Question 70: Please discuss the merits and detriments of using low-base strength or high-base strength neutralizers for corrosion control in atmospheric column overhead.

Chris Claesen (NALCO Champion)

We do not recommend the use of low base strength neutralizers that have a pkb lower than Ammonia for the obvious reason that these are not able to compete with Ammonia in the chloride salt formation. We prefer higher base strength neutralizers but that is only part of the selection criteria, other important criteria are vapor/liquid partitioning, chloride salt properties, oil/water distribution in OVHD and desalter, volatility, toxicity and cost/performance.

Phil Thornthwaite (NALCO Champion)

It is important to note that the use of any neutralizer should be closely monitored using the appropriate phase modelling software so that dew point pH and salt formation properties can be closely monitored. The ability to monitor this on a routine basis is advantageous (i.e. every service visit) versus periodic assessments as it help in ensuring that corrosion is effectively controlled whilst assessing the risk of salt formation.

Dennis Hayne (NALCO Champion)

The base strength is important to make sure the neutralizer chosen reacts with its target acid at the point in the process where it is supposed to. The efficiency of application also depends on method of introduction into the overhead system.

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