

The Physics Experiments of Robert Wichard Pohl (1884–1976)

For decades, Robert Wichard Pohl taught his famous lectures of introductory physics in the old lecture hall of the Physics Institute at Goettingen University. These lectures became the foundation for three volumes entitled „Introduction into Physics“. Now, using Professor Pohl's original instruments in the same lecture hall in which he taught, this set of videos captures his extraordinary ingenuity and once more brings to life Pohl's great experimental skills.



Buoyancy in a model fluid

Video title: Buoyancy in a model fluid

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Series title: The Physics Experiments of Robert Wichard Pohl (1884-1976)

Abstract: The effect of buoyancy is demonstrated for two objects of different mass density in a model liquid of small steel spheres. Thermal motion is simulated by shaking the container.

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Key words: Mechanics, liquids, gravity force, buoyancy

- Goal of the experiment:** The effect of buoyancy is demonstrated for two objects of different mass density in a model liquid of small steel spheres.
- Experimental setup:** A rectangular container is filled with small spheres as a model of a liquid. Two large spheres, equal in size, but differing in mass density, of wood and aluminum, are buried in the liquid. Thermal motion is simulated by shaking the container. Best viewed in shadow projection.
- Experiment:** Initially, both large spheres are completely submerged in the model liquid. As the container is shaken, both spheres reemerge, first the wood sphere which rises high, then the aluminum one which remains half immersed even after extended shaking.

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