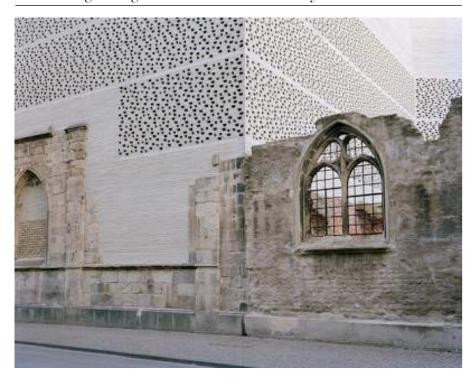
## Yu Hsiang Wang - TS2 - Materials Study



Project: Kolumba Museum
Location: Cologne, Germany
Architect: Peter Zumthor

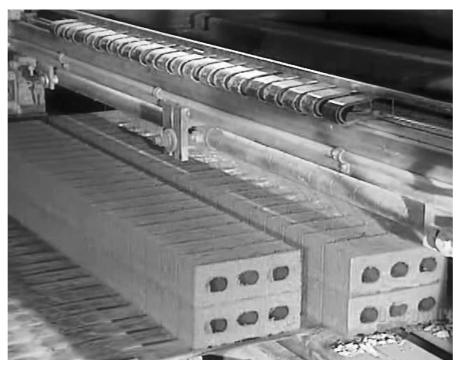
Brickwork: Petersen Tegl, DK-Egernsund

Client: Archdiocese Ordinariate of Cologne



The Kolumba Brick

Kolumba Brick was developed in 2000 in cooperation between architect Peter Zumthor and the Danish brick developer, Petersen Tegl for the Kolumba Museum in Cologne, Germany. After that, the Kolumba Brick have had its own products lines.



## Material Study

## Normally, brick contains the following ingredients:

Silica (sand) 50% to 60% by weight Alumina (clay) 20% to 30% by weight Lime 2 to 5% by weight Iron oxide  $\leq$  7% by weight

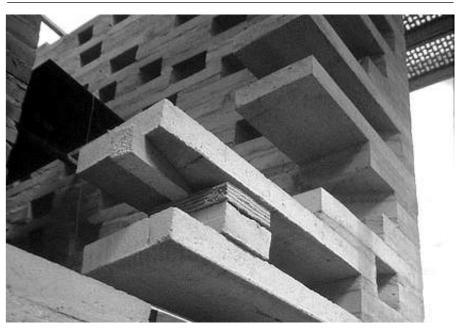
Magnesia less than 1% by weight

In the United Kingdom, the usual size of a modern brick is  $215 \times 102.5 \times 65$  mm, with a nominal 10 mm mortar joint, forms a unit size  $225 \times 112.5$ 

x 75 mm, for a ratio of 6:3:2. In contrast to the normal brick, Kolumba Brick are thinner and longer, similar Roman brick with the standard format  $528 \times 108 \times 37$  mm but can also be made in custom sizes.



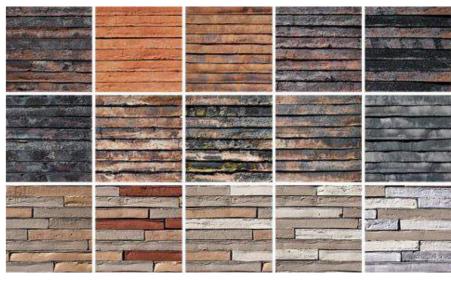
Kolumba Brick are manufactured by old craft techniques. Once the clay has been processed, the bricks are handmade in wooden moulds after which they are dried and fired.



Masonry Construction of Kolumba Brick



Interior View of the Brick Wall



Kolumba Bricks have different textures made by varying temperatures in the firing process.