STL PROCESS DESIGN

SEIBERT TECK LICENSING

TEG GAS DEHYDRATION UNITS

STL Process Design TEG Gas Dehydration Units are a blend of rugged oilfield type construction and separation / dehydration efficiency.

The integral separator design employs centrifugal force in the primary removal of oil/condensate and water from natural gas, then uses Stokes type gravity settling for secondary separation and finally utilizes a mesh pad or vane type mist extractor for tertiary liquid droplet removal. Third phase construction adds Stokes type gravity settling capabilities to the liquid collection section of the separator enabling efficient separation of oil/condensate and water to occur.

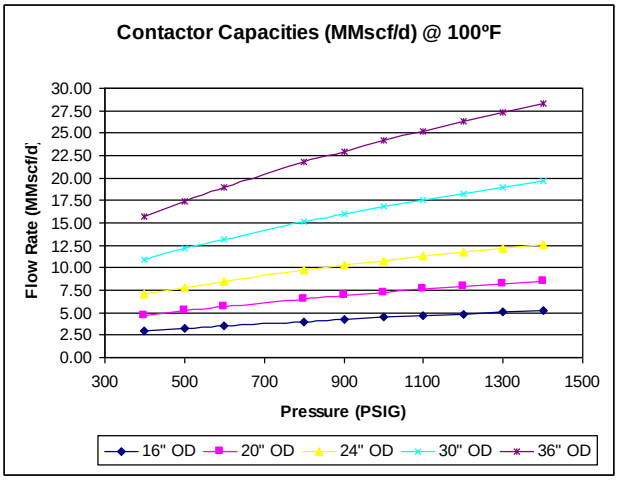
The glycol gas dehydrator design employs a contactor with structured packing (or bubble cap trays) to provide intimate contact between the moisture laden natural gas and the dry glycol desiccant. A high efficiency mist extractor is installed at the top of the contactor to limit mechanical glycol losses to less than 0.1 pounds TEG per MMSCF of gas treated.

The glycol regenerator consists of a reboiler, still column, stripping column and surge tank and is equipped with a natural gas fueled flame arrested burner.

The glycol pump is typically a glycol-gas powered unit that utilizes energy from the high pressure rich glycol along with a small amount of high pressure gas to circulate the lean glycol.

All STL Process TEG Gas Dehydration Units are constructed according to the API 12GDU Specification for Glycol-Type Gas Dehydration Units, GPSA Section 20, and other applicable Industry Codes and Standards unless stipulated otherwise.

STANDARD DEHYDRATION PACKAGE LINE-UP		
CONTACTOR	REBOILER	GLYCOL PUMP
16" OD	100,000 BTU/HR	40 US GALLON/HR
20" OD	175,000 BTU/HR	90 US GALLON/HR
24" OD	250,000 BTU/HR	90 US GALLON/HR
30" OD	375,000 BTU/HR	210 US GALLON/HR
36" OD	500,000 BTU/HR	450 US GALLON/HR



OPTIONS

- 3-Phase Glycol Flash Separator for reduced TEG losses.
- 2-Phase Fuel Gas Scrubber.
- 3rd Phase Controls on TEG Contactor.
- Carbon Filtration.
- Standby and electric pump(s).

ENHANCED PERFORMANCE

- Standard Design: 4#/MMSCF water content in outlet gas with lean TEG purity of 99.9%.
- Azeo-Stripping high dewpoint depression units (w/ water content in outlet gas as low 0.05#/MMSCF and TEG purities in excess of 99.999%).
- Azeo-Octane TEG regeneration process for increased TEG purity with no stripping gas for decreased emissions (w/ water content in outlet gas as low 0.025#/MMSCF and TEG purities in excess of 99.9999%).
- Azeo-Finger TEG regeneration process for increased TEG purity with no stripping gas for decreased emissions (w/ water content in outlet gas as low 1.0#/MMSCF and TEG purities in excess of 99.9%). .

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STL PROCESS DESIGN

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TEG GAS DEHYDRATION PACKAGE INQUIRY INFORMATION FORM:

1.0 CUSTOMER DATA:

NAME: _____ DATE: _____

ATTEN.:_____ REF NO: _____

PH / EMAIL:_____ LOCATION: _____

2.0 PROCESS DATA:

A. GAS VOLUME:

a. _____ MMSCFD SPECIFIC GRAVITY: _____ (AIR = 1.0)

B. GAS CONDITIONING:

a. WATER CONTENT / INLET GAS: _____ # / MMSCF (IF UNKNOWN, ASSUMED SATURATED)

b. WATER CONTENT / OUTLET GAS: _____ # / MMSCF

C. LIQUID VOLUME :

a. CONDENSATE: _____ BPD SPECIFIC GRAVITY: _____ (WATER = 1.0)

b. WATER: _____ BPD SPECIFIC GRAVITY: _____ (WATER = 1.0)

D. OPERATING TEMPERATURE (°F): _____ MAXIMUM _____ MINIMUM

E. OPERATING PRESSURE (PSIG): _____ MAXIMUM _____ MINIMUM

F. H2S CONTENT: _____ MOLE % CO2 CONTENT: _____ MOLE %

3.0 MECHANICAL DATA:

G. DESIGN PRESSURE: _____ PSIG @ ____/____ °F + _____ " CORROSION ALLOWANCE

H. NACE REQUIREMENTS (SPECIFY): _____

I. STRESS RELIEVING (SPECIFY): _____

4.0 PACKAGE DATA:

J. FLASH TANK: YES ☐ NO ☐

K. CARBON FILTER: YES ☐ NO ☐

L. FUEL GAS SCRUBBER: YES ☐ NO ☐

M. CONTACTOR 3RD PHASE: YES ☐ NO ☐

N. STANDBY PUMP: YES ☐ NO ☐ PUMP TYPE: _____

O. GAS METERING: YES ☐ NO ☐ FITTING TYPE: _____

P. RECORDER: YES ☐ NO ☐ RECORDER TYPE: _____

Q. CONDENSATE METERING: YES ☐ NO ☐ METER TYPE: _____

R. WATER METERING: YES ☐ NO ☐ METER TYPE: _____

S. UTILITIES AVAILABLE: _____ PHASE _____ HZ _____ VOLTS

T. INSTRUMENTATION: PNEUMATIC ☐ ELECTRONIC ☐

U. BUILDING: SHED TYPE ☐ GABLE TYPE ☐

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