PROCESS FLOW DIAGRAM OF DISSALINATION TOWER

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Abstract

Distillation columns are key unit operations in traditional chemical engineering, especially in the oil and gas industry. They are usually tall structures filled with heated flammable fluids, and are consequently inherently hazardous. Many serious accidents have centered on columns and their ancillary operations.

Introduction

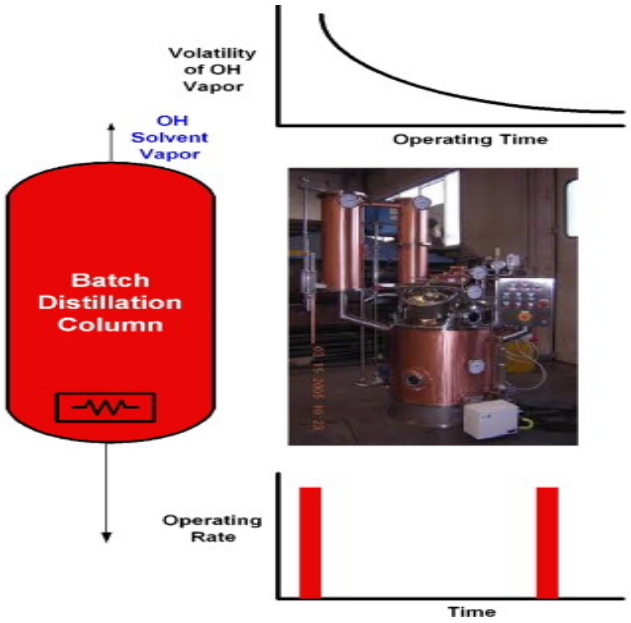
Distillation is a widely used process for separation of multiple components based on differences in boiling points of various fluids. It involves heating a mixture to different temperatures during which fluids with lower boiling point evaporate and are collected and separated. The distillation process is dependent on the relative volatility of the mixture fluids and their vapor pressures. A liquid boils when the vapor pressure exerted by the fluid equals the atmospheric pressure. Liquids possessing higher vapor pressures boil at lower temperatures and vice versa.

Components

Distillation tower generally consists of the following major components:

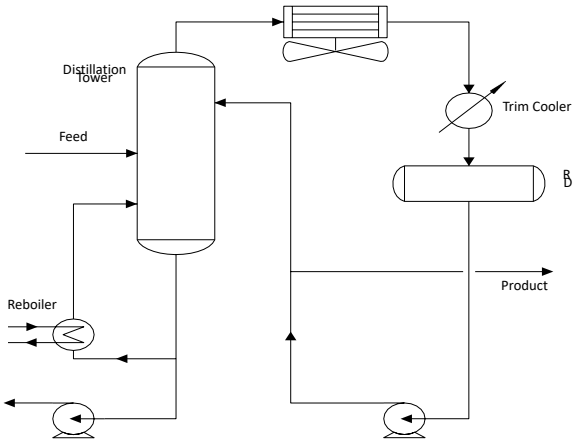
1.Re boiler
2.Tower
3.Auxiliary equipment's like pumps, heat exchangers, valves, tanks, etc.
4.Condenser

BATCH DISTILLATION COLUMN



WORKING PRINCIPLE

Reboiler supplies steam or heat to the bottom end of the distillation tower to heat the mixture. Reboiler is typically a shell and tube type heat exchanger whose function is to heat the water in it and convert it into steam and pass it on to the distillation tower. Reboilers are usually placed next to the distillation tower or at the end of it.



Components of Distillation Tower

PROJECT GOALS

- To create a Desalination Tower .
- Make the renewable source of energy in use .
- Make the system of the work in specified Location .
- Allow the Complete Modification of the System .

CONCLUSION

Versatile water is believed to be something hard to obtain ,particularly in dry and remote spots . Customary desalination advancements are great at addressing water needs ,yet they are believed to be very energy polishing off . Assuming you can utilize a ton of water you can utilize a customary desalination innovations.

References

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