

FEEDING THE BEAST



Figure 1 Antifoam use can turn normal amine foaming (above) into the **BEAST** (below)

Abstract

Foams don't go away simply by adding antifoam. The accumulation of contaminating surfactants in the presence of inhibitors forces the foam to change into a form we call the BEAST. As with most quick fixes, there is an operating price to pay for the temporary relief of symptoms without addressing the root cause. This article describes the equilibrium shift that is produced after foam is broken by antifoams, and the foam causing surfactants allowed to re-enter the bulk solution. (See figure 2 below.) Further surfactant ingresses and column internals fouling become invisible to the process because the symptoms are being suppressed by the inhibitors. The result is, at the very least, the appearance of ineffective antifoam, and at the very most, a more severe amine plant upset.



Figure 2 Amine solution foaming conditions (left to right); a) No foaming, b) surfactant caused chemical foaming, c) foam inhibition by antifoam, d) THE BEAST