

Not to be cited without prior reference to the MSS, Marine Laboratory, Aberdeen

MRV Scotia

Survey 1522S

PROGRAMME

25 October – 3 November 2022

Loading: Aberdeen 22-23 October 2022

Departure: Aberdeen 25 October 2022

Unloading: Aberdeen 3 November 2022

In setting the survey programme and specific objectives, etc. the Scientist-in-Charge needs to be aware of the restrictions on working hours and the need to build in adequate rest days and rest breaks as set out in Marine Scotland's Working Time Policy (Lab Notice 34/03). In addition, the Scientist-in-Charge must formally review the risk assessments for the survey with staff on-board before work is commenced.

In the interest of efficient data management, it is now mandatory to return the Survey Report, to I Gibb and the Survey Summary Report (old ROSCOP form) to M Geldart, within four weeks of a survey ending. In the case of the Survey Summary Report a nil return is required, if appropriate.

Estimated days by project: 10 days – SU0400 (20178)

Fishing Gear

BT137 GOV trawl rigged with ground gear A (Top drum)

BT237 rigged with Light hopper rig (Figures 1-3).

1 set GOV (Morgere) polyvalent (1100kg) trawl doors (Top castle).

1 New Thyboron trawl doors - 1300kg (Figure 4).

Objectives

1. To assess the fishing performance, in terms of gear geometry, of the BT237 trawl with new Thyboron trawl doors to configure correct warp/depth ratios. Either 15 or 20 minute hauls will be made using Scanmar and bottom contact sensor in water depths ranging from 30 m to approximately 500 m.
2. To assess the effect on gear geometry and ground gear contact of adding additional weight to BT237 light hopper rig and reducing the length of the headline extension chains.
3. To obtain underwater observations of net shape (BT237) and door performance using a self-recording mini TV system attached to different areas of the trawl.
4. To assess the performance of the GOV trawl with the new Thyboron trawl doors.

Procedures

All fishing gear will be loaded aboard on 22 October with the BT237 trawl rigged onto the lower drum and GOV rigged onto the top drum. The Thyboron Type 11 trawl doors will be used first and the GOV polyvalent doors stored on the upper castles. A full fishing gear specification for BT237 is given in Figures 1 to 3.

Scotia will sail on 25 October and after all safety drills have been completed, make passage for the Moray Firth where trials will commence to evaluate the performance of the Thyboron trawl doors. Thereafter, and weather permitting the intention is to work around the Shetland Islands for the duration of the survey with trawling operations conducted between 07:00 and 19:00 hours

Survey schedule and operations will be decided by SIC after daily consultation with Captain and Fishing Master.

During the survey one member of scientific staff will undergo Scientist in Charge Training (SIT).

Fishing

The main objective of this survey is to assess the performance of the new Thyboron trawl doors and ensure that the correct gear geometry of BT237 is achieved. Once the new trawl doors are operating correctly, short hauls will be made to collect gear geometry and ground gear contact data to define the correct warp/depth ratio for BT237. If time allows the effect of adding weight to the light hopper ground gear and adjusting the length of the headline extensions chains will be assessed.

Results from this set of gear trials are to be reported to WGIBTS (2023) in support of fine tuning BT237 as the replacement for the existing GOV survey trawl. The intension (and if time allows) is to operate both trawls with the new Thyboron trawl doors to compare the performance of a modern door with the GOV trawl design. Observation hauls ~30 mins will be made using the self-recording TV system during the survey.

The survey will finish in Aberdeen on 03 November when all staff, some scientific equipment and most fishing gear (all BT237 and GOV ground gear A) will be returned to the Marine Laboratory.

Unused GOV trawls, wires and Morgere trawl doors will be left aboard for survey 1622S.

Normal contacts will be maintained with MSS.

Submitted:
R J Kynoch
05 October 2022

Approved:
I Gibb
19 October 2022

Figure 1: BT237 trawl.

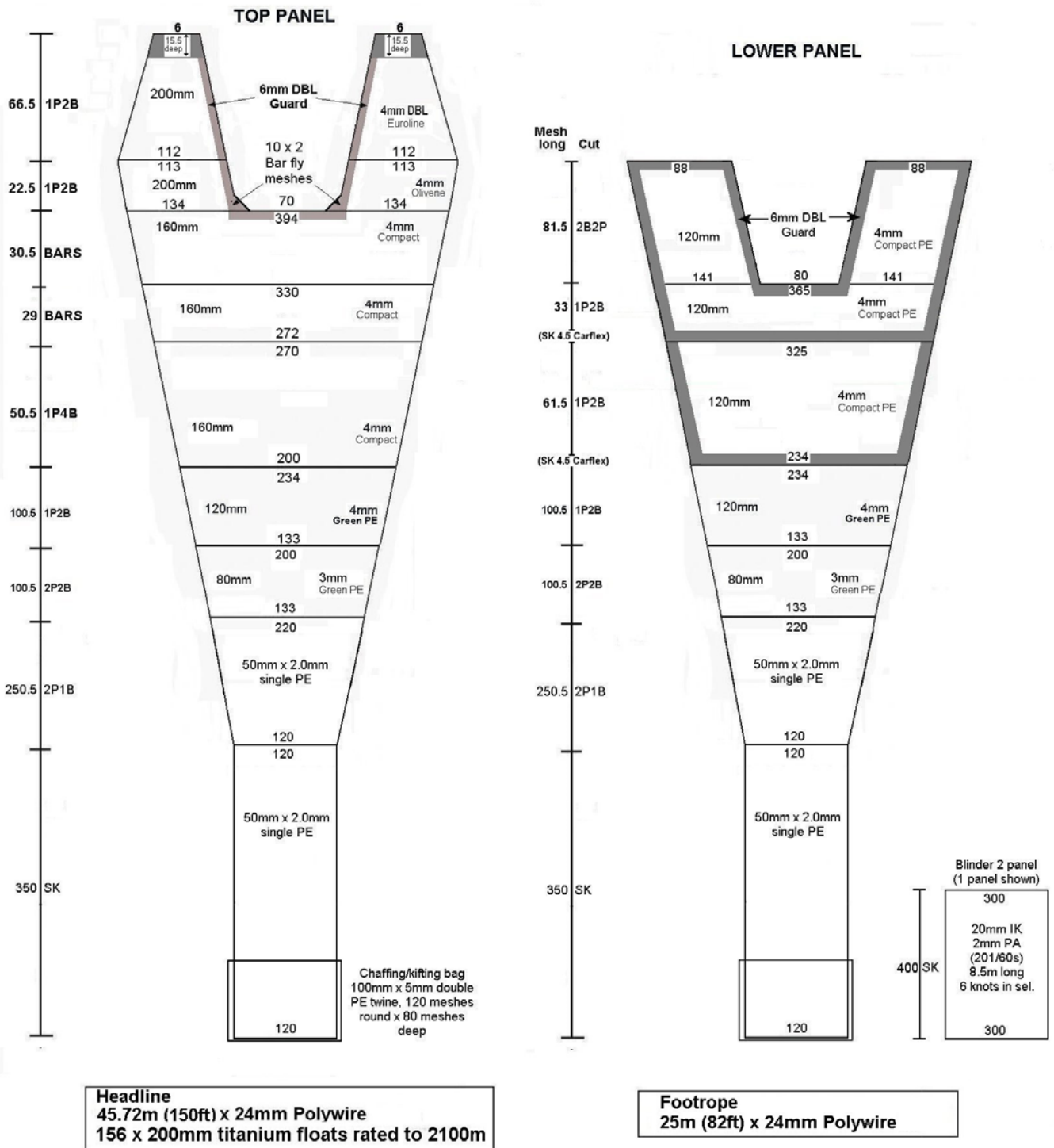


Figure 2: Light hopper rig for BT237.

Light hopper ground gear for BT237
 (250/300mm hoppers total length = 24.4m)

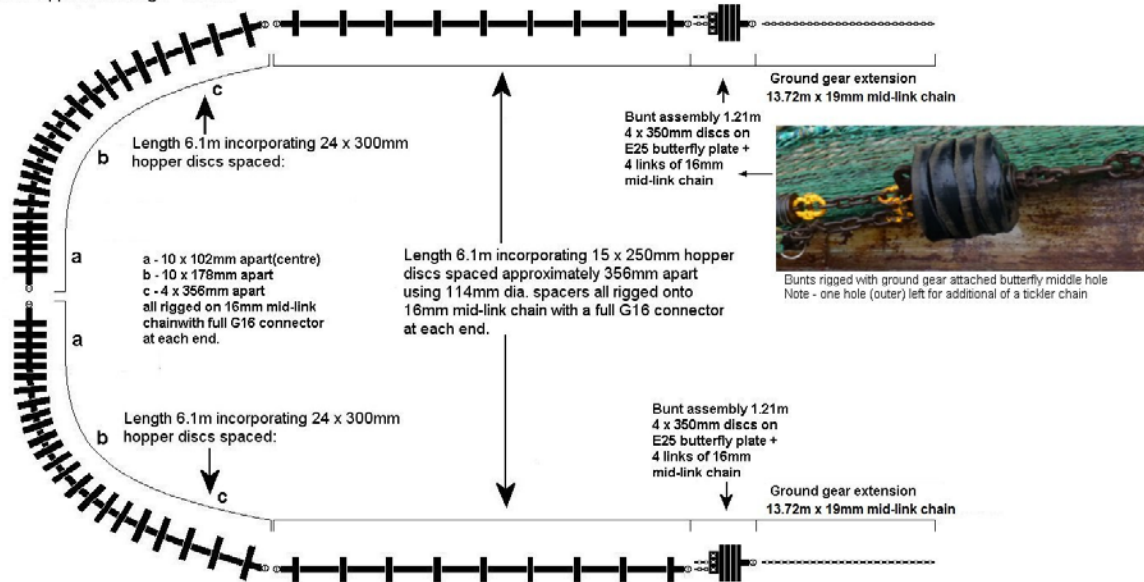
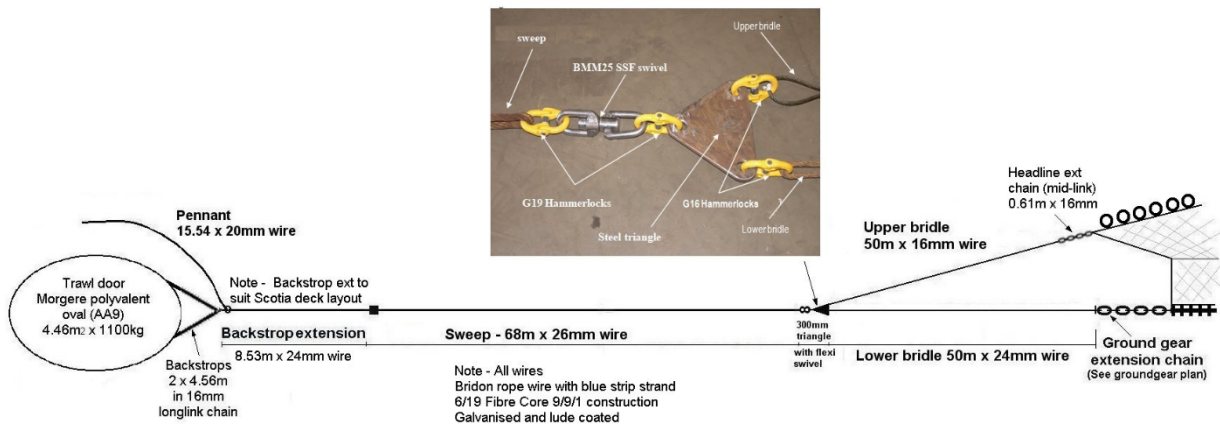


Figure 3: Wire rig for BT237.



Note - New trawl doors Thyboron Type 11s (96") x 1300kgs are still being trialed

Figure 3: Thyboron Type 11 doors 1300 kg.

