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UnderwaySV Application Note #2

Norwegian Hydrographic Service Select the UnderwaySV for MS Hydrograf

Summary



The Norwegian Hydrographic Service (NHS) conducted the first ever multibeam survey using the revolutionary new UnderwaySV sound velocity profiler to provide critical sound speed data in early 2011. The partnership of the Oceanscience Group's underway deployment system developed for the UnderwayCTD, and the innovative Valeport "free-fall" RapidSV probe has generated the first compact and affordable, high-quality underway sound speed profiler. NHS surveyors have reported several benefits from their new profiling capability; better SV data, more efficient surveys, and a happier crew.



Figure 1. MS Hydrograf

Background

Released early in 2011, the NHS took delivery of the first UnderwaySV system off the production line using the Valeport rapidSV probe. After considering a larger profiler to allow sound velocity casts to be conducted from a moving vessel, the NHS came across the new UnderwaySV at the 2010 Hydro conference in Rostock, Germany. Wishing to take advantage of the compact nature of the system, significant depth capability and affordability, the NHS fast-tracked an order in time for the 2011 survey season on board the dedicated survey vessel MS Hydrograf.

Oceanscience engineers were on hand for commissioning and user training, with typical sound velocity profiles of about 400m completed in less than 15 minutes from start to finish.

The View from the Users

According to Dag Hodnesdal of NHS, "Taking a sound velocity profile is much easier now than it used to be. Since we can take a profile while underway we save a lot of time, making us more efficient. Until this year we have been using a CTD profiler for generating sound speed profiles down to 400 meters. This is a very time consuming operation because the vessel has to stop each time. Since we are only operating in such deep water areas 2 months a year it has been impossible to justify a large and expensive deep water profiler. At the Hydro2010 conference we saw a presentation about the UnderwaySV, which to us seemed to be a very cost-effective solution".

The NHS are tasked with completing the bathymetry of all coastal areas in Norway, including the fjords and bays, which is quite an undertaking with a total of 25,000 kilometers of



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coastline. With such a big challenge, increasing vessel productivity is a key area. “We got the system installed in April 2011, and after one month of surveying we are very satisfied”, adds chief-surveyor Edgar Rasmussen “The experiences are positive. It’s simple to operate the system. It is stable, and we have a great enhancement in efficiency”.

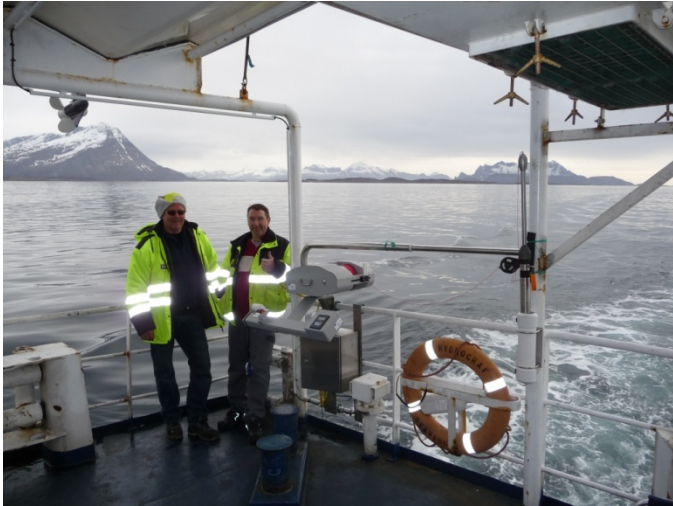


Figure 2. The UnderwaySV on board MV Hydrograf

The Hydrograf crew are also grateful for the UnderwaySV for quite unexpected reasons, “The crew off-shift is no longer disturbed while taking a profile. Prior to getting the UnderwaySV, we had to stop the vessel, position it against wind and current and then take a profile. This made a lot of irregular noise from the propeller and the main engine”.

Future UnderwaySV Activities

Now part of routine survey operations, the UnderwaySV will continue to reward the NHS with more efficient surveys and a happier crew in years to come!