



# AMINE UNIT EVALUATION

To: AMINES & PLASTICIZERS LIMITED  
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Date: \_\_\_\_\_

## CUSTOMER INFORMATION:

Company:

Contact Person:

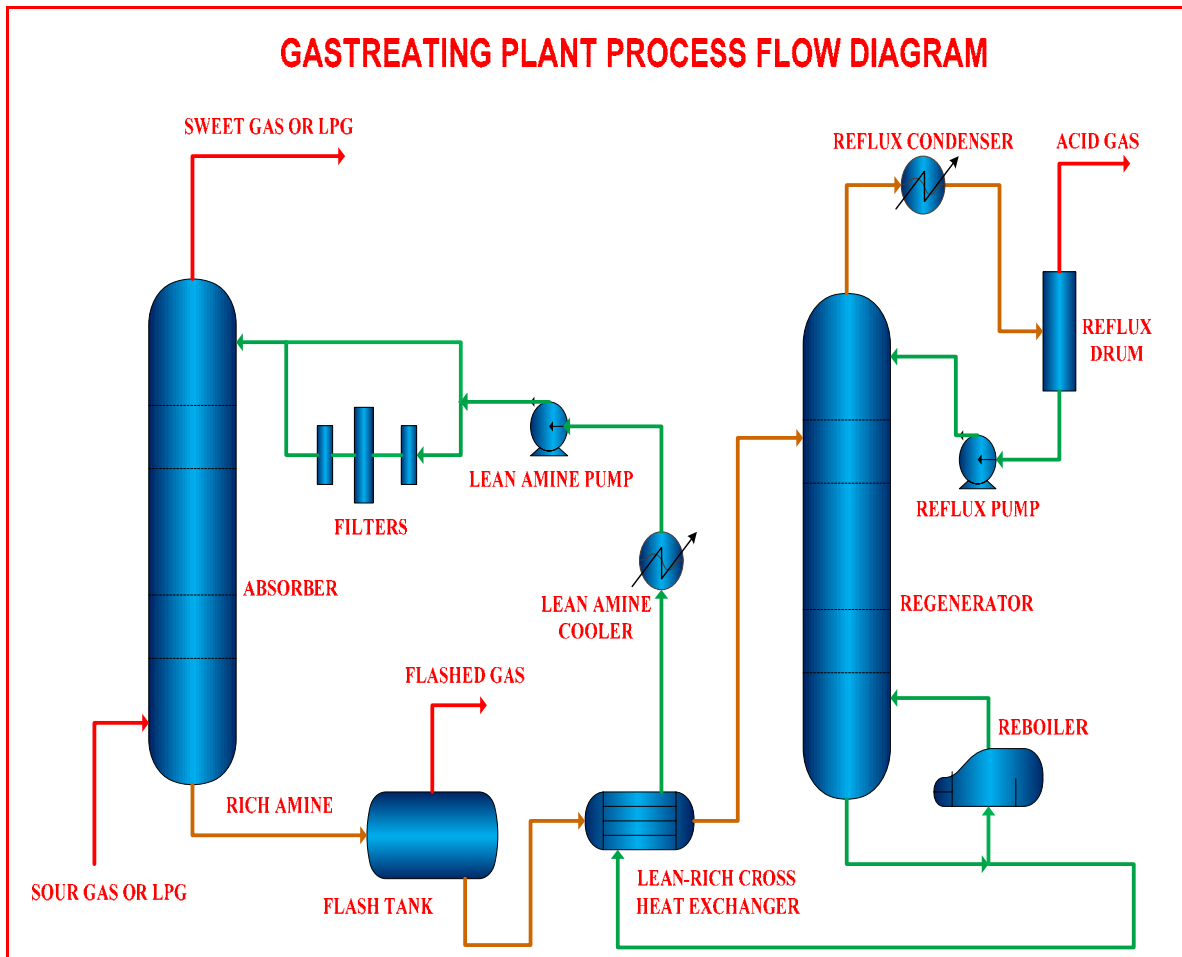
Location:

Phone:

Fax:

E-mail:

## GENERAL PLANT LAY-OUT:



Metric units :

## ABSORBER DETAILS

### NAME / NUMBER:

### FEED STREAM CONDITIONS OF SOUR GAS OR LPG:

Source of feed

	DESIG	ACTUAL	
Flow:		_____	MMSCMD gas
Pressure:		_____	bar a
Temperature:		_____	°C

### FEED COMPOSITION OF SOUR GAS / LPG:

CO <sub>2</sub>	mol%	H <sub>2</sub> S	mol%		
H <sub>2</sub>	mol%	CH <sub>4</sub>	mol%	C <sub>2</sub> H <sub>6</sub>	mol%
C <sub>2</sub> H <sub>4</sub>	mol%	C <sub>3</sub> H <sub>8</sub>	mol%	C <sub>3</sub> H <sub>6</sub>	mol%
n-C <sub>4</sub>	mol%	i-C <sub>4</sub>	mol%	n-C <sub>5</sub>	mol%
i-C <sub>5</sub>	mol%	n-C <sub>6</sub>	mol%		
CO	mol%	N <sub>2</sub>	mol%	O <sub>2</sub>	mol%
H <sub>2</sub> O	mol%	COS	mol%	CS <sub>2</sub>	mol%
C <sub>1</sub> SH	mol%	C <sub>2</sub> SH	mol%	C <sub>3</sub> SH	mol%

Other components:

### REQUIRED SPECIFICATION OF TREATED GAS OR LPG:

CO <sub>2</sub>	ppmv gas	H <sub>2</sub> S	ppmv gas	COS	ppmv gas
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Other sulfur

### LEAN AMINE DETAILS:

Temperature:	°C	Feed tray number:	
Design rate:	m <sup>3</sup> /h liquid	Actual rate:	m <sup>3</sup> /h liquid

### ABSORBER DETAILS:

Diameter:	mm	Height:	mm
<b>TRAYED ABSORBER</b>		<b>PACKED ABSORBER</b>	
Type of trays:		Type of packing:	
Number of trays:		Packing material:	
Tray spacing :	mm	Nominal size:	mm
Number of		Packing Bed Height:	mm
Weir height:	mm	No. of Packed Beds	
Downcomer			
Side:	mm	Downcomer Area:	mm <sup>2</sup>
Central:	mm	Active Area :	mm <sup>2</sup>
Off Center	mm		

REGENERATOR DETAILS:		NAME / NUMBER:	
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Diameter:	mm	Bottom pressure:	bara
Rich amine		Overhead	bara
- Temperature:	°C	Overhead	°C
- Feed tray number:		Reflux flow rate:	m3/h
<b>TRAYED REGENERATOR</b>		<b>PACKED REGENERATOR</b>	
Type of trays:		Type of packing:	
Number of trays:		Packing material:	stainless steel
Tray spacing :	mm	Nominal size:	mm
Number of passes:		Packing Bed	mm
Weir height:	mm	No. of Packed	
Downcomer width		Downcomer Area:	mm2
Side:	mm	Active Area :	mm2
Central:	mm		
Off Center:	mm		

REBOILER DETAILS:		NAME / NUMBER:	
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Number of reboilers:		Heat source:	
Total design duty:	kcal/h	Total actual duty:	kcal/h

RICH-LEAN CROSS HEAT EXCHANGER DETAILS:		NAME / NUMBER:	
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Total design duty:	kcal/h	Exchanger area:	m2
<b>Rich amine:</b>		<b>Lean amine:</b>	
Temperature in:	°C	Temperature in:	°C
Temperature out:	°C	Temperature out:	°C

LEAN AMINE COOLER DETAILS:		NAME / NUMBER:	
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Total design duty:	kcal/h	Exchanger area:	m2
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ACID GAS COOLER DETAILS:		NAME / NUMBER:	
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Total design duty:	kcal/h	Exchanger area:	m2
Gas temperature in:	°C	Gas temperature out:	°C

FLASH DRUM DETAILS:		NAME / NUMBER:	
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Operating pressure:	bara	Total volume:	m3
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RICH AMINE MECHANICAL FILTER DETAILS:		NAME / NUMBER:	
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Type :		Nominal size of cartridges:	
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**LEAN AMINE MECHANICAL AND CARBON FILTERS:**

**MECHANICAL FILTER BEFORE CARBON BED:**

Type : \_\_\_\_\_ Nominal size of cartridges: \_\_\_\_\_

**CARBON BED:** YES  NO

**MECHANICAL FILTER AFTER CARBON BED:** YES  NO

Type : \_\_\_\_\_ Nominal size of cartridges: \_\_\_\_\_

% of main circulation flow treated \_\_\_\_\_

**GENERAL BACKGROUND INFORMATION:**

Current solvent used:  MEA  DEA  DIPA  DGA  
 Other amines

Total solution inventory: \_\_\_\_\_ m3 Concentration: \_\_\_\_\_ Wt%

**WHY YOU REASON(S) FOR CONSIDERING AN ALTERNATE SOLVENT:**

- Energy savings
- Increased capacity
- Reduced corrosion
- Reduced CO<sub>2</sub> pick-up

Current operating problems: \_\_\_\_\_  
\_\_\_\_\_

**COMMENTS:**

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\_\_\_\_\_  
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