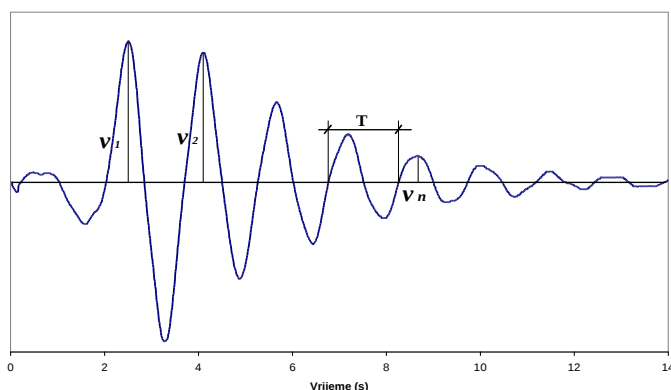
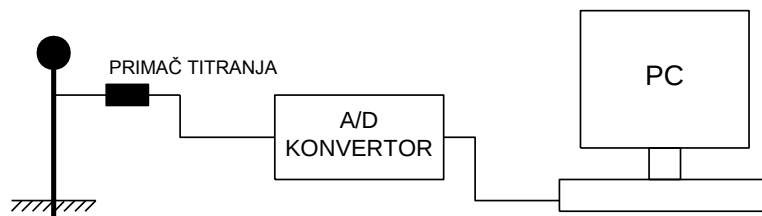




DINAMIČKO ISPITIVANJE MODELA



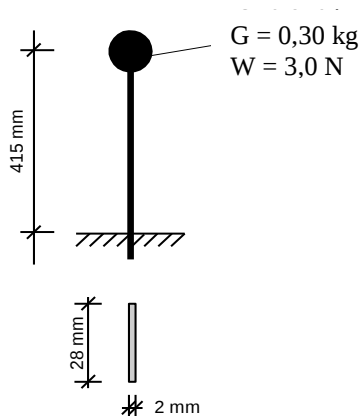
Frekvencija: $f = \frac{1}{T}$

Logaritamski dekrement:

$$\delta = \frac{1}{n-1} \ln \frac{v_1}{v_n}$$

Koeficijent prigušenja:

$$\xi = \frac{\delta}{2\pi}$$

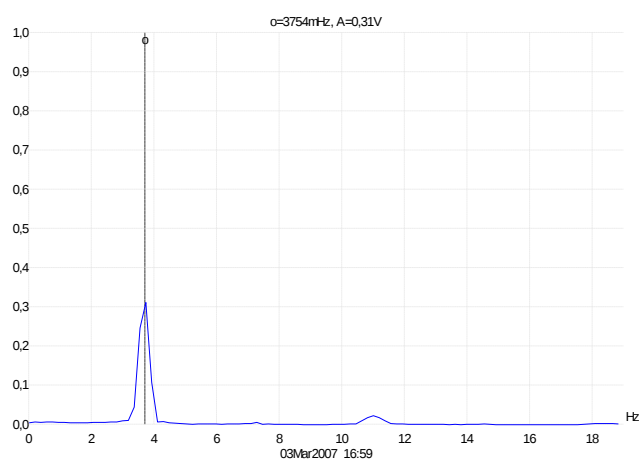
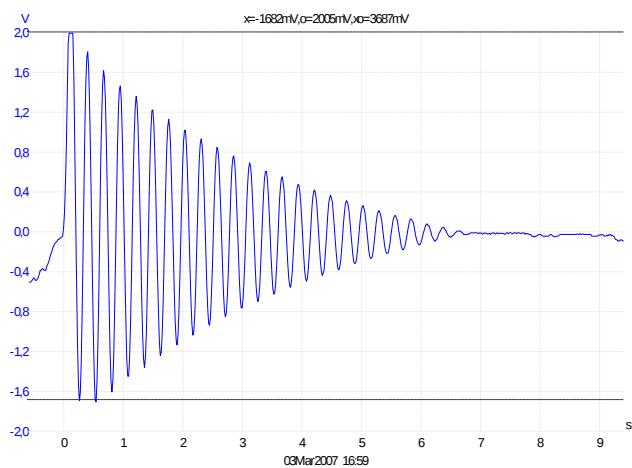


$$E = 2 \cdot 10^5 \text{ MPa}; \quad I = \frac{28 \cdot 2^3}{12} = 18,667 \text{ mm}^4;$$

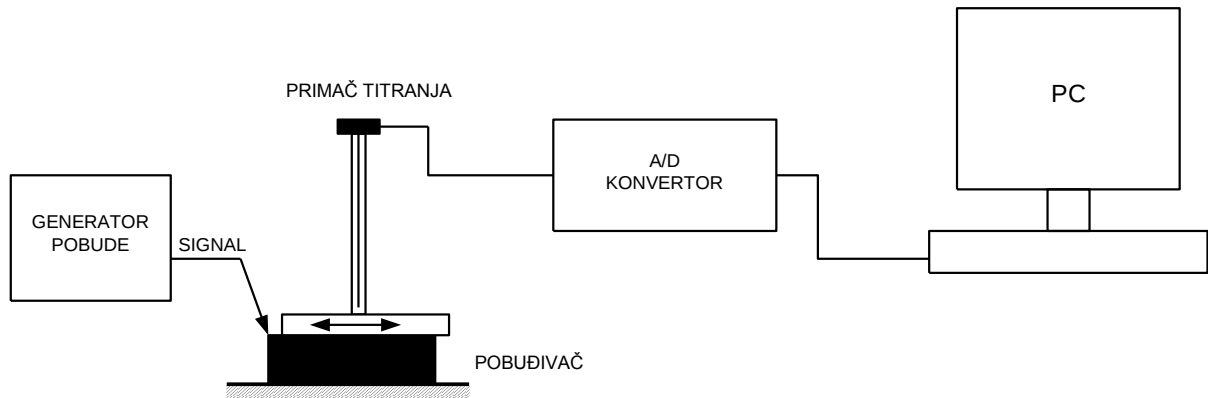
$$g = 9810 \text{ mm/sec}^2$$

$$\tau_1 = 2\pi \sqrt{\frac{\delta_{st}}{g}}, \quad \delta_{st} = \frac{W \cdot l^3}{3EI}$$

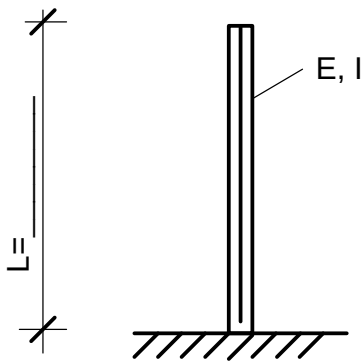
$$f_1 = \frac{1}{\tau_1}$$



1. PRISILNO TITRANJE



Primjer 2. – Drveni konzolni štap



$$E = \text{_____} \text{ MPa}; \quad I = \text{_____} \text{ mm}^4$$

$$\bar{m} = \frac{q}{g} = \text{_____} \left[\frac{\text{Nsek}^2}{\text{mm}^2} \right]$$

$$f_i = c_i \cdot \sqrt{\frac{EI}{m \cdot l^4}} \quad - \text{ Vlastita frekvencija [Hz]}$$

$$(c_1 = 0,56; \quad c_2 = 3,5; \quad c_3 = 9,82)$$

Odrediti prve tri vlastite frekvencije i usporediti s izmjerenim vrijednostima.

$$\boxed{} \quad b/h = \text{___} / \text{___}$$

(Zapreminska masa drveta cca 450 kg/m³.)