

C3 L6 : Alkali From Salt

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the processes of making salt into alkali

The Leblanc Process (inefficient - small product with lots of input)
You need large quantities of alkali :
during the time period needed for cleanliness - agriculture etc.

2 million tonnes ---1/4 of a million tonnes

sodium chloride + iron sulfide (sulfuric acid) -> sodium sulfide + hydrogen chloride gas
coal + calcium carbonate + sodium sulfide -> sodium carbonate + calcium sulfide

over 200 hectares X 4m depth -- solid waste from alkali industry

the hydrogen chloride from the factories , if dissolved in rainwater , produced acid rain . (Which has the same elements as hydrochloric acid) This led to building and wildlife damage and reactions with solid waste to release foul smelling hydrogen sulfide.

cleaning up process involved

- reacting water and hydrogen chloride gas before it was emitted in the atmosphere .
- Henry Deacon made chlorine from the gas - hydrogen chloride gas is oxidised

disadvantages of living in Widnes 1891 :

- respiratory problems (pollution etc.) -
- foul smell

So regulations in scientific advancements are crucial in order not to damage the environment / people