

Effective underwater inspections with a ROV



VideoRay ROV vs. diver (photo: VideoRay LLC)

According to Norconsult's experience this is the case for many underwater inspections of hydropower plants and Norconsult has therefore acquired a VideoRay Pro4 inspection ROV, which have lowered the threshold for organising our underwater inspections considerably. Inspections are now cheaper and quicker to perform because the ROV can be operated by our own inspection engineers. The ROV is quickly prepared for operation and can be in the water within minutes. The quality of ROV inspections is high compared to diver-operations since the operator will be a qualified hydropower engineer with relevant experience.

The camera on the ROV allows the operator to study images of the inspected objects on a monitor and direct the ROV for closer studies of any object. The film can be continuously stored and images may be grabbed and saved on a PC for report illustrating, thus avoiding lengthy post-inspection studies of the whole video tape.

The Pro4 ROV is equipped with depth gauge and compass for position indication and it is also possible to fit different equipment like sonar and positioning system that can track the position and make precise profiles measurements and profiling. It is also possible to connect probes for ultrasonic measurements and material thickness recor-

Underwater inspections have become more and more advantageous, especially during assessments of dams and hydropower plants in service. Due to strict safety regulations, conventional diving operations are usually extensive and expensive to organise since the mobilized diving team normally comprises two divers and a tether man. Furthermore, in many cases divers do not have the necessary engineering background to evaluate what they observe.

dings as well as sensors for water temperature, salinity, cathodic potential, dissolved O₂, etc. Additional to its video camera, lights and motors for propulsion and depth control, the Pro4 ROV can be fitted with a simple manipulator arm.

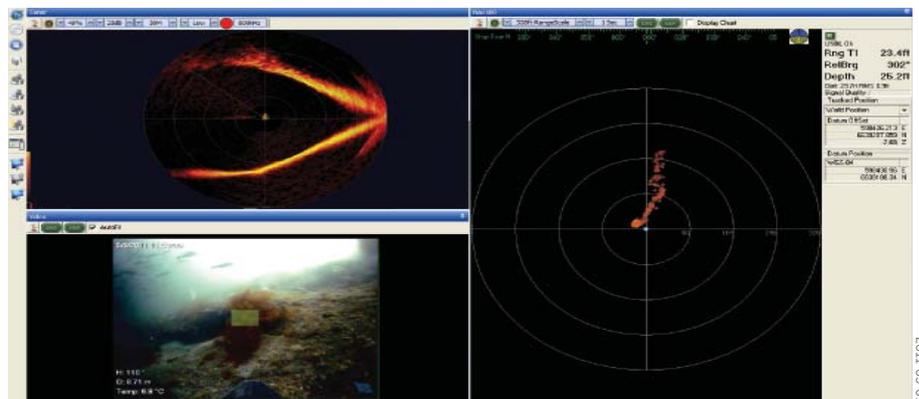
It is operated from a hand held control box and the operator is guided by the image information on the monitor. The standard tether-cable is 70 m long, but can be extended to 300 m or more on request.

The Pro4 ROV, measuring only 270 x 210 x 360 mm, weighing 5 kg. Hence in can operate in very confined and narrow spaces normally inaccessible to divers. Its equipment is quickly prepared for operation and it is transported in a normal car and can be dispatched as luggage on air flights.

High quality inspections are carried out quickly and at competitive prices.



VideoRay Pro4 ROV with Tritech sonar and positioning system



Logging of sonarsignal, position and ROV video using Seanet Pro.

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