How the Pyramids Were Built in Egypt

https://www.youtube.com/watch?v=znQk_yBHre4

Transcript: https://dontveter.com/ec/pyramid1.pdf

In September of 2002 our Geopolymer Institute crew cast massive imitation pyramid blocks.

Or perhaps you should say genuine pyramid blocks [because] we used the same kind of earthen ingredients available to the ancient Egyptians 4,500 years ago.

These massive blocks have the same chemical makeup and appearance as the blocks of the Great Pyramid.

The limestone we used consists of fossil shells called new milites like those in the Giza bedrock.

Like in Giza, our French limestone is so loosely bound it doesn't require crushing but unlike in Giza it contains no kaolin clay.

We heap the ingredients, lime, natron and kaolin clay near the limestone.

The two-components will react in the water and will institute a geological glue which will then enter the hard agglomerated limestone.

We start making the cement by mixing sodium carbonate, found in Egyptian natron and lime in five hundred liters of water.

We then add the kaolin inherent to Giza limestone and stir the mix with a wooden tool.

We dump 1 tonne of limestone rubble into the basin and mix it with the cement.

Several days later, water has evaporated from the basin so we remove the disaggregated limestone for making the block.

Inspecting the mixture [we find] 95 percent limestone aggregates and only 5% rock making binder.

[It contains] between 12 and 17 percent of water, giving it the consistency of wet sand.

After squeezing the mixture mixture with his hand, it keeps its shape. This batch will quickly gain strength.

We do all of the work manually, forming a human chain, carrying buckets from the mixing area to the mold.

We pour the limestone concrete mixture in a mold and pack it down with a tool called a rammer.

Compacting the material requires little effort. The packing operation encourages cohesion and the denser mixture takes on high strength from the initial curing phase.

When the climate is warm and beautiful, our crew rapidly produces a real agglomerated limestone that proved strong, dense and true to the planned size and shape.

The mold consists of small wooden boards which can be reused many times for making other blocks.

In this ideal weather the whole process runs smoothly and is very simple.

When we remove the mold four hours later, the synthetic limestone looks like a natural stone. We observed no trace of the wood grain.

Four blocks have already been made. Joseph Davidowitz presents them.

The two large blocks weighing up to 4.5 tons containing the most water have given smoother surfaces.

The two small blocks weighing up to 1.3 tonnes are the least wet and take on rougher surfaces.

When you look at the stone of the pyramid this is what you see.

You see either smooth blocks or very crude blocks and we have replicated all these surfaces just by varying the amount of water.

Which depends on the climate, it depends on the weather.

Joints between blocks are also perfect.

It will take three months for the stones to fully cure because of the climate of Northern France.

In 4,000 years will future archaeologists insist that our imitation pyramid stones are natural limestone?