PURASPEC\textsubscript{JM} H\textsubscript{2}S Removal Scavenger Technology from Cameron

Environmentally safe H\textsubscript{2}S removal solution

The PURASPEC\textsubscript{JM} technology uses a fixed bed containing a mixed metal oxide in engineered granules to remove traces of contaminants from hydrocarbon gases and liquids. In particular, the processes are designed to remove a range of sulphur compounds – most frequently hydrogen sulphide (H\textsubscript{2}S) and carbonyl sulphide (COS). They are widely used for sweetening to meet pipeline specifications and polishing to meet individual customer feedstock requirements.

Features and operating benefits

- **Low capital cost:** fixed-bed processes are simple and require only low capital outlay. It is possible to phase installation to match expenditure to the development of a project.
- **Impurity removal to very low levels:** these can be as low as ppbv for H\textsubscript{2}S from natural and associated gas and copper strip 1A quality for propane/LPG. If required, total removal can be achieved.
- **Effective low temperature operation:** PURASPEC\textsubscript{JM} processes operate at temperatures from 30-400° F (0-200° C).
- **Easy retrofitting:** to existing onshore and offshore installations.
- **Easy operation:** in dry or saturated gas, in high or low CO\textsubscript{2}-containing gases. End-of-life discharge is free-flowing under gravity.
- **No feedstock losses:** only the impurities are reacted and absorbed.
- **High operating flexibility:** PURASPEC\textsubscript{JM} processes are flexible and accommodate changes in throughput. The technology is truly “fit-and-forget.”
- **Environmentally friendly:** there are no vents, flares, noise or problematic effluents and the plant has a minimal footprint. Used absorbents can be reprocessed and disposed of in an environmentally sound manner. Energy use and CO\textsubscript{2} emissions during operation is effectively zero.

**PURASPEC\textsubscript{JM} applications for H\textsubscript{2}S removal**

PURASPEC\textsubscript{JM} has already been proven for more than 25 years in over 150 installations worldwide, including offshore and onshore applications.

The technology is ideally suited for H\textsubscript{2}S polishing and is targeted at applications where the sulphur removal capacity required is no greater than 500 lbs/day. The technology can also be used in conjunction with other bulk sulphur removal technologies to offer a more cost effective solution.

**Some applications include:**

- Sales gas
- Fuel gas
- Reboiler vent gas
- Carbon dioxide
- Tank vapors
- Amine off-gas

PURASPEC\textsubscript{JM} processes operate effectively in the temperature range of 30-400° F (0-200° C), pressures from atmospheric up to 1750 psi (120 bar) and flow rates exceeding 1.8 bscfd (2.0 million Nm\textsuperscript{3}/h).
How it works

PURASPEC™ is a market leading product for hydrogen sulphide removal from hydrocarbon streams. It is a well-proven and robust product for removing hydrogen sulphide down to exceptionally low levels. It removes hydrogen sulphide by an irreversible chemical reaction.

A typical PFD is as shown below

Once the hydrogen sulphide has reacted with the metal oxide present in the absorbent, it is chemically bound onto the material and cannot escape. Even when the absorbent is fully saturated, it will not desorb hydrogen sulphide or sulphur, making it safe to handle spent material.

The spent material is shipped to a facility that removes the absorbed sulfur before the metals are extracted and recycled into industrial applications. All constituents, including the sulfur, are returned to the chemical industry.

Cameron's Aftermarket Services

Cameron offers exceptional on-site operational and maintenance support through our world-class CAMSERV™ Aftermarket Service Network. A team of experienced commissioning, service, design and development personnel covering process, mechanical, electrical, and control disciplines provide complete support.

We bring together three critical areas to create a synergy which results in a more powerful solution than you could obtain taking them separately:

• **World class products** manufactured to ISO 9001 standards, underpinned by a dedicated research and technology team developing products required to meet your ever changing and demanding needs.

• **Applications know-how** from a dedicated gas processing team with years of experience and knowledge in every facet of operation.

• **A full range of specialist services** drawing on our expertise, designed to ensure you get the best from your plant.

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<thead>
<tr>
<th>LOCATIONS</th>
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<tbody>
<tr>
<td>United States of America</td>
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