

On-Site Inlet Contamination Testing & Sampling

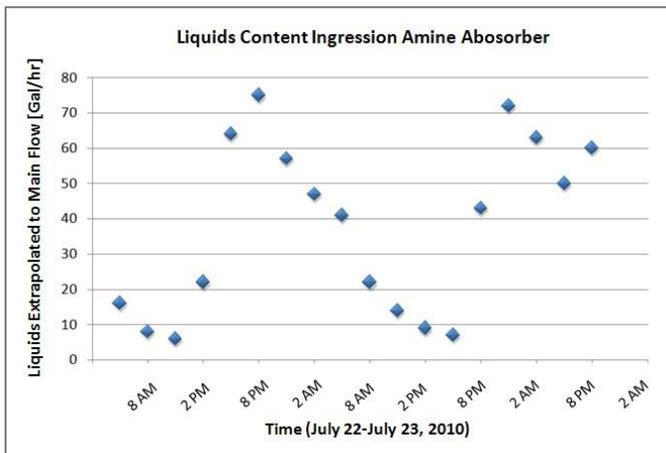
One of the best ways to assess contamination breakthrough from a gas-liquid separator is to remove and quantify all liquids in the stream. To achieve this, it is necessary to efficiently remove all liquids from the stream using a high performance coalescer. The best method is to use a micro-fiber Gas Coalescer Sampling System (GASCO) equipped with ports and features that will allow the removal of 99.9998% of liquids. This separation is completed by contacting the liquids with a specialized formulation of layered materials and coatings specifically designed to promote total liquids interception, coalescence and liquids discharge.



The GASCO system (picture to the right) has a number of mechanisms to measure flow rate, temperature, pressure, differential pressure and liquid buildup levels. The gas stream is contacted with the internal materials that intercepts, coalesces and discharges the liquids into a reservoir for measurement, withdrawal and further analysis. The system also allows for segregation of liquids and solids by separating both contaminants in different and independent stages. Using this method hence allows solids quantification and characterization as well as liquids.

Case Study: Amine Unit Inlet Separation & Two-Phase Separator Efficiency Determination

A gas processing plant in the United States was experimenting amine unit foaming. The initial separation of the feed gas was performed in a 3-phase separator. Secondary liquids removal was



done in a vertical gas coalescer. To better understand the liquids entering the amine unit, a sampling test system was used (GASCO). The system was connected 2 feet away from the absorber at the main feed gas pile (slipstream). The sampling unit was operated for 36 hours to account for process variability, changes in the feed gas and environmental factors. As seen in the graph to the left, there were considerable liquids entering the unit (37 GPH on average). These

loadings were more prevalent during night time as lower temperatures caused higher liquids condensation. Further evaluation and inspection of the gas coalescer revealed that liquid by pass was caused by broken internals. The system was repaired enabling liquids to properly separate leading to amine foaming reduction to a minimum.

For additional information, please contact us at Support@NexoSolutions.com