SPENT GAS PUERIFICATION AND ODOR CONTROL©

The Problem

Rendering plants convert non-hazardous organic remains “waste” such as feathers, bones, blood and meat to a valuable protein product. The Spent gases of rendering plants have strong odor and could, despite treatment, still have very unpleasant smell and disturb the social life of small and large communities. An economical solution of a reliable spent gas purification system to eliminate and control odor is required.

The Solution

Our interdisciplinary engineering expertise and understanding the protein production process with the spent gas treatment requirements enable us to develop innovative and cost effective solutions. This includes development, designing, and optimization of treatment processes. Our solutions result in odor elimination, significant reduction of operation costs and a complete customer satisfaction.

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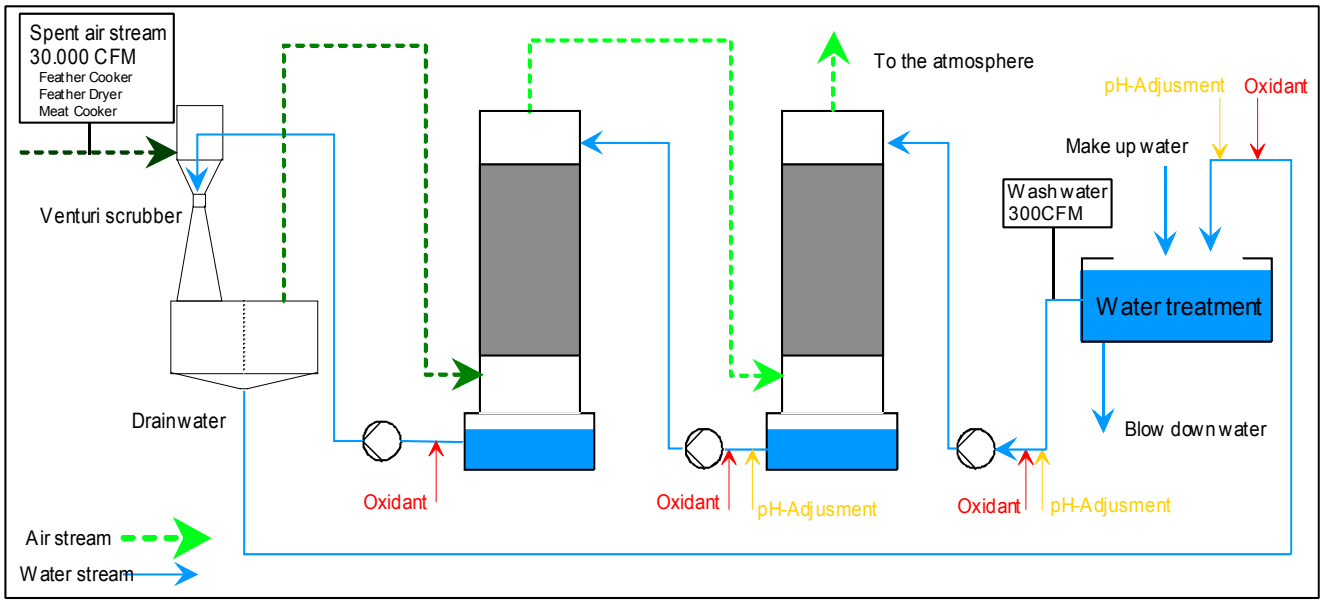
Process Description

Spent gases from feather cockers and meat cockers are primary cooled down for water and grease condensation. In the next step non-condensable gases, which are Volatile Organic Compounds (VOC) are washed continuously using a venturi scrubber. The pre treated gas stream is than washed with water counter current in the first packed column. In this treatment stage the gas velocity is significantly reduced and the water surface is extremely increased for better gas absorption. In the third treatment stage an additional packed column scrubber is also used. It is a final gas-polishing step before exposing the gas stream to the atmosphere.
Adjusting the appropriate pH for each scrubber and optimizing the used oxidant amount in each treatment stage will control the quality of the used washing water to secure a sufficient purification of spent gases to be released.



Schematic Process Diagram

Advantages of this Process:

- **Low operation costs**
- **High purification performance**
- **Easy control**

Furthermore We provide services for:

- **Waste remediation**
- **Wastewater remediation**
- **Soil remediation**

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