

POLIS: educational PIV-system

Educational POLIS PIV-system is developed for students enrolled in physics and mechanical engineering departments. It is used to carry out experiments in fluids and allows to measure velocity fields up to 5 m/s. The system is low-cost analog of PIV system and allows obtaining experience of working with PIV system and data processing.

Educational POLIS PIV-system allows to measure instantaneous velocity fields in low-speed liquid flows with frequency up to 1 kHz. ActualFlow software is aimed for experiment automation, image acquisition and data processing. The system is compact, mobile and can be mounted on the table. It can be supplied with desktop hydrodynamic tunnel with set of measurement sections which also include a number of lab works instructions which helps student to learn hydrodynamics low by means of modern experimental techniques.

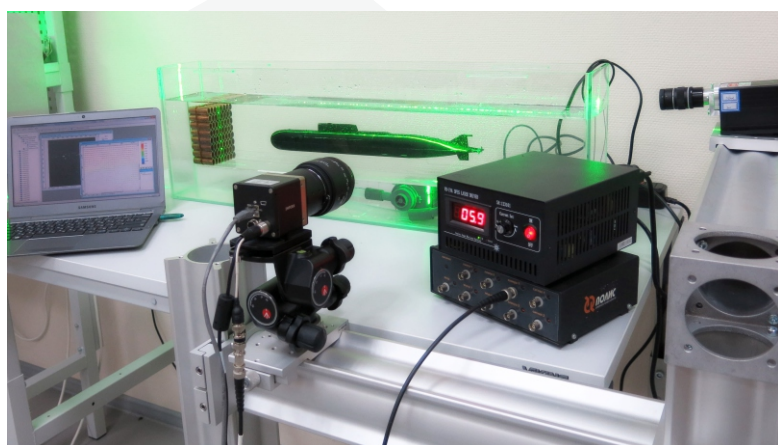
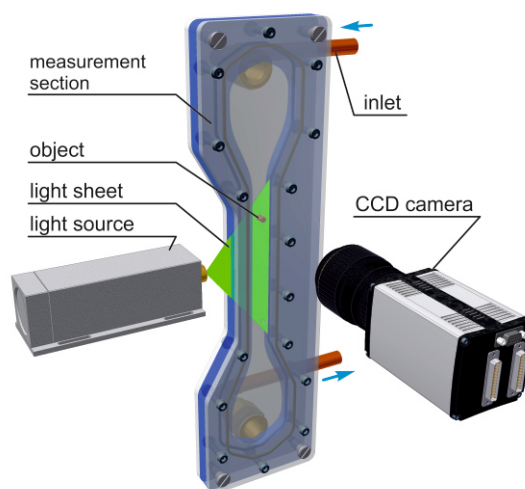


Photo of POLIS educational PIV-system



Scheme of experiment

Measurements and visualization:

- › instantaneous and average velocity fields;
- › velocity pulsations;
- › vorticity visualization;
- › velocity profiles.

Main characteristics:

- › working fluid - liquid;
- › measured velocity from 0,001 to 5 m/s;
- › measurement area up to 50x70 mm²;
- › spatial resolution from 20x15 vectors;
- › maximum acquisition frequency - 1 kHz;
- › measurement error < 3%.

Measurement system components:

- › light-emitting-diode with controlling unit;
- › light sheet formation optics;
- › CCD camera with objective;
- › seeding particles;
- › ActualFlow software with DemoPIV Kit;
- › PC;
- › user manual.

Optionally:

- › desktop hydrodynamic tunnel with set of measurement sections and lab works instructions.

Questions? Contact us:

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