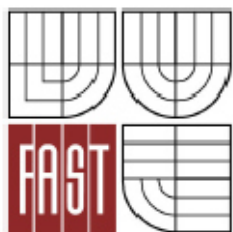




VYSOKÉ UČENÍ TECHNICKÉ V BRNĚ
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FAKULTA STAVEBNÍ
ÚSTAV POZEMNÍHO STAVITELSTVÍ

FACULTY OF CIVIL ENGINEERING
INSTITUTE OF BUILDING STRUCTURES

FOLDER No.7 Other calculations

Calculation of staircases

BAKALÁŘSKÁ PRÁCE
BACHELOR 'S THESIS

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BRNO 2015

Calculation of staircases: to the 1st floor

1. Construction height: 2880mm, once broken, one flight stairs
2. Height of the step h' : $2h' + b = 610 - \underline{630}$
proposal: $h' = 170$ mm
3. Number of steps: $2880/170 = 16,94$ - 17 steps
4. Height of the step: $h = 2880/17 = 170$ mm
5. Width of the step: $b = 610 - 2h = 270$ mm
6. Slope of the stairs: $\tan\alpha = h/b = 170/270 = 32,2^\circ$
7. Length of stairs $L = (n-1) \times b = 4320$ mm
8. Headroom height: $1500 + 750/\cos 32,2 = 2386$ mm
9. Passage height: $750 + 1500 \cdot \cos 32,2 = 2019$ mm