

**Knowledge**

Trainees know ...

- the characteristics of the different materials ( $\lambda$  (Lambda),  $\rho$  (Rho),  $\mu$  (Mü),  $w$ ,  $w_{24}$ , CO<sub>2</sub> storage, ...)
- the forms of heat transfer (conduction, radiation, convection).
- the importance and principles of cold and heat protection in winter and summer
- the capacity (advantage) of straw in thermal and humidity storage (living comfort)
- about thermal bridges and how to minimize them
- importance of airtightness and windproofness
- the humidity transport (vapour, capillary) and the principles of moisture protection
- the importance of rain protection
- how to protect against flooding inside and outside
- the conditions for mould growth (temperature, moisture, time of exposition)
- the  $s_D$  value of different cladding materials
- the acoustic performance (air and material transmission)
- the principles of fire protection with building matter and constructive elements
- energy performance calculation programmes
- meaning of PEI, CO<sub>2</sub> storage, footprint

**Skills**

Trainees can ...

- construct buildings with reduced thermal bridging
- build airtight details and detect air leakages and repair them
- calculate the heat resistance (R-value, U-value) of construction elements with online tools
- select appropriate materials for different construction details
- protect the straw bales from water, moisture and fire
- select ecological preferable materials and assemble them in an appropriate way

**Competence**

Trainees can ...

- address other partners from the building site to ensure weatherproof conditions for building site (including straw bale storage, overnight and during longer breaks),
- create awareness on airtightness and thermal bridges as well as humidity problems.
- take care of fireproof situations as well as detecting faults in building parts and address partners to correct it.
- Explain the advantages and the use of ecological materials / sustainability
- help planners and builders to reduce the ecological footprint