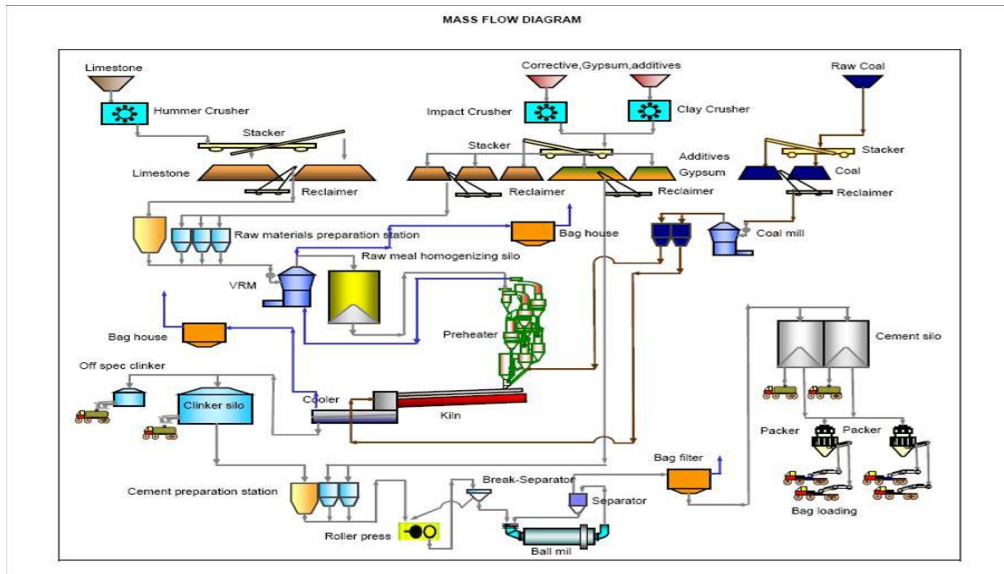


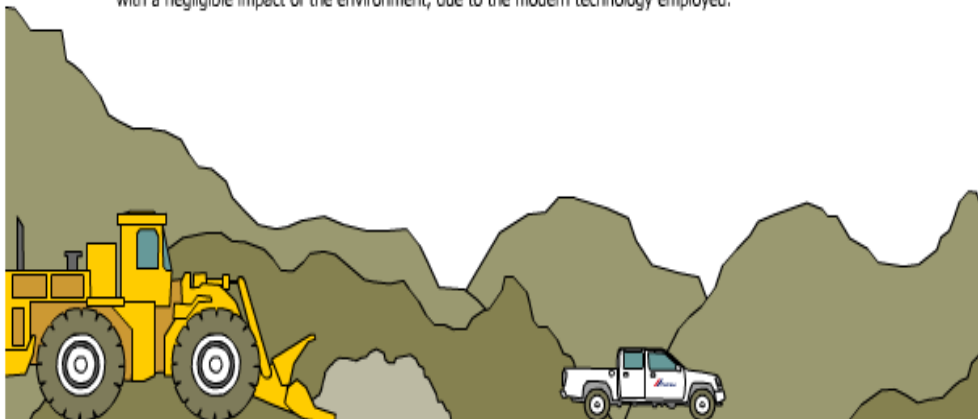
Part III Technological process for building cement plant



1. Mining the raw material

1 Mining the raw material

Limestone and clay are blasted from rock quarries by boring the rock and setting off explosives with a negligible impact of the environment, due to the modern technology employed.



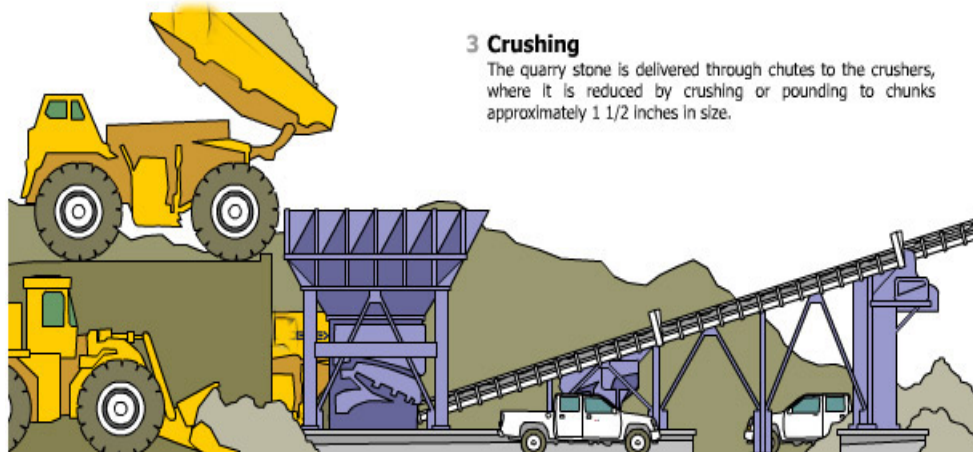
2, Transporting the raw material

2 Transporting the raw material

Once the huge rocks have been fragmented, they are transported to the plant in dump trucks or by conveyor belt.



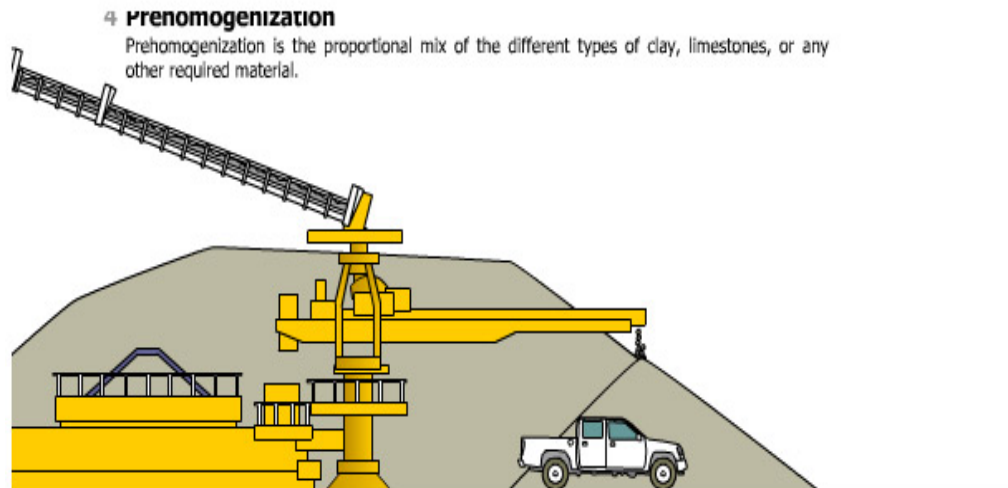
3. Crushing



3 Crushing

The quarry stone is delivered through chutes to the crushers, where it is reduced by crushing or pounding to chunks approximately 1 1/2 inches in size.

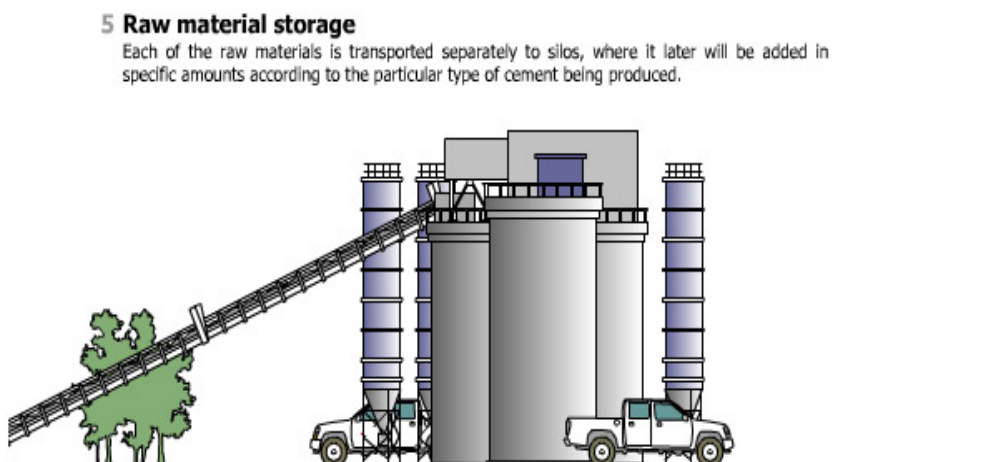
4. Prehomogenization



4 Prehomogenization

Prehomogenization is the proportional mix of the different types of clay, limestones, or any other required material.

5.Raw material storage



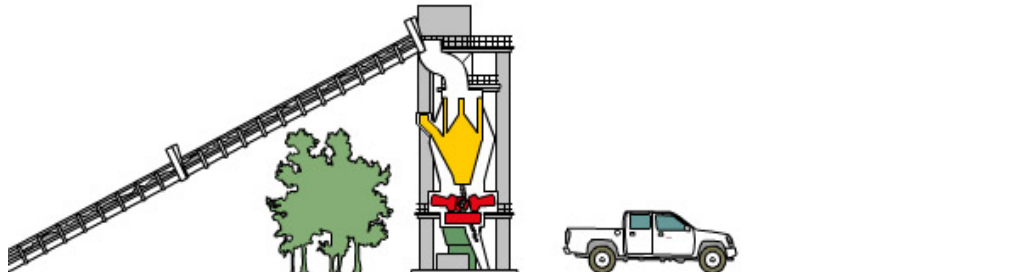
5 Raw material storage

Each of the raw materials is transported separately to silos, where it later will be added in specific amounts according to the particular type of cement being produced.

6.Raw material mill

6 Raw material mill

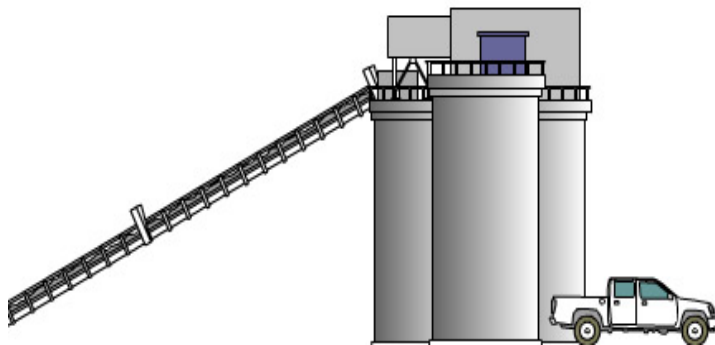
This takes place in vertical steel mill, which grinds the material through the pressure exerted by three conical rollers. Which roll over a turning milling table. Horizontal mills, inside which the material is pulverized by means of steel balls, are also used in this phase.



7. Raw meal homogenization

7 Raw meal homogenization

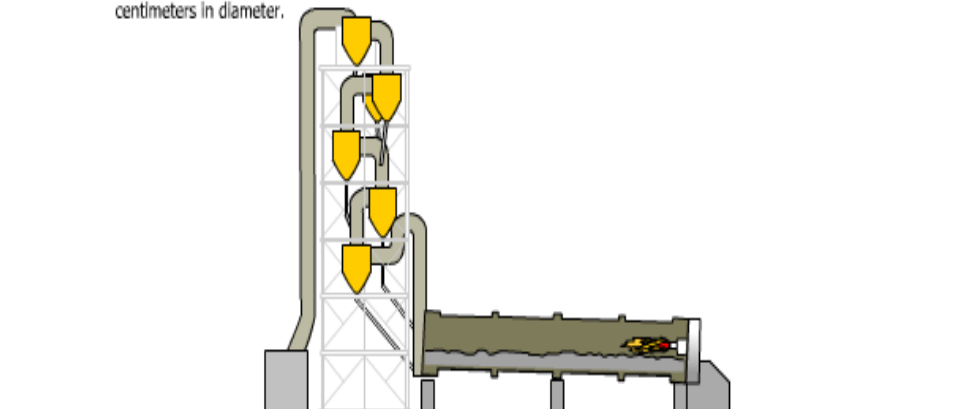
This process takes place in silos equipped for obtaining a homogenous mix of the material.



8.Calcination

8 Calcination

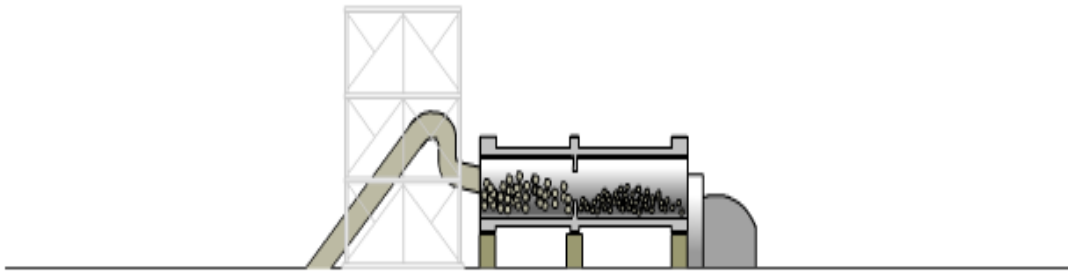
Calcination is the core portion of the process, in which huge rotary kilns come into play. Inside, at 1400 degrees C, the raw material is transformed into clinker: small, dark gray nodules 3-4 centimeters in diameter.



9. Cement milling

9 Cement milling

The clinker is ground by different-size steel balls while it works its way through the mill's two chambers, with gypsum being added to extend cement setting times



10. Cement packaging and shipping

10 Cement packaging and shipping

The cement is then housed in storage silos, from where it is hydraulically or mechanically extracted and transported to facilities where it will be packaged in sacks or supplied in bulk. In either case, it can be shipped by rail car, freighter truck or ship.

