

Datum: 10.02.1997.		
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**GRAĐEVINSKI FAKULTET  
SVEUČILIŠTA U SPLITU**

KATEDRA ZA METALNE I DRVENE KONSTRUKCIJE  
DRVENE KONSTRUKCIJE

KANDIDAT: **VIDE ŠIMUNOVIĆ**  
BR: 890/97

Split, siječanj 1997 god.


**ZADATAK ZA DIPLOMSKI RAD**  
**PJEŠAČKI MOST**

Izradite izvedbeni projekt drvenog pješačkog mosta raspona cca 20.00 m.  
Širine prelaza 2.0 m.

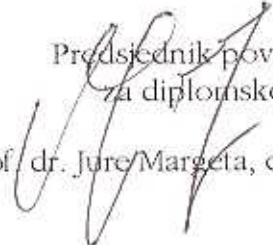
Materijal: - glavni nosači L.L.D. I klase  
- ostalo po vlastitom odabiru

Propisi: DIN 1052 i ostali važeći

Voditelj:

  
Pred. Duro Nižetić, dipl. ing. grad.

Predsjednik povjerenstva  
za diplomске radove

  
Prof. dr. Jure Margeta, dipl. ing. grad.

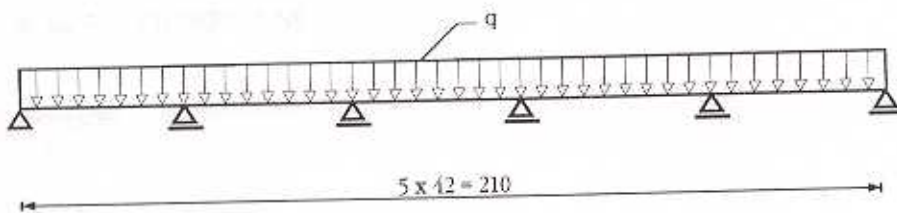
### 3. 2 RUBNA REBRA

#### 3. 2. 1. OPTEREĆENJE:

- Podna konstrukcija.....
- Vlastita težina rebara.....

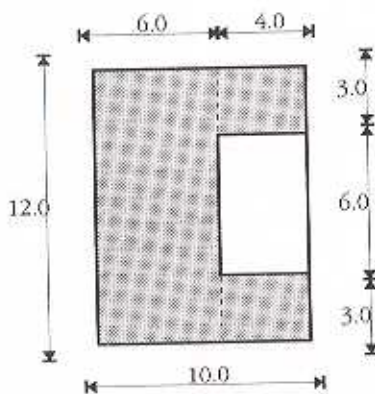
$$\begin{aligned} 1168/0.20 &= 5.840 \text{ kN/m} \\ 0.10 \times 0.12 \times 6.00 &= 0.072 \text{ kN/m} \\ \hline q &= 5.912 \text{ kN/m} \end{aligned}$$

#### 3. 2. 2. STATIČKA SHEMA REZNE SILE



$$\begin{aligned} M_{\max} &= -0.1196ql^2 \\ M_{\max} &= -0.1196 \times 5.912 \times 0.42^2 \\ M_{\max} &= -0.130 \text{ kNm} \end{aligned}$$

$$\begin{aligned} T_{\max} &= 12177ql \\ T_{\max} &= 12177 \times 5.912 \times 0.42 \\ T_{\max} &= 302 \text{ kN} \end{aligned}$$



$$\begin{aligned} A &= b \times h = 6.0 \times 12.0 = 72.0 \text{ cm}^2 \\ W_x &= \frac{b \times h^2}{6} = \frac{6.0 \times 12.0^2}{6} = 144.0 \text{ cm}^3 \\ I_x &= \frac{b \times h^3}{12} = \frac{6.0 \times 12.0^3}{12} = 864.0 \text{ cm}^4 \end{aligned}$$

#### 3. 2. 3. DIMENZIONIRANJE:

$$\sigma_m = \frac{M_{\max}}{W_x} = \frac{13000}{144.0} = 90.0 \text{ N/cm}^2 < \sigma_{\text{md}} = 1300 \text{ N/cm}^2$$

$$\tau_{\text{md}} = 15 \times \frac{T_{\max}}{A} = 15 \times \frac{3020.0}{72.0} = 63.0 \text{ N/cm}^2 < \tau_{\text{md}} = 90 \text{ N/cm}^2$$

$$f = 0.097 \times \frac{q \times l^4}{EI} = 0.097 \times \frac{59.1 \times 420^4}{10^6 \times 864} = 0.021 \text{ cm}$$

$$f_{\text{dop}} = \frac{l}{300} = \frac{42}{300} = 0.14 \text{ cm} > f_{\text{stv}} = 0.021 \text{ cm}$$