

ABSTRACT

The Red mud is the waste that results from the processing of bauxite into alumina at the Bayer process. The Red Mud is a compound of iron, alumina, silica, and titan is not soluble and has a pH of about 13-14. In the Red Mud still contained aluminum by 10-22%, and several other elements such as iron, amounting to 14-35%. Handling is one of the ways is to use inorganic acids (HCl, H₂SO₄, HNO₃) which serve to neutralize high pH is contained in the red mud. The results can be known from 35-40% of the total red mud can be terduksi by using an acid solution.

In addition to processing bauxite into alumina also produces gas emissions from combustion results in the boiler. Gas emissions can be reduced using a prototype absorber absorber with a solution of NaOH. Where is the concentration of a solution of NaOH on sinks 2.5% optimum flux 0.23 moles CO₂/m²s on 15-minute shows the amount of carbon dioxide being absorbed per unit area of the membrane per second. This would save costs because of the concentration of a solution of NaOH sinks low, short contact time, and the results of a large flux. From the concentration of NaOH 2.5% is absorbent enough to the reduction of CO₂ emissions of the gas that comes out of boiler units of 8-12%. This is better than using a scrubber and absorber reaching only 50-60% efficiency.