

# R/V Thompson Mid-life Refit



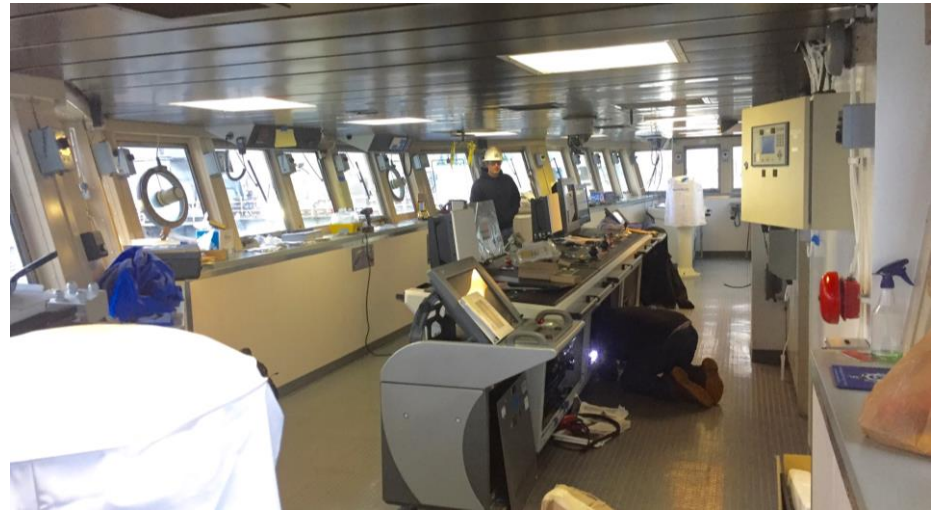
UW Marine Operations

# Timeline - Milestones

- ✓ Contract awarded 24 Aug 2015
- ✓ Thompson finished science 24 May 2016
- ✓ Entered shipyard 16 June 16
- ✓ First seismic compressor removed 28 June 16
- ✓ Drydocked 15 Aug 16
- ✓ First generator set removed 19 Aug 16
- ✓ First new generator set onboard 22 Sept 16
- ✓ Undocked 25 Oct 16
- ✓ First engine lite off 7 Sept 17
- ✓ Drydock for Bow Thruster Plating Repair complete – undocked 25 Oct 17
- ✓ Dock Trials complete
- ✓ Builders Sea Trials complete
- ✓ Shipyard Delivery to UW 19 Dec 2017
- ✓ Shakedown cruises late Dec 2017 & early Jan 2018
- ✓ Student cruise 13-15 Jan 2018
- ✓ NSF Inspection 23-25 Jan 2018
- ✓ Returned to science Feb 2018 starting with transit to New Zealand & first science cruise at Kermadec Trench



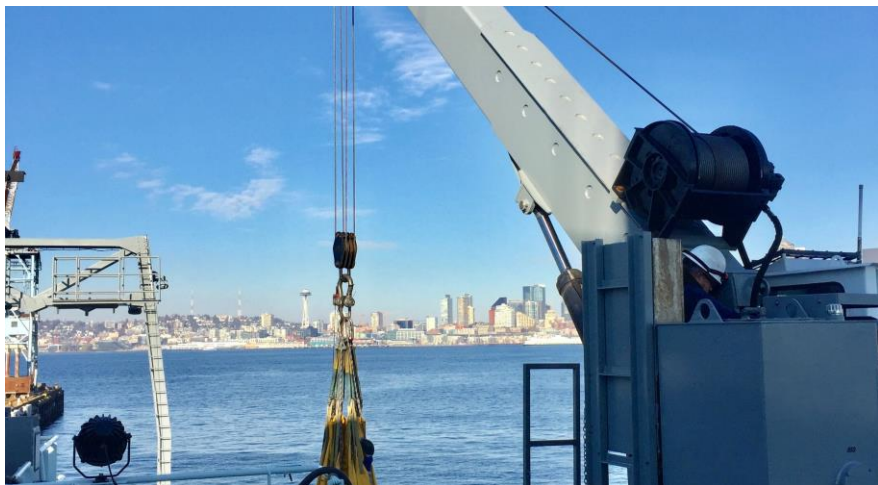
New propulsion plant  
New Caterpillar diesel generator sets



Completely updated Pilothouse



Finishing up at Vigor Shipyard



Weight test of port crane



First CTD



# Departure from Vigor – 19 Dec 2017



# Summary

- 18 months in the shipyard
- ~\$52M total project cost
- 38 major projects
- 187 contract changes
- ~3 weeks to complete underway testing / grooming / sea trials
- Service life extended another 15-20 years
- Lots of lessons learned!!

# Post Delivery Issues

- Warranty – 1 year – 16 claims to date
  - Diesel Engines
    - Front end drive gear failure – corrected - warranty
    - Fuel oil cooler leaks - corrected – warranty
  - Generators
    - Cooling pump bearings – corrected - warranty
  - Transformers
    - Cooling system leaks – corrected – warranty
    - Erosion of cooling piping at coolers – dissimilar metals – temp fix, piping repairs being planned
  - R/O Watermakers
    - Cracking of sand filters – temp fix, new filter housings ordered
  - Sewage Pump
    - Sheared shaft – temp fix, new pump coming

# Post Delivery Issues Cont'd

- Power quality
  - Notching of output power impacts sensitive electrical / electronic gear.
  - Have final report & Shipyard/Vendor recommendations
  - Need to add filters to certain circuits
    - Plan in place to install during upcoming transit
  - Contractual status of the issue – to be determined



# Cruises completed since re-delivery

- Shakedown, 3-day Student Cruise, MAC/Multibeam Calibration, NSF Inspection
  - Transit – Seattle to New Zealand
- Susan Humphris/Brothers Volcano – New Zealand
  - Transit – NZ to Taiwan
- Bill Hodgkiss/MF Noise – Taiwan
  - Transit – Taiwan to Chennai, India
- Hemantha Wijesekera/MISOBoB – India / Sri Lanka



## Thompson Back in Operation!

Many, many thanks to Congress, Office of Naval Research, National Science Foundation, Scripps, WHOI, & UW!!