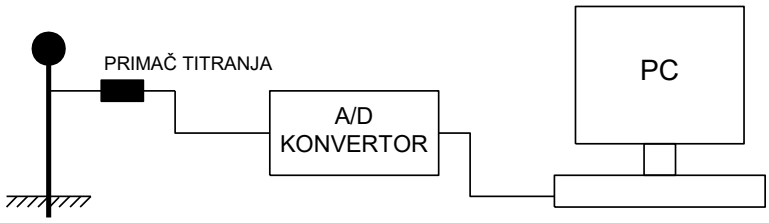
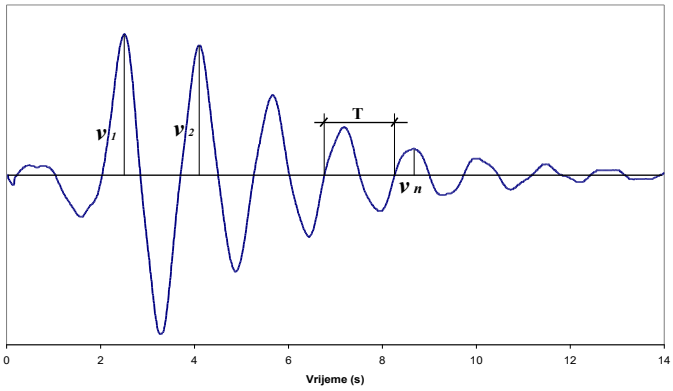
DINAMIČKO ISPITIVANJE MODELA





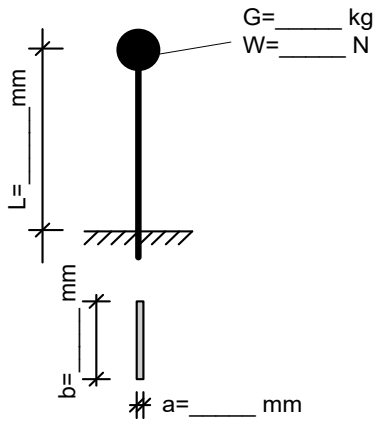
Frekvencija: $f = \frac{1}{T}$

Logaritamski dekrement:

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

Koeficijent prigušenja:

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

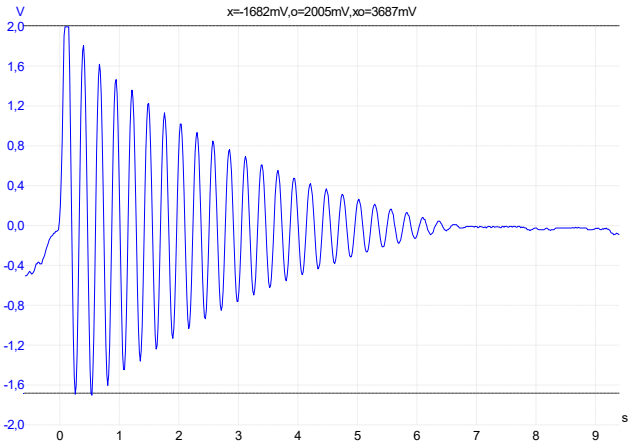


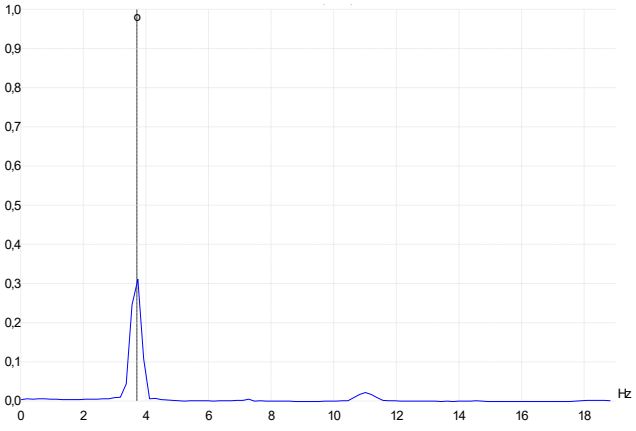
$E = 2 \cdot 10^5 \, MPa; \quad I = \frac{b \cdot a^3}{12} = \_\_\_\_\_ \, mm^4;$

$g = 9{,}81 \ m/s^2$

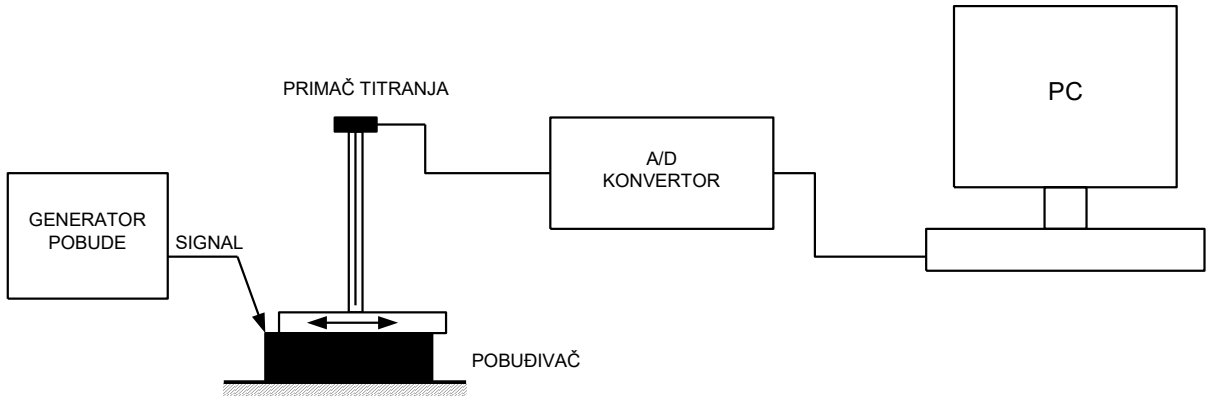
$$\tau_1 = 2\pi \sqrt{\frac{\delta_{st}}{g}}, \qquad \delta_{st} = \frac{W \cdot L^3}{3EI}$$

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

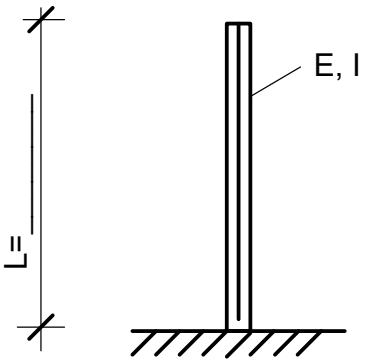




PRISILNO TITRANJE



Primjer 2. – Drveni konzolni štap



$E = \_\_\_\_\_ \; MPa; \quad \mathrm{I} = \_\_\_\_\_ \; mm^4$

$$\overline{\mathrm{m}} = \frac{\mathrm{q}}{\mathrm{g}} = \_\_\_\_\_ \left[\frac{\mathrm{N\,s^2}}{mm^2}\right]$$

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

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

Odrediti prve tri vlastite frekvencije i usporediti s izmjerenim vrijednostima.

 b/h=___/___

(Zapreminska masa drveta cca 450 kg/m^3.)