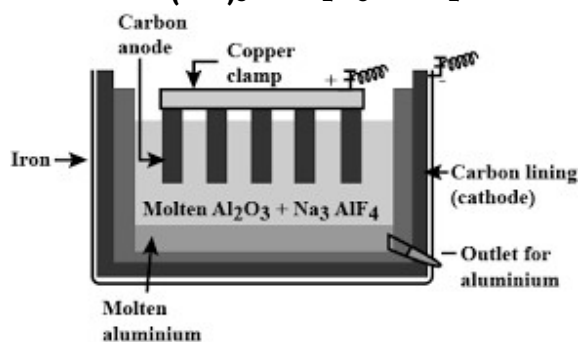
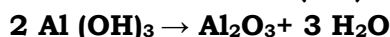
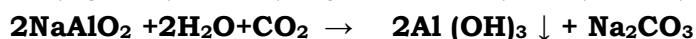
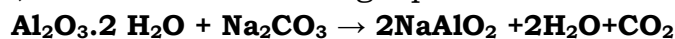
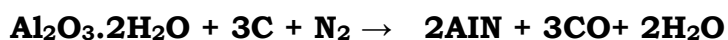


1. Halls process:

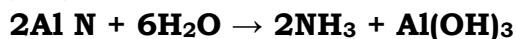
The powdered ore is fused with sodium carbonate to get sodium meta aluminate while the impurities remain undissolved which can be removed by filtration. The filtrate is heated to 333K and a current of CO₂ is passed through it where Al(OH)₃ is precipitated out, filtered, washed and dried to get pure alumina.



- 2. Serpeck's process:** This process is used for the purification of bauxite ore containing silica (SiO₂) (WHITE BAUXITE) as the main impurity. The powdered ore is mixed with coke and the mixture is heated at about 1800°C in the presence of Nitrogen gas, when aluminium nitride is formed.



Aluminium nitride thus obtained is hydrolysed with water to get a precipitate of Al(OH)₃.



The precipitate of Al(OH)₃ is filtered, washed and dried. The silica present as an impurity in bauxite is reduced to silicon which being volatile at high temperature, is removed easily.

