

New communication system tested at a depth of 108 meters

Last Tuesday FMV carried out a dive to 108 meters depth with the saturation chamber system on board the submarine rescue ship HMS Belos.

The diving was carried out in the context of verifications of the newly acquired communication system for Belos saturation chamber system. The aim was to test the full functionality to the maximum depth of the diving tables, 108 meters. Last time a diving below 100 meters was performed in the Swedish navy was more than 20 years ago.

For all types of diving in saturation chambers you need a functioning communication between divers rescued and placed in the pressure chambers and the surroundings on the ship.

- The environment that an increased pressure causes makes great demands on the equipment when the sound and its propagation in the pressure chamber atmosphere is affected by both pressure and temperature and the current gas mixture, says the FMV project manager Robert Wigert.

The increased pressure causes the divers' voices are distorted significantly. This effect is enhanced when the gas mixture contains helium. Without the built-in helium unscramble function with an audio filter that compensates for the effect sounds, divers sounds like Donald Duck or Smurfs.

FMV conducted the dive with the help of staff from first submarine division. The gas mixture used was 90/10 heliox, meaning 90 percent helium and 10 percent oxygen.

The new system is one of the very latest systems available on the market to meet the classification society DNV rules. The reason for the change of communication was that the old system has reached its end of life, says Robert Wigert.

Competitive procurement

The contract was carried out by the FMV unit for marine supply equipment. The contract went to the contractor GDA Sweden, after they won the FMV competitive procurement.

Installation work on Belos has been ongoing during the spring and summer of 2014. FMV will forward the communication to the Armed Forces during the fall, 2014.

Facts:

HMS Belos is along with the submersible URF, the Swedish submarine rescue system. The ship is also a national resource for salvage work and advanced diving operations.