PARTY WALL **higher noise resistance level is required**

- higher weight - higher load, or drive down onto the foundation
- sometimes different connection (recess in the main walls + noise ins. around)

□ THE SELECTION OF INTERNAL WALLS BETWEEN APARTMENTS ON THE BASIS OF ACOUSTIC REQUIREMENTS

GUIDE

1. General noise insulation requirements are defined in the Hungarian 04-601-2:1988 standard

Multi apartment building, apartment separator internal wall construction requirements, both in terms of air (radiated) noise and of knocking (transmitted) noise minimum values:

Walls between aparments: R'_w= 52 dB
Walls between apartments and stairwells: R_w = 52 dB
Slabs between aparments: R'_w = 52 dB (radiated noise)
L_{nw}'= 55 dB (transmitted noise)
Walls within apartments, without doors: R'_w = 37 dB

CAVITY WALLS – Book 93-101 What is this?

Historical – sketches

"Poor building"

- Rat-trap-walls
  Important to realise (low level load-bearing capacity)
  How?
- Air gap (thermal insulation, material need, condensation)
- Filled-up-wall (slag, ins. material)

traditional cavity wall

- Water in the wall: rain (condensation) - (against water infiltration / for dry inner skin)
- DPC under the cavity
- exposed brick surface (different quality bricks)
- connection: tie brick, metal wall ties + drip (twisting turned down, twisted flat iron, disk)

Nowadays

Heavy - insulated brick / stone

- Sample
- Support

Light

- metal frame on the load-bearing wall: horizontal + vertical
- setting possibility in 3 dimensions
- metal sheet, metal panel, tiles, thin stone, plastic boards, …etc.

WALL – SHUTTERING BLOCKS

Made from

A) concrete (Solid, hard, strong, ice resistant, high thermal capacity, "no" thermal ins. capacity)
B) polystyrene (des)advantages (soft surface, good thermal ins, low thermal capacity)
C) "Durisol" (wood fibres glued together by artificial resin) – similar to B)

Areas: basements, fences, plinth (footing) – A)
could be in multi-layer walls – A)
family house – B), C)

STONE WALLING

The properties of stones show considerable differences
→ permissible strength = 1/20-25×crushing str.
In book from page #107 – Stone types - origin, defects, tools, machines, surface finishes, stone walling (rubble wall, dimension stone)
We do not discuss them, to learn from book!

Properties of stone wall

- Load bearing
- Thermal ins. capacity
- Thermal capacity
- Aesthetic – **sketches**

STONE CLADDING – traditional way in the book: compound wall
Nowadays:

- Stone is expansive!!
- As a designer: → market, to choose, but: Frost resistance? Abrasion resistance? Acid resistance? Graffiti resistance?, …etc.
- (Finishing – Flag stone)
- Cover – heavy - Concrete behind (10+8) 1-2 floors (Condensation - PS by extrusion)
  - As exposed brick cavity wall
- independent cladding – thin - Stainless steel fixing elements positioned into the brick wall behind
  - aluminium / Stainless steel fixing elements (Rails +)
- Stone facing – thin, to imitate stone work, glued onto a surface