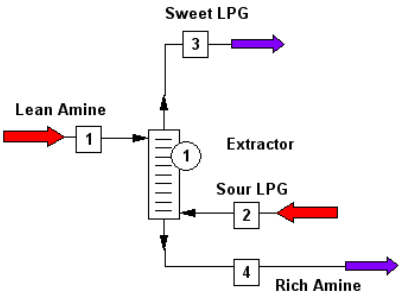
LLE Desulfurization of Liquefied Petroleum Gas



Extractor Summary	
Equip. No.	1
Name	Extractor
No. of Stages:	5
1st feed stage	1
2nd feed stage	5

Stream No.	1	2	3	4
Name	Lean Amine	Sour LPG	Sweet LPG	Rich Amine
- - Overall - -				
Molar flow kmol/hr	745.0	132.8	120.4	757.4
Mass flow kg/hr	16124.5	6768.8	6308.0	16585.3
Temp C	39.0	39.0	38.7	43.5
Pres kg/cm2	20.0	20.0	20.0	20.0
Vapor mole fraction	0.0000	0.0000	0.0000	0.0000
Actual vol m3/h	16.0	13.5	12.6	16.9
Std liq m3/h	15.8	12.3	11.6	16.6
Std vap 0 C m3/h	16698.8	2976.0	2699.3	16975.4
Component mole %				
Methane	0.00	0.83	0.56	0.06
Ethane	0.00	4.88	4.57	0.13
Propane	0.00	28.87	30.16	0.26
I-Butane	0.00	35.20	38.11	0.11
N-Butane	0.00	24.28	26.28	0.08
I-Pentane	0.00	0.20	0.22	0.00
N-Pentane	0.00	0.01	0.02	0.00
Hydrogen Sulfide	0.25	5.57	0.00	1.23
Water	95.63	0.17	0.08	94.09
Diethanolamine	4.12	0.00	0.00	4.05

DESCRIPTION:

Traditional way of gas desulfurization involved absorption process, where H2S was being removed with aqueous solution of mono- or diethanolamine. The new technology, becoming popular, is liquid-liquid extraction of liquefied petroleum gas (LPG).

CHEMCAD includes modified both AMINe thermodynamic model of CHEMCAD as well as the modified EXTRactor model able to simulate the new process possible.

CHEMCAD is a technology- and market-driven product, so market demands of common interest are implemented in the program. This example shows how to set up the flowsheet to make use of the special methods.