lost possibility for batteries.