Europe has an extraordinary richness in traditional earthen techniques. An attempt of classification based upon the use and bonding systems follows divided into walls (adobe, half-timber, cob, rammed earth, daubed walls, lumps, CEB, earth bags, coated straw bales), floors, pavements, roofs (excavated, gardened, coating layers, bedding layers), mortars (beddings, coatings). Just not to forget any related variant, some hybrid techniques like gypsum or lime with masonry in formwork, that retain the formwork but almost belong to the masonry field, have been included in rammed earth. We may point out the big number of mixed techniques where earth is combined with other materials like wood, brick or stone, other bounding products such as lime or gypsum, vegetal fibres like wattle, laths, wicker, straw, etc. The different function that wood assumes in some mixed techniques, definitive or auxiliary, has allowed to classify them into half-timber, when it retains it structural function and earth in several forms becomes just a filling; daubed walls, when the act of coating a vegetal screen between posts prevails; and cob or another techniques, when the wood structure has only an auxiliary function while building the wall, being structurally absorbed by the earthen wall once finished. Much in the same way, this classification include the new earthen constructive techniques and related ones, reinterpretation of the tradition, like the modern adobe or CEB, the new cob earth-straw walls, earthen coated straw bale walls, etc.

CLASSIFICATION OF THE TECHNIQUES
A. WALLS
1. Adobe
   1.1. Adobe masonry wall
   1.2. Adobe masonry with wattle or reed bedding layers
   1.3. Adobe masonry with brick reinforcement
   1.4. Adobe masonry with timber boards protection
   1.5. Adobe masonry with stone slabs reinforcement
2. Half-timber
   2.1. Half-timber with horizontal adobe in fill
   2.2. Half-timber with herringbone adobe in fill
   2.3. Half-timber with cob in fill
   2.4. Half-timber with donut-like in fill
   2.5. Half-timber with angle braces and donut-like in fill
   2.6. Half-timber with earth in fill between two lath screens
   2.7. Half-timber with adobe in fill and tile protection
   2.8. Half-timber with earth in fill between two wicker screens
   2.9. Half-timber with earth in fill between two wattle screens
3. Cob
   3.1. Cob
   3.2. Cob built with between forms
   3.3. Cob built with wattle formwork fixed by vertical posts
   3.4. Cob with auxiliary post-and-beam structure
3.5. Tooled cob
3.6. Cob with adobe masonry layers
3.7. Tooled cob with auxiliary post-and-beam structure
3.8. Tooled cob with auxiliary structure of post-and-beam with close studding
3.9. Tooled cob with auxiliary structure of log post-and-beam with wattle

4. Rammed earth
4.1. Rammed earth built with single or double board formwork
4.2. Rammed earth with single or double boards formwork fixed by vertical posts
4.3. Rammed earth built between forms
4.4. Rammed earth reinforced with layers of lime mortar
4.5. Rammed earth reinforced with layers of brick masonry bonded with lime mortar
4.6. Rammed earth reinforced with layers of adobe masonry bonded with lime mortar
4.7. Rammed earth reinforced with gypsum mortar
4.8. Rammed earth reinforced with gypsum mortar, forming waves
4.9. Rammed earth reinforced with gypsum mortar and gypsum pillars
4.10. Rammed earth reinforced with gypsum mortar waves and bricks on outer surface
4.11. Rammed earth reinforced with gypsum mortar waves and stones on outer surface
4.12. Rammed earth reinforced with bricks on outer surface
4.13. Rammed earth reinforced with stones on outer surface
4.14. Rammed earth with an ashlar masonry basement
4.15. Rammed earth with masonry pillars
4.16. Rammed earth with stone and lime mortar in fill
4.17. Rammed earth built between brick masonry pillars
4.18. Formed masonry with gypsum mortar
4.19. Formed masonry with lime mortar

5. Daubed walls
5.1. Post-and-beam structure with wattle-and-daub in fill
5.2. Post-and-beam with angle braces and wattle-and-daub in fill I
5.3. Post-and-beam with angle braces and wattle-and-daub in fill II
5.4. Daubed straw screens between posts
5.5. Daubed straw knotted plaits between posts
5.6. Daubed straw tresses between posts

6. Lump
6.1. Lump wall

7. CEB (Compressed Earth Blocks)
7.1. CEB simple wall
7.2. CEB with corners reinforced

8. Earth bags

9. Straw–bale structure with earthen plaster

B. FLOORS
1. Donut-like earthen filling
2. Tamped earth pavement

C. ROOFS
1. Underground dwellings
2. Gardened roofs
3. Insulating earth layer for wooden roof
4. Bedding mortar for roof tiles
5. Crest for vegetal roofs

D. MORTAR
1. Bedding mortar for log houses
2. Bedding mortar for adobe masonry walls
3. Earthen bedding mortar for masonry wall
4. Earthen plaster for log houses
5. Lath and earthen plaster on wooden houses
6. Earthen plaster for earthen walls
7. Plaster with fibres for earthen walls
8. Lime plaster for earthen walls
9. Earthen plaster with mesh for earthen walls
10. Stone masonry wall with earthen filling and earthen plaster
11. Decorative elements

E. AUXILIAR
1. Baking ovens
2. Chimneys
1. **Adobe**

1.1. Adobe masonry wall

1.2. Adobe masonry with wattle or reed bedding layers

1.3. Adobe masonry with brick reinforcement

1.4. Adobe masonry with timber boards protection

1.5. Adobe masonry with stone slabs reinforcement

2. **Half timber**

2.1. Half-timber with horizontal adobe in fill

2.2. Half-timber with herringbone adobe in fill

2.3. Half-timber with cob in fill

2.4. Half-timber with donut-like in fill

2.5. Half-timber with angle braces and donut-like in fill

2.6. Half-timber with earth in fill between two lath screens

2.7. Half-timber with adobe in fill and tile protection

2.8. Half-timber with earth in fill between two wicker screens
### 3. Cob

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<th>3.1. Cob</th>
<th>3.2. Cob built with between forms</th>
<th>3.3. Cob built with wattle formwork fixed by vertical posts</th>
<th>3.4. Cob with auxiliary post-and-beam structure</th>
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<td>3.9. Tooled cob with auxiliary structure of log post-and-beam with wattle</td>
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2.9. Half-timber with earth in fill between two wattle screens
WALLS

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2011 map of earthen heritage in the European Union