

Sustainable Building Renovation- Forming the Future

„with clay earth building materials“

Dr. Ipek Ölcüm, Berlin



Industrieverband
Lehmstoffe e.V.

www.iv-lehm.de

Content

1. Why an Industry Association?
2. What is the variety of clay products?
3. Why we should use clay building materials?
4. And last but not least: some success stories



1. Introduction Industry Association

- founded end of 2022 to give industrially produced clay building materials a voice and visibility
- our Vision is to transform the building sector towards Co2-neutral manufacturing
- installation of building products, environmentally friendly operation of Buildings and recyclable return or reuse of the products
- Our mission is to promote sustainable construction practices with clay-based solutions, which are known too little by now



Der Vorstand des Industrieverbands Lehmstoffe (v.l.): Maximilian Breidenbach (Claytec Lehmstoffe), Lea Hart (Hart Keramik) und Thomas Bader (Lehmore). (Quelle: Industrieverband Lehmstoffe)



1. Introduction Industry Association

Changing times:

producing earthen building materials back then

and

producing earthen building materials now



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2. Variety of clay Building Products (1)

clay stone / clay brick

- DIN 18945
- Inside DIN 18940
- Outside DIN 18940 (Eurocode 6)
load-bearing with protection
from moisture



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2. Variety of clay Building Products (2)

clay plaster, clay mortar, clay paint

- DIN 18946: clay mortar
- DIN 18947: clay plaster



2. Variety of clay Building Products (3)

Clay drybuilding

- DIN 18948:2018

➔ Built out of clay, natural wood fibre and starch flour

Dimension: 125 x 62,5

Thickness: 16 mm or 22 mm

Density: 1450 kg/m³

Weight: 23 kg or 32 kg



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2. Variety of clay Building Products (4)



The *green* alternative in drywall construction.

www.lemix.eu

Fire protection test arrangement 2:

Wooden wallboard construction 60 × 80 mm
with jute insulation of 80 mm
planked with Lemix® 22 mm on both sides total
wall thickness approx. 13 cm

fire resistance duration EI90 (=F90)

Fire protection test arrangement 3:

Wooden wallboard construction 60 × 80 mm
with jute insulation of 80 mm
planked with double layers of Lemix® 16 mm on both sides total
wall thickness approx. 15 cm

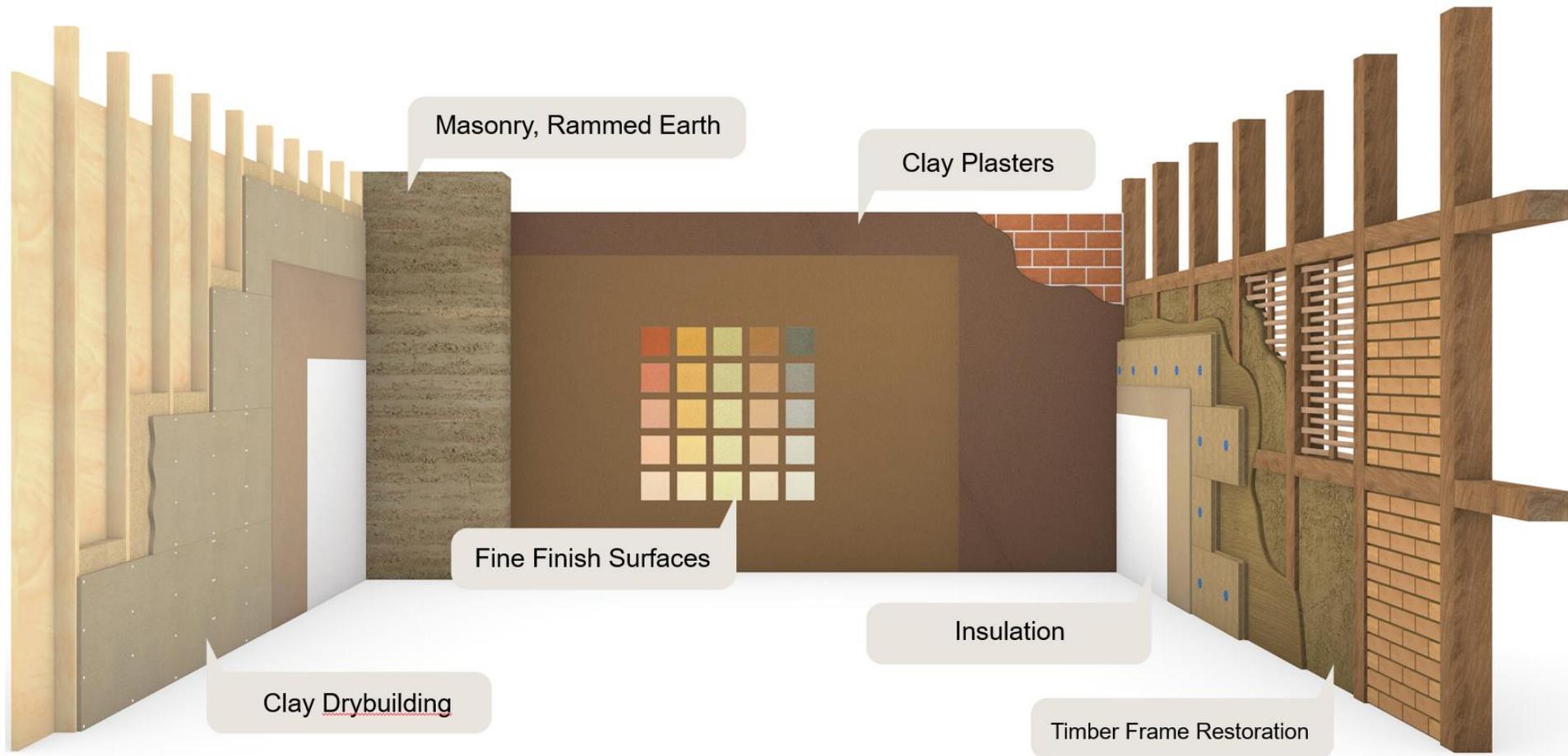
fire resistance duration EI120 (=F120)



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2. Variety of clay Building Products (5)



3. Why we should use clay building materials:

Advantages of clay Building Materials

The ecological building material in anyway:

- low energy
- recyclable
- reuseable
- regionally available
- sound-absorbing
- moisture-regulating
- pollutant-regulating
- heat-storing
- heat protection in summer



4. Success Stories: Federal Ministry of Food and Agriculture

For further information with pictures go
to:

<https://www.bbr.bund.de/BBR/DE/Bauprojekte/Berlin/Politik/BMEL/bmel.html>

Extension Building => built in 2006 - 2009



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4. Success Stories



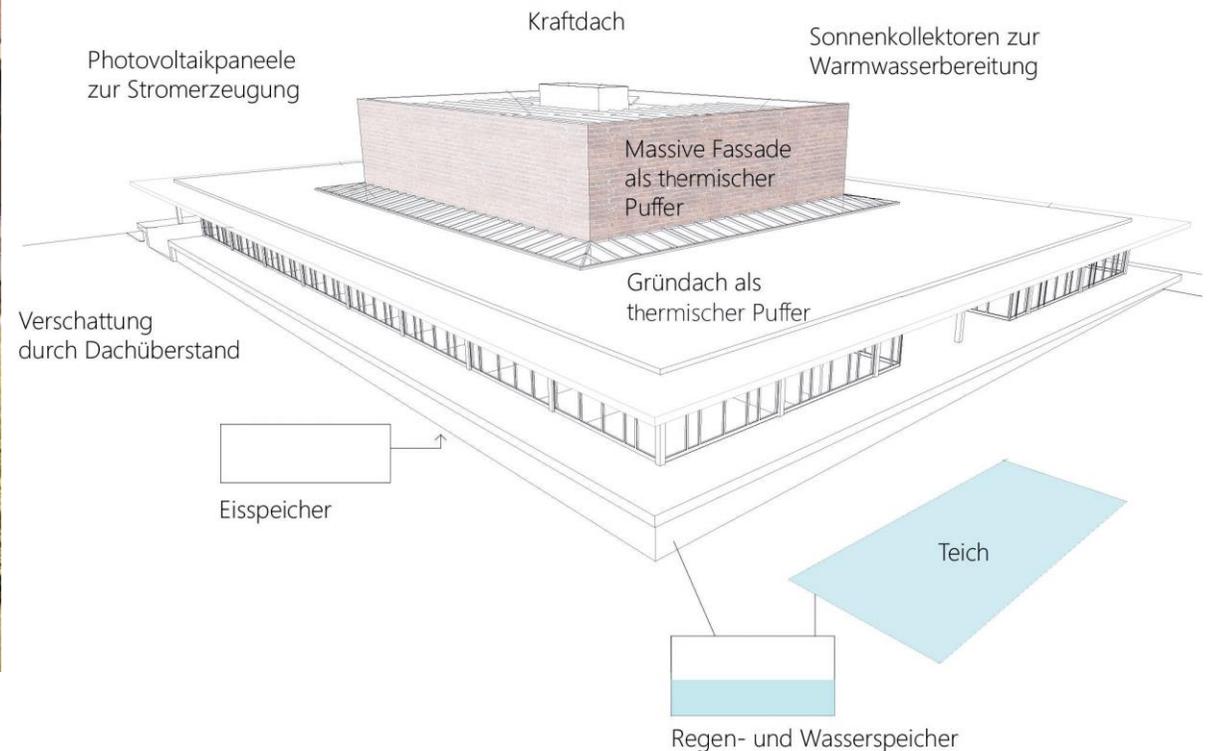
DGM Architekten, Kreisarchiv Viersen, a. rendering

LowTech

Es ist angestrebt, die technische Gebäudeausstattung sehr einfach zu halten. Dies reduziert Wartung und Instandhaltung der Gebäudetechnik. Es sollte möglichst eine passive Klimatisierung des Gebäudes erreicht werden.

Energie

Die Nutzung erneuerbarer Energie ist zentraler Bestandteil der Konzeption. Photovoltaikpaneele auf dem Dach erzeugen die Energie für die Gebäudetechnik. Überschüssige Energie kann eingespeist werden. Warmwasserkollektoren auf dem Dach reduzieren den Heizbedarf.



4. Success Stories

Bad Aibling – build from clay and more



© Bundesstiftung Baukultur, Nadine Stegemann



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