

# A Scientific Analysis of Various forms of Chemical Compounds and their use

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## *Abstract*

In this Research it is talked about that different procedure of Portland concrete assembling. Wet procedure minerals are wet ground to shape a slurry and in dry procedure minerals are dry ground to frame a powder like substance. In this paper, we are talking about the correlation between wet procedure and dry procedure with different favorable circumstances and drawbacks.

*Keywords: Portland cement, slurry, lime stone etc.*

## I. INTRODUCTION

There are two kinds of procedure for assembling the concrete are appeared in beneath.

### **Wet process**

Crude materials are blend in wash plant by 35 to half water. The current Materials are known as slurry that have stream capacity highlights. The furnace size that are required for developed of concrete is higher so the crude material can be blended easily that is the reason well comparative sort of material can be obtained. The creation cost of wet procedure is high and capital expense is moderately less.

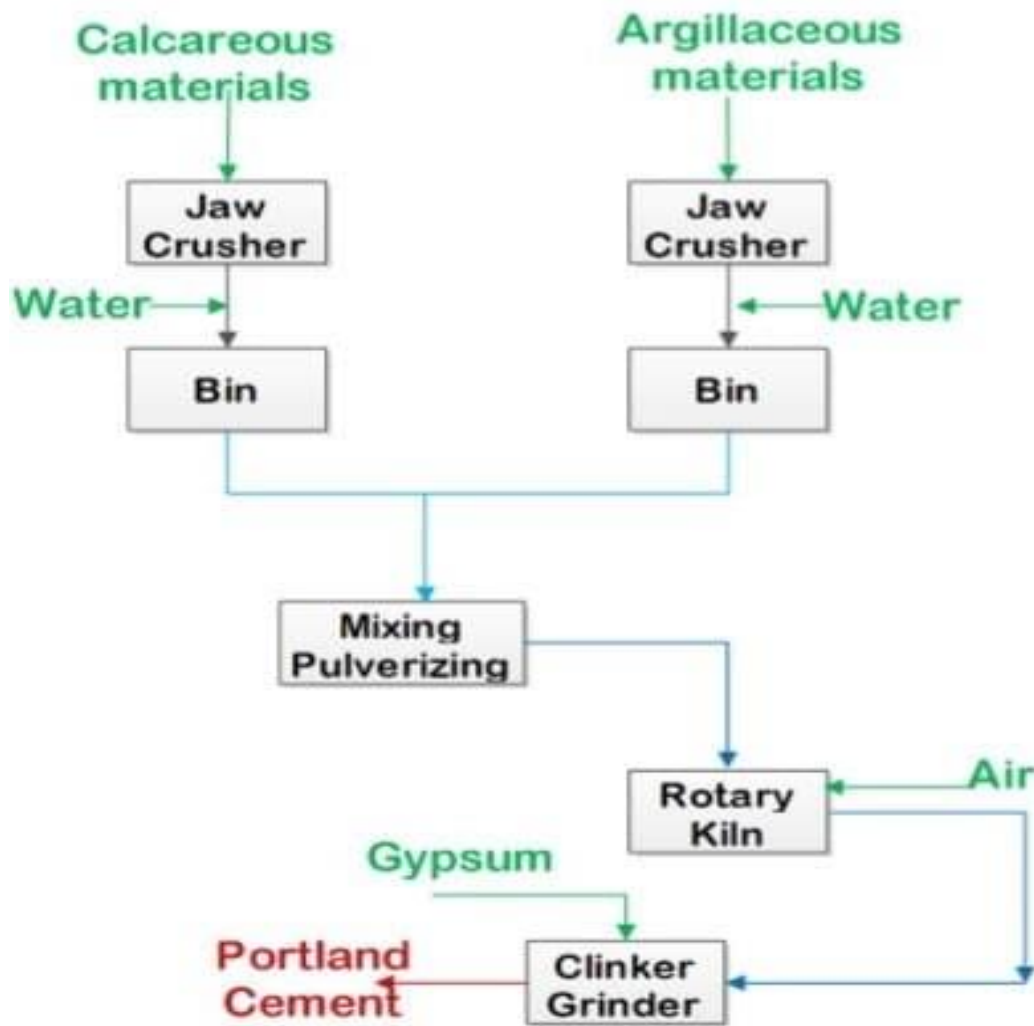
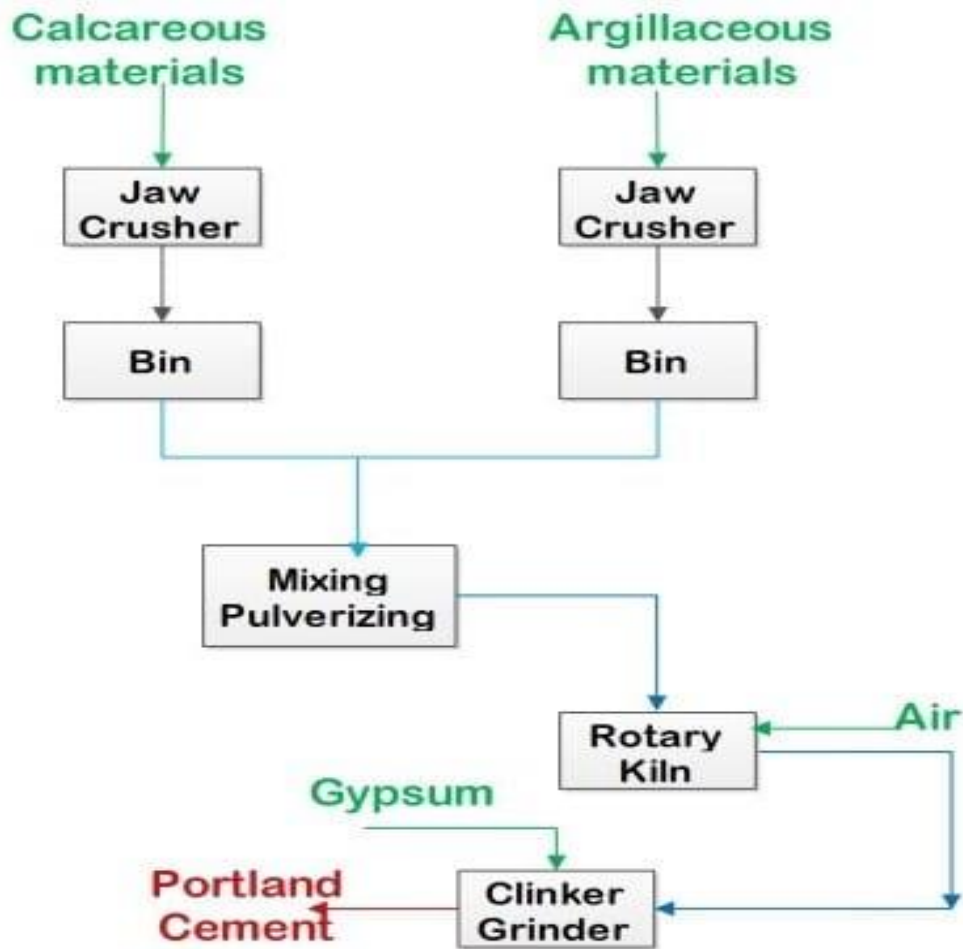


Fig 1: Manufacture of Cement by Wet Process

### Dry process

In the dry process, raw material is mixed in mixers. This dry material is also known as kiln feed. The kiln size required for built-up of cement is smaller so it is difficult to control raw materials mixing and it is also challenging to find a well-similar material. The production cost is less and capital cost is relatively high because of the blender.



**Fig: Manufacture of Cement by Dry Process**

Table 1

Raw materials for Portland cement manufacture

Calcareous Materials	Argillaceous Materials			
	Calcium	Silicon	Aluminum	Iron
Limestone	Clay	Clay	Clay	Clay
Marl	Marl	Shale	Iron ore	Iron ore
Calcite	Sand	Fly ash	Mill scale	Mill scale
Aragonite	Shale	Aluminum ore refuse	Shale	Shale
Shale	Fly ash		Blast furnace dust	Blast furnace dust
Sea Shells	Rice hull ash			
Cement kiln dust	Slag			

## II. DIFFERENCE BETWEEN DRY PROCESS AND WET PROCESS

S.no.	Wet process	Dry process
1.	When raw material is soft then this method is used	When raw material is hard then this method is used
2.	The raw material are changed to powdered form in the presence of water	The raw material are changed to powdered form in the of absence water
3.	cement produced-26%	cement produced-74%
4.	kilns high fuel needed	kilns less fuel needed
5.	Less Economically	More Economically
6.	Need of maintenance is less	Need of maintenance is high
7.	Raw material can be easily mix	Raw material cannot be easily mix
8.	Production cost high	Production cost less
9.	Capital cost is less	Capital cost is less

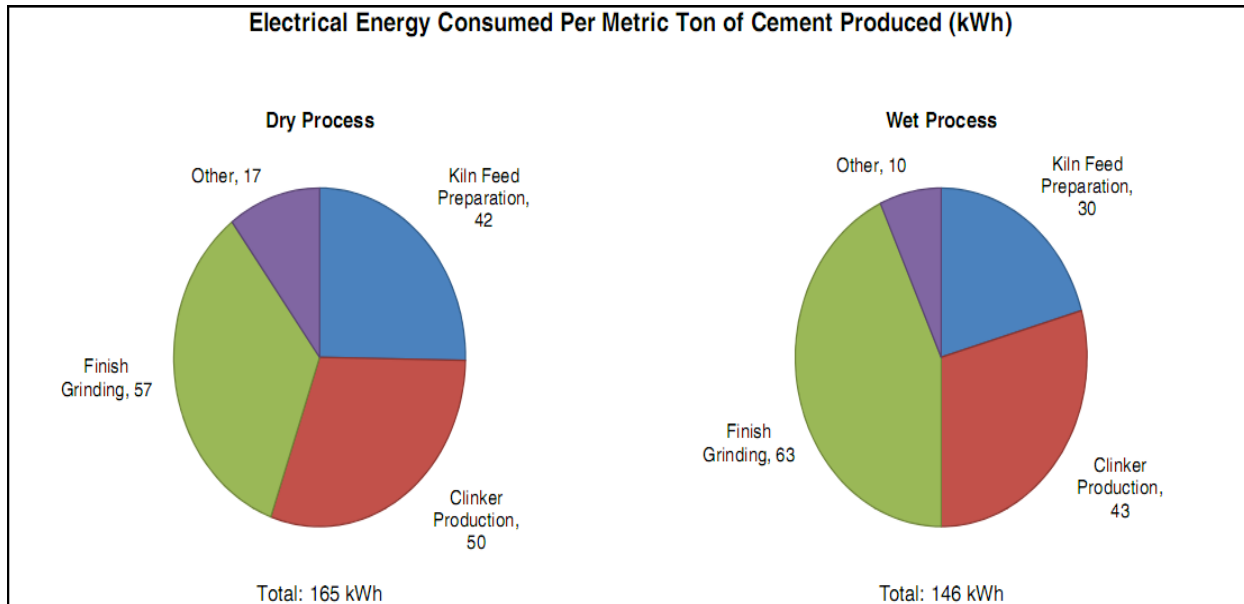


Fig 3: Electrical energy consumed by both process

### III. CONCLUSION

In this paper we have talked about the wet and dry concrete assembling process. And furthermore we have talked about different crude materials for Portland concrete assembling. This paper shows the examination between wet procedure and dry procedure with different focal points and burdens.

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