

26. Bouncing balls

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Aim

- Make a small hole in a ping pong ball, fill it with some liquid and seal the hole. Drop the ball from the fixed height and investigate how high it bounces, depending on the amount of liquid inside

Theoretical part

- Loss of mechanical energy can be calculated as:

$$\Delta E = mg(h - H_0)$$

h – height of bounch

$H_0 = \text{const} = 0,1\text{m}$ – height of fall

Theoretical part



$KE=\max, PE=0$

$KE=0, PE=\max$

Conclusion

- As the fall height increases, the loss of mechanical energy decreases
- As the volume of the water increases, the loss of mechanical energy also increases

Thank you for attention!

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