Hybrid Separation Technology: H₂S and Mercaptans Removal

Exion® / Intellichem® HR

The combination of Exion® selective separation systems and Intellichem® HR advanced chemical technology creates a unique hybrid solution capable of unprecedented results. The hybrid system is designed for optimized performance in H₂S and mercaptans separation. The chemical is a water-soluble blend of active components in an organic environment. The chemistry is extremely effective in removing H₂S, COS and low molecular weight mercaptans in applications including:

- Gas
- Water
- Crude Oil
- NGL, LNG and LPG
- Hydrocarbon Condensates
- Fuel Oils

Exion® is a selective separation system that can effectively remove dissolved components in a gas or liquid stream. The system is completely integrated with a series of components for high efficiency water injection, mixing, a contacting-extracting stage and a phase separation stage.

Intellichem® HR converts H₂S and mercaptans irreversibly and instantaneously into a stable, non-hazardous and water-soluble component. This eliminates the many issues and detrimental effects in the process system often associated with aldehydes, triazine-based chemistries and other scavengers that leave reaction products in the hydrocarbon phase. Intellichem® HR is a safe product which is compatible with virtually all production chemicals and system materials. The chemical requires very little retention time as the chemical reactions are nearly instantaneous, and most importantly, the reaction is irreversible forming stable water soluble by-products.

Hybrid System Design

The Hybrid Exion® selective separation system uses an upstream chemical injection of Intellichem® HR followed by a specialized mechanical process for contacting and chemical reaction. The hydrocarbon stream is then extracted of any water soluble components, and both phases are then efficiently separated. This combination enables never before seen results and allows for the efficient removal of H₂S and mercaptans without downstream complications.

Benefits

High Removal Efficiency | Low Capital | Small Footprint | Skidded Integrated Systems | Minimal Maintenance | Continuous Operation | No Downstream Effects

For additional information about Nexo Solutions please contact us via email at info@nexosolutions.com or also visit our website at www.nexosolutions.com