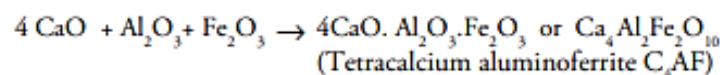
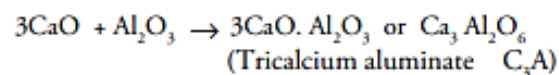
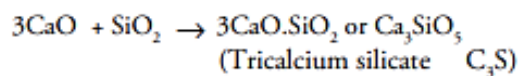
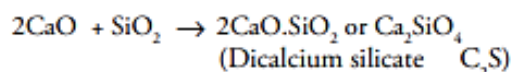
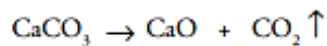


## ENGINEERING MATERIALS

### Cement

**Table 5.1** Comparison between wet and dry process

S.No	Dry process	Wet process
1	It is a slow process	It is relatively faster
2	Fuel consumption is low. Shorter kiln is required. Cost of cement production is less	More fuel is required to evaporate excess water. Longer kiln is needed for the same purpose. Cost of cement production is high
3	Causes environmental pollution as the raw materials are ground dry	Causes less environment pollution as grinding is done by adding water
4	The quality of cement produced is inferior	Cement produced is of better quality
5	The process is adopted when the raw materials are quite hard and cannot be disintegrated by water	This process is preferred for soft raw materials
6	This process is not suitable when the raw materials have an inherent moisture content of 15% or more	The process is used when the percentage of moisture in raw materials is high
7	Method is used in cold countries where water might freeze at low temperatures	Cannot be used in cold climatic conditions because the water will freeze

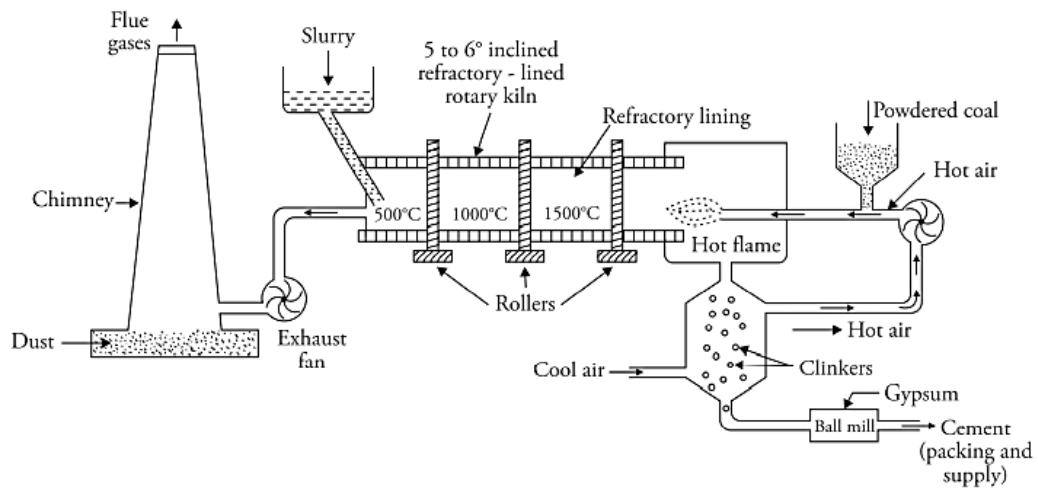


These aluminates and silicates combine together to form small, round, greyish stones called clinkers.

#### Typical clinker nodules

## Lecture 6

- (b) **Cooling zone** The clinkers produced above are cooled by a stream of air and the hot air so produced is used for drying the coal before pulverisation.



**Figure 5.1** Line diagram of rotary kiln for the manufacture of cement



## Lecture 6



**H.W:** IRAQI specification of Portland cement???

## Lecture 6





## Lecture 6

