

## Water depth measurement on a river model

With investigations using realistic models of flowing waters, the river bed must be sampled as accurately as possible and without physical contact.

To do this, the laser-based optical displacement measurement system, optoNCDT, is used which features high accuracy with a large measuring range and is largely independent of the ground conditions. It is mounted together with the signal conditioning electronic unit on a measurement carriage movable in the X direction which is suspended from a traversing beam movable in the Y direction. The distance to the water surface is acquired simultaneously with a parallel-mounted ultrasonic displacement system.

### Measurement system requirements

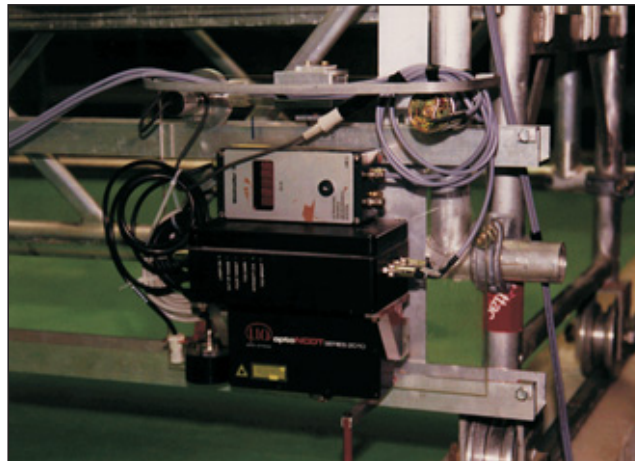
- Measurement range: 500 mm
- Large base distance (formation of waves!).
- Accuracy: < 0.5 mm
- Insensitive to different surfaces.

### Reasons for the system selection

- High measurement accuracy.
- Independence of measurement object surface.

### Measurement system setup

ILD 2010-500 Laser-based optical displacement measurement system



Pic: TU Dresden,  
Institut für Wasserbau  
und Techn. Hydromechanik,  
Dresden

