

## Abstract

DAS technology or Distributed Acoustic Sensing is a relatively new technology. By sending a laser pulse through a fibre-optic cable, it can detect where higher acoustic waves pass. Submarine cables such as interconnectors and communication cables are equipped with spare fibre-optic cables. By connecting a DAS system to these, sound can be detected along these cables. This thesis addresses the question of whether noise produced by ships can be detected when a ship passes over such cables.

To answer this question, in addition to literature research and interviews, I conducted a field test. By having a test ship navigate a track passing over such cable and while looking at the DAS data, we tried to see if there is an increase in acoustic values when the ship crosses the cable. This at different courses and speeds.

The conclusion of this field test and hence the thesis is that one can detect ships through DAS systems. However, the conditions to have successful detection still need to be explored with further testing.