API Specification
12GDU
1st Edition, December 1990
Glycol-Type Gas Dehydration Units

Appendix C

Glycol-Type Gas Dehydration User Design Information Sheet

Glycol-Type Gas Dehydration User Design Information Sheet

Field name and Location _____

Design Conditions

Gas Rate _____ MMscfd (Max.)

_____ MMscfd (Min.)

Design Pressure _____ psig

Design Temperature, Max. _____ °F

Design Temperature, Min. _____ °F

Operating Pressure _____ psig Min. _____ psig Max.

Operating Temperature _____ °F Min. _____ °F Max.

Gas Specific Gravity _____ (Air = 1.0)

Inlet Gas Water Content _____ lb./MMSCF

Inlet Gas Dew Point _____ °F

Outlet Gas Water Content
or Dew Point Required _____ lb./MMSCF or _____ °F

H_2S Content _____ PPM

CO_2 Content _____ %

Available Utilities (Electricity, Instrument Air, Fuel Gas, Etc.) _____

Site Elevation _____ Feet Above Sea Level

Glycol-Type Gas Dehydrator – Design Data Sheet
Vendor Design Data Sheet
(To be completed by User and Vendor)

Inlet Scrubber

Design Pressure			_____
Diameter X Length			_____
Mist Eliminator Material and Type (Wire Mesh/Vane/Filter)			_____
Gas Inlet/Outlet Connection – Size and Type			_____
Integral with Absorber	❑ Yes	❑ No	_____
Weight			_____
Manway/Inspection Opening	❑ Yes	❑ No	_____
Corrosion Allowance	❑ Yes	❑ No	_____
Accessories Provided			
Pressure Gauge	❑ Yes	❑ No	_____
Thermometer with Thermowell	❑ Yes	❑ No	_____
Relief (full or thermal)			_____
Level Controller with Control Valve	❑ Yes	❑ No	_____
Sight Glass	❑ Yes	❑ No	_____

Contractor

Design Pressure			_____
Diameter X Length			_____
Tray or Packing Type and Material			_____
Mist Eliminator Material and Type (Wire Mesh/Vane/Filter)			_____
Mist Eliminator – Size and Material			_____
Gas Inlet/Outlet Connection – Size and Type			_____
Gas/Glycol Heat Exchanger – Size and Type and Heat Transfer Area			_____
Weight			_____
Manway/Inspection Opening	❑ Yes	❑ No	_____
Corrosion Allowance	❑ Yes	❑ No	_____
Accessories Provided			
Pressure Gauge	❑ Yes	❑ No	_____
Thermometer with Thermowell	❑ Yes	❑ No	_____
Relief (full or thermal)			_____
Level Controller with Control Valve	❑ Yes	❑ No	_____
Sight Glass	❑ Yes	❑ No	_____
Low Liquid Level Shutdown			_____

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Glycol-Type Gas Dehydrator – Design Data Sheet
Vendor Design Data Sheet *(continued)*
(To be completed by User and Vendor)

Reboiler

Design Pressure				_____
Diameter X Length				_____
Design Heat Duty				_____
Firetube Area				_____
Firetube Wall Thickness				_____
Average Firetube Heat Flux				_____
Insulation Type/Thickness				_____
Pressure Relieving Device or Method				_____
Accessories Provided				
Thermometer with Thermowell	❑ Yes	❑ No		_____
Temperature Controller with Control Valve	❑ Yes	❑ No		_____
High Temperature Shutdown (Glycol)	❑ Yes	❑ No		_____
High Temperature Shutdown (Stack)	❑ Yes	❑ No		_____
Flame Failure Shutdown	❑ Yes	❑ No		_____
Sight Glass/Type	❑ Yes	❑ No	Type	_____
Stack Gas Test Connection	❑ Yes	❑ No		_____

Still Column

Design Pressure				_____
Diameter X Length				_____
Packing Type and Material				_____
Reflux Oil	❑ Yes	❑ No		_____
Insulation Thickness and Type (if used)				_____

Surge

Design Pressure				_____
Diameter X Length				_____
Integral with Reboiler	❑ Yes	❑ No		_____
Insulation Thickness and Type				_____
Low Glycol Liquid Level Alarm/Shutdown	❑ Yes	❑ No	Type	_____

Glycol/Glycol Heat Exchanger

Design Heat Duty	_____
Design Pressure	_____
Heat Exchanger – Size, Type and Heat Transfer Area	_____
Insulation Type/Thickness	_____

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Glycol-Type Gas Dehydrator – Design Data Sheet
Vendor Design Data Sheet *(continued)*
(To be completed by User and Vendor)

Particle Filter

Manufacturer/Model No.				_____
Design Pressure				_____
Maximum Flow Capacity				_____
Filter Element Micron Removal				_____
Insulation Thickness				_____
Differential Pressure Indicator	❑ Yes	❑ No		_____
Bypass Valves and Piping	❑ Yes	❑ No	Type	_____

Pump

Manufacturer/Model No.			_____
Type (Electric – Glycol/Gas Powered) and Speed	❑ Yes	❑ No	_____
Spare Pump			_____
Flow Rate			_____
Motor Type, HP, Voltage, Phase, Speed			_____
Pulsation Dampeners	❑ Yes	❑ No	_____
Flow Indicator	❑ Yes	❑ No	_____

Miscellaneous Information

Level Gage Glass Type	_____
Reboiler Temperature (°F)	_____
Glycol Purity (weight %)	_____
Circulation Rate (gal/hr)	_____
Gallons Glycol Circulated/lb. Water Removed	_____
Estimated Fuel Gas Usage (SCF/hr)	_____
Estimated Stripping Gas Usage	_____
Reconcentrator Assembly Skid – Size and Weight	_____
Instrument Tubing Material	_____

Additional Optional Requirements

Gas-Condensate-Glycol Separator

Design Pressure			_____
Diameter X Length			_____
Type (Vertical/Horizontal, 2-Phase/3-Phase)			_____
Glycol Retention Time			_____
Corrosion Allowance	❑ Yes	❑ No	_____
Insulation Thickness and Type			_____
Accessories Provided			
Pressure Gauge	❑ Yes	❑ No	_____
Therometer with Thermowell	❑ Yes	❑ No	_____
Relief (Full or Thermal)			_____
Glycol Level Controller with Control Valve	❑ Yes	❑ No	_____
Hydrocarbon Level Controller with Control Valve	❑ Yes	❑ No	_____
Sight Glasses	❑ Yes	❑ No	_____
Back Pressure Valve	❑ Yes	❑ No	_____

Activated Carbon Filter

Manufacturer/Model No.			_____
Design Pressure			_____
Maximum Flow Capacity			_____
Carbon Replacement (Bulk/Cartridge Element)			_____
Insulation Thickness and Type			_____
Differential Pressure Indicator	❑ Yes	❑ No	_____
Bypass Valves and Piping	❑ Yes	❑ No	Type _____

Fuel Gas Scrubber ❑ Yes ❑ No _____

Valves and Controls Mfg. Standard _____
Others _____

Pilot Igniter ❑ Yes ❑ No _____

Winter Coil in Inlet Scrubber ❑ Yes ❑ No _____

Lifting Lugs ❑ Yes ❑ No _____

Painting Mfg. Standard _____
Others _____

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Additional Optional Requirements *(continued)*

Heat Efficiency Options

A. Secondary Air Adjustment	❑ Yes	❑ No	_____
B. Turbulator	❑ Yes	❑ No	_____
C. Surge Insulated	❑ Yes	❑ No	_____

Comments _____