

White fish trawler with lock chamber for codend docking

Introduction

With the **lock chamber for codend docking**, SINTEF Fisheries and Aquaculture introduces a new and improved fishing concept. The main principle behind the concept is to float the codend into a closed chamber instead of hauling it onto the trawl deck. The method gives the following main advantages:

- Gentle handling ensures a higher utilization of the catch
- The amount of dangerous work on the trawldeck is reduced

Working principle

The trawl launching is conventional, but the trawl slip is shorter, and located higher on the stern. Hauling of trawl doors, gear and trawl is also conventional.



Figure 1. Hauling the gear

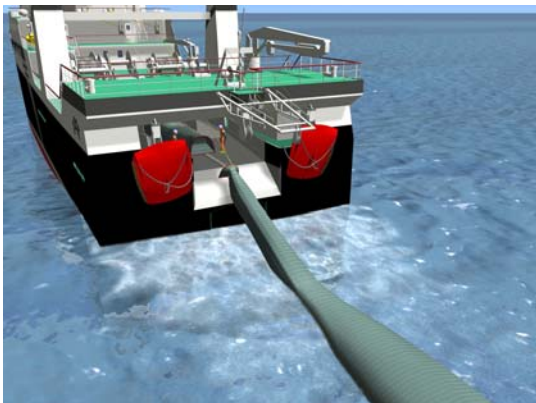


Figure 2. The codend has been disconnected from the trawl net, and is being guided towards the lock chamber.

When the forward part of the codend extension has reached the working deck, it is disconnected from the trawl net. Then the codend extension is connected to a moving chain that leads through the chamber to the forward trunk. The chain will then pull the codend into the chamber.

Working principle continued

When the line reaches the forward trunk opening, it is released from the chain and connected to the codend drum. The codend is then pulled into the chamber. The chamber stern door is closed and the codend is opened by zipping. The fish passes through a horizontal grid to the lower part of the chamber when the water level is reduced. The fish is pumped gently from the chamber to the factory with a vacuum pump.

Large foreign objects remain on the grid and are removed manually through the forward trunk. Smaller objects such as stone and fungus fall into a lower sump with a cage that is lifted up and emptied whenever needed.

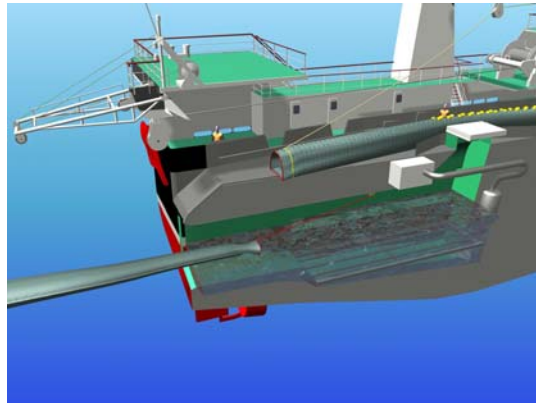


Figure 3. The codend is pulled into the chamber

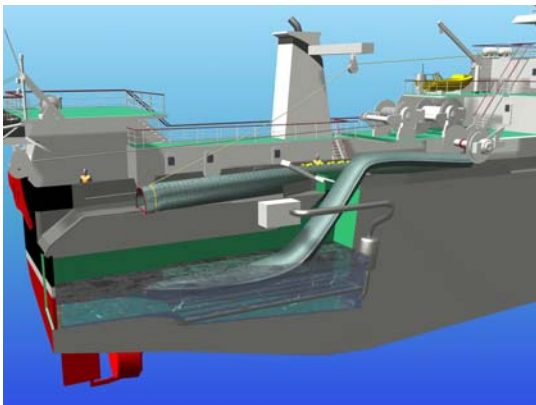


Figure 4. The codend is connected to the codend drum.

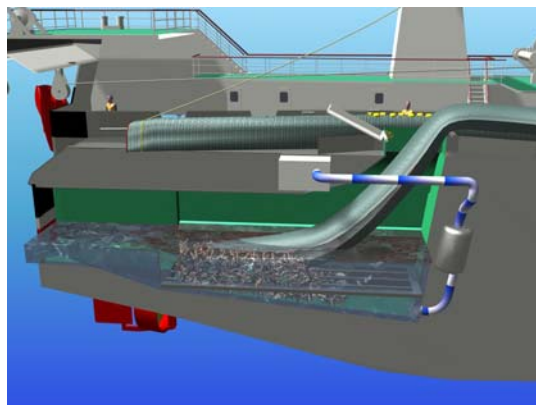


Figure 5. The codend is zipped open, and the fish is pumped out of the chamber.

Credits

The concept has been developed through a cooperation between SINTEF Fisheries and Aquaculture, Fiskerstrand verft, Rolls-Royce Nordvestconsult, Mørenot and Strand shipping company. The concept is also supported by Innovasjon Norge, FHF and the Research Council of Norway.