

STONE, TIMBER STAIRS

Arrangement in the book

Stone stairs

How to support the flights? How to support the steps?

Stone ---> minimal tensile strength ---> large blocks, if needed

Quality of stone:

- hard, solid
- good workability
- abrasion resistance
- pleasant colour, texture (aesthetic requirements)

Flight support:

- average solution on both ends of the step (vaults, arches)
- one end – hanging steps – if flight is narrow, but
 - calculation risk
 - material quality risk
 - building risk (chiselling holes into the wall, temporary support until final load-bearing capacity, precise positioning of the step, solid and strong fixing between the steps and the grouted out surface)

Connection between stone pieces --> metal elements

Surface as mentioned before (non-skid solutions)

To highlight (!!): load bearing

Nowadays just stone finishing, other load-bearing construction

Timber stairs

In average: small stairs, inside the flats. Why?

- fire protection
- noise insulation
- abrasion resistance (more people – more wearing)

Support: hanged up
strings fixed to wall, or supported at the ends

String position:

- × in the middle (carefully!!! – protection against string turning, twisting
protection against step tilting)
- × both sides
- × as a “handrail or baluster”

- Steps
- on the string
 - “in” the string – housed (cutting in grooves)
 - next to the string (angle glue blocks or square brackets)

To highlight (!!):***fire hazard******protection*** (mould, fungus, worm(?), fire) {paint, scooping, spraying}***noise*** (cracking noise, thudding)**INTERESTING STRUCTURE**

glued timber girder