

Using Echoscope for dam inspections

The MSI3D team is proud to present you its services for marine inspections in real-time with a 3D sonar. MSI3D is a subsidiary company of Groupe Synergis who specialized in Marine inspection services, Geomatics, Environment and 3D Imaging laser scanning (LIDAR).

The surveys are realized using the Echoscope® 3D sonar and the Coda Octopus modeling software (see imagery examples in the annex). The mobile system is composed of our high definition sonar installed on a survey boat. Thanks to the F185+ inertial station in RTK mode the point cloud is georeferenced. In high definition mode the sonar can record 16 000 points simultaneously up to 12 times per second creating a detailed portrait of the seabed and immersed structures. To improve the quality of the data a sound velocity profiler (Valeport Mini SVP) is used to calculate the speed of sound in the water column and corrects the data in real time before sending the information to Survey Explorer (acquisition software).

Here are a few benefits of our system:

- Setup onlu takes 2-3 hours
- At least 3km of infrastructures or seabed can be scanned daily in 3D. (Detecting future upstream problems)
- Only 3 people are required to operate the system. (Keeping costs low.)
- Infrastructures can be seen live on the boat. (Clients are always invited on the boat to see the infrastructures in real time.)
- Ideal system to clearly see the condition of water intake debris grills.
- Detect and quantify sediments, debris or scour issues at the base of dam walls.
- Images can be produced and put on a usb stick the same day. (To authorise emergency work immediately.)
- Very little post processing. A detailed report can be produced within a week or two.
- Our systems can be used in currents up to 10 knots.
- Hydroelectric dams can be scanned while in function. (Both upstream and downstream)

In sum, the Echoscope instantly creates a 3D georeferenced dataset of submerged infrastructure in all water conditions. The surveys are done quickand safer manner. The range of available products can be from the simple screen capture to full inspection report through 3D animations and merging datasets with conventional AUTOCAD draws (.DXF or .DWG). It would be our pleasure to discuss your needs for your maritime inspections projects.



