



Great benefits with symmetric pair-trawling

Within the past few years 18 Faroe Island pair-trawlers have installed the Scantrol Pairlink automatic control system. Automatic symmetry control ensures that the optimal shape and direction of the trawl opening is maintained. The fishery has become highly effective due to this technology and Faroe Island skippers are in agreement that its removal would feel like stepping back to Stone Age methods. The Faroe Island skippers know what they are talking about. Indeed they were the pioneers when they began pair-trawling in 1981

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They are fishing large volumes. Efficiency has increased by 50 percent since the introduction of automatic symmetry and distance control. For each tonne of fish caught there are substantial fuel savings. Furthermore,



there is now reduced workload for those on the bridge.

The first Faroe Island pair-trawlers to have the new technology installed by Scantrol did so in 2004. These fishing vessels were thus equipped with fully automatic symmetry and distance control. Sensors mounted on each ship allow them to be linked together via radio and GPS signals. This enables the vessels to hold precisely the same course and the same distance between each other during trawling.

This technology enables the optimal shape for the trawl opening to be automatically maintained during fishing. This is enabled by the placement of a sensor in the trawl mouth. On-board the Faroe Island pair-trawlers there is a tradition to alternate which vessel is taking the lead or following role. This presents no problem for the Scantrol system which registers each vessel as master or slave on the bridge display.

-This is nearly too good to be true. In fisheries which include Greater Argentine it is especially important that the trawl should pass through the sea in a precise manner. If I were to heave in three meters of trawl wire

on the master vessel then three meters would automatically be heaved in on the slave vessel. Compared to manual control this system is far more precise and allows us to fish more in less time, says Jákup Egholm, captain onboard Polarhav.

Stjørnan is partner to Polarhav and both are owned by Sjóborg. These pair-trawlers fish for Saithe during the winter and Greater Argentine from April to September. Sjóborg was the first ship owner in the Faroe Islands to have the automatic control systems installed on its pair-trawlers. This is a decision that director Tummás Justinussen has never regretted.

-This is a system that we use every day and are very grateful for. I would say this system is a necessity for all who pair-trawl. The investment pays for itself time and again and we have reduced fuel consumption for each tonne we fish, says Tummás Justinussen.

Pioneers in pair-trawling

In relation to the size of the entire Faroe Island fishing fleet, the largest proportion of vessels are pair-trawlers. The motivation for the introduc-

tion of pair-trawling came with the sky high fuel prices of 1979. During this period the number of vessels quickly rose to 60.

Beta owned eight of these pair-trawlers and Olaf Olsen, director at Beta for 30 years, considers pair-trawling a major technological advancement in the history of trawling. Statistics from Beta show that pair-trawlers capture the same volume of fish as they do when fishing individually. However, fuel consumption for each tonne of fish caught is reduced by 30-35 percent when pair-trawling. Today this is a weighty argument when discussing CO2 emissions. Furthermore, equipment costs are 15 percent lower for pair-trawlers when compared to single trawling.

In the beginning manual control was the only option. The need for better method inspired the Faro Island inventor Arnbjørn Durhuus to develop a distance measurement device. Via radar this device gave the distance between partner vessels on a screen. This was a great advancement but manual control was still a necessity.

Captain Jákup Egholm has been around for all three generations of pair-trawling and he would never go back to the first or second.

-The development has been rapid. Of course the distance measurement device was a good step forward but we had to refer to the slave systems continuously to check course, wire tension and engine power. Since we installed Scantrol Pairlink five years ago we have experienced a revolution and innovation of another league. Now everything is automatically controlled and we have constant on screen feedback on trawl symmetry. As captain I of course must find the fish and get the trawl out but Scantrol takes care of the rest, says captain Kjartan Larsen.

High stability

Kjartan Larsen is captain onboard the newest Faroe Island pair-trawler; Heykur. Heykur and Falkur are both built in Spain and are two of six pair-trawlers, which have replaced the eight old Beta trawlers, now taken over by Faroe Seafood.

With a flexible fishing day system these vessels can be out trawling for

most of the year and so it is critically important that our technical equipment works flawlessly.

-The Scantrol control system has performed fantastically. After some adjustment and calibration during the first cruise the system has never failed. The pressure is on relentlessly but the vessels maintain parallel courses and hold distance without fail. Should the current or wind increase we simply make the adjustment in the software. Without the system we would be paralyzed today, says Kjartan Larsen.

One of the advantages of the Scantrol system is that we can maintain optimal trawling while turning our vessels. The Faroe Island trawlers maintain a separation of between 300 and 500 meters. That this distance is held stable during trawling and in spite of course changes is highly significant. This was not possible by manual control. Kjartan Larsen says that with the Scantrol system the trawlers save a significant amount of time. Time is money and together with a significantly improved fishery he says that efficiency is increased by 50 percent in comparison to manual control.

Kjartan Larsen says that the new system has allowed for effective trawling both with and against current and wind. Pair-trawler progress is generally increased against the current. Configuring the Scantrol system correctly facilitates the optimal flow into the trawl and enables our vessels to reduce speed against the current and increase with the current while still maintaining the optimal flow into the trawl. So we do not risk the so called bucket effect, where trawling with too much speed leads to pushing fish ahead of the trawl.

Kjartan Larsen concludes that the greatest benefit of the Scantrol system is that with automatic control of wire tension, engine power and vessel separation the trawls passage through the sea is optimal and thus fishing optimally.

-Some of the older captains were skeptical of the system in the beginning. It was therefore practically a question of faith. However, the difference has been so marked that even the most skeptical have been convinced, says Kjartan Larsen.

FACTS

- The Faroe Islands started pair-trawling in 1981. Comparisons between single and pair-trawling for the same volume of fish show a reduction in fuel consumption for pair-trawling of 30-35 percent.
- The Faroe Islands have 26 pair-trawlers. Catches are primarily Saithe but approximately 25 percent is Cod and Haddock.
- Six pair-trawlers fish Greater Argentine with pelagic trawling during the summer.
- Five men work onboard each trawler and the crews rotate and each is on land every third cruise.
- So far 18 pair-trawlers with Faroe Seafood before and after Scantrol Pairlink show the fishery to be up by 20 percent.
- The yearly average catch by Beta trawlers from 1978 to 2003 was 1200 tonnes. In comparison the top performing pair with Faroe Seafood caught 6500 tonnes or 3250 tonnes each in 2008. Heykur and Falkur during the first four months of 2009 have already caught 2500 tonnes.