www.mator.com

Mator News

13/2005

Provider of innovative consultancy services in gas/oil/water/solids separation technology

Troubleshooting of Gas Dehydration and Glycol Regeneration

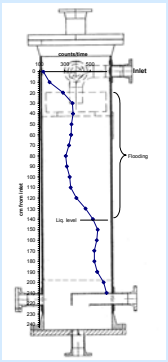
Typical challenges in gas dehydration and glycol regeneration plants are:

- ***Glycol contamination.***
- ***Glycol losses.***
- ***How to obtain stable and effective control of foaming tendencies and liquid build-up in the gas phase.***

Insufficient glycol quality may lead to deviation from gas export specifications. Possible causes and areas that need to be investigated include:

- Excessive entrained water and/or hydrocarbons from upstream scrubber.
- Solids may promote foaming and carry-over of liquid in addition to erosion problems, plugging of column packing/trays and reboiler/heat exchanger fouling.
- Operational conditions.

Loss of glycol may be caused by foaming, carry-over and liquid build-up in contactor, natural vaporization due to equilibrium balance and decomposition/losses at high temperatures.



Foam propagation should be prevented by proper solution filtration or by rising the temperature above the dew point of the contaminated hydrocarbons. Adjustment of pH can dissolve accumulated solid brine. Reduced capacity may be detected as flooding. The figure indicates a typical flooding section in a glycol stripping column, which makes almost the entire free contact volume in the column fully flooded.

Mator AS field survey assistance:

Neutron backscattering	Probably the easiest method to verify flow patterns and foaming conditions inside contactors, stripping columns or flash separators etc.
Gamma-scan of contactor	Detection of unfavorable liquid hold-up, channeling or maldistribution in the gas phase, and mechanical integrity issues.
Tracer technology	Injection of radioactive tracer allows monitoring of liquid build-up in gas phase and eventually short-circuiting in mesh pad or vane pack.
HYSYS simulation	Mator AS can provide valuable comparison of operational conditions with reliable estimates of theoretical expected conditions.
Sampling and analysis	As needed.

A field survey conducted by Mator with use of the facilities listed above will provide a complete diagnosis of your gas dehydration and TEG regeneration plants – also applicable to gas sweetening processes and MEG regeneration. Our hands-on experience will assist you with qualified recommendations for further operation of your plant.

Recent Mator projects:

- **Statoil Heidrun:** Produced water optimization and flocculant testing.
- **BP Valhall:** Process mapping and scanning of inlet separators.
- **Statoil Åsgard B:** MEG separator verification and antifoam testing.
- **Marathon Brae Alpha:** Epcon test.

Mator AS

Herøya Næringspark, N-3936 Porsgrunn, Norway
Tel: +47 35 57 49 00, Fax: +47 35 57 49 10
e-mail: admin.mator@mator.com *www.mator.com*