

## H<sub>2</sub>S REMOVAL FROM NATURAL GAS

### SourSep™

#### Problem

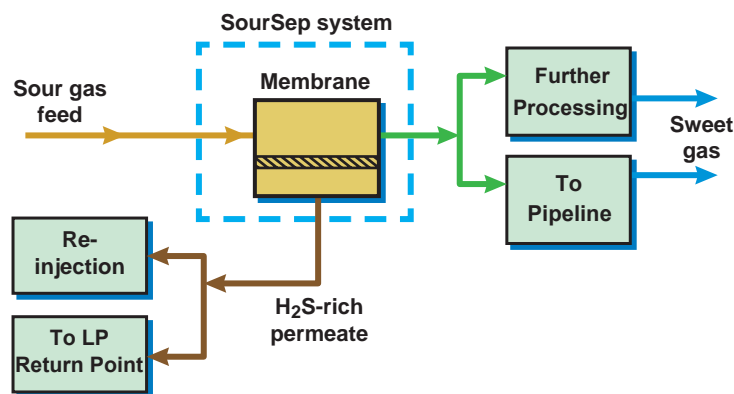
Sour gas is a right from the wellhead. Simple bulk removal of H<sub>2</sub>S upstream will mitigate the problem. Upstream bulk removal can be combined with re-injection or Claus processing to unload downstream sweetening facilities. Downstream facilities can then be configured to merely polish the gas to pipeline specs - allowing a wider choice of downstream processing options.

#### Membrane Solution

MTR's SourSep™ systems bulk remove H<sub>2</sub>S from pressurized sour gas in a simple single stage process. Bulk removal (>75%) will generate a very sour permeate which can be re-injected or processed in a Claus plant. The unit is simple, has no moving parts, no absorbents or adsorbents and processes only gas. No liquids or solids are used or produced. The incoming high pressure sour stream is split into a moderately sweetened high pressure product stream and a low pressure H<sub>2</sub>S rich reject stream.

- Bulk H<sub>2</sub>S removal using a simple passive system
- Combine with re-injection
- Simple and effective at small scale — simple to start-up and operates unattended
- Compact skid-mounted equipment can be trucked or airlifted to site

*“Because of their simplicity, SourSep™ units do not need a myriad of redundant components to ensure reliability.”*



SourSep™ bulk H<sub>2</sub>S removal can be combined with reinjection for bulk H<sub>2</sub>S disposal. Moderately sweetened product gas can be polished using lightly loaded conventional amine units with existing Claus facilities

For H<sub>2</sub>S removal from fuel gas — see MTR leaflet “Fuel Gas Conditioning”

## H<sub>2</sub>S REMOVAL FROM NATURAL GAS

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*SourSep™ unit for installation on an Indonesian remote production field*

#### Benefits

- Simple bulk H<sub>2</sub>S removal down to 200-300 ppm
- Product gas with low hydrocarbon and water dewpoint
- Robust, proven membrane performance at high H<sub>2</sub>S content
- Skid mounted equipment, can be trucked to site and installed fast

#### System Performance

- Feed flow rate: 1 MMSCFD to >100 MMSCFD
- Feed H<sub>2</sub>S content: >5% to <100 ppm
- Product gas pressure 30 to 1200 psia
- H<sub>2</sub>S reduction up to 90%

#### Application Options

- Bulk upstream removal
- Minimize scavenger loading

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