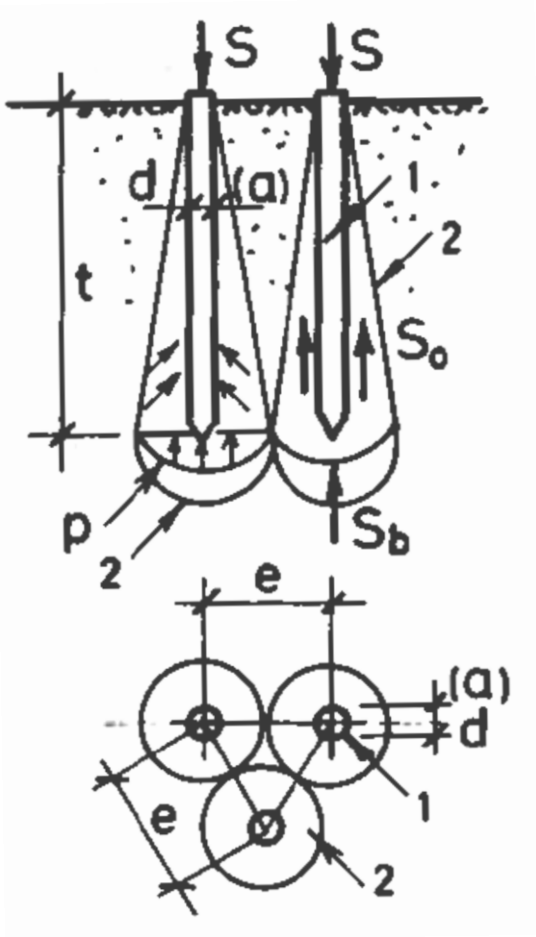
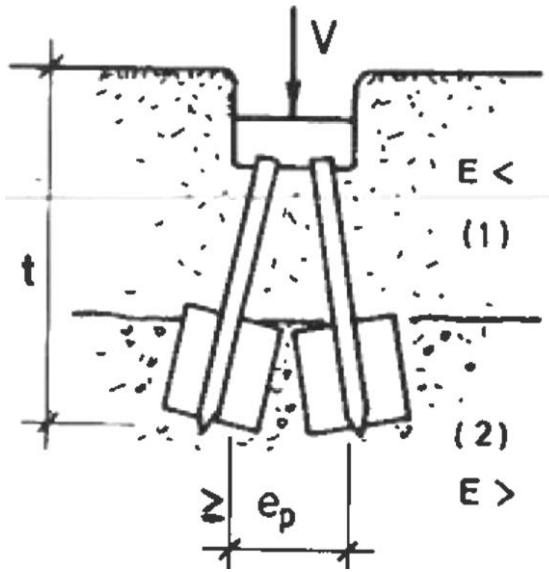
- Šipovi u temeljima
- Proračun sila u šipovima
- Analitički proračun
- Grafički proračun

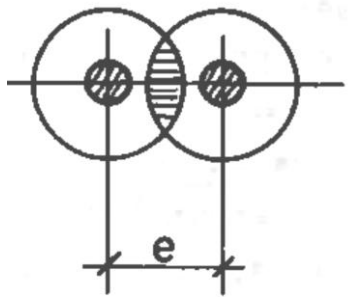
Fundiranje 2020

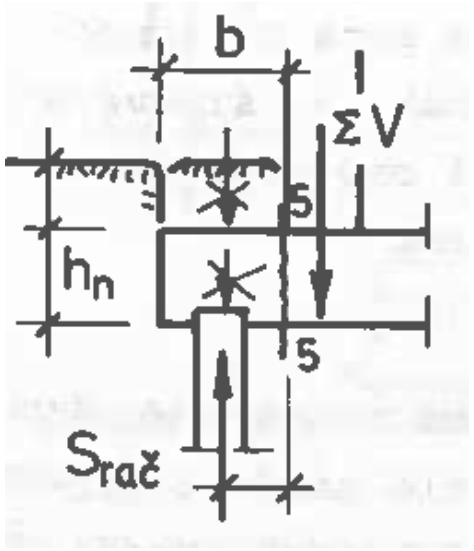
IX predavanje. Šipovi u temeljima. Proračun sila u šipovima.

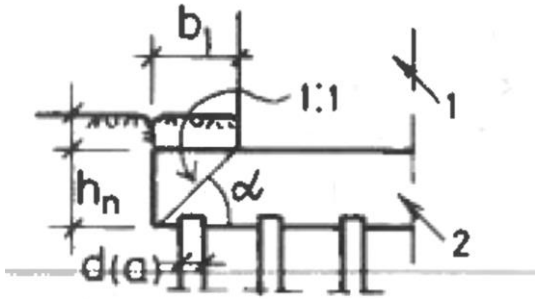
Šipovi u temeljima

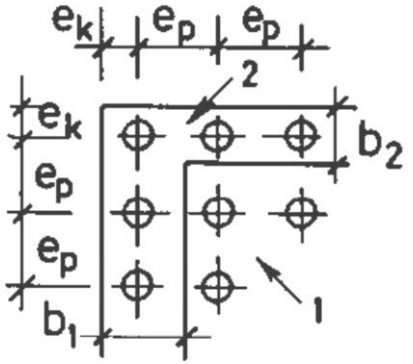




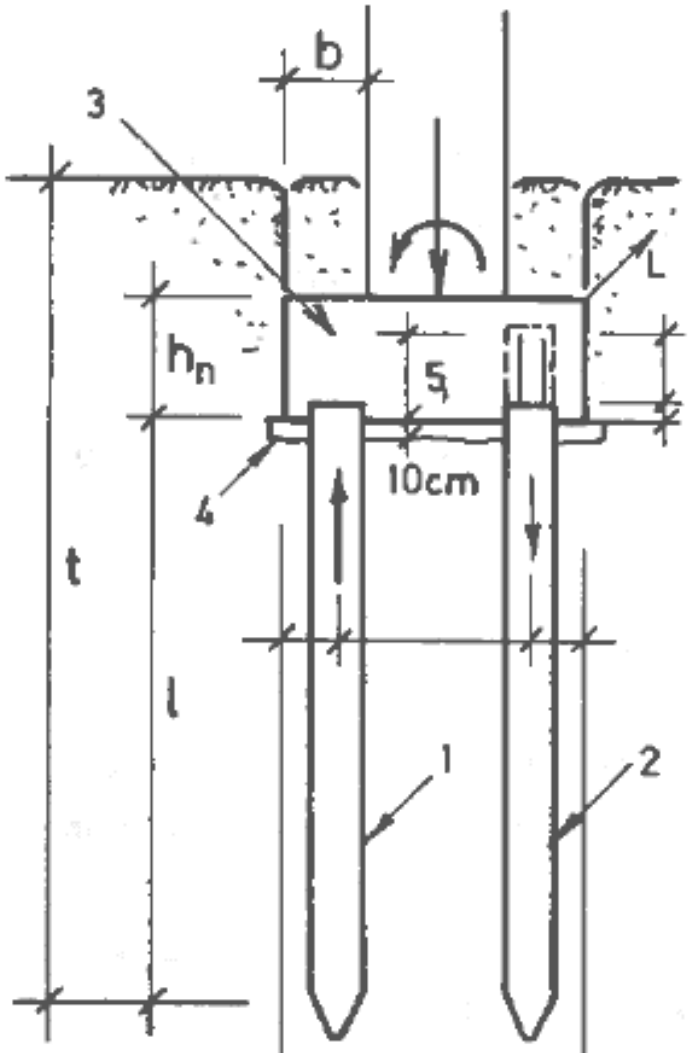




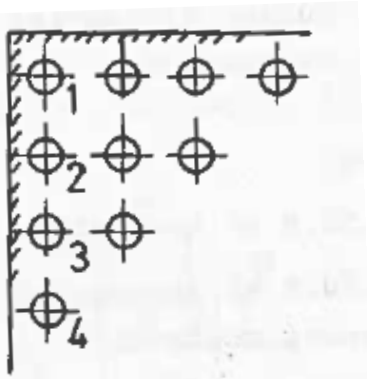




Šipovi u temeljima



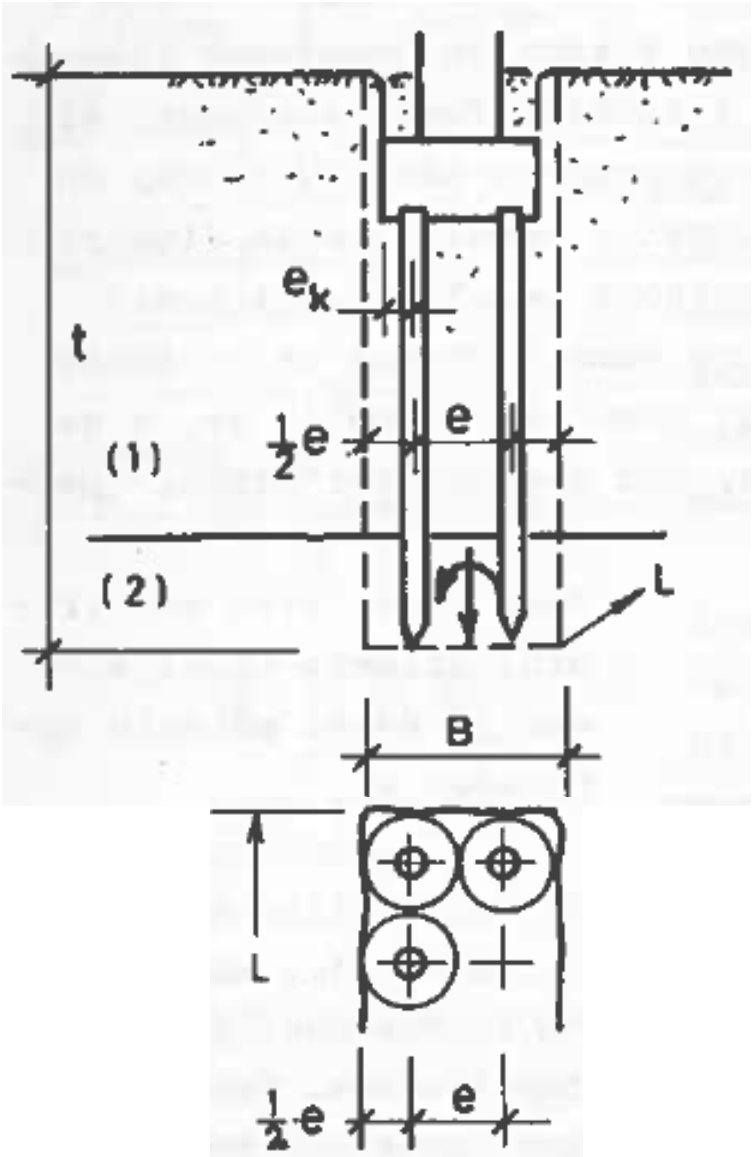
B



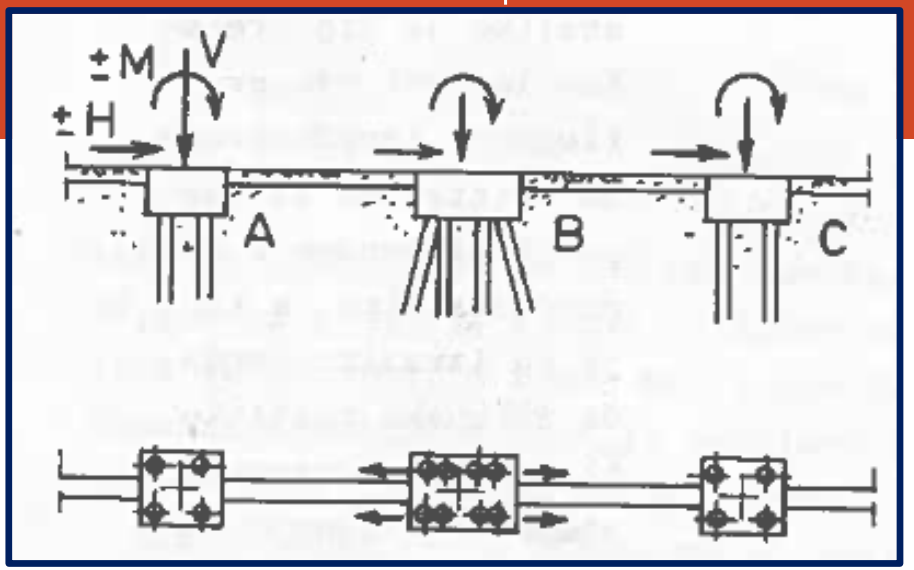
$$ {}_1S_{doz} = S_{doz} - \frac{3}{16} \cdot S_{doz} \ (kN) $$

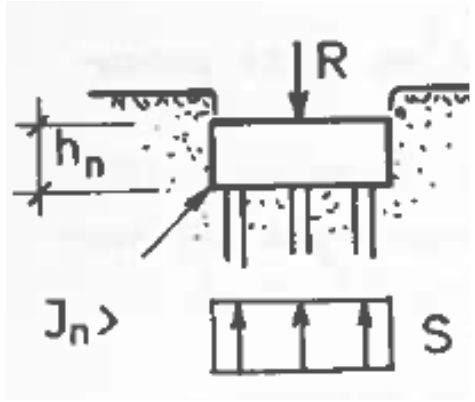
$$ {}_2S_{doz} = S_{doz} - \frac{5}{16} \cdot S_{doz} \ (kN) $$

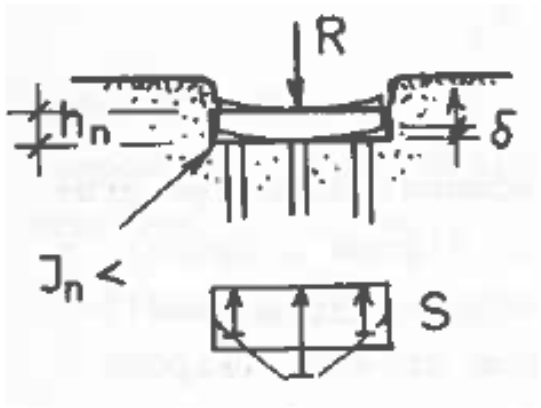
Kontrola temelja na šipovima kao cjeline (kao masivan temelj)



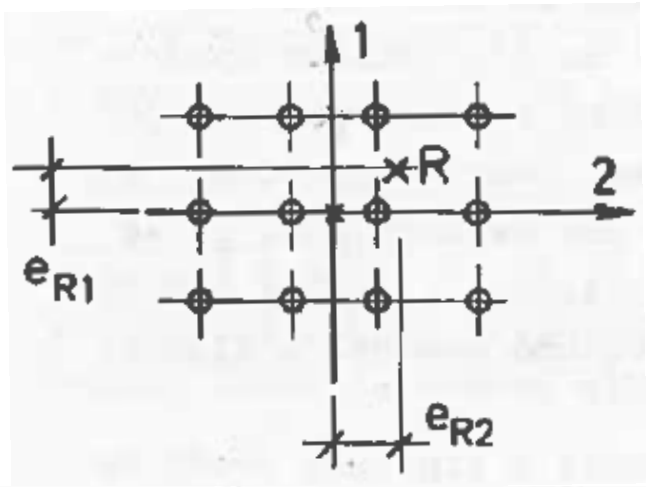
Proračun sila u šipovima

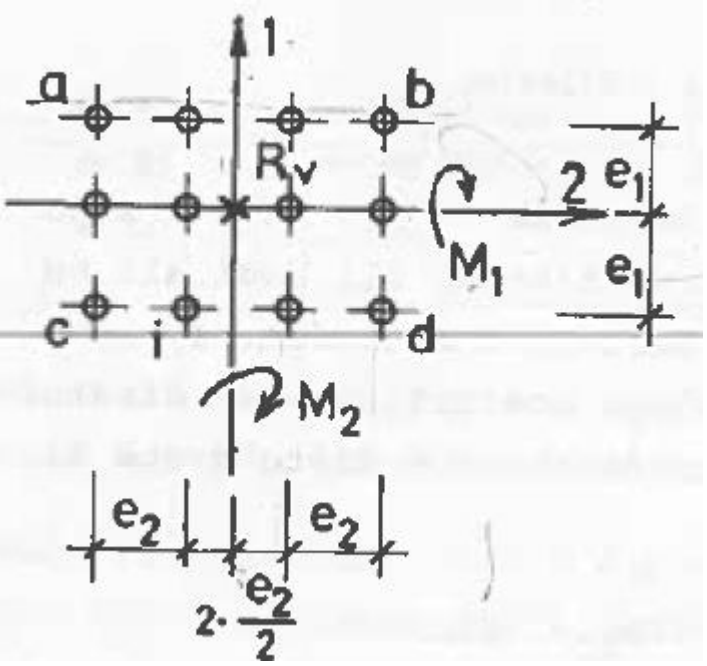




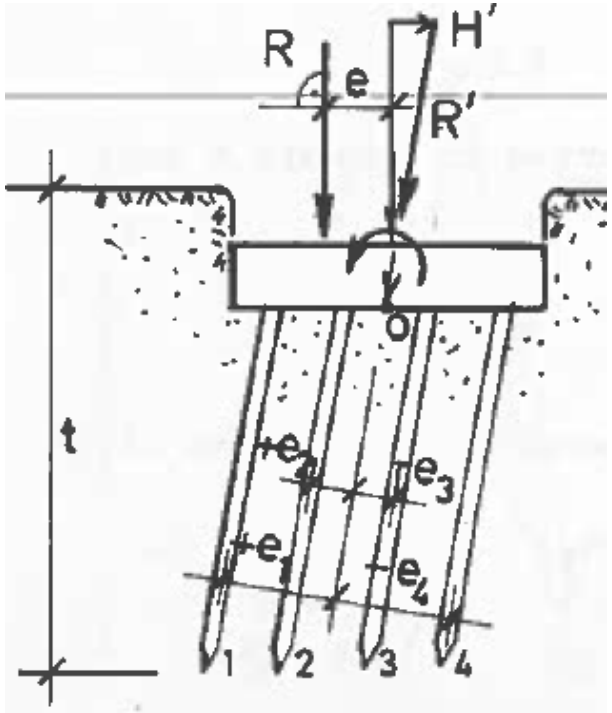


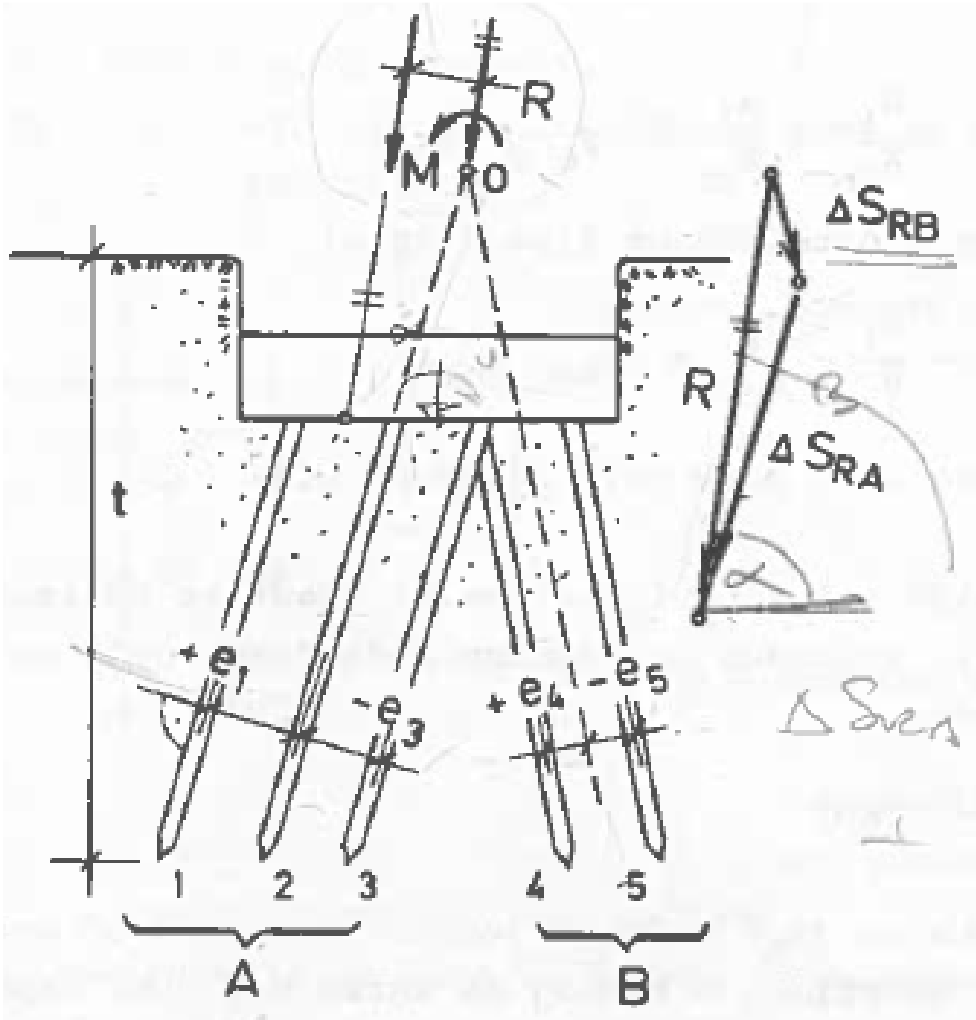
Analitički postupak izračunavanja sila u šipovima



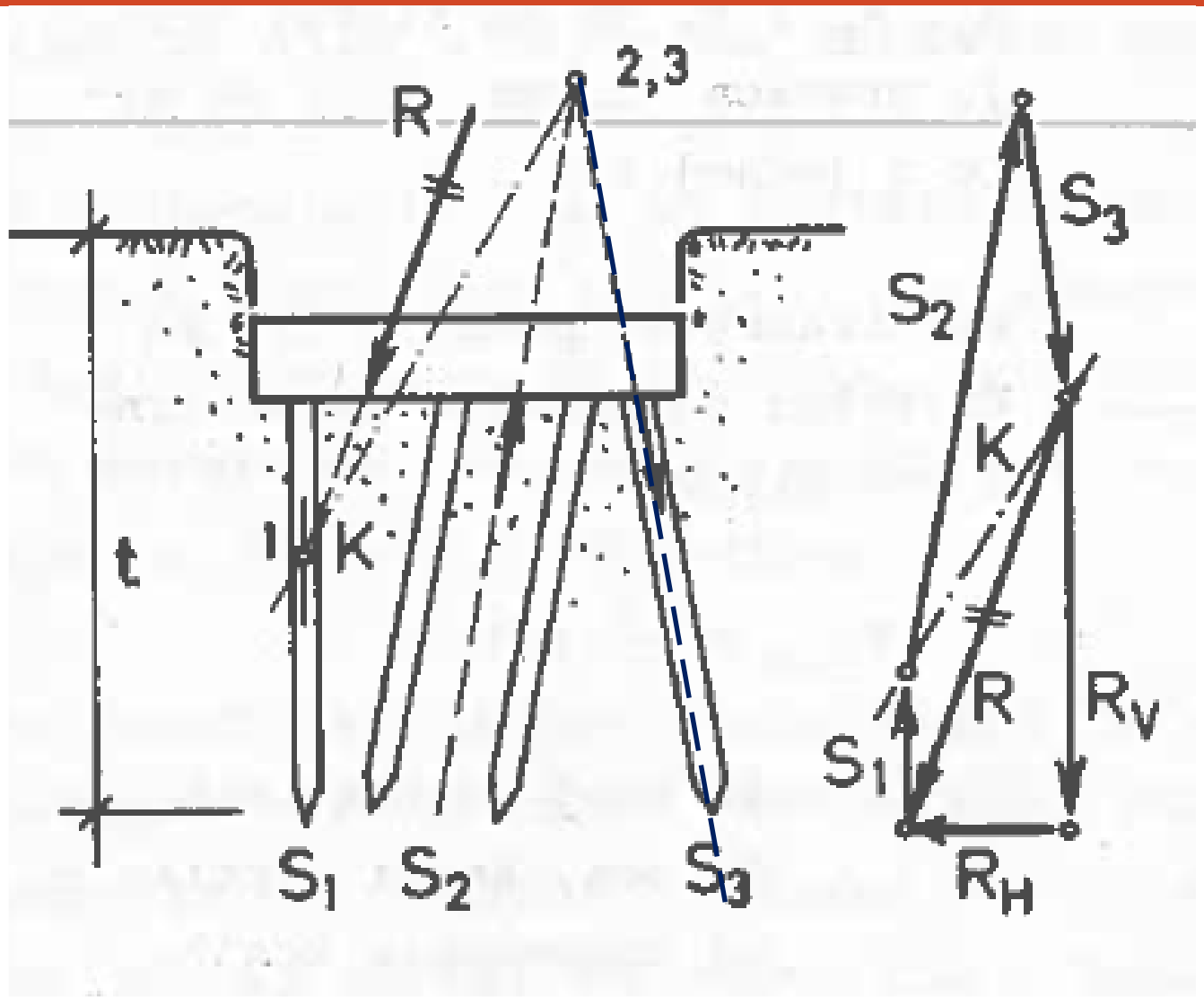


Analitički postupak izračunavanja sila u šipovima

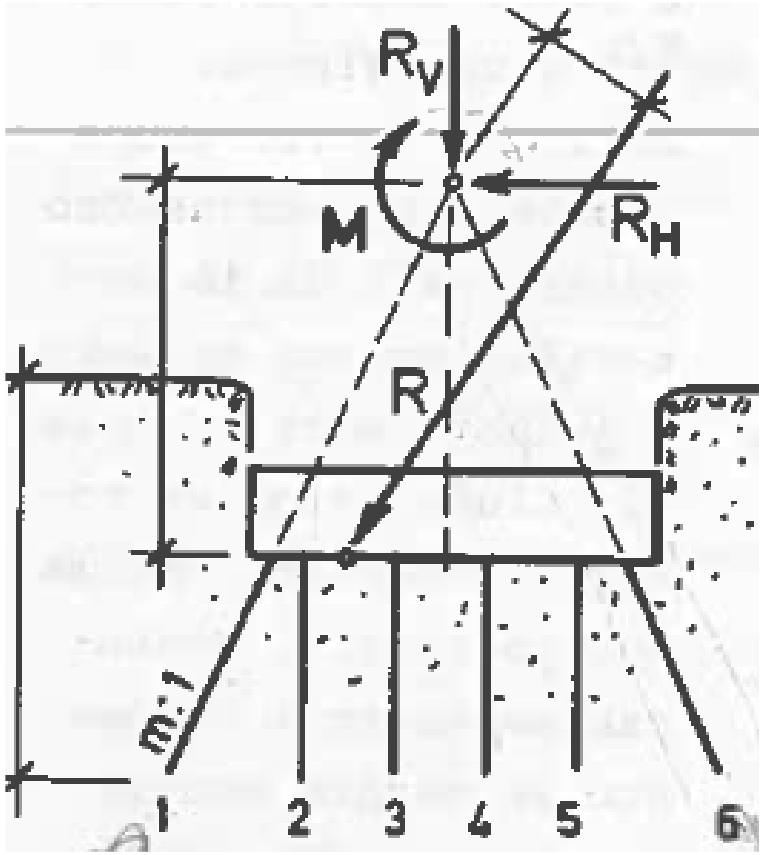


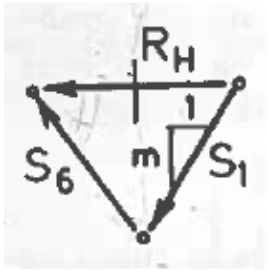


Grafički postupak izračunavanja sila u šipovima

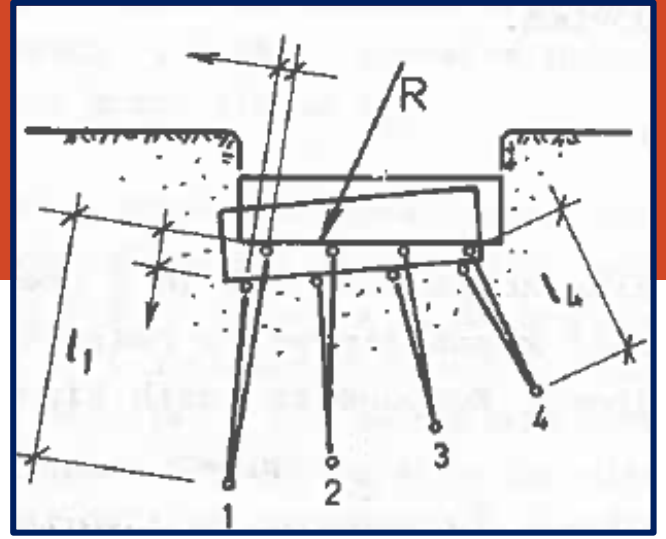


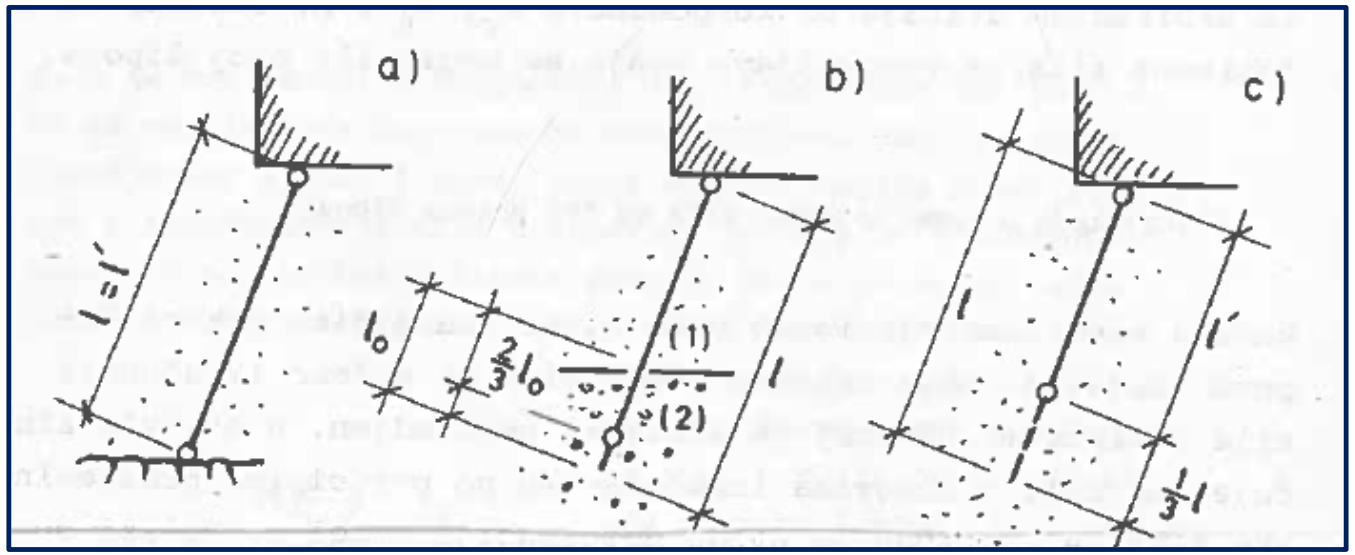
Postupak usvajanja kosih šipova u temelju



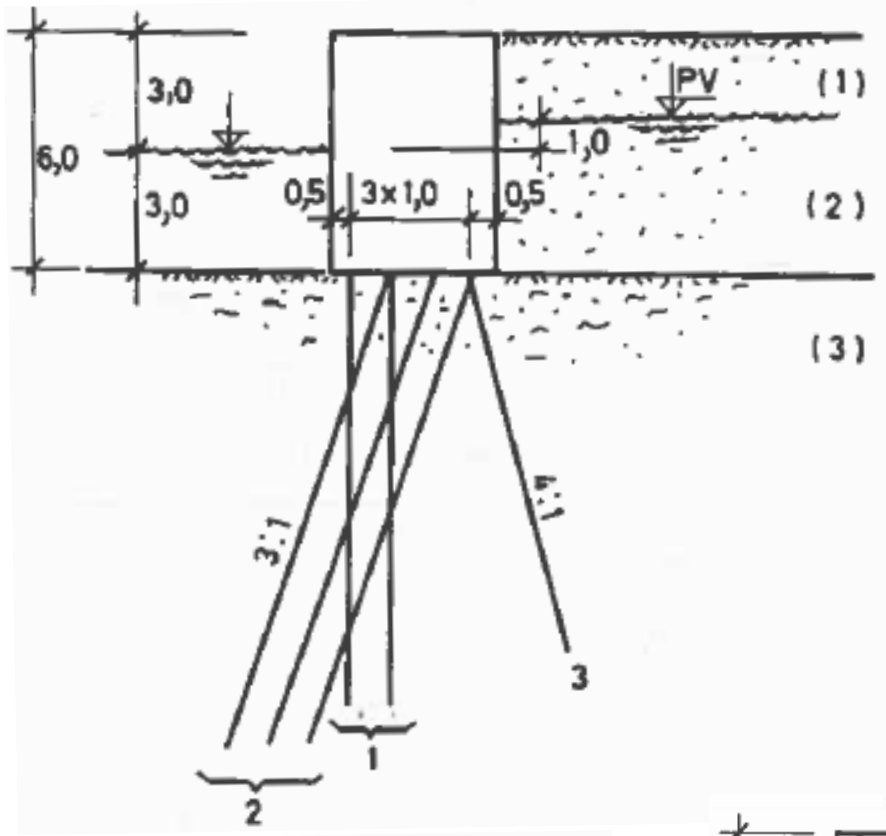


Slučaj kada u temelju imamo više od 3 pravca šipova





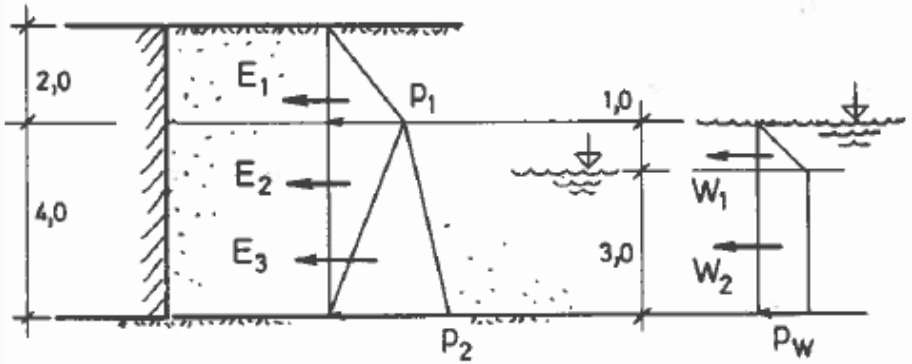
Računski primjer – fundiranje kejskog zida



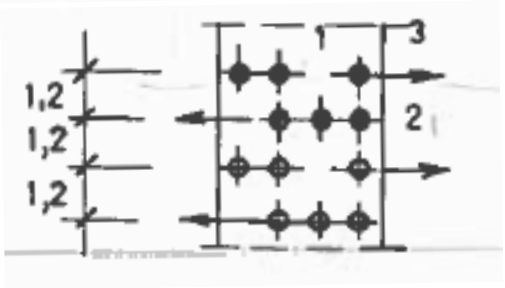
$\gamma = 18{,}0\ kN/m^3$
$\varnothing = 30°$

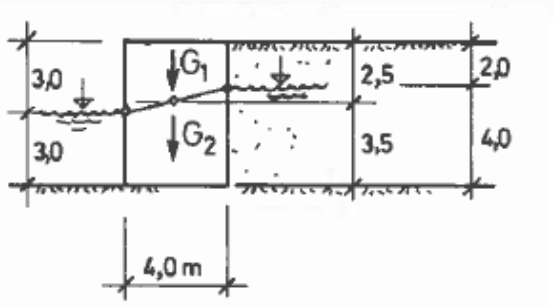
$\gamma' = 10{,}0$
$\varnothing = 30°$

- Pritisci vode.
  - Usvaja se da je sloj (3) vodonepropusno tlo, pa je zid opterećen hidrostatičkim pritiscima vode.

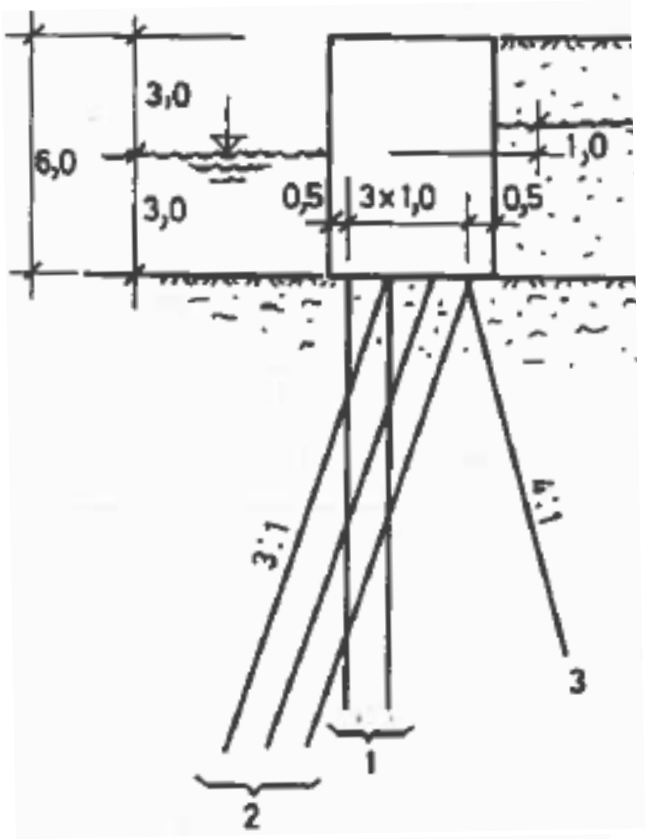


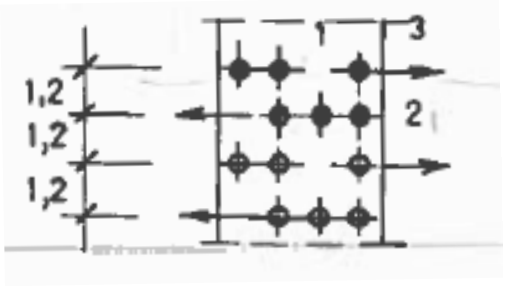
$p_w = 1{,}0.10{,}0 = 10{,}0\ kN/m^2$
$W_1 = 0{,}5.1{,}0.10{,}0 = 5{,}0\ kN/m'$
$W_2 = 10{,}0.3{,}0 = 30{,}0$
$\Sigma W = 35{,}0\ kN/m'$

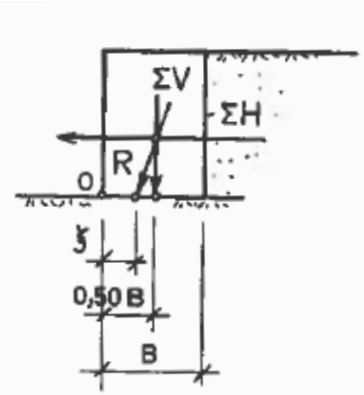




Računski primjer – fundiranje kejskog zida







$M_G = \sum G.0,5.B$
$= 436,0.2,0$
$= 872,0$ kNm

$M_E = -E_1(\frac{1}{3}.2,0+4,0)-E_2.\frac{2}{3}.4,0 -$
$-E_3.\frac{1}{3}.4,0-W_1(\frac{1}{3}.1,0+4,0)-W_2.2,0$
$=12,0.4,67-24,0.2,67-50,6.1,33-$
$-5,0.4,33-30,0.2,0$
$=-248,5$ kNm

$M = +872,0 - 248,5$
$= 623,5$ kNm

- Položaj rezultante

$\xi = \frac{M}{\Sigma V} = \frac{623,5}{436,0} = 1,44$ m'