



AGAR CORPORATION

Process Measurement & Control Solutions

NOTE 16: Foam Detection

THE PROBLEM

Foam carry-over can cause upsets in operations and severe damage to compressors. In production, refining, and petrochemical processes, foaming can occur in:

Production Applications

- Liquid/gas production separators
- Production gas sweetening (Amine)
- Production gas dehydration (Glycol)
- Three-Phase production separators

Refining and Petrochemical

- Amine contactors (H₂S removal)
- Knock out drums
- Reflux drums
- Three-phase separators
- Liquid/Gas contactors

Common techniques for foam detection include: DP gauges, capacitance probes, electromagnetic radiation, neutron-backscatter, sonic echo devices, flow meters and sight glasses.

Most of these do not offer early foam detection. These devices only detect foam after severe foaming has occurred and often not until the foam has upset downstream operations.

THE SOLUTION

The Agar Foam Detector operates on the principle of energy absorption. The Foam Detector is a device that is installed into the process vessel providing early detection as foam begins to form and before the occurrence of process upsets or equipment damage. This information can be used to control/optimize the defoamer injection rate. Benefits from early foam detection are listed below:

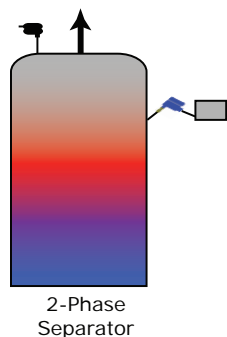
- A reduction in chemical costs and foam carry-over
- Minimal liquid entrainment
- Sustained operating rates
- Protection of downstream equipment (i.e. compressors)
- Reduced process upsets



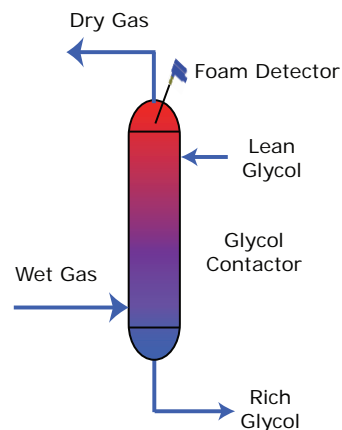
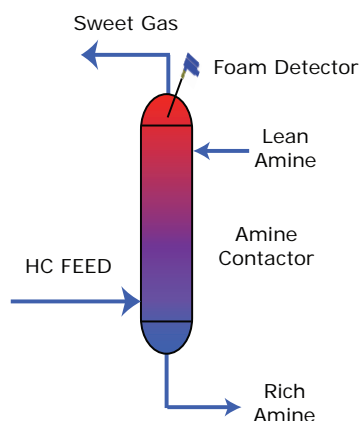
Foam Detection Demonstration

UPSTREAM APPLICATIONS

FOAM CONTROL

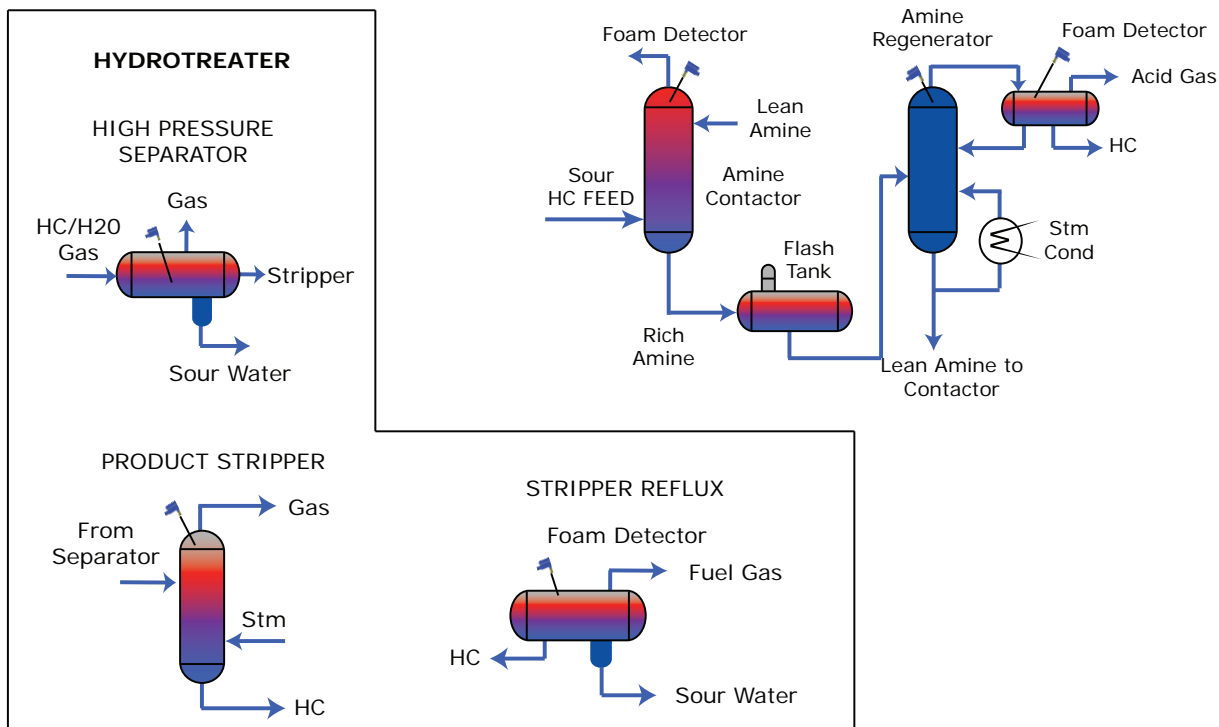


GAS SWEETENING / GLYCOL



DOWNSTREAM APPLICATIONS

AMINE SYSTEM



■ ID 201s
 ■ OIL
 ■ GAS
 ■ WATER
 ■ EMULSION

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