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# “CEMENT GRINDING STATIONS IN W. AFRICA”

## West Africa grinding stations

Cement is the main component of concrete and many other construction materials globally. Portland cement consists of clinker, gypsum and chemicals and if secondary raw materials (such as fly ash, slag, pozzolana, limestone etc.) are added, blended cements, that are usually less strong and cheaper, can be produced.



For the production of clinker, limestone and/or marl is needed, materials that cannot be easily found in big quantities or good quality in the West African countries. That is the reason that clinker is imported in most of the region, coming mainly from the Mediterranean Sea

countries. It is a relatively cheap material but adding the transportation and the loading/unloading cost it is delivered with a CFR price of 50-60 USD/tn

Usually, along seaside and close to the main ports cement grinding stations have been built and are producing the cement needed for the local market. A cement grinding station consists of the clinker storage area (usually covered), the secondary raw materials area, the milling department, the filters, the cement silos, the bagging machine area and the ready products storage area. Depending on the production size, the area needed is between 40-100.000 sq.m. The cost of such a plant varies from 25-50 m USD when an integrated cement plant needs more than 100m USD



The last years, modular small to medium size ready for installation grinding units appeared in the market (8-15 containers depending of the production size) having the advantage of easy and quick installation but with significant higher price. Again all the rest of the buildings and infrastructure works need to be done in the designated plot.

By adding 20-30% of the existing or also imported secondary raw materials (usually limestone) cement

quality CEM II/B 32,5 or 42,5 is produced and distributed in 50kg bags by trucks or by barges if rivers are floatable. The bagged cement has more than 90% of the market and it is for sale or through big traders or most commonly by small retailers supported by the traders



When RMC is rare (mainly in big projects) and precast industry is in manual mode (concrete blocks). This gradually has started been changing, mainly in RMC, but still needs a lot of time to reach a descent market share in order to support commercial plants and not only projects'



In most of the countries they built with concrete blocks hand made by individuals everywhere. Clay Bricks or other lightweight materials are scare.



Cement consumption per capita in the area is very low compared with this in the developed countries and varies from 60-240 kg/year when in North Africa can reach the 600kg and in Europe the 1000kg. However, this is giving the prospective of the area in medium and long term. Although the last years many cement plants have been built in most of the countries and the utilization factor of them now is sometimes less than 50%, with GDP growth of 6-7% and the rapid increase of the population will significantly increase this number in the next few years. Taking into consideration that a new plant needs a period of at least 2 years to be completed, new investments will needed soon.