



Determination of the speed of propagation of surface waves.

Purpose of work:

Determine the speed of wave propagation on the water surface.

Equipment:

063 - wide laboratory vessel;
088 - float;
091 - stopwatch;

Theoretical part:

A mechanical wave propagates in an elastic medium at a speed $V = \lambda / T$ and is determined by the properties of this medium. If we measure the wave propagation distance l and its propagation time t , then we can also determine its velocity by the formula $V = \frac{l}{t}$.

Workflow

1. According to the picture on the board, prepare a workplace for the experiment.
2. Start the simulation
3. Fill the aquarium with water, on one side, lower the float into the water.
4. On the opposite side of the float, throw a small ball into the water and measure the time (t) for which the wave will travel the distance from the splash point to the float (l)
5. Repeat the experiment several times changing the distance of the float from the ball fall. Enter the result in the table.

6. Collect the formula for calculating the speed of wave propagation

$$v = \frac{l}{t}$$

7. **Table:**

No.	t (s)	l (m)	v m / s
1			
2			
3			

8. **Conclusion:**

A. The speed of the wave is directly proportional to its propagation distance and inversely proportional to time distribution.

In. The wave speed is inversely proportional to its propagation distance and is directly proportional to the propagation time.

C. The speeds of propagation of all surface waves are the same and do not depend on the range of their propagation.