

**Government Engineering College, Valsad**  
**Chemical Engineering Department**

**Webinar Title:** Distillation techniques and distillation column operation with troubleshooting

**Name of Expert:** Mr. Pankaj Mishra (B.E Chemical Engineering, pursuing MBA Operation from Symbiosys.)

**Date of Webinar:** 24/5/2020

**Time:** 7:15 P.M onwards

**Faculty Coordinator:** Prof. H.M.Jariwala, Prof. A.R.Magodara, Prof. A.H.Prajapati

**No. of Registered Participants:** 108

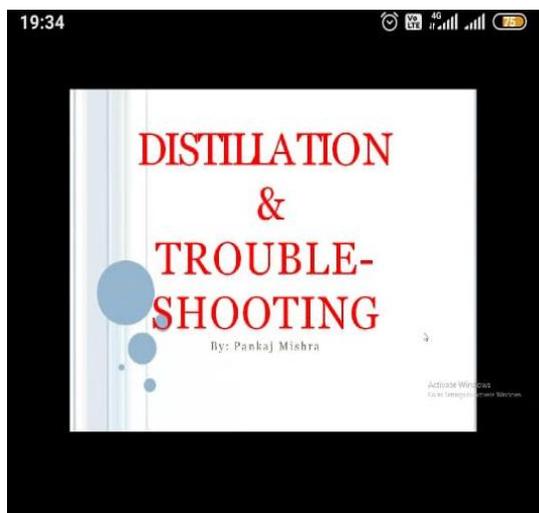
**Guest Profile:**

Mr. Pankaj Mishra has 9.5 Years of Experience in Production and New Product commissioning. Currently He is working with M/S PI Industries Limited. Mr Pankaj Mishra has worked for M/S BASF Ind. Ltd (MNC), M/S LANXESS Ind. Ltd. (MNC) and M/S Lupin Ltd. (pharmaceutical).

**Webinar description:**

The Department of Chemical Engineering organized a Webinar on “Distillation techniques and distillation column operation with troubleshooting” on 24<sup>th</sup> May 2020 under RUSA. The webinar was organized for all students of Chemical Engineering Department. Prof. B. M. Pandya introduced Mr. Pankaj Mishra to all participants. Mr. Pankaj Mishra gave information regarding Basics of Distillation Operation and Different Types of Distillation Techniques. Mr. Pankaj Mishra shared his personal Experience and knowledge for How to operate Distillation column with troubleshooting and How to apply theoretical concepts in Troubleshooting.. The session ended with vote of thanks by Prof. B. M. Pandya in appreciation to Mr. Pankaj Mishra for sharing his valuable time for interacting with Students and Faculties.

## Glimpses of Expert lecture



20:18

**DISTILLATION OPERATION**

In distillation column feed is introduced at the middle of the column on feed tray which divides the column in top and bottom section.

- The feed slowly comes down in column where it is collected in reboiler which converts feed in to vapour.
- Vapour is reintroduced in column from bottom and liquid remain in reboiler is known as bottom.
- Vapour moves upward in column and comes out from top.
- It is then condensed by condenser and stored in vessel. It is known as distillate.
- Some of this condensate is again introduced from top, it is known as reflux.
- Thus, there are internal flows of vapour and liquid within the column as well as external flows of feed and product streams, into and out of the column.

Diagram illustrating the distillation process with labels: REBOILER, COLUMN, CONDENSER, DISTILLATE, REFLUX, FEED, BOTTOMS.

This is a screenshot of a presentation slide. The slide has a white background with black and red text. The title 'DISTILLATION OPERATION' is in large, bold, red letters. Below the title, there is a paragraph of text and a bulleted list of points. To the right of the text, there is a schematic diagram of a distillation column. The diagram shows a reboiler at the bottom, a column in the middle, and a condenser at the top. Labels include 'REBOILER', 'COLUMN', 'CONDENSER', 'DISTILLATE', 'REFLUX', 'FEED', and 'BOTTOMS'. The top of the slide shows a black status bar with the time '20:18' and various icons for battery, signal, and Wi-Fi.

20:30

**TROUBLESHOOTING**

- \*Examine the column behaviour yourself.
- \*Utility less flow.
- \*More time for the distillation. (High TRT)
- \*Malfunctioning of the equipment.
- \*Parameters measures.
- \*Not proper priming of the distillation column.
- \*Feed rate more
- \*More heating and sudden raise in the temperature by operator.
- \*Delta P across column not maintain while performing the distillation.
- \*HE effectiveness.

Diagram illustrating the distillation process with labels: REBOILER, COLUMN, CONDENSER, DISTILLATE, REFLUX, FEED, BOTTOMS.

This is a screenshot of a presentation slide. The slide has a white background with black and red text. The title 'TROUBLESHOOTING' is in large, bold, red letters. Below the title, there is a bulleted list of points. To the right of the text, there is a small schematic diagram of a distillation column, similar to the one in the previous slide. The top of the slide shows a black status bar with the time '20:30' and various icons for battery, signal, and Wi-Fi.

Head of Department

Chemical Engineering Department

GEC, Valsad