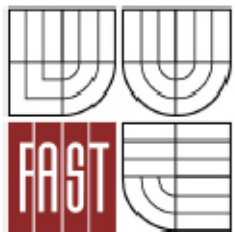




**VYSOKÉ UČENÍ TECHNICKÉ V BRNĚ**  
BRNO UNIVERSITY OF TECHNOLOGY



**FAKULTA STAVEBNÍ**  
**ÚSTAV POZEMNÍHO STAVITELSTVÍ**

FACULTY OF CIVIL ENGINEERING  
INSTITUTE OF BUILDING STRUCTURES

## **FOLDER NO. 6 - BUILDING PHYSICS**

### **APEX 3- List of compositions**

**BAKALÁŘSKÁ PRÁCE**  
BACHELOR 'S THESIS

**AUTOR PRÁCE**  
AUTHOR

**VIKTOR GACH**

**VEDOUCÍ PRÁCE**  
SUPERVISOR

**Ing. FRANTIŠEK VAJKAY, Ph.D.**

BRNO 2015

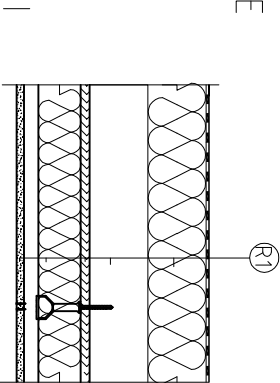
R1

CEILING ABOVE THE FIRST FLOOR

ABOVE THE FIRST FLOOR

NUMBER	FUNCTION OF LAYER	MATERIAL OF LAYER	TRADE NAME	CONNECTING, PLACING	TH. [mm]
1	WATERPROOFING	VAPOUR DIFFUSIVE FOIL	PK-FOL MP	CONNECTED BY THE HELP OF SELF STICKING TAPE, AT THE EDGES BY THE CLASPS	2
2	THERMAL INSULATION	BLOWN CELLULOSE	TEMPAL	BLOWN FREELY	100
3	STRUCTURAL MEMBER	TIMBER 100 x 80		CONNECTED TO TRUSS BY GANG NAILS, TO RING BY STEEL ANGLES WITH SCREWS	100
4	IMPROOVING VAPOUR RESISTANCE	LATEX	LATEX	BY THE ROLLER	2
5	VAPOUR BARRIER	GLUED WOOD	OSB BOARDS	TONGUE AND GROOVE, CONNECTIONS SEALED, SCREWED TO LOWER CHORD	15
6	THERMAL INSULATION	BLOWN CELLULOSE	TEMPAL	BLOWN FREELY	100
7	FINNISH LAYER	GYPSUM BOARDS	GYPSUM BOARDS KNAUF TH. 12,5 mm	SUSPENDED ON CD PROFILES	12,5
8	COATING	INNER PAINT	PRIMALEX POLAR WHITE	ROLLER	-

SCHEME OF LAYERS 1:15 E



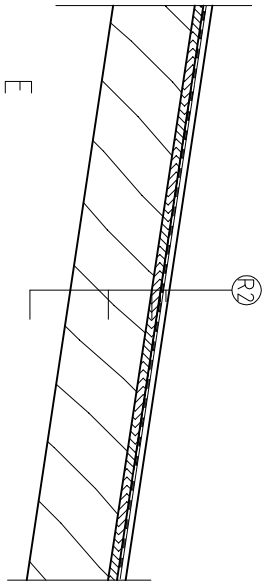
R2

ROOF STRUCTURE ABOVE VENTILATED CAVITY

ABOVE THE VENTILATED CAVITY

NUMBER	FUNCTION OF LAYER	MATERIAL OF LAYER	TRADE NAME	CONNECTING, PLACING	TH. [mm]
1	WATERPROOFING	METAL SHEETS COVERING	LINDAB SRP Click	CONNECTED BY VERTICAL JOINT, WITH CLICK SYSTEM, ANCHORED BY SCREWS W153	3
2	WATERPROOFING	VAPOUR DIFFUSIVE FOIL	PK-FOL MP	CONNECTED BY THE HELP OF SELF STICKING TAPE, ANCHORED BY THE CLASPS	2
3	STIFFENING LAYER	GLUED WOOD	OSB BOARDS	TONGUE AND GROOVE, SCREWED TO UPPER CHORD	15
4	STRUCTURAL MEMBER	TIMBER TRUSS 140x 80 mm		CONNECTED TO OTHER TRUSS MEMBERS BY GANG NAILS	140
5	VENTILATED CAVITY				average 600

SCHEME OF LAYERS 1:15



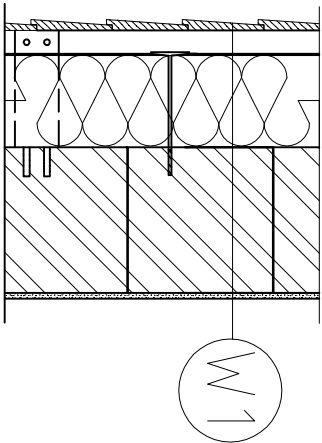
W1

PERIPHERAL LOAD BEARING WALL

PERIPHERAL WALLS

NUMBER	FUNCTION OF LAYER	MATERIAL OF LAYER	TRADE NAME	CONNECTING, PLACING	TH. [mm]
1	COATING	INNER PAINT	PRIMALEX POLAR WHITE	ROLLER	-
2	FINNISH LAYER	LIME CEMENT PLASTER, TH. 10mm	SAKRET PM	APPLIED BY THE STEEL TROWEL	15
3	LOAD BEARING	CLAY CAVITY BLOCKS	HELUZ FAMILY CUT	CONNECTED BY PU FOAM	250
4	THERMAL INSULATION	MINERAL WOOL	ISOVER TOPSIL 8	CONNECTED TO THE WALL BY PLASTIC ANCHORES	160
5	WATERPROOFING	VAPOUR DIFFUSIVE FOIL	PK-FOL MP	CONNECTED TO THE WOOL BY THE PLASTIC ANCHORES	2
6	STRUCTURAL MEMBER	TIMBER FRAME, LATHS 40X60 mm	-	CONNECTED BY THE STEEL ANGLES AND SCREWS TO THE WALL	40
7	FINNISH LAYER	WOODEN DECKING 20X140 mm	THERMWOOD UYL	SCREWED TO TIMBER FRAME	19

SCHEME OF LAYERS 1:15



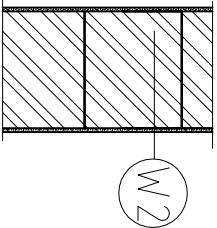
W/2

INTERNAL LOAD BEARING WALL

GROUND FLOOR

NUMBER	FUNCTION OF LAYER	MATERIAL OF LAYER	TRADE NAME	CONNECTING, PLACING	TH. [mm]
1	COATING	INNER PAINT	PRIMALEX POLAR WHITE	ROLLER	-
2	FINNISH LAYER	LIME CEMENT PLASTER , TH. 15 mm	SAKRET PM	APPLIED BY THE STEEL TROWEL	15
3	LOAD BEARING	CLAY CAVITY BLOCKS	HELUZ FAMILY CUT	CONNECTED BY PU FOAM	300
4	FINNISH LAYER	LIME CEMENT PLASTER , TH. 15 mm	SAKRET PM	APPLIED BY THE STEEL TROWEL	15
5	COATING	INNER PAINT	PRIMALEX POLAR WHITE	ROLLER	-

SCHEME OF LAYERS 1:15



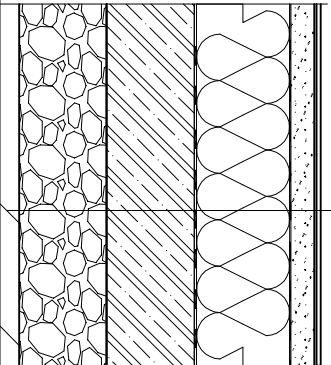
F1

HEAVY FLOOR IN CONTACT WITH SOIL - LAMINATE FLOOR

LIVING ROOM - 103, WORKING ROOM - 106

NUMBER	FUNCTION OF LAYER	MATERIAL OF LAYER	TRADE NAME	CONNECTING, PLACING	TH. [mm]
1	FINNISH LAYER	LAMINATE PLATES	FLOATING LAMINATE FLOOR PARADOR	FREELY LAID, CONNECTED BY THE MEANS OF GROOVE AND TONGUE	7
2	SEPARATION LAYER	FOAM POLYETHYLEN	MIRELON	FREELY LAID	2
3	LOAD SPREADING LAYER	ANHYDRITE SCREED	AFE 20 SAKRET	CASTED	40
4	SEPARATION LAYER	PE FOIL	PE FOIL -SAKRET	FREELY LAID	2
5	THERMAL INSULATION	EXPANDED POLYSTYREN	Isover EPS 100S	FREELY LAID	160
6	WATERPROOFING	MODIFICATED BITUMINIOUS BELT "S" TYPE	ELASTOBIT GG 40	WELED TO SUBLAYER BY FLAME	4
7	STRUCTURAL MEMBER	REINFORCED CONCRETE SLAB	-	FREELY LAID, VIBRATED	150
8	LEVELLING LAYER	GRAVEL SUB BASE		FREELY LAID, COMAPCTED	50
9	ORIGINAL SUB SOIL	R4, ROCK WITH LOW STIFNESS , Rd= 400 kPa			-

SCHEME OF LAYERS 1:15



F1

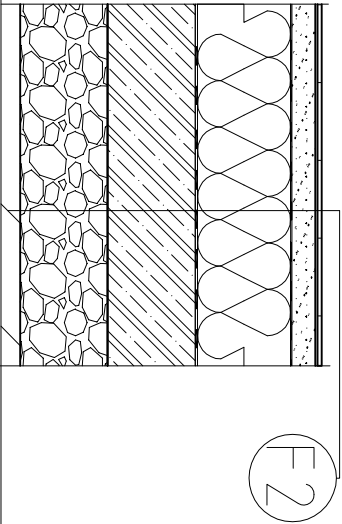
F2

HEAVY FLOOR WITH THE CONTACT WITH SOIL, CERAMIC TILES

KITCHEN- 103, CORRIDOR- 102, VESTIBULE- 101, SERVICE ROOM- 105, WORKSHOP- 107

NUMBER	FUNCTION OF LAYER	MATERIAL OF LAYER	TRADE NAME	CONNECTING, PLACING	TH. [mm]
1	FINNISH LAYER	CERAMIC	TILES RAKO STONE	GLUED BY ADHESIVE	8
2	CONNECTING LAYER	FLEXIBLE GLUE FOR CERAMIC TILES	CERAMIC TILES ADHESIVE C1T SAKRET	APPLIED BY THE STEEL TROWEL	6
3	PENETRATION LAYER	SINGLE COMPONENT SILICATE DISPERSION SEALING LAYER	PENETRATION SAKRET A&H	APPLIED BY TH ROLLER	-
4	LOAD SPREADING LAYER	ANHYDRITE SCREED	AfE 20 SAKRET	CASTED	40
5	SEPARATION LAYER	PE FOIL	PE FOIL -SAKRET	FREELY LAID	2
6	THERMAL INSULATION	EXPANDED POLYSTYREN	Isover EPS 100S	FREELY LAID	160
7	WATERPROOFING	MODIFICATED BITUMINOUS BELT "S" TYPE	ELASTOBIT GG 40	WELED TO SUBLAYER BY FLAME	4
8	STRUCTURAL MEMBER	REINFORCED CONCRETE SLAB	-	FREELY LAID, VIBRATED	150
9	LEVELLING LAYER	GRAVEL SUB BASE		FREELY LAID, COMAPCTED	50
10	ORIGINAL SUB SOIL	R4, ROCK WITH LOW STIFNESS, Rd= 400 kPa			-

SCHEME OF LAYERS 1:15



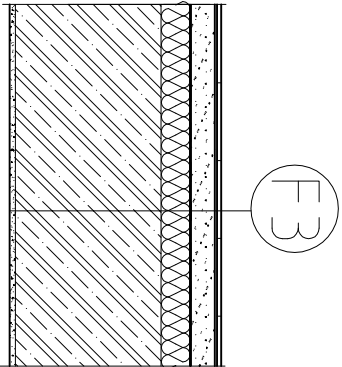
F3

FLOOR ABOVE GROUND FLOOR, CERAMIC TILES

BATHROOM - 202, WC - 203, BATHROOM OF PARENTS - 205

NUMBER	FUNCTION OF LAYER	MATERIAL OF LAYER	TRADE NAME	CONNECTING, PLACING	TH. [mm]
1	FINNISH LAYER	CERAMIC	TILES RAKO STONE	GLUED BY ADHESIVE	8
2	CONNECTING LAYER	FLEXIBLE GLUE FOR CERAMIC TILES	CERAMIC TILES ADHESIVE C1T SAKRET	APPLIED BY THE STEEL TROWEL	5
3	PENETRATION LAYER	SINGLE COMPONENT SILICATE DISPERSION SEALING LAYER	PENETRATION SAKRET A&H	APPLIED BY TH ROLLER	-
4	LOAD SPREADING LAYER	ANHYDRITE SCREED	AFE 20 SAKRET	CASTED	40
5	SEPARATION LAYER	PE FOIL	PE FOIL -SAKRET	FREELY LAID	2
6	IMPACT NOIS INSULATION	EXPANDED POLYSTYREN	Isover EPS 100S	FREELY LAID	50
7	STRUCTURAL MEMBER	REINFORCED CONCRETE SLAB, C 20/25, STEEL B500B	-	FREELY LAID, VIBRATED	250
8	FINNISH LAYER	LIME CEMENT PLASTER , TH. 15 mm	SAKRET PM	APPLIED BY THE STEEL TROWEL	15
9	COATING	INNER PAINT	PRIMALEX POLAR WHITE	ROLLER	-

SCHEME OF LAYERS 1:15



F 4	FLOOR ABOVE THE GROUND FLOOR, LAMINATE FLOOR
	CORRIDOR - 201, GUEST ROOM - 204, PARENTS BEDROOM - 206, CHILDREN ROOM - 207, CHILDREN R.-208

NUMBER	FUNCTION OF LAYER	MATERIAL OF LAYER	TRADE NAME	CONNECTING, PLACING	TH. [mm]
1	FINNISH LAYER	LAMINATE PLATES	FLOATING LAMINATE FLOOR PARADOR	FREELY LAID, CONNECTED BY THE MEANS OF GROOVE AND TONGUE	7
2	SEPARATION LAYER	FOAM POLYETHYLEN	MIRELON	FREELY LAID	-
3	LOAD SPREADING LAYER	ANHYPDRITE SCREED	AFE 20 SAKRET	CASTED	40
4	SEPARATION LAYER	PE FOIL	PE FOIL -SAKRET	FREELY LAID	2
5	IMPACT NOIS INSULATION	EXPANDED POLYSTYREN	Isover EPS 100S	FREELY LAID	50
6	STRUCTURAL MEMBER	REINFORCED CONCRETE SLAB, C 20/25, STEEL B500B	-	FREELY LAID, VIBRATED	250
7	FINNISH LAYER	LIME CEMENT PLASTER, TH. 10mm	SAKRET PM	APPLIED BY THE STEEL TROWEL	15
8	COATING	INNER PAINT	PRIMALEX POLAR WHITE	ROLLER	-

SCHEME OF LAYERS 1:15

