**TOPIC: AIR AND COMBUSITION  
INTRODUCTION**

Air is a mixture of gases and it can be separated into constituent gases by fractional distillation.

**The process / flow chart**

The air is first purified by passing it through **filters to remove dust.**  
The dust-free air is then passed through a solution of **conc. NaOH to remove CO2 gas**.  
The remaining part of air is then cooled at **-25oC to remove water vapor** **which solidifies out as ice.**  
The remaining part of air is then compressed at **a pressure 200 atmosphere** and the expansion of the air cools it to liquid at -2000C.  
**The liquid air consists of oxygen, nitrogen and noble gases**.  
Since this gases have different but close boiling points, they can be separated by ***Fractional distillation.***  
Liquid oxygen boils at **-1830C** and nitrogen at **-1960C**. *Nitrogen* distills out first because **it has a lower boiling point.**  
The other gases made of mainly oxygen, ***boils at -1830C***, they form the second fraction. The argon can be separated from oxygen by further distillation.

This is now the fractional distillation of air.

