

Application:

Impact testing of submerged structures

Kemo Products:

IEPE Impact hammers

Cables to suit above water data acquisition

Waterproofing

**Application:**

The testing of structures using instrumented impact hammers is a well-known method for evaluating how structures respond to forced excitation and the associated frequencies and mode shapes. However, what is less well established is the application of this testing method for submerged structures which are subject to very different responses due to the surrounding water.

Kemo's range of IEPE impact hammers cover a wide range of force levels from 50N impact pencil hammers through to 50,000N impact sledge hammers.

When approached by a defence industry customer to supply an IEPE impact hammer capable of being used under water at depths up to 40m, Kemo was pleased to meet the challenge.

Other than the obvious challenge of making the hammer waterproof without effecting its operational calibration performance, there was an additional problem created by the need to attached a minimum 40m length cable which would need to be permanently attached to the hammer making it fairly difficult to handle in normal conditions.

Using techniques previously proven in cable and connector sealing, Kemo has now supplied submersible IEPE impact hammers to overseas and UK customers who have successfully used the hammers at depths of 40m for over an hour of testing.

Supplied with sealed cables up to 50m in length the hammers offer an interesting insight to structure response when subject to significant external force on all body areas, a very different response than that seen in normal atmospheric conditions above sea level.

Still supplied with a range if impact tips, the hammers available are:

- VTH50KN-W
- VTH20KN-W
- VTH10KN-W
- VTH5KN-W
- VTH2KN-W

For more details and to discuss your cable requirements, please contact us sales@kemo.com

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