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STRAWBALE HOUSE



Technical applications of renewable resources in the building sector

- Thermal insulation and sound absorption
- Surface treatment
- interior textiles
- ready made interior systems
- assembly aids
- wall/ceiling/roof systems
- static systems
- pre-manufactured systems
- windows and doors



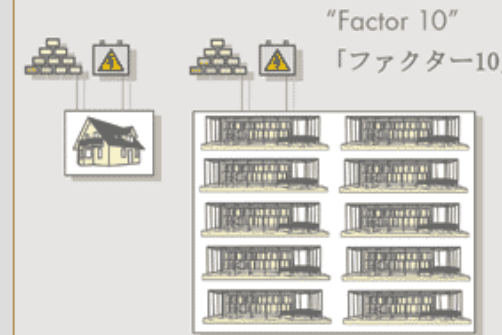
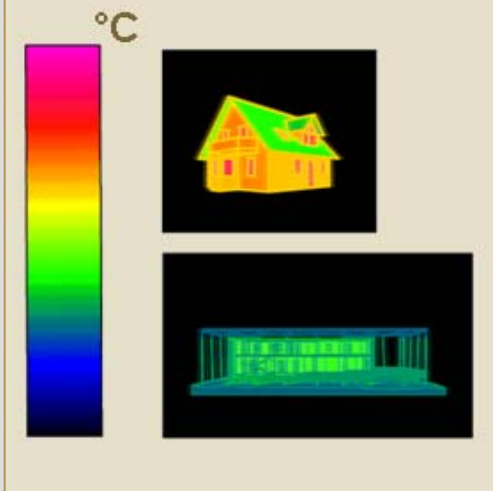
S-HOUSE, progress of construction work, innovations

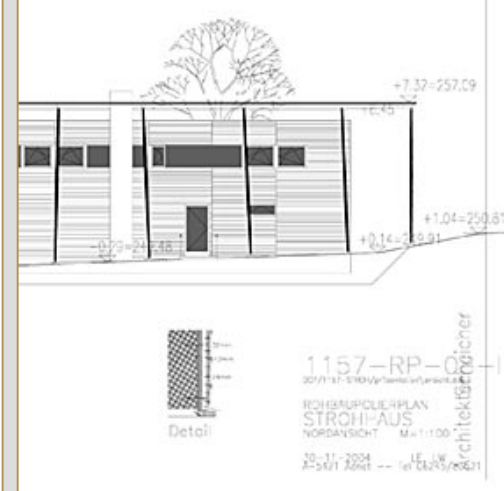


Aims

Realizing a „Factor 10“ example:
A building that is using only 10 per cent of
ressources and energy compared to
a convencional construction

- highest energy saving standard
- meeting high ecological criteria
- high user comfort





S-HOUSE

- Resource efficient building, factor 10 building
- two storey demonstration building and passive house
- Renewable resources like wood and straw to the highest extent possible



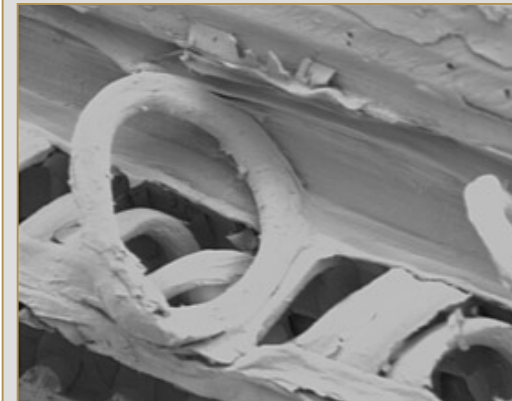
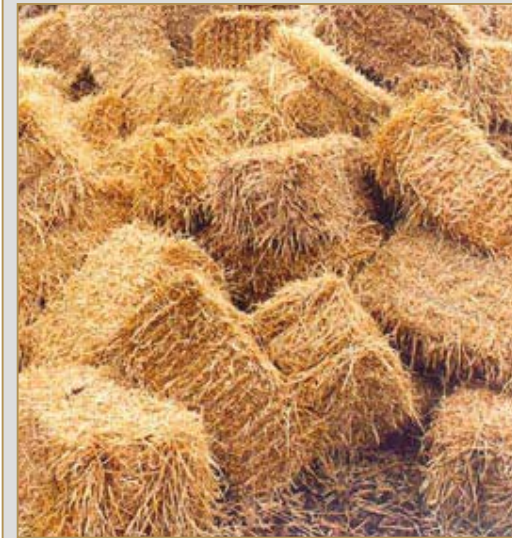
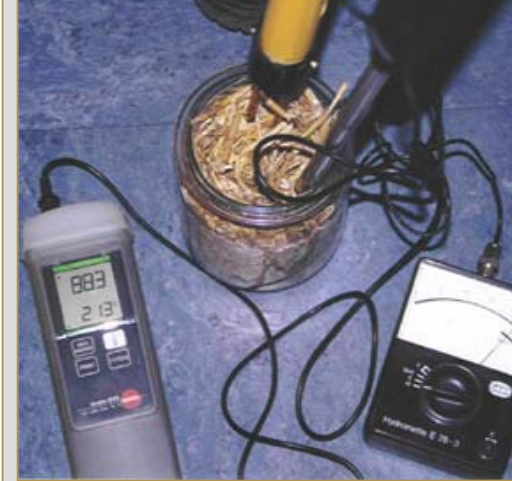


Why straw bale building?

- exceptional building physic characteristics
- compatible for low energy houses and passive houses
- income opportunities for agriculture
- good availability
- low cost of raw material
- energy saving function
- market potential for regional economy

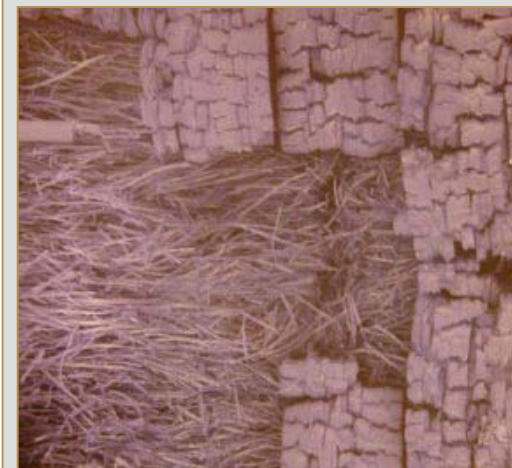
Quality Management

The quality of the straw bales is proved by test of the material and of the components



Fire tests





The test was successful, the wall construction resists more than 90 minutes the heat of the fire and gets the F90 certificate



Humidity tests



Sound absorption tests





Summary

Material characteristics of the building material straw

- multifunctional
- ecological
- economical viable

Characteristics of the wall construction

- meets the criteria of the very strict austrian building
- positive building physic characteristics
- good sound absorbtion

building progress



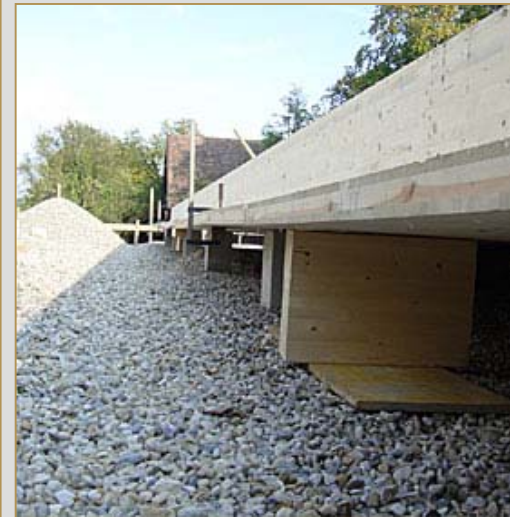
extraction of clay plaster



environmentally friendly and
resource efficient pile



ventilated base plate

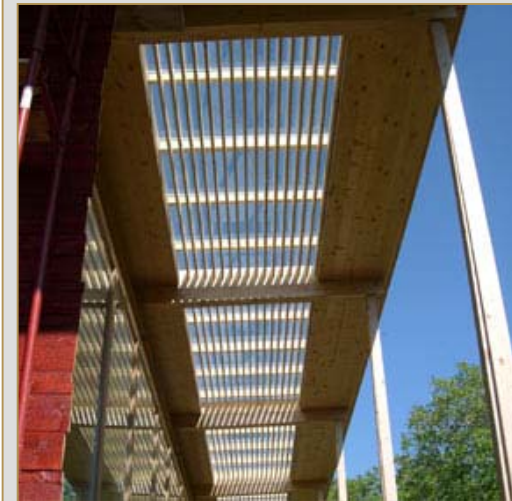


wooden plate construction





membrane roof construction made of
cautschouc membrane and
UV-protection by green roof



thermal bridge free straw bale wall constructions and test walls



clay plastered straw bales





passive house windows
without plastic parts

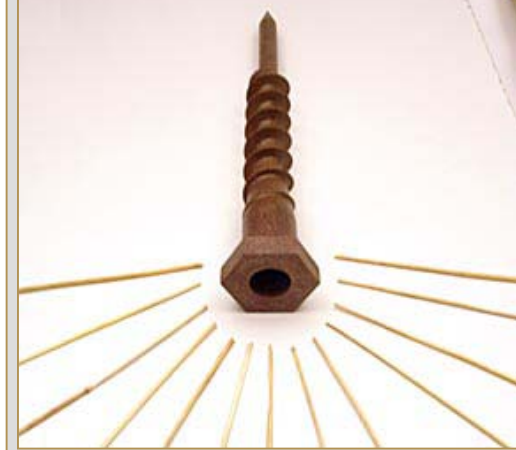


counterlathing mounted with
TREEPLAST screw at the
straw bale layer





injection moulding tool for the
TREEPLAST screw made of bioplastic



wooden facade



spezial S-HOUSE solar facade





stone floor installed with natural glue





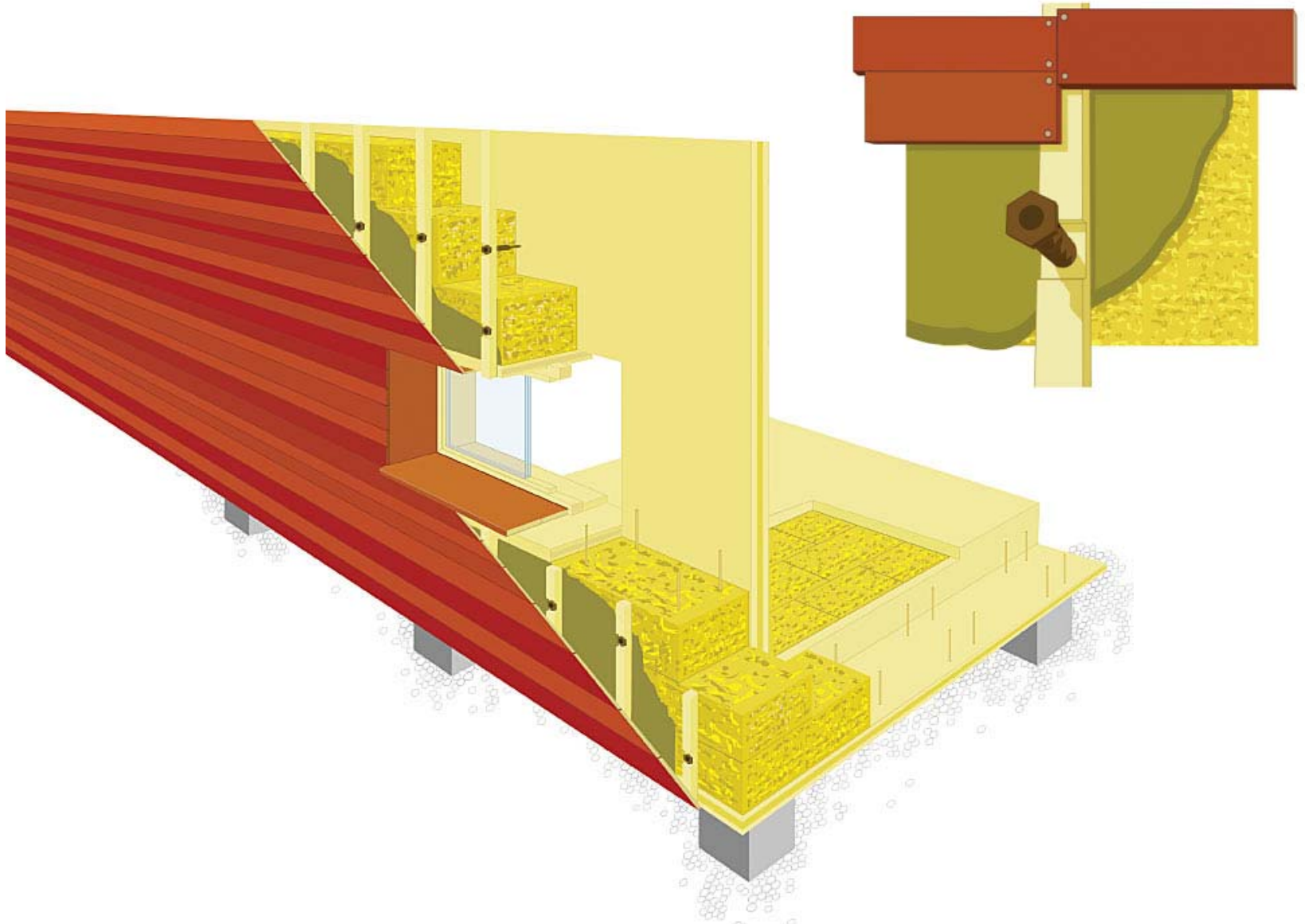
highly efficient biomass stove

- modular and adaptable
- the feeling of an open fire
- improved user comfort



S-HOUSE straw bale wall system

S-HOUSE
BALANCED TECHNOLOGIES



The use of the S-HOUSE

- „Balanced Technologies“ a permanent exhibition about renewable resources
- extensive measuring and monitoring of building components and materials to demonstrate their long term functionality (humidity, temperature, heat flow) and proofing of airtightness
- Public access

