# Separation Equipment/Vessel Evaluations, Modeling & Designs

Contamination ingression in gas processing units is one of the most prevalent mechanisms negatively affecting plant operations. In order to enable plants to run with minimal instabilities, increased capacity and high reliability, it is necessary to remove unwanted contaminants prior to processing.

From a mechanical perspective, filters, inlet separators, adsorption beds, 2 and 3-phase separatos, and coalescer systems are key devices in any processing facility. Fundamental differences exist among the various strategies, systems and devices in terms of their applicability, operability and performance. These differences directly impact the efficiency and effectiveness of contaminant removal.
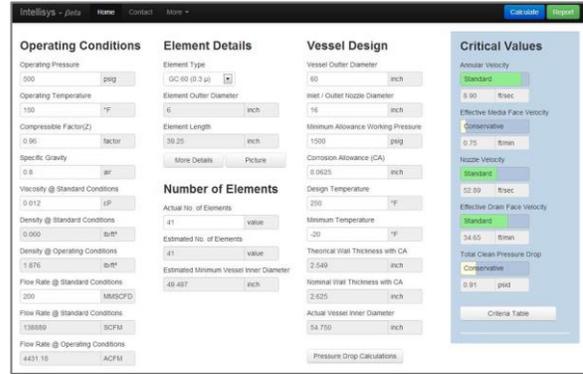
Poor feed gas conditioning is often found by Nexo Solutions during technical evaluations of inlet separations equipment, and process design or operational deficiencies are always found in

association. The effects of poor gas feed conditioning can have profound impacts in almost every gas processing operation, such as financial losses associated with low efficiency, extended downtimes, unscheduled maintenance, solvent losses, solvent contamination, solvent degradation, bed deactivation and equipment failure.
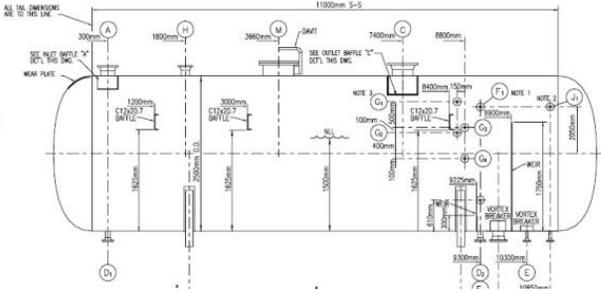
To address these deficiencies, different strategies for ensuring the feed gas meets processing parameters are recommended. These strategies can range from carefully considering feed contaminants, process conditions and variations to ensuring correct vessel design and correct selection of internals.

Nexo Solutions carefully considers several parameters, field exerience and also utilizes advanced modeling software in order to evaluate separation systems. The results of each technical evaluations can reveal previously undiscovered deficiencies in both design and operation of any separation vessel. Furter recommendations and upgrader procedures can provide simple and effective improvements to process efficiency and profitability.

For additional information, contact us via **Support@NexoSolutions.com**