

# Dr. Fridtjof Nansen Replacement – Building progress

Update by 31st May 2016



**Main milestones:**

- First steel cut: 13.01.2015**
- Keel laying: 23.04.15**
- Launch of vessel: 23.12.15**
- Scheduled trial start up – ref MP4: Dockside trials 25.07.16 – Sea trials: 15.09.16**
- Scheduled delivery: 06.10.16**

## General comments:

- Week 19 - Neptun Marine performed inspection of electrical performance, cable laying and termination works. Some remarks, however electrical supervisor is overall satisfied with AG's standard and execution of electrical work.
- Week 19 - Workboat delivered to owner.
  - In agreement with owner, AG exhibited the boat at the International Shipbuilding Exhibition - NAVALIA - in Vigo - week 21

## Progress:

- Average workforce increased with 15 - 20 persons since last report, average manning on board vessel is now 160, (Steel, outfitting & piping 55 – Electricians 50 – Accommodation & Insulation 40 – Painters 10-15) working 10-12 hrs/day 5 days/week. Accommodation workers, electricians and painters also working every 2<sup>nd</sup> Saturday. Accommodation contractor (LIDO) has 10-12 men on nightshifts, mainly on insulation work in technical areas.
- High activity in all areas, but we are now in the stage that spaces are getting narrow and hamper productivity. Conflicts and collisions which cause demolition and re-work are seen more often.
- Do not see that any of the previous reported delay (4 weeks) from MP4 has decreased this period. It is our view that present fall back will be difficult to catch up at this stage of project.
- Yard will this week present an updated progress status/plan and start up & trial plan.

Despite the challenging progress status and tight schedule, the overall workmanship and quality remains good.

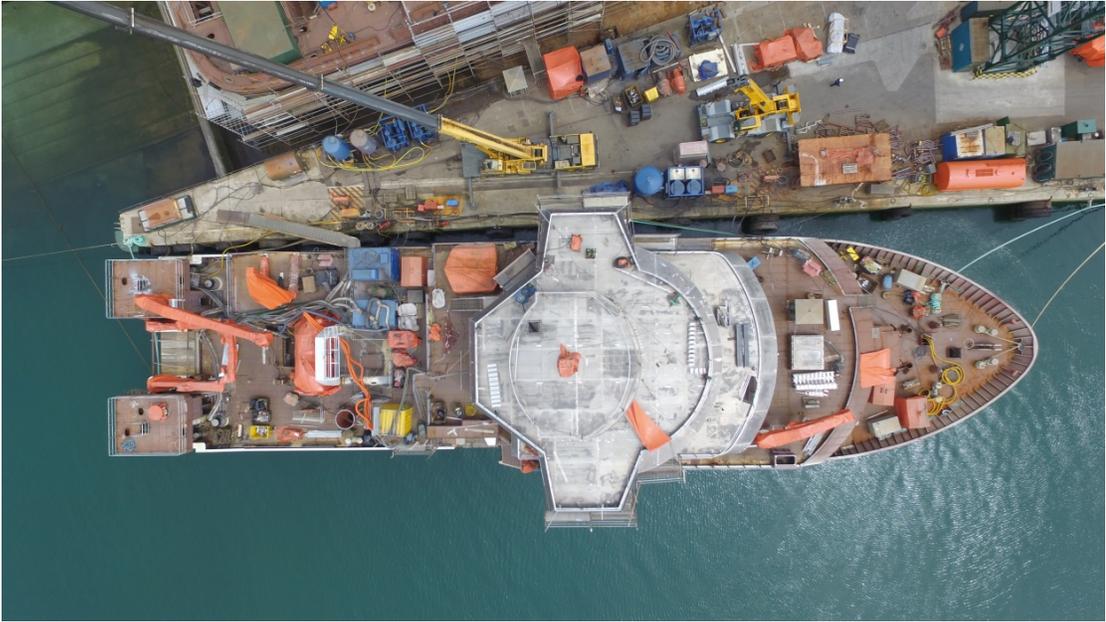
- **Hull Construction:** External outfitting:
  - Units 47 & 54 (Casing and main mast) still not assembled on board. AG's MP 4 from 29.04 states week 19&21 for assembly
  - Main Crane not installed.
  - Work boat davit installed week 19.
- **Piping:**

Still aux. systems in engine & tech. areas to be completed. Due lack of co-ordination at earlier stages, we do see conflict and collisions resulting in demolition and re-work (i.e. chilled water and clean seawater system)

  - Steel piping: Zone 400 (structural tanks etc.) 98%,  
Zone 500 (Engine & aux rooms) 75%  
Zone 700 (technical work areas, Labs) 75%  
Zone 800 (Accommodation) 95%
  - Sanitary piping, water mist piping and HVAC in accommodation areas up to bridge dk. completed.
  - Pressure testing of pipe systems ongoing.
- **Propulsion and maneuvering:** connection of auxiliary systems (fuel, lub, cooling etc.) ongoing and el. termination to components (pumps etc.) started. Propulsion motor alignment continuing. Mainly all frameworks for engine room floors in place.
- **Scientific equipment and Labs:** Main deck. Labs: Piping, cabling and insulation work ongoing 3<sup>rd</sup>. Dk: Main cabling and insulation completed, Wall paneling started.
- **Electrical: Cable trays and cabling**
  - Cable trays: All accommodation cable trays on decks up to Bridge completed. Approx. 30% remaining on Bridge decks and Main Deck technical areas.
  - Cables pulled: Approx. 90.000m of a yard estimated total of 165.000m (given total is from my point of view somewhat under estimated?)
  - Terminations: Approx. 1400 cables connected by date– Estimated total of cables to be connected are 9800.
- **Accommodation:** Wall paneling up to 3<sup>rd</sup> deck 95% completed. No doors installed yet (should have started 3<sup>rd</sup> May). Provision rooms and wet room tiling not started (16.05)
- **Sandblasting & Painting:** Tk's: 910 P&S, 810 C and 800C completed – good quality of work.

#### At outfitting berth





Work boat davit



**Forward Bridge consoles installed**



**Center console**



Mess room & pantry wall with entrance to galley



Corridor Dk. 2



**Chief Eng. cabin**



**Room division on 3<sup>rd</sup> dk started**



**Insulation L11**



**Conduit pipes – Main Hangar to Dk. 3**



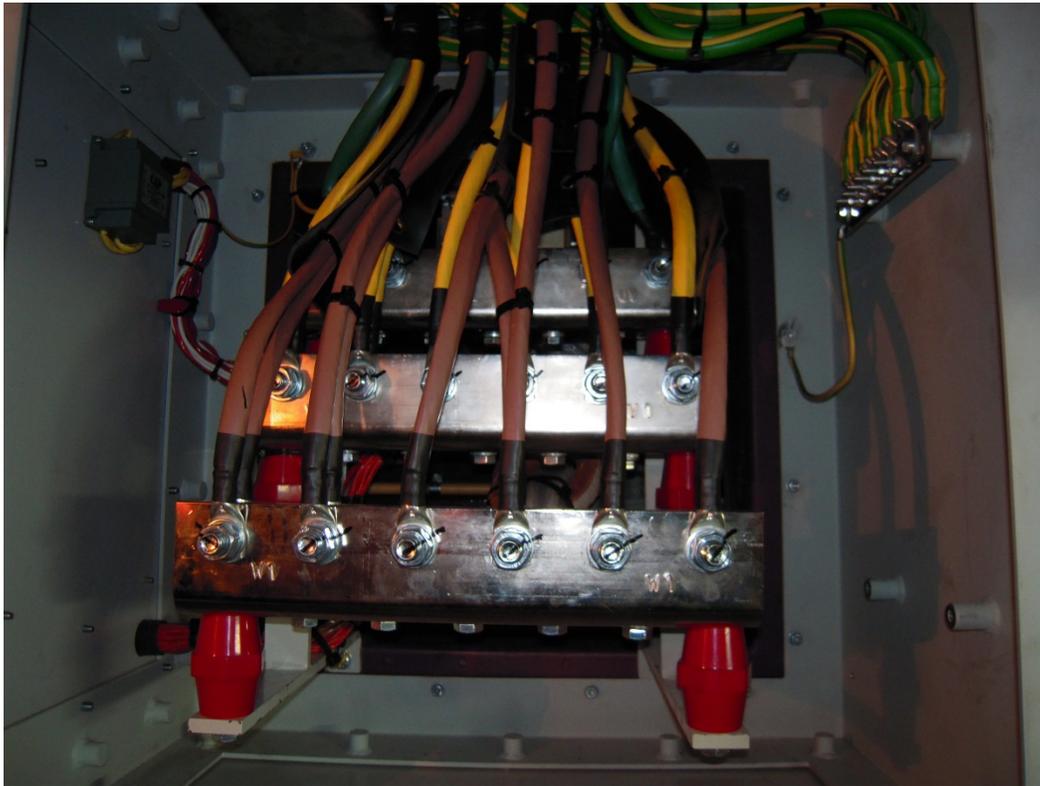
**Rack room Dk 3**



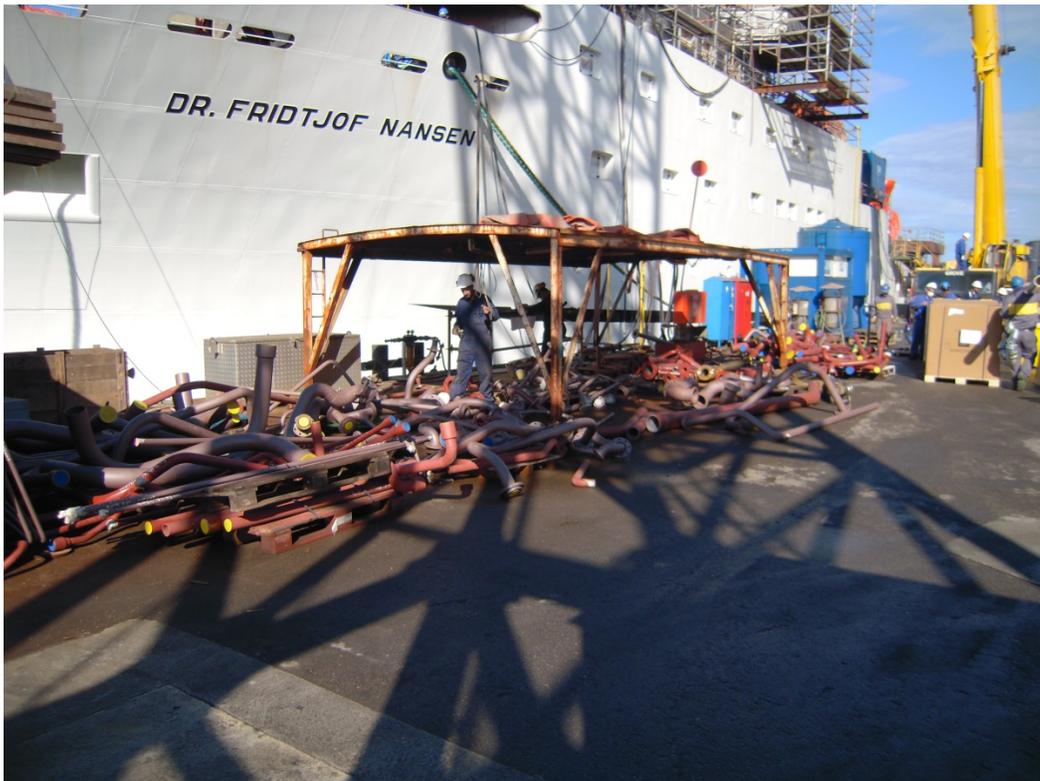
**Mounting of EI distribution & starter cabinets**



**Terminations Generator no 3**



**Steel pipes – still loads to go on board**



**Tk 810 C (FW) sandblasted**



**Tk 900 P (BW) coated**



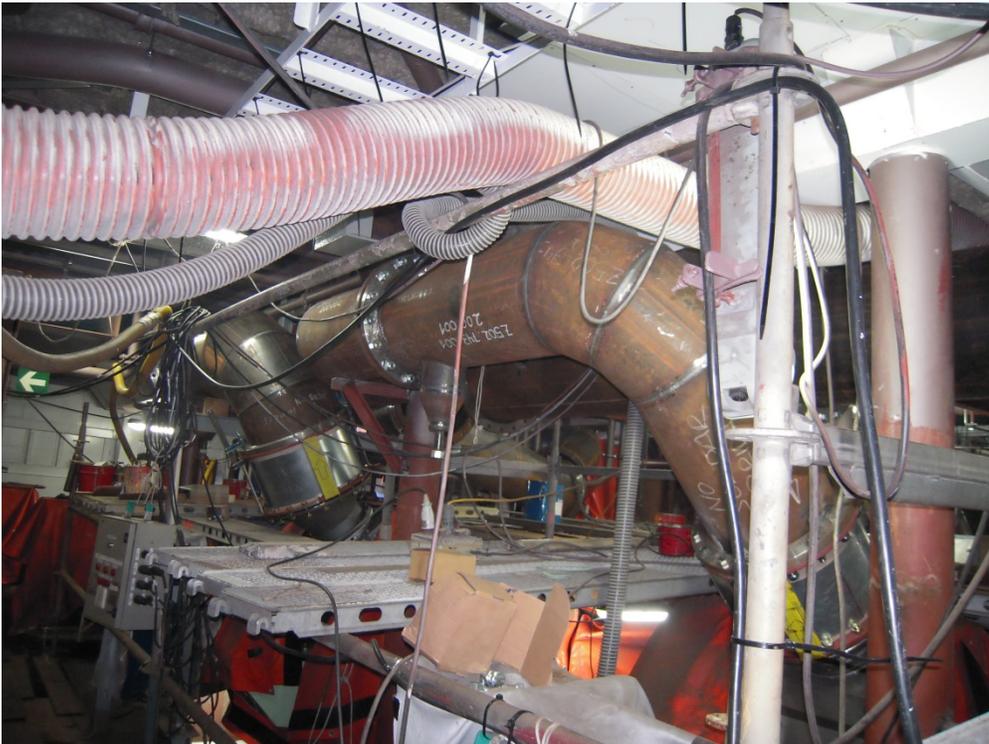
Drop keels – supports for upper locking device installed.



HPR installed



Exhaust arr. – completed to main dk.



DFN Workboat at the NAVILIA exhibition

