



Brick

Building and living (2)

15:00 minutes

00:46 Building with brick is an ancient method of house construction. At a building site in Winterthur, an apartment complex is being built in brick.

The architect Christian Zimmermann is visiting the large construction site. It will take a total of 500'000 bricks to complete the seven apartment blocks.

01:50 A bricklayer is laying bricks. He uses his bricklayer's trowel and mortar. Once dried, the mortar will hold the bricks together. Bricks were already used in Roman times.

04:21 The raw material for brick production comes from clay pits. Brick clay is composed of clay and shale. The freshly mined clay is mixed with sand and paper scraps. Machines then form individual bricks from the clay mixture, at a rate of 33'000 a day. After drying at a temperature of 80o Celsius for 36 hours, they are ready for baking in a tunnel kiln, which is 135 metres long. The 1'000o Celsius heat turns the soft clay into baked blocks – into bricks.

06:27 Ordinary bricks are suitable for inside walls. For unplastered outside walls, clinker bricks or face bricks are used. As they are baked at higher temperatures, they can brave rain and cold. Tiles, which are baked at even higher temperatures than clinker bricks, are used for covering roofs.

In the old days, brick production used to involve a lot of manual labour.

In the brickwork museum in Cham, you can see how bricks were made 200 years ago. In those days, children would work alongside adults. They trod and mixed the clay. Brickmakers would form bricks and tiles from the clay and sand mixture using a mould and a flat stick.

11:25 At a construction hall at the Swiss Federal Institute of Technology, Hönggerberg, a machine simulates an earthquake of magnitude 6. What happens to a brick wall in a moderate quake like this? Without wooden supports at the sides, the wall will fall apart.