



CASE STUDY

XyRex[®] P3 Plus application in Blue Whiting for Surimi production.

The fishing and processing vessel *Atlantic Navigator*, which operates from the Faroe Islands by the American Seafood Company, catches and processes blue whiting for the production of Surimi.

Fish is caught at night, stored in Refrigerated Sea Water (RSW) tank systems and then processed onboard. It was found that the fish was sometimes too soft for the filleting machines to process because of bacterial degradation of the flesh. In a bid to resolve the problem, XyRex[®] P3 Plus was incorporated into the storage and production process to improve the firmness of the fish and enhance quality and increase yield.

The vessel has four RSW tanks each holding 150m³ and there are 16 filleting lines each handling 240 fish a minute. XyRex[®] P3 Plus diluted at a ratio of 10,000:1 was sprayed over the fish as they entered the RSW tanks, which also contains seawater and a 10,000:1 dilution of XyRex[®] P3 Plus. The chilled seawater in the tanks is held at 3-5°C and holds up to 600 tonnes of blue whiting. Prior to the initial addition of fish, the RSW system is flushed with a XyRex[®] P3 Plus dilution of 20,000:1 with seawater. This is recirculated for 1-3 hours and then discharged. A fresh batch of seawater with XyRex[®] is then added and chilled.

The blue whiting was found to be significantly firmer after the XyRex[®] P3 Plus was added. Prior to the application of XyRex[®] P3 Plus, over 35% of the fish were rejected by the machines. After using XyRex[®] P3 Plus, hardly any of the fish were rejected. After the spawning season the flesh of blue whiting is especially soft and hard to fillet. For American Seafood, the main benefit is that they can now produce fillets 24 hours a day with a 25% increase in yield even though the fishing only occurs during the night.

In summary, there was a reduction of 35% in rejections from the filleting machines. Yield increased by 25% and overall production of Surimi was up by 38% average. The RSW and surrounding process equipment was visibly cleaner and the bacterial loading on the product showed a reduction by 99.9%.