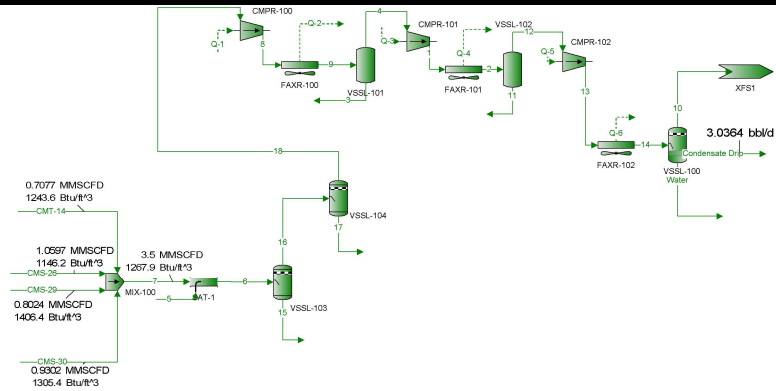


Inlet Compression Plant Schematic

Client Name:	PTSDK	Job: J877
Location:		
Flowsheet:	Inlet Compression	



* User Specified Values
 ? Extrapolated or Approximate Values

Process Streams Report
All Streams
 Tabulated by Total Phase

Client Name:	PTSDK	Job: J877
Location:		
Flowsheet:	Inlet Compression	

Connections

	CMS-26	CMS-29	CMS-30	CMT-14	Condensate Drip
From Block	--	--	--	--	VSSL-100
To Block	MIX-100	MIX-100	MIX-100	MIX-100	--

Stream Composition

	CMS-26	CMS-29	CMS-30	CMT-14	Condensate Drip
Mole Fraction	%	%	%	%	%
Nitrogen	3.99 *	2.34 *	2.64 *	3.09 *	0.189963
Oxygen	0 *	0 *	0 *	0 *	0
Carbon Dioxide	3.97 *	5.77 *	4.87 *	4.76 *	1.48285
Methane	78.53 *	63.74 *	70.95 *	73.32 *	11.0661
Ethane	4.81 *	6.47 *	5.41 *	5.29 *	3.24924
Propane	4.85 *	12.82 *	8.92 *	7.71 *	12.6782
i-Butane	1.01 *	2.19 *	1.72 *	1.49 *	5.10611
n-Butane	1.29 *	3.47 *	2.61 *	2.18 *	10.0629
i-Pentane	0.46 *	1.14 *	0.98 *	0.75 *	7.02919
n-Pentane	0.32 *	0.87 *	0.76 *	0.56 *	6.51263
n-Hexane	0.35 *	0.65 *	0.65 *	0.45 *	14.2347
n-Heptane	0.42 *	0.54 *	0.49 *	0.4 *	28.2682
Water	0 *	0 *	0 *	0 *	0.120017
Ethylene Glycol	0 *	0 *	0 *	0 *	0
Therminol 55	0 *	0 *	0 *	0 *	0

Stream Properties

Property	Units	CMS-26	CMS-29	CMS-30	CMT-14	Condensate Drip
Temperature	°F	70 *	70 *	70 *	70 *	120
Pressure	psia	43.6959 *	45.6959 *	24.6959 *	45.6959 *	464.696
Mole Fraction Vapor	%	100	100	100	100	0
Mole Fraction Light Liquid	%	0	0	0	0	100
Mole Fraction Heavy Liquid	%	0	0	0	0	0
Molecular Weight	lb/lbmol	21.67	26.86	24.6482	23.5801	68.2491
Mass Density	lb/ft^3	0.168091	0.219293	0.107828	0.191756	36.9097
Molar Flow	lbmol/h	116.353	88.102	102.134	77.7041	0.398935
Mass Flow	lb/h	2521.38	2366.42	2517.42	1832.27	27.227
Vapor Volumetric Flow	ft^3/h	15000.1	10791.1	23346.6	9555.22	0.737665
Liquid Volumetric Flow	gpm	1870.14	1345.39	2910.74	1191.3	0.0919686
Std Vapor Volumetric Flow	MMSCFD	1.0597 *	0.8024 *	0.9302 *	0.7077 *	0.00363335
Std Liquid Volumetric Flow	sgpm	13.5144	11.3214	12.6074	9.38388	0.0885603
Compressibility		0.991032	0.984667	0.993136	0.988564	0.138128
Specific Gravity		0.748208	0.927403	0.851036	0.814155	0.591795
API Gravity						93.4555
Enthalpy	Btu/h	-4.45625E+06	-3.85768E+06	-4.23388E+06	-3.15434E+06	-28759
Mass Enthalpy	Btu/lb	-1767.39	-1630.18	-1681.83	-1721.55	-1056.27
Mass Cp	Btu/(lb*°F)	0.455513	0.431254	0.439543	0.445676	0.591743
Ideal Gas Cp/Cv Ratio		1.25531	1.21051	1.22636	1.2366	1.07393
Dynamic Viscosity	cP	0.0110036	0.0103985	0.0105866	0.0107656	0.174541
Kinematic Viscosity	cSt	4.08669	2.96022	6.12918	3.50483	0.295214
Thermal Conductivity	Btu/(h*ft*°F)	0.0171485	0.0154516	0.0161254	0.0165144	0.0608617
Surface Tension	lbf/ft					0.000677986 ?
Net Ideal Gas Heating Value	Btu/ft^3	1039.16	1281.95	1187.53	1129.96	3472.92
Net Liquid Heating Value	Btu/lb	18146.5	18025.3	18210	18119	19156
Gross Ideal Gas Heating Value	Btu/ft^3	1146.22	1406.37	1305.4	1243.58	3757.43
Gross Liquid Heating Value	Btu/lb	20021.4	19783.1	20024.8	19947.4	20737.9

Remarks

* User Specified Values

? Extrapolated or Approximate Values

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Process Streams Report
All Streams
 Tabulated by Total Phase

Client Name:	PTSDK	Job: J877
Location:		
Flowsheet:	Inlet Compression	

Connections

	Water	1	2	3	4
From Block	VSSL-100	CMPR-101	FAXR-101	VSSL-101	VSSL-101
To Block	--	FAXR-101	VSSL-102	--	CMPR-101

Stream Composition

Mole Fraction	Water %	1 %	2 %	3 %	4 %
Nitrogen	0.000952405	3.0274	3.0274		3.0274
Oxygen	0	0	0		0
Carbon Dioxide	0.0396586	4.71379	4.71379		4.71379
Methane	0.0400801	71.0492	71.0492		71.0492
Ethane	0.00270966	5.36984	5.36984		5.36984
Propane	0.00311896	8.21893	8.21893		8.21893
i-Butane	0.000207488	1.54407	1.54407		1.54407
n-Butane	0.000726228	2.28765	2.28765		2.28765
i-Pentane	0.000128196	0.801208	0.801208		0.801208
n-Pentane	0.000100833	0.602886	0.602886		0.602886
n-Hexane	3.14971E-05	0.511372	0.511372		0.511372
n-Heptane	1.22765E-05	0.455518	0.455518		0.455518
Water	99.9123	1.41814	1.41814		1.41814
Ethylene Glycol	0	0	0		0
Therminol 55	0	0	0		0

Stream Properties

Property	Units	Water	1	2	3	4
Temperature	°F	120	259.557	120 *	120	120
Pressure	psia	464.696	217.696	212.696 *	84.6959	84.6959
Mole Fraction Vapor	%	0	100	99.4104		100
Mole Fraction Light Liquid	%	100	0	0.589602		0
Mole Fraction Heavy Liquid	%	0	0	0		0
Molecular Weight	lb/lbmol	18.0266	23.9522	23.9522		23.9522
Mass Density	lb/ft^3	61.6698	0.687768	0.858796		0.331497
Molar Flow	lbmol/h	1.67503	389.821	389.821	0	389.821
Mass Flow	lb/h	30.1951	9337.08	9337.08	0	9337.08
Vapor Volumetric Flow	ft^3/h	0.489625	13575.9	10872.3		28166.4
Liquid Volumetric Flow	gpm	0.0610442	1692.58	1355.51		3511.65
Std Vapor Volumetric Flow	MMSCFD	0.0152556	3.55035	3.55035	0	3.55035
Std Liquid Volumetric Flow	sgpm	0.0604368	47.0262	47.0262	0	47.0262
Compressibility		0.0218356	0.982253	0.953607		0.983746
Specific Gravity		0.988789	0.827004			0.827004
API Gravity		-94.1232				
Enthalpy	Btu/h	-204464	-1.546E+07	-1.61613E+07	0	-1.60797E+07
Mass Enthalpy	Btu/lb	-6771.45	-1655.77	-1730.88		-1722.13
Mass Cp	Btu/(lb*°F)	0.969367	0.534524	0.483529		0.467101
Ideal Gas CpCv Ratio		1.32341	1.18913	1.2207		1.2207
Dynamic Viscosity	cP	0.571346	0.0141157			0.0116704
Kinematic Viscosity	cSt	0.57837	1.28127			2.19778
Thermal Conductivity	Btu/(h*ft*°F)	0.366254	0.0249402			0.018443
Surface Tension	lbf/ft	0.00466184				
Net Ideal Gas Heating Value	Btu/ft^3	0.519146	1136.27	1136.27		1136.27
Net Liquid Heating Value	Btu/lb	-1047.34	17922.6	17922.6		17922.6
Gross Ideal Gas Heating Value	Btu/ft^3	50.8389	1250.59	1250.59		1250.59
Gross Liquid Heating Value	Btu/lb	11.9647	19733.8	19733.8		19733.8

Remarks

Process Streams Report
All Streams
 Tabulated by Total Phase

Client Name:	PTSDK	Job: J877
Location:		
Flowsheet:	Inlet Compression	

Connections

	5	6	7	8	9
From Block	--	SAT-1	MIX-100	CMPR-100	FAXR-100
To Block	SAT-1	VSSL-103	SAT-1	FAXR-100	VSSL-101

Stream Composition

Mole Fraction	5 %	6 %	7 %	8 %	9 %
Nitrogen	0	3.0274	3.07095	3.0274	3.0274
Oxygen	0	0	0	0	0
Carbon Dioxide	0	4.71379	4.7816	4.71379	4.71379
Methane	0	71.0492	72.0713	71.0492	71.0492
Ethane	0	5.36984	5.44709	5.36984	5.36984
Propane	0	8.21893	8.33716	8.21893	8.21893
i-Butane	0	1.54407	1.56628	1.54407	1.54407
n-Butane	0	2.28765	2.32056	2.28765	2.28765
i-Pentane	0	0.801208	0.812734	0.801208	0.801208
n-Pentane	0	0.602886	0.611559	0.602886	0.602886
n-Hexane	0	0.511372	0.518729	0.511372	0.511372
n-Heptane	0	0.455518	0.462071	0.455518	0.455518
Water	100	1.41814	0	1.41814	1.41814
Ethylene Glycol	0	0	0	0	0
Therminol 55	0	0	0	0	0

Stream Properties

Property	Units	5	6	7	8	9
Temperature	°F	239.564	68.7202	68.7202	253.77	120 *
Pressure	psia	24.6959	24.6959	24.6959	89.6959	84.6959 *
Mole Fraction Vapor	%	92.1386	100	100	100	100
Mole Fraction Light Liquid	%	7.86135	0	0	0	0
Mole Fraction Heavy Liquid	%	0	0	0	0	0
Molecular Weight	lb/lbmol	18.0153	23.9522	24.0376	23.9522	23.9522
Mass Density	lb/ft^3	0.0651668	0.104997	0.105373	0.282788	0.331497
Molar Flow	lbmol/h	5.52823	389.821	384.293	389.821	389.821
Mass Flow	lb/h	99.5926	9337.08	9237.48	9337.08	9337.08
Vapor Volumetric Flow	ft^3/h	1528.27	88926.9	87664.4	33018	28166.4
Liquid Volumetric Flow	gpm	190.538	11087	10929.6	4116.53	3511.65
Std Vapor Volumetric Flow	MMSCFD	0.0503491	3.55035	3.5	3.55035	3.55035
Std Liquid Volumetric Flow	sgpm	0.199093	47.0262	46.8271	47.0262	47.0262
Compressibility		0.909817	0.993515	0.993499	0.992284	0.983746
Specific Gravity			0.827004	0.829953	0.827004	0.827004
API Gravity						
Enthalpy	Btu/h	-575209	-1.62774E+07	-1.57022E+07	-1.54627E+07	-1.60797E+07
Mass Enthalpy	Btu/lb	-5775.62	-1743.3	-1699.83	-1656.06	-1722.13
Mass Cp	Btu/(lb*°F)	0.50361	0.44077	0.440662	0.524057	0.467101
Ideal Gas CpCv Ratio		1.31819	1.23363	1.23269	1.19029	1.2207
Dynamic Viscosity	cP		0.010691	0.0106579	0.0138774	0.0116704
Kinematic Viscosity	cSt		6.35649	6.31422	3.06356	2.19778
Thermal Conductivity	Btu/(h*ft*°F)		0.0162167	0.0162495	0.0243354	0.018443
Surface Tension	lbf/ft					
Net Ideal Gas Heating Value	Btu/ft^3	0	1136.27	1152.61	1136.27	1136.27
Net Liquid Heating Value	Btu/lb	-1059.76	17922.6	18127.3	17922.6	17922.6
Gross Ideal Gas Heating Value	Btu/ft^3	50.31	1250.59	1267.85	1250.59	1250.59
Gross Liquid Heating Value	Btu/lb	0	19733.8	19946.6	19733.8	19733.8

Remarks

Process Streams Report
All Streams
 Tabulated by Total Phase

Client Name:	PTSDK	Job: J877
Location:		
Flowsheet:	Inlet Compression	

Connections

	10	11	12	13	14
From Block	VSSL-100	VSSL-102	VSSL-102	CMPR-102	FAXR-102
To Block	XFS1	--	CMPR-102	FAXR-102	VSSL-100

Stream Composition

Mole Fraction	10 %	11 %	12 %	13 %	14 %
Nitrogen	3.06154	0.000429415	3.04536	3.04536	3.04536
Oxygen	0	0	0	0	0
Carbon Dioxide	4.76543	0.0193954	4.74163	4.74163	4.74163
Methane	71.8434	0.0188961	71.4705	71.4705	71.4705
Ethane	5.42737	0.0013999	5.40168	5.40168	5.40168
Propane	8.29901	0.00174011	8.26766	8.26766	8.26766
i-Butane	1.55629	0.000122983	1.55322	1.55322	1.55322
n-Butane	2.30318	0.000439778	2.30121	2.30121	2.30121
i-Pentane	0.803021	8.30376E-05	0.80596	0.80596	0.80596
n-Pentane	0.602984	6.61589E-05	0.606461	0.606461	0.606461
n-Hexane	0.50244	2.27409E-05	0.514405	0.514405	0.514405
n-Heptane	0.431428	9.94299E-06	0.45822	0.45822	0.45822
Water	0.403885	99.9574	0.833708	0.833708	0.833708
Ethylene Glycol	0	0	0	0	0
Therminol 55	0	0	0	0	0

Stream Properties

Property	Units	10	11	12	13	14
Temperature	°F	120	120	120	237.933	120 *
Pressure	psia	464.696	212.696	212.696	469.696	464.696 *
Mole Fraction Vapor	%	100	0	100	100	99.4648
Mole Fraction Light Liquid	%	0	100	0	0	0.102945
Mole Fraction Heavy Liquid	%	0	0	0	0	0.432241
Molecular Weight	lb/lbmol	23.9675	18.0209	23.9874	23.9874	23.9874
Mass Density	lb/ft^3	1.96353	61.6683	0.85504	1.57107	1.97522
Molar Flow	lbmol/h	385.449	2.2984	387.523	387.523	387.523
Mass Flow	lb/h	9238.24	41.4193	9295.66	9295.66	9295.66
Vapor Volumetric Flow	ft^3/h	4704.92	0.671646	10871.6	5916.76	4706.14
Liquid Volumetric Flow	gpm	586.587	0.0837377	1355.42	737.674	586.74
Std Vapor Volumetric Flow	MMSCFD	3.51053	0.0209329	3.52942	3.52942	3.52942
Std Liquid Volumetric Flow	sgpm	46.7943	0.0828499	46.9433	46.9433	46.9433
Compressibility		0.911819	0.00999148	0.959203	0.957923	0.907176
Specific Gravity		0.827531	0.988765	0.828219	0.828219	
API Gravity			10.0127			
Enthalpy	Btu/h	-1.57616E+07	-280612	-1.58807E+07	-1.53845E+07	-1.59948E+07
Mass Enthalpy	Btu/lb	-1706.12	-6774.93	-1708.4	-1655.02	-1720.67
Mass Cp	Btu/(lb*°F)	0.514774	0.969729	0.481363	0.543993	0.516476
Ideal Gas CpCv Ratio		1.22043	1.32344	1.22029	1.1931	1.22029
Dynamic Viscosity	cP	0.0123244	0.570835	0.0118476	0.0141138	
Kinematic Viscosity	cSt	0.391838	0.577867	0.865015	0.560824	
Thermal Conductivity	Btu/(h*ft*°F)	0.0198426	0.366936	0.0188857	0.0246831	
Surface Tension	lbf/ft		0.00466418			
Net Ideal Gas Heating Value	Btu/ft^3	1145.56	0.258753	1143.01	1143.01	1143.01
Net Liquid Heating Value	Btu/lb	18066.1	-1053.58	18007.2	18007.2	18007.2
Gross Ideal Gas Heating Value	Btu/ft^3	1260.36	50.5739	1257.7	1257.7	1257.7
Gross Liquid Heating Value	Btu/lb	19883.8	5.95908	19821.7	19821.7	19821.7

Remarks

Process Streams Report
All Streams
 Tabulated by Total Phase

Client Name:	PTSDK	Job: J877
Location:		
Flowsheet:	Inlet Compression	

Connections

	15	16	17	18
From Block	VSSL-103	VSSL-103	VSSL-104	VSSL-104
To Block	--	VSSL-104	--	CMPR-100

Stream Composition

Mole Fraction	15 %	16 %	17 %	18 %
Nitrogen		3.0274		3.0274
Oxygen		0		0
Carbon Dioxide		4.71379		4.71379
Methane		71.0492		71.0492
Ethane		5.36984		5.36984
Propane		8.21893		8.21893
i-Butane		1.54407		1.54407
n-Butane		2.28765		2.28765
i-Pentane		0.801208		0.801208
n-Pentane		0.602886		0.602886
n-Hexane		0.511372		0.511372
n-Heptane		0.455518		0.455518
Water		1.41814		1.41814
Ethylene Glycol		0		0
Therminol 55		0		0

Stream Properties

Property	Units	15	16	17	18
Temperature	°F	68.7202	68.7202	68.7202	68.7202
Pressure	psia	24.6959	24.6959	24.6959	24.6959
Mole Fraction Vapor	%		100		100
Mole Fraction Light Liquid	%		0		0
Mole Fraction Heavy Liquid	%		0		0
Molecular Weight	lb/lbmol		23.9522		23.9522
Mass Density	lb/ft^3		0.104997		0.104997
Molar Flow	lbmol/h	0	389.821	0	389.821
Mass Flow	lb/h	0	9337.08	0	9337.08
Vapor Volumetric Flow	ft^3/h		88926.9		88926.9
Liquid Volumetric Flow	gpm		11087		11087
Std Vapor Volumetric Flow	MMSCFD	0	3.55035	0	3.55035
Std Liquid Volumetric Flow	sgpm	0	47.0262	0	47.0262
Compressibility			0.993515		0.993515
Specific Gravity			0.827004		0.827004
API Gravity					
Enthalpy	Btu/h	0	-1.62774E+07	0	-1.62774E+07
Mass Enthalpy	Btu/lb		-1743.3		-1743.3
Mass Cp	Btu/(lb*°F)		0.44077		0.44077
Ideal Gas CpCv Ratio			1.23363		1.23363
Dynamic Viscosity	cP		0.010691		0.010691
Kinematic Viscosity	cSt		6.35649		6.35649
Thermal Conductivity	Btu/(h*ft*°F)		0.0162167		0.0162167
Surface Tension	lb/ft				
Net Ideal Gas Heating Value	Btu/ft^3		1136.27		1136.27
Net Liquid Heating Value	Btu/lb		17922.6		17922.6
Gross Ideal Gas Heating Value	Btu/ft^3		1250.59		1250.59
Gross Liquid Heating Value	Btu/lb		19733.8		19733.8

Remarks

Process Streams Report
Stream: CMS-26
 Phases Grouped by Columns

Client Name:	PTSDK	Job: J877
Location:		Modified: 10:07 AM, 12/8/2010
Flowsheet:	Inlet Compression	Status: Solved 8:55 AM, 4/28/2011

Connections

From: -- To: MIX-100

Composition

Mole Fraction	Total %	Vapor %		
Nitrogen	3.99 *	3.99		
Oxygen	0 *	0		
Carbon Dioxide	3.97 *	3.97		
Methane	78.53 *	78.53		
Ethane	4.81 *	4.81		
Propane	4.85 *	4.85		
i-Butane	1.01 *	1.01		
n-Butane	1.29 *	1.29		
i-Pentane	0.46 *	0.46		
n-Pentane	0.32 *	0.32		
n-Hexane	0.35 *	0.35		
n-Heptane	0.42 *	0.42		
Water	0 *	0		
Ethylene Glycol	0 *	0		
Therminol 55	0 *	0		

Properties

Property	Units	Total	Vapor	
Temperature	°F	70 *	70	
Pressure	psia	43.6959 *	43.6959	
Mole Fraction Vapor	%	100	100	
Mole Fraction Light Liquid	%	0	0	
Mole Fraction Heavy Liquid	%	0	0	
Molecular Weight	lb/lbmol	21.67	21.67	
Mass Density	lb/ft^3	0.168091	0.168091	
Molar Flow	lbmol/h	116.353	116.353	
Mass Flow	lb/h	2521.38	2521.38	
Vapor Volumetric Flow	ft^3/h	15000.1	15000.1	
Liquid Volumetric Flow	gpm	1870.14	1870.14	
Std Vapor Volumetric Flow	MMSCFD	1.0597 *	1.0597	
Std Liquid Volumetric Flow	sgpm	13.5144	13.5144	
Compressibility		0.991032	0.991032	
Specific Gravity		0.748208	0.748208	
API Gravity				
Enthalpy	Btu/h	-4.45625E+06	-4.45625E+06	
Mass Enthalpy	Btu/lb	-1767.39	-1767.39	
Mass Cp	Btu/(lb*°F)	0.455513	0.455513	
Ideal Gas Cp/Cv Ratio		1.25531	1.25531	
Dynamic Viscosity	cP	0.0110036	0.0110036	
Kinematic Viscosity	cSt	4.08669	4.08669	
Thermal Conductivity	Btu/(h*ft*°F)	0.0171485	0.0171485	
Surface Tension	lbf/ft			
Net Ideal Gas Heating Value	Btu/ft^3	1039.16	1039.16	
Net Liquid Heating Value	Btu/lb	18146.5	18146.5	
Gross Ideal Gas Heating Value	Btu/ft^3	1146.22	1146.22	
Gross Liquid Heating Value	Btu/lb	20021.4	20021.4	

Remarks

Process Streams Report
Stream: CMS-29
 Phases Grouped by Columns

Client Name:	PTSDK	Job: J877
Location:		Modified: 10:08 AM, 12/8/2010
Flowsheet:	Inlet Compression	Status: Solved 8:55 AM, 4/28/2011

Connections

From: -- To: MIX-100

Composition

Mole Fraction	Total %	Vapor %		
Nitrogen	2.34 *	2.34		
Oxygen	0 *	0		
Carbon Dioxide	5.77 *	5.77		
Methane	63.74 *	63.74		
Ethane	6.47 *	6.47		
Propane	12.82 *	12.82		
i-Butane	2.19 *	2.19		
n-Butane	3.47 *	3.47		
i-Pentane	1.14 *	1.14		
n-Pentane	0.87 *	0.87		
n-Hexane	0.65 *	0.65		
n-Heptane	0.54 *	0.54		
Water	0 *	0		
Ethylene Glycol	0 *	0		
Therminol 55	0 *	0		

Properties

Property	Units	Total	Vapor	
Temperature	°F	70 *	70	
Pressure	psia	45.6959 *	45.6959	
Mole Fraction Vapor	%	100	100	
Mole Fraction Light Liquid	%	0	0	
Mole Fraction Heavy Liquid	%	0	0	
Molecular Weight	lb/lbmol	26.86	26.86	
Mass Density	lb/ft^3	0.219293	0.219293	
Molar Flow	lbmol/h	88.102	88.102	
Mass Flow	lb/h	2366.42	2366.42	
Vapor Volumetric Flow	ft^3/h	10791.1	10791.1	
Liquid Volumetric Flow	gpm	1345.39	1345.39	
Std Vapor Volumetric Flow	MMSCFD	0.8024 *	0.8024	
Std Liquid Volumetric Flow	sgpm	11.3214	11.3214	
Compressibility		0.984667	0.984667	
Specific Gravity		0.927403	0.927403	
API Gravity				
Enthalpy	Btu/h	-3.85768E+06	-3.85768E+06	
Mass Enthalpy	Btu/lb	-1630.18	-1630.18	
Mass Cp	Btu/(lb*°F)	0.431254	0.431254	
Ideal Gas Cp/Cv Ratio		1.21051	1.21051	
Dynamic Viscosity	cP	0.0103985	0.0103985	
Kinematic Viscosity	cSt	2.96022	2.96022	
Thermal Conductivity	Btu/(h*ft*°F)	0.0154516	0.0154516	
Surface Tension	lbf/ft			
Net Ideal Gas Heating Value	Btu/ft^3	1281.95	1281.95	
Net Liquid Heating Value	Btu/lb	18025.3	18025.3	
Gross Ideal Gas Heating Value	Btu/ft^3	1406.37	1406.37	
Gross Liquid Heating Value	Btu/lb	19783.1	19783.1	

Remarks

Process Streams Report
Stream: CMS-30
 Phases Grouped by Columns

Client Name:	PTSDK	Job: J877
Location:		Modified: 10:08 AM, 12/8/2010
Flowsheet:	Inlet Compression	Status: Solved 8:55 AM, 4/28/2011

Connections

From: -- To: MIX-100

Composition

Mole Fraction	Total %	Vapor %		
Nitrogen	2.64 *	2.64		
Oxygen	0 *	0		
Carbon Dioxide	4.87 *	4.87		
Methane	70.95 *	70.95		
Ethane	5.41 *	5.41		
Propane	8.92 *	8.92		
i-Butane	1.72 *	1.72		
n-Butane	2.61 *	2.61		
i-Pentane	0.98 *	0.98		
n-Pentane	0.76 *	0.76		
n-Hexane	0.65 *	0.65		
n-Heptane	0.49 *	0.49		
Water	0 *	0		
Ethylene Glycol	0 *	0		
Therminol 55	0 *	0		

Properties

Property	Units	Total	Vapor	
Temperature	°F	70 *	70	
Pressure	psia	24.6959 *	24.6959	
Mole Fraction Vapor	%	100	100	
Mole Fraction Light Liquid	%	0	0	
Mole Fraction Heavy Liquid	%	0	0	
Molecular Weight	lb/lbmol	24.6482	24.6482	
Mass Density	lb/ft^3	0.107828	0.107828	
Molar Flow	lbmol/h	102.134	102.134	
Mass Flow	lb/h	2517.42	2517.42	
Vapor Volumetric Flow	ft^3/h	23346.6	23346.6	
Liquid Volumetric Flow	gpm	2910.74	2910.74	
Std Vapor Volumetric Flow	MMSCFD	0.9302 *	0.9302	
Std Liquid Volumetric Flow	sgpm	12.6074	12.6074	
Compressibility		0.993136	0.993136	
Specific Gravity		0.851036	0.851036	
API Gravity				
Enthalpy	Btu/h	-4.23388E+06	-4.23388E+06	
Mass Enthalpy	Btu/lb	-1681.83	-1681.83	
Mass Cp	Btu/(lb*°F)	0.439543	0.439543	
Ideal Gas CpCv Ratio		1.22636	1.22636	
Dynamic Viscosity	cP	0.0105866	0.0105866	
Kinematic Viscosity	cSt	6.12918	6.12918	
Thermal Conductivity	Btu/(h*ft*°F)	0.0161254	0.0161254	
Surface Tension	lbf/ft			
Net Ideal Gas Heating Value	Btu/ft^3	1187.53	1187.53	
Net Liquid Heating Value	Btu/lb	18210	18210	
Gross Ideal Gas Heating Value	Btu/ft^3	1305.4	1305.4	
Gross Liquid Heating Value	Btu/lb	20024.8	20024.8	

Remarks

Process Streams Report
Stream: CMT-14
 Phases Grouped by Columns

Client Name:	PTSDK	Job: J877
Location:		Modified: 10:07 AM, 12/8/2010
Flowsheet:	Inlet Compression	Status: Solved 8:55 AM, 4/28/2011

Connections

From: -- To: MIX-100

Composition

Mole Fraction	Total %	Vapor %		
Nitrogen	3.09 *	3.09		
Oxygen	0 *	0		
Carbon Dioxide	4.76 *	4.76		
Methane	73.32 *	73.32		
Ethane	5.29 *	5.29		
Propane	7.71 *	7.71		
i-Butane	1.49 *	1.49		
n-Butane	2.18 *	2.18		
i-Pentane	0.75 *	0.75		
n-Pentane	0.56 *	0.56		
n-Hexane	0.45 *	0.45		
n-Heptane	0.4 *	0.4		
Water	0 *	0		
Ethylene Glycol	0 *	0		
Therminol 55	0 *	0		

Properties

Property	Units	Total	Vapor	
Temperature	°F	70 *	70	
Pressure	psia	45.6959 *	45.6959	
Mole Fraction Vapor	%	100	100	
Mole Fraction Light Liquid	%	0	0	
Mole Fraction Heavy Liquid	%	0	0	
Molecular Weight	lb/lbmol	23.5801	23.5801	
Mass Density	lb/ft^3	0.191756	0.191756	
Molar Flow	lbmol/h	77.7041	77.7041	
Mass Flow	lb/h	1832.27	1832.27	
Vapor Volumetric Flow	ft^3/h	9555.22	9555.22	
Liquid Volumetric Flow	gpm	1191.3	1191.3	
Std Vapor Volumetric Flow	MMSCFD	0.7077 *	0.7077	
Std Liquid Volumetric Flow	sgpm	9.38388	9.38388	
Compressibility		0.988564	0.988564	
Specific Gravity		0.814155	0.814155	
API Gravity				
Enthalpy	Btu/h	-3.15434E+06	-3.15434E+06	
Mass Enthalpy	Btu/lb	-1721.55	-1721.55	
Mass Cp	Btu/(lb*°F)	0.445676	0.445676	
Ideal Gas CpCv Ratio		1.2366	1.2366	
Dynamic Viscosity	cP	0.0107656	0.0107656	
Kinematic Viscosity	cSt	3.50483	3.50483	
Thermal Conductivity	Btu/(h*ft*°F)	0.0165144	0.0165144	
Surface Tension	lbf/ft			
Net Ideal Gas Heating Value	Btu/ft^3	1129.96	1129.96	
Net Liquid Heating Value	Btu/lb	18119	18119	
Gross Ideal Gas Heating Value	Btu/ft^3	1243.58	1243.58	
Gross Liquid Heating Value	Btu/lb	19947.4	19947.4	

Remarks

Process Streams Report
Stream: Condensate Drip
 Phases Grouped by Columns

Client Name:	PTSDK	Job: J877
Location:		Modified: 9:11 AM, 11/24/2008
Flowsheet:	Inlet Compression	Status: Solved 8:55 AM, 4/28/2011

Connections

From: VSSL-100	To: --
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Composition

Mole Fraction	Total %	Light Liquid %		
Nitrogen	0.189963	0.189963		
Oxygen	0	0		
Carbon Dioxide	1.48285	1.48285		
Methane	11.0661	11.0661		
Ethane	3.24924	3.24924		
Propane	12.6782	12.6782		
i-Butane	5.10611	5.10611		
n-Butane	10.0629	10.0629		
i-Pentane	7.02919	7.02919		
n-Pentane	6.51263	6.51263		
n-Hexane	14.2347	14.2347		
n-Heptane	28.2682	28.2682		
Water	0.120017	0.120017		
Ethylene Glycol	0	0		
Therminol 55	0	0		

Properties

Property	Units	Total	Light Liquid	
Temperature	°F	120	120	
Pressure	psia	464.696	464.696	
Mole Fraction Vapor	%	0	0	
Mole Fraction Light Liquid	%	100	100	
Mole Fraction Heavy Liquid	%	0	0	
Molecular Weight	lb/lbmol	68.2491	68.2491	
Mass Density	lb/ft ³	36.9097	36.9097	
Molar Flow	lbmol/h	0.398935	0.398935	
Mass Flow	lb/h	27.227	27.227	
Vapor Volumetric Flow	ft ³ /h	0.737665	0.737665	
Liquid Volumetric Flow	gpm	0.0919686	0.0919686	
Std Vapor Volumetric Flow	MMSCFD	0.00363335	0.00363335	
Std Liquid Volumetric Flow	sgpm	0.0885603	0.0885603	
Compressibility		0.138128	0.138128	
Specific Gravity		0.591795	0.591795	
API Gravity		93.4555	93.4555	
Enthalpy	Btu/h	-28759	-28759	
Mass Enthalpy	Btu/lb	-1056.27	-1056.27	
Mass Cp	Btu/(lb*°F)	0.591743	0.591743	
Ideal Gas Cp/Cv Ratio		1.07393	1.07393	
Dynamic Viscosity	cP	0.174541	0.174541	
Kinematic Viscosity	cSt	0.295214	0.295214	
Thermal Conductivity	Btu/(h*ft*°F)	0.0608617	0.0608617	
Surface Tension	lbf/ft	0.000677986 ?	0.000677986 ?	
Net Ideal Gas Heating Value	Btu/ft ³	3472.92	3472.92	
Net Liquid Heating Value	Btu/lb	19156	19156	
Gross Ideal Gas Heating Value	Btu/ft ³	3757.43	3757.43	
Gross Liquid Heating Value	Btu/lb	20737.9	20737.9	

Remarks

Process Streams Report
Stream: Water
 Phases Grouped by Columns

Client Name:	PTSDK	Job: J877
Location:		Modified: 9:11 AM, 11/24/2008
Flowsheet:	Inlet Compression	Status: Solved 8:55 AM, 4/28/2011

Connections

From: VSSL-100	To: --
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Composition

Mole Fraction	Total %	Light Liquid %		
Nitrogen	0.000952405	0.000952405		
Oxygen	0	0		
Carbon Dioxide	0.0396586	0.0396586		
Methane	0.0400801	0.0400801		
Ethane	0.00270966	0.00270966		
Propane	0.00311896	0.00311896		
i-Butane	0.000207488	0.000207488		
n-Butane	0.000726228	0.000726228		
i-Pentane	0.000128196	0.000128196		
n-Pentane	0.000100833	0.000100833		
n-Hexane	3.14971E-05	3.14971E-05		
n-Heptane	1.22765E-05	1.22765E-05		
Water	99.9123	99.9123		
Ethylene Glycol	0	0		
Therminol 55	0	0		

Properties

Property	Units	Total	Light Liquid	
Temperature	°F	120	120	
Pressure	psia	464.696	464.696	
Mole Fraction Vapor	%	0	0	
Mole Fraction Light Liquid	%	100	100	
Mole Fraction Heavy Liquid	%	0	0	
Molecular Weight	lb/lbmol	18.0266	68.2491	
Mass Density	lb/ft ³	61.6698	61.6698	
Molar Flow	lbmol/h	1.67503	1.67503	
Mass Flow	lb/h	30.1951	30.1951	
Vapor Volumetric Flow	ft ³ /h	0.489625	0.489625	
Liquid Volumetric Flow	gpm	0.0610442	0.0610442	
Std Vapor Volumetric Flow	MMSCFD	0.0152556	0.0152556	
Std Liquid Volumetric Flow	sgpm	0.0604368	0.0604368	
Compressibility		0.0218356	0.0218356	
Specific Gravity		0.988789	0.988789	
API Gravity		-94.1232	-94.1232	
Enthalpy	Btu/h	-204464	-204464	
Mass Enthalpy	Btu/lb	-6771.45	-6771.45	
Mass Cp	Btu/(lb*°F)	0.969367	0.256038	
Ideal Gas Cp/Cv Ratio		1.32341	1.32341	
Dynamic Viscosity	cP	0.571346	0.571346	
Kinematic Viscosity	cSt	0.57837	0.57837	
Thermal Conductivity	Btu/(h*ft*°F)	0.366254	0.366254	
Surface Tension	lbf/ft	0.00466184	0.00466184	
Net Ideal Gas Heating Value	Btu/ft ³	0.519146	0.519146	
Net Liquid Heating Value	Btu/lb	-1047.34	-276.632	
Gross Ideal Gas Heating Value	Btu/ft ³	50.8389	50.8389	
Gross Liquid Heating Value	Btu/lb	11.9647	3.16023	

Remarks

Process Streams Report
Stream: 1
 Phases Grouped by Columns

Client Name:	PTSDK	Job: J877
Location:		Modified: 11:02 AM, 12/8/2010
Flowsheet:	Inlet Compression	Status: Solved 8:55 AM, 4/28/2011

Connections

From: CMPR-101 To: FAXR-101

Composition

Mole Fraction	Total %	Vapor %		
Nitrogen	3.0274	3.0274		
Oxygen	0	0		
Carbon Dioxide	4.71379	4.71379		
Methane	71.0492	71.0492		
Ethane	5.36984	5.36984		
Propane	8.21893	8.21893		
i-Butane	1.54407	1.54407		
n-Butane	2.28765	2.28765		
i-Pentane	0.801208	0.801208		
n-Pentane	0.602886	0.602886		
n-Hexane	0.511372	0.511372		
n-Heptane	0.455518	0.455518		
Water	1.41814	1.41814		
Ethylene Glycol	0	0		
Therminol 55	0	0		

Properties

Property	Units	Total	Vapor	
Temperature	°F	259.557	259.557	
Pressure	psia	217.696	217.696	
Mole Fraction Vapor	%	100	100	
Mole Fraction Light Liquid	%	0	0	
Mole Fraction Heavy Liquid	%	0	0	
Molecular Weight	lb/lbmol	23.9522	23.9522	
Mass Density	lb/ft ³	0.687768	0.687768	
Molar Flow	lbmol/h	389.821	389.821	
Mass Flow	lb/h	9337.08	9337.08	
Vapor Volumetric Flow	ft ³ /h	13575.9	13575.9	
Liquid Volumetric Flow	gpm	1692.58	1692.58	
Std Vapor Volumetric Flow	MMSCFD	3.55035	3.55035	
Std Liquid Volumetric Flow	sgpm	47.0262	47.0262	
Compressibility		0.982253	0.982253	
Specific Gravity		0.827004	0.827004	
API Gravity				
Enthalpy	Btu/h	-1.546E+07	-1.546E+07	
Mass Enthalpy	Btu/lb	-1655.77	-1655.77	
Mass Cp	Btu/(lb*°F)	0.534524	0.534524	
Ideal Gas CpCv Ratio		1.18913	1.18913	
Dynamic Viscosity	cP	0.0141157	0.0141157	
Kinematic Viscosity	cSt	1.28127	1.28127	
Thermal Conductivity	Btu/(h*ft*°F)	0.0249402	0.0249402	
Surface Tension	lbf/ft			
Net Ideal Gas Heating Value	Btu/ft ³	1136.27	1136.27	
Net Liquid Heating Value	Btu/lb	17922.6	17922.6	
Gross Ideal Gas Heating Value	Btu/ft ³	1250.59	1250.59	
Gross Liquid Heating Value	Btu/lb	19733.8	19733.8	

Remarks

Process Streams Report
Stream: 2
 Phases Grouped by Columns

Client Name:	PTSDK	Job: J877
Location:		Modified: 11:02 AM, 12/8/2010
Flowsheet:	Inlet Compression	Status: Solved 8:55 AM, 4/28/2011

Connections

From: FAXR-101 To: VSSL-102

Composition

Mole Fraction	Total %	Vapor %	Light Liquid %
Nitrogen	3.0274	3.04536	0.000429415
Oxygen	0	0	0
Carbon Dioxide	4.71379	4.74163	0.0193954
Methane	71.0492	71.4705	0.0188961
Ethane	5.36984	5.40168	0.0013999
Propane	8.21893	8.26766	0.00174011
i-Butane	1.54407	1.55322	0.000122983
n-Butane	2.28765	2.30121	0.000439778
i-Pentane	0.801208	0.80596	8.30376E-05
n-Pentane	0.602886	0.606461	6.61589E-05
n-Hexane	0.511372	0.514405	2.27409E-05
n-Heptane	0.455518	0.45822	9.94299E-06
Water	1.41814	0.833708	99.9574
Ethylene Glycol	0	0	0
Therminol 55	0	0	0

Properties

Property	Units	Total	Vapor	Light Liquid
Temperature	°F	120 *	120	120
Pressure	psia	212.696 *	212.696	212.696
Mole Fraction Vapor	%	99.4104	100	0
Mole Fraction Light Liquid	%	0.589602	0	100
Mole Fraction Heavy Liquid	%	0	0	0
Molecular Weight	lb/lbmol	23.9522	23.9874	18.0209
Mass Density	lb/ft^3	0.858796	0.85504	61.6683
Molar Flow	lbmol/h	389.821	387.523	2.2984
Mass Flow	lb/h	9337.08	9295.66	41.4193
Vapor Volumetric Flow	ft^3/h	10872.3	10871.6	0.671646
Liquid Volumetric Flow	gpm	1355.51	1355.42	0.0837377
Std Vapor Volumetric Flow	MMSCFD	3.55035	3.52942	0.0209329
Std Liquid Volumetric Flow	sgpm	47.0262	46.9433	0.0828499
Compressibility		0.953607	0.959203	0.00999148
Specific Gravity			0.828219	0.988765
API Gravity				10.0127
Enthalpy	Btu/h	-1.61613E+07	-1.58807E+07	-280612
Mass Enthalpy	Btu/lb	-1730.88	-1708.4	-6774.93
Mass Cp	Btu/(lb*°F)	0.483529	0.481363	0.969729
Ideal Gas Cp/Cv Ratio		1.2207	1.22029	1.32344
Dynamic Viscosity	cP		0.0118476	0.570835
Kinematic Viscosity	cSt		0.865015	0.577867
Thermal Conductivity	Btu/(h*ft*°F)		0.0188857	0.366936
Surface Tension	lbf/ft			0.00466418
Net Ideal Gas Heating Value	Btu/ft^3	1136.27	1143.01	0.258753
Net Liquid Heating Value	Btu/lb	17922.6	18007.2	-1053.58
Gross Ideal Gas Heating Value	Btu/ft^3	1250.59	1257.7	50.5739
Gross Liquid Heating Value	Btu/lb	19733.8	19821.7	5.95908

Remarks

Process Streams Report
Stream: 3
 Phases Grouped by Columns

Client Name:	PTSDK	Job: J877
Location:		Modified: 10:59 AM, 12/8/2010
Flowsheet:	Inlet Compression	Status: Solved 8:55 AM, 4/28/2011

Connections

From: VSSL-101	To: --
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Composition

Mole Fraction	Total %				
Nitrogen					
Oxygen					
Carbon Dioxide					
Methane					
Ethane					
Propane					
i-Butane					
n-Butane					
i-Pentane					
n-Pentane					
n-Hexane					
n-Heptane					
Water					
Ethylene Glycol					
Therminol 55					

Properties

Property	Units	Total			
Temperature	°F	120			
Pressure	psia	84.6959			
Mole Fraction Vapor	%				
Mole Fraction Light Liquid	%				
Mole Fraction Heavy Liquid	%				
Molecular Weight	lb/lbmol				
Mass Density	lb/ft ³				
Molar Flow	lbmol/h	0			
Mass Flow	lb/h	0			
Vapor Volumetric Flow	ft ³ /h				
Liquid Volumetric Flow	gpm				
Std Vapor Volumetric Flow	MMSCFD	0			
Std Liquid Volumetric Flow	sgpm	0			
Compressibility					
Specific Gravity					
API Gravity					
Enthalpy	Btu/h	0			
Mass Enthalpy	Btu/lb				
Mass Cp	Btu/(lb*°F)				
Ideal Gas CpCv Ratio					
Dynamic Viscosity	cP				
Kinematic Viscosity	cSt				
Thermal Conductivity	Btu/(h*ft*°F)				
Surface Tension	lbf/ft				
Net Ideal Gas Heating Value	Btu/ft ³				
Net Liquid Heating Value	Btu/lb				
Gross Ideal Gas Heating Value	Btu/ft ³				
Gross Liquid Heating Value	Btu/lb				

Remarks

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Process Streams Report
Stream: 4
 Phases Grouped by Columns

Client Name:	PTSDK	Job: J877
Location:		Modified: 10:59 AM, 12/8/2010
Flowsheet:	Inlet Compression	Status: Solved 8:55 AM, 4/28/2011

Connections

From: VSSL-101 To: CMPR-101

Composition

Mole Fraction	Total %	Vapor %		
Nitrogen	3.0274	3.0274		
Oxygen	0	0		
Carbon Dioxide	4.71379	4.71379		
Methane	71.0492	71.0492		
Ethane	5.36984	5.36984		
Propane	8.21893	8.21893		
i-Butane	1.54407	1.54407		
n-Butane	2.28765	2.28765		
i-Pentane	0.801208	0.801208		
n-Pentane	0.602886	0.602886		
n-Hexane	0.511372	0.511372		
n-Heptane	0.455518	0.455518		
Water	1.41814	1.41814		
Ethylene Glycol	0	0		
Therminol 55	0	0		

Properties

Property	Units	Total	Vapor	
Temperature	°F	120	120	
Pressure	psia	84.6959	84.6959	
Mole Fraction Vapor	%	100	100	
Mole Fraction Light Liquid	%	0	0	
Mole Fraction Heavy Liquid	%	0	0	
Molecular Weight	lb/lbmol	23.9522	23.9522	
Mass Density	lb/ft ³	0.331497	0.331497	
Molar Flow	lbmol/h	389.821	389.821	
Mass Flow	lb/h	9337.08	9337.08	
Vapor Volumetric Flow	ft ³ /h	28166.4	28166.4	
Liquid Volumetric Flow	gpm	3511.65	3511.65	
Std Vapor Volumetric Flow	MMSCFD	3.55035	3.55035	
Std Liquid Volumetric Flow	sgpm	47.0262	47.0262	
Compressibility		0.983746	0.983746	
Specific Gravity		0.827004	0.827004	
API Gravity				
Enthalpy	Btu/h	-1.60797E+07	-1.60797E+07	
Mass Enthalpy	Btu/lb	-1722.13	-1722.13	
Mass Cp	Btu/(lb*°F)	0.467101	0.467101	
Ideal Gas CpCv Ratio		1.2207	1.2207	
Dynamic Viscosity	cP	0.0116704	0.0116704	
Kinematic Viscosity	cSt	2.19778	2.19778	
Thermal Conductivity	Btu/(h*ft*°F)	0.018443	0.018443	
Surface Tension	lbf/ft			
Net Ideal Gas Heating Value	Btu/ft ³	1136.27	1136.27	
Net Liquid Heating Value	Btu/lb	17922.6	17922.6	
Gross Ideal Gas Heating Value	Btu/ft ³	1250.59	1250.59	
Gross Liquid Heating Value	Btu/lb	19733.8	19733.8	

Remarks

Process Streams Report
Stream: 5
 Phases Grouped by Columns

Client Name:	PTSDK	Job: J877
Location:		Modified: 9:00 PM, 6/27/2008
Flowsheet:	Inlet Compression	Status: Solved 8:55 AM, 4/28/2011

Connections

From: -- To: SAT-1

Composition

Mole Fraction	Total %	Vapor %	Light Liquid %
Nitrogen	0	0	0
Oxygen	0	0	0
Carbon Dioxide	0	0	0
Methane	0	0	0
Ethane	0	0	0
Propane	0	0	0
i-Butane	0	0	0
n-Butane	0	0	0
i-Pentane	0	0	0
n-Pentane	0	0	0
n-Hexane	0	0	0
n-Heptane	0	0	0
Water	100	100	100
Ethylene Glycol	0	0	0
Therminol 55	0	0	0

Properties

Property	Units	Total	Vapor	Light Liquid
Temperature	°F	239.564	239.564	239.564
Pressure	psia	24.6959	24.6959	24.6959
Mole Fraction Vapor	%	92.1386	100	0
Mole Fraction Light Liquid	%	7.86135	0	100
Mole Fraction Heavy Liquid	%	0	0	0
Molecular Weight	lb/lbmol	18.0153	18.0153	18.0153
Mass Density	lb/ft^3	0.0651668	0.060049	59.1403
Molar Flow	lbmol/h	5.52823	5.09364	0.434593
Mass Flow	lb/h	99.5926	91.7633	7.82932
Vapor Volumetric Flow	ft^3/h	1528.27	1528.14	0.132386
Liquid Volumetric Flow	gpm	190.538	190.521	0.0165052
Std Vapor Volumetric Flow	MMSCFD	0.0503491	0.0463909	0.00395812
Std Liquid Volumetric Flow	sgpm	0.199093	0.183441	0.0156514
Compressibility		0.909817	0.987358	0.00100253
Specific Gravity			0.622019	0.948232
API Gravity				10.0106
Enthalpy	Btu/h	-575209	-523055	-52154.6
Mass Enthalpy	Btu/lb	-5775.62	-5700.05	-6661.44
Mass Cp	Btu/(lb*°F)	0.50361	0.462072	0.990459
Ideal Gas CpCv Ratio		1.31819	1.31819	1.31819
Dynamic Viscosity	cP		0.0131508	0.238924
Kinematic Viscosity	cSt		13.6718	0.252206
Thermal Conductivity	Btu/(h*ft*°F)		0.0164285	0.39419
Surface Tension	lbf/ft			0.00378375
Net Ideal Gas Heating Value	Btu/ft^3	0	0	0
Net Liquid Heating Value	Btu/lb	-1059.76	-1059.76	-1059.76
Gross Ideal Gas Heating Value	Btu/ft^3	50.31	50.31	50.31
Gross Liquid Heating Value	Btu/lb	0	0	0

Remarks

Process Streams Report
Stream: 6
 Phases Grouped by Columns

Client Name:	PTSDK	Job: J877
Location:		Modified: 10:43 AM, 12/15/2010
Flowsheet:	Inlet Compression	Status: Solved 8:55 AM, 4/28/2011

Connections

From: SAT-1 To: VSSL-103

Composition

Mole Fraction	Total %	Vapor %		
Nitrogen	3.0274	3.0274		
Oxygen	0	0		
Carbon Dioxide	4.71379	4.71379		
Methane	71.0492	71.0492		
Ethane	5.36984	5.36984		
Propane	8.21893	8.21893		
i-Butane	1.54407	1.54407		
n-Butane	2.28765	2.28765		
i-Pentane	0.801208	0.801208		
n-Pentane	0.602886	0.602886		
n-Hexane	0.511372	0.511372		
n-Heptane	0.455518	0.455518		
Water	1.41814	1.41814		
Ethylene Glycol	0	0		
Therminol 55	0	0		

Properties

Property	Units	Total	Vapor	
Temperature	°F	68.7202	68.7202	
Pressure	psia	24.6959	24.6959	
Mole Fraction Vapor	%	100	100	
Mole Fraction Light Liquid	%	0	0	
Mole Fraction Heavy Liquid	%	0	0	
Molecular Weight	lb/lbmol	23.9522	23.9522	
Mass Density	lb/ft ³	0.104997	0.104997	
Molar Flow	lbmol/h	389.821	389.821	
Mass Flow	lb/h	9337.08	9337.08	
Vapor Volumetric Flow	ft ³ /h	88926.9	88926.9	
Liquid Volumetric Flow	gpm	11087	11087	
Std Vapor Volumetric Flow	MMSCFD	3.55035	3.55035	
Std Liquid Volumetric Flow	sgpm	47.0262	47.0262	
Compressibility		0.993515	0.993515	
Specific Gravity		0.827004	0.827004	
API Gravity				
Enthalpy	Btu/h	-1.62774E+07	-1.62774E+07	
Mass Enthalpy	Btu/lb	-1743.3	-1743.3	
Mass Cp	Btu/(lb*°F)	0.44077	0.44077	
Ideal Gas CpCv Ratio		1.23363	1.23363	
Dynamic Viscosity	cP	0.010691	0.010691	
Kinematic Viscosity	cSt	6.35649	6.35649	
Thermal Conductivity	Btu/(h*ft*°F)	0.0162167	0.0162167	
Surface Tension	lbf/ft			
Net Ideal Gas Heating Value	Btu/ft ³	1136.27	1136.27	
Net Liquid Heating Value	Btu/lb	17922.6	17922.6	
Gross Ideal Gas Heating Value	Btu/ft ³	1250.59	1250.59	
Gross Liquid Heating Value	Btu/lb	19733.8	19733.8	

Remarks

Process Streams Report
Stream: 7
 Phases Grouped by Columns

Client Name:	PTSDK	Job: J877
Location:		Modified: 9:00 PM, 6/27/2008
Flowsheet:	Inlet Compression	Status: Solved 8:55 AM, 4/28/2011

Connections

From: MIX-100 To: SAT-1

Composition

Mole Fraction	Total %	Vapor %		
Nitrogen	3.07095	3.07095		
Oxygen	0	0		
Carbon Dioxide	4.7816	4.7816		
Methane	72.0713	72.0713		
Ethane	5.44709	5.44709		
Propane	8.33716	8.33716		
i-Butane	1.56628	1.56628		
n-Butane	2.32056	2.32056		
i-Pentane	0.812734	0.812734		
n-Pentane	0.611559	0.611559		
n-Hexane	0.518729	0.518729		
n-Heptane	0.462071	0.462071		
Water	0	0		
Ethylene Glycol	0	0		
Therminol 55	0	0		

Properties

Property	Units	Total	Vapor	
Temperature	°F	68.7202	68.7202	
Pressure	psia	24.6959	24.6959	
Mole Fraction Vapor	%	100	100	
Mole Fraction Light Liquid	%	0	0	
Mole Fraction Heavy Liquid	%	0	0	
Molecular Weight	lb/lbmol	24.0376	24.0376	
Mass Density	lb/ft ³	0.105373	0.105373	
Molar Flow	lbmol/h	384.293	384.293	
Mass Flow	lb/h	9237.48	9237.48	
Vapor Volumetric Flow	ft ³ /h	87664.4	87664.4	
Liquid Volumetric Flow	gpm	10929.6	10929.6	
Std Vapor Volumetric Flow	MMSCFD	3.5	3.5	
Std Liquid Volumetric Flow	sgpm	46.8271	46.8271	
Compressibility		0.993499	0.993499	
Specific Gravity		0.829953	0.829953	
API Gravity				
Enthalpy	Btu/h	-1.57022E+07	-1.57022E+07	
Mass Enthalpy	Btu/lb	-1699.83	-1699.83	
Mass Cp	Btu/(lb*°F)	0.440662	0.440662	
Ideal Gas CpCv Ratio		1.23269	1.23269	
Dynamic Viscosity	cP	0.0106579	0.0106579	
Kinematic Viscosity	cSt	6.31422	6.31422	
Thermal Conductivity	Btu/(h*ft*°F)	0.0162495	0.0162495	
Surface Tension	lbf/ft			
Net Ideal Gas Heating Value	Btu/ft ³	1152.61	1152.61	
Net Liquid Heating Value	Btu/lb	18127.3	18127.3	
Gross Ideal Gas Heating Value	Btu/ft ³	1267.85	1267.85	
Gross Liquid Heating Value	Btu/lb	19946.6	19946.6	

Remarks

Process Streams Report
Stream: 8
 Phases Grouped by Columns

Client Name:	PTSDK	Job: J877
Location:		Modified: 11:01 AM, 12/8/2010
Flowsheet:	Inlet Compression	Status: Solved 8:55 AM, 4/28/2011

Connections

From: CMPR-100 To: FAXR-100

Composition

Mole Fraction	Total %	Vapor %		
Nitrogen	3.0274	3.0274		
Oxygen	0	0		
Carbon Dioxide	4.71379	4.71379		
Methane	71.0492	71.0492		
Ethane	5.36984	5.36984		
Propane	8.21893	8.21893		
i-Butane	1.54407	1.54407		
n-Butane	2.28765	2.28765		
i-Pentane	0.801208	0.801208		
n-Pentane	0.602886	0.602886		
n-Hexane	0.511372	0.511372		
n-Heptane	0.455518	0.455518		
Water	1.41814	1.41814		
Ethylene Glycol	0	0		
Therminol 55	0	0		

Properties

Property	Units	Total	Vapor	
Temperature	°F	253.77	253.77	
Pressure	psia	89.6959	89.6959	
Mole Fraction Vapor	%	100	100	
Mole Fraction Light Liquid	%	0	0	
Mole Fraction Heavy Liquid	%	0	0	
Molecular Weight	lb/lbmol	23.9522	23.9522	
Mass Density	lb/ft ³	0.282788	0.282788	
Molar Flow	lbmol/h	389.821	389.821	
Mass Flow	lb/h	9337.08	9337.08	
Vapor Volumetric Flow	ft ³ /h	33018	33018	
Liquid Volumetric Flow	gpm	4116.53	4116.53	
Std Vapor Volumetric Flow	MMSCFD	3.55035	3.55035	
Std Liquid Volumetric Flow	sgpm	47.0262	47.0262	
Compressibility		0.992284	0.992284	
Specific Gravity		0.827004	0.827004	
API Gravity				
Enthalpy	Btu/h	-1.54627E+07	-1.54627E+07	
Mass Enthalpy	Btu/lb	-1656.06	-1656.06	
Mass Cp	Btu/(lb*°F)	0.524057	0.524057	
Ideal Gas Cp/Cv Ratio		1.19029	1.19029	
Dynamic Viscosity	cP	0.0138774	0.0138774	
Kinematic Viscosity	cSt	3.06356	3.06356	
Thermal Conductivity	Btu/(h*ft*°F)	0.0243354	0.0243354	
Surface Tension	lbf/ft			
Net Ideal Gas Heating Value	Btu/ft ³	1136.27	1136.27	
Net Liquid Heating Value	Btu/lb	17922.6	17922.6	
Gross Ideal Gas Heating Value	Btu/ft ³	1250.59	1250.59	
Gross Liquid Heating Value	Btu/lb	19733.8	19733.8	

Remarks

Process Streams Report
Stream: 9
 Phases Grouped by Columns

Client Name:	PTSDK	Job: J877
Location:		Modified: 11:02 AM, 12/8/2010
Flowsheet:	Inlet Compression	Status: Solved 8:55 AM, 4/28/2011

Connections

From: FAXR-100 To: VSSL-101

Composition

Mole Fraction	Total %	Vapor %		
Nitrogen	3.0274	3.0274		
Oxygen	0	0		
Carbon Dioxide	4.71379	4.71379		
Methane	71.0492	71.0492		
Ethane	5.36984	5.36984		
Propane	8.21893	8.21893		
i-Butane	1.54407	1.54407		
n-Butane	2.28765	2.28765		
i-Pentane	0.801208	0.801208		
n-Pentane	0.602886	0.602886		
n-Hexane	0.511372	0.511372		
n-Heptane	0.455518	0.455518		
Water	1.41814	1.41814		
Ethylene Glycol	0	0		
Therminol 55	0	0		

Properties

Property	Units	Total	Vapor	
Temperature	°F	120 *	120	
Pressure	psia	84.6959 *	84.6959	
Mole Fraction Vapor	%	100	100	
Mole Fraction Light Liquid	%	0	0	
Mole Fraction Heavy Liquid	%	0	0	
Molecular Weight	lb/lbmol	23.9522	23.9522	
Mass Density	lb/ft^3	0.331497	0.331497	
Molar Flow	lbmol/h	389.821	389.821	
Mass Flow	lb/h	9337.08	9337.08	
Vapor Volumetric Flow	ft^3/h	28166.4	28166.4	
Liquid Volumetric Flow	gpm	3511.65	3511.65	
Std Vapor Volumetric Flow	MMSCFD	3.55035	3.55035	
Std Liquid Volumetric Flow	sgpm	47.0262	47.0262	
Compressibility		0.983746	0.983746	
Specific Gravity		0.827004	0.827004	
API Gravity				
Enthalpy	Btu/h	-1.60797E+07	-1.60797E+07	
Mass Enthalpy	Btu/lb	-1722.13	-1722.13	
Mass Cp	Btu/(lb*°F)	0.467101	0.467101	
Ideal Gas CpCv Ratio		1.2207	1.2207	
Dynamic Viscosity	cP	0.0116704	0.0116704	
Kinematic Viscosity	cSt	2.19778	2.19778	
Thermal Conductivity	Btu/(h*ft*°F)	0.018443	0.018443	
Surface Tension	lbf/ft			
Net Ideal Gas Heating Value	Btu/ft^3	1136.27	1136.27	
Net Liquid Heating Value	Btu/lb	17922.6	17922.6	
Gross Ideal Gas Heating Value	Btu/ft^3	1250.59	1250.59	
Gross Liquid Heating Value	Btu/lb	19733.8	19733.8	

Remarks

Process Streams Report
Stream: 10
 Phases Grouped by Columns

Client Name:	PTSDK	Job: J877
Location:		Modified: 9:11 AM, 11/24/2008
Flowsheet:	Inlet Compression	Status: Solved 8:55 AM, 4/28/2011

Connections

From: VSSL-100 To: XFS1

Composition

Mole Fraction	Total %	Vapor %		
Nitrogen	3.06154	3.06154		
Oxygen	0	0		
Carbon Dioxide	4.76543	4.76543		
Methane	71.8434	71.8434		
Ethane	5.42737	5.42737		
Propane	8.29901	8.29901		
i-Butane	1.55629	1.55629		
n-Butane	2.30318	2.30318		
i-Pentane	0.803021	0.803021		
n-Pentane	0.602984	0.602984		
n-Hexane	0.50244	0.50244		
n-Heptane	0.431428	0.431428		
Water	0.403885	0.403885		
Ethylene Glycol	0	0		
Therminol 55	0	0		

Properties

Property	Units	Total	Vapor	
Temperature	°F	120	120	
Pressure	psia	464.696	464.696	
Mole Fraction Vapor	%	100	100	
Mole Fraction Light Liquid	%	0	0	
Mole Fraction Heavy Liquid	%	0	0	
Molecular Weight	lb/lbmol	23.9675	23.9675	
Mass Density	lb/ft ³	1.96353	1.96353	
Molar Flow	lbmol/h	385.449	385.449	
Mass Flow	lb/h	9238.24	9238.24	
Vapor Volumetric Flow	ft ³ /h	4704.92	4704.92	
Liquid Volumetric Flow	gpm	586.587	586.587	
Std Vapor Volumetric Flow	MMSCFD	3.51053	3.51053	
Std Liquid Volumetric Flow	sgpm	46.7943	46.7943	
Compressibility		0.911819	0.911819	
Specific Gravity		0.827531	0.827531	
API Gravity				
Enthalpy	Btu/h	-1.57616E+07	-1.57616E+07	
Mass Enthalpy	Btu/lb	-1706.12	-1706.12	
Mass Cp	Btu/(lb*°F)	0.514774	0.514774	
Ideal Gas Cp/Cv Ratio		1.22043	1.22043	
Dynamic Viscosity	cP	0.0123244	0.0123244	
Kinematic Viscosity	cSt	0.391838	0.391838	
Thermal Conductivity	Btu/(h*ft*°F)	0.0198426	0.0198426	
Surface Tension	lbf/ft			
Net Ideal Gas Heating Value	Btu/ft ³	1145.56	1145.56	
Net Liquid Heating Value	Btu/lb	18066.1	18066.1	
Gross Ideal Gas Heating Value	Btu/ft ³	1260.36	1260.36	
Gross Liquid Heating Value	Btu/lb	19883.8	19883.8	

Remarks

Process Streams Report
Stream: 11
 Phases Grouped by Columns

Client Name:	PTSDK	Job: J877
Location:		Modified: 10:59 AM, 12/8/2010
Flowsheet:	Inlet Compression	Status: Solved 8:55 AM, 4/28/2011

Connections

From: VSSL-102	To: --
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Composition

Mole Fraction	Total %	Light Liquid %		
Nitrogen	0.000429415	0.000429415		
Oxygen	0	0		
Carbon Dioxide	0.0193954	0.0193954		
Methane	0.0188961	0.0188961		
Ethane	0.0013999	0.0013999		
Propane	0.00174011	0.00174011		
i-Butane	0.000122983	0.000122983		
n-Butane	0.000439778	0.000439778		
i-Pentane	8.30376E-05	8.30376E-05		
n-Pentane	6.61589E-05	6.61589E-05		
n-Hexane	2.27409E-05	2.27409E-05		
n-Heptane	9.94299E-06	9.94299E-06		
Water	99.9574	99.9574		
Ethylene Glycol	0	0		
Therminol 55	0	0		

Properties

Property	Units	Total	Light Liquid	
Temperature	°F	120	120	
Pressure	psia	212.696	212.696	
Mole Fraction Vapor	%	0	0	
Mole Fraction Light Liquid	%	100	100	
Mole Fraction Heavy Liquid	%	0	0	
Molecular Weight	lb/lbmol	18.0209	18.0209	
Mass Density	lb/ft ³	61.6683	61.6683	
Molar Flow	lbmol/h	2.2984	2.2984	
Mass Flow	lb/h	41.4193	41.4193	
Vapor Volumetric Flow	ft ³ /h	0.671646	0.671646	
Liquid Volumetric Flow	gpm	0.0837377	0.0837377	
Std Vapor Volumetric Flow	MMSCFD	0.0209329	0.0209329	
Std Liquid Volumetric Flow	sgpm	0.0828499	0.0828499	
Compressibility		0.00999148	0.00999148	
Specific Gravity		0.988765	0.988765	
API Gravity		10.0127	10.0127	
Enthalpy	Btu/h	-280612	-280612	
Mass Enthalpy	Btu/lb	-6774.93	-6774.93	
Mass Cp	Btu/(lb*°F)	0.969729	0.969729	
Ideal Gas Cp/Cv Ratio		1.32344	1.32344	
Dynamic Viscosity	cP	0.570835	0.570835	
Kinematic Viscosity	cSt	0.577867	0.577867	
Thermal Conductivity	Btu/(h*ft*°F)	0.366936	0.366936	
Surface Tension	lbf/ft	0.00466418	0.00466418	
Net Ideal Gas Heating Value	Btu/ft ³	0.258753	0.258753	
Net Liquid Heating Value	Btu/lb	-1053.58	-1053.58	
Gross Ideal Gas Heating Value	Btu/ft ³	50.5739	50.5739	
Gross Liquid Heating Value	Btu/lb	5.95908	5.95908	

Remarks

Process Streams Report
Stream: 12
 Phases Grouped by Columns

Client Name:	PTSDK	Job: J877
Location:		Modified: 11:00 AM, 12/8/2010
Flowsheet:	Inlet Compression	Status: Solved 8:55 AM, 4/28/2011

Connections

From: VSSL-102 To: CMPR-102

Composition

Mole Fraction	Total %	Vapor %		
Nitrogen	3.04536	3.04536		
Oxygen	0	0		
Carbon Dioxide	4.74163	4.74163		
Methane	71.4705	71.4705		
Ethane	5.40168	5.40168		
Propane	8.26766	8.26766		
i-Butane	1.55322	1.55322		
n-Butane	2.30121	2.30121		
i-Pentane	0.80596	0.80596		
n-Pentane	0.606461	0.606461		
n-Hexane	0.514405	0.514405		
n-Heptane	0.45822	0.45822		
Water	0.833708	0.833708		
Ethylene Glycol	0	0		
Therminol 55	0	0		

Properties

Property	Units	Total	Vapor	
Temperature	°F	120	120	
Pressure	psia	212.696	212.696	
Mole Fraction Vapor	%	100	100	
Mole Fraction Light Liquid	%	0	0	
Mole Fraction Heavy Liquid	%	0	0	
Molecular Weight	lb/lbmol	23.9874	23.9874	
Mass Density	lb/ft ³	0.85504	0.85504	
Molar Flow	lbmol/h	387.523	387.523	
Mass Flow	lb/h	9295.66	9295.66	
Vapor Volumetric Flow	ft ³ /h	10871.6	10871.6	
Liquid Volumetric Flow	gpm	1355.42	1355.42	
Std Vapor Volumetric Flow	MMSCFD	3.52942	3.52942	
Std Liquid Volumetric Flow	sgpm	46.9433	46.9433	
Compressibility		0.959203	0.959203	
Specific Gravity		0.828219	0.828219	
API Gravity				
Enthalpy	Btu/h	-1.58807E+07	-1.58807E+07	
Mass Enthalpy	Btu/lb	-1708.4	-1708.4	
Mass Cp	Btu/(lb*°F)	0.481363	0.481363	
Ideal Gas CpCv Ratio		1.22029	1.22029	
Dynamic Viscosity	cP	0.0118476	0.0118476	
Kinematic Viscosity	cSt	0.865015	0.865015	
Thermal Conductivity	Btu/(h*ft*°F)	0.0188857	0.0188857	
Surface Tension	lbf/ft			
Net Ideal Gas Heating Value	Btu/ft ³	1143.01	1143.01	
Net Liquid Heating Value	Btu/lb	18007.2	18007.2	
Gross Ideal Gas Heating Value	Btu/ft ³	1257.7	1257.7	
Gross Liquid Heating Value	Btu/lb	19821.7	19821.7	

Remarks

Process Streams Report
Stream: 13
 Phases Grouped by Columns

Client Name:	PTSDK	Job: J877
Location:		Modified: 11:00 AM, 12/8/2010
Flowsheet:	Inlet Compression	Status: Solved 8:55 AM, 4/28/2011

Connections

From: CMPR-102 To: FAXR-102

Composition

Mole Fraction	Total %	Vapor %		
Nitrogen	3.04536	3.04536		
Oxygen	0	0		
Carbon Dioxide	4.74163	4.74163		
Methane	71.4705	71.4705		
Ethane	5.40168	5.40168		
Propane	8.26766	8.26766		
i-Butane	1.55322	1.55322		
n-Butane	2.30121	2.30121		
i-Pentane	0.80596	0.80596		
n-Pentane	0.606461	0.606461		
n-Hexane	0.514405	0.514405		
n-Heptane	0.45822	0.45822		
Water	0.833708	0.833708		
Ethylene Glycol	0	0		
Therminol 55	0	0		

Properties

Property	Units	Total	Vapor	
Temperature	°F	237.933	237.933	
Pressure	psia	469.696	469.696	
Mole Fraction Vapor	%	100	100	
Mole Fraction Light Liquid	%	0	0	
Mole Fraction Heavy Liquid	%	0	0	
Molecular Weight	lb/lbmol	23.9874	23.9874	
Mass Density	lb/ft ³	1.57107	1.57107	
Molar Flow	lbmol/h	387.523	387.523	
Mass Flow	lb/h	9295.66	9295.66	
Vapor Volumetric Flow	ft ³ /h	5916.76	5916.76	
Liquid Volumetric Flow	gpm	737.674	737.674	
Std Vapor Volumetric Flow	MMSCFD	3.52942	3.52942	
Std Liquid Volumetric Flow	sgpm	46.9433	46.9433	
Compressibility		0.957923	0.957923	
Specific Gravity		0.828219	0.828219	
API Gravity				
Enthalpy	Btu/h	-1.53845E+07	-1.53845E+07	
Mass Enthalpy	Btu/lb	-1655.02	-1655.02	
Mass Cp	Btu/(lb*°F)	0.543993	0.543993	
Ideal Gas Cp/Cv Ratio		1.1931	1.1931	
Dynamic Viscosity	cP	0.0141138	0.0141138	
Kinematic Viscosity	cSt	0.560824	0.560824	
Thermal Conductivity	Btu/(h*ft*°F)	0.0246831	0.0246831	
Surface Tension	lbf/ft			
Net Ideal Gas Heating Value	Btu/ft ³	1143.01	1143.01	
Net Liquid Heating Value	Btu/lb	18007.2	18007.2	
Gross Ideal Gas Heating Value	Btu/ft ³	1257.7	1257.7	
Gross Liquid Heating Value	Btu/lb	19821.7	19821.7	

Remarks

Process Streams Report		
Stream: 14		
Phases Grouped by Columns		

Client Name:	PTSDK	Job: J877
Location:		Modified: 11:13 AM, 12/8/2010
Flowsheet:	Inlet Compression	Status: Solved 8:55 AM, 4/28/2011

Connections	
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From: FAXR-102	To: VSSL-100
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Composition					
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Mole Fraction	Total %	Vapor %	Light Liquid %	Heavy Liquid %	Mixed Liquid %
Nitrogen	3.04536	3.06154	0.189963	0.000952405	0.0373092
Oxygen	0	0	0	0	0
Carbon Dioxide	4.74163	4.76543	1.48285	0.0396586	0.317261
Methane	71.4705	71.8434	11.0661	0.0400801	2.16098
Ethane	5.40168	5.42737	3.24924	0.00270966	0.627192
Propane	8.26766	8.29901	12.6782	0.00311896	2.44121
i-Butane	1.55322	1.55629	5.10611	0.000207488	0.982347
n-Butane	2.30121	2.30318	10.0629	0.000726228	1.93622
i-Pentane	0.80596	0.803021	7.02919	0.000128196	1.35219
n-Pentane	0.606461	0.602984	6.51263	0.000100833	1.25281
n-Hexane	0.514405	0.50244	14.2347	3.14971E-05	2.73811
n-Heptane	0.45822	0.431428	28.2682	1.22765E-05	5.4375
Water	0.833708	0.403885	0.120017	99.9123	80.7169
Ethylene Glycol	0	0	0	0	0
Therminol 55	0	0	0	0	0

Properties						
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Property	Units	Total	Vapor	Light Liquid	Heavy Liquid	Mixed Liquid
Temperature	°F	120 *	120	120	120	120
Pressure	psia	464.696 *	464.696	464.696	464.696	464.696
Mole Fraction Vapor	%	99.4648	100	0	0	0
Mole Fraction Light Liquid	%	0.102945	0	100	0	19.2354
Mole Fraction Heavy Liquid	%	0.432241	0	0	100	80.7646
Molecular Weight	lb/lbmol	23.9874	23.9675	68.2491	18.0266	27.687
Mass Density	lb/ft^3	1.97522	1.96353	36.9097	61.6698	46.7877
Molar Flow	lbmol/h	387.523	385.449	0.398935	1.67503	2.07397
Mass Flow	lb/h	9295.66	9238.24	27.227	30.1951	57.422
Vapor Volumetric Flow	ft^3/h	4706.14	4704.92	0.737665	0.489625	1.22729
Liquid Volumetric Flow	gpm	586.74	586.587	0.0919686	0.0610442	0.153013
Std Vapor Volumetric Flow	MMSCFD	3.52942	3.51053	0.00363335	0.0152556	0.0188889
Std Liquid Volumetric Flow	sgpm	46.9433	46.7943	0.0885603	0.0604368	0.148997
Compressibility		0.907176	0.911819	0.138128	0.0218356	0.0442048
Specific Gravity			0.827531	0.591795	0.988789	0.750175
API Gravity				93.4555	10.0096	50.6128
Enthalpy	Btu/h	-1.59948E+07	-1.57616E+07	-28759	-204464	-233223
Mass Enthalpy	Btu/lb	-1720.67	-1706.12	-1056.27	-6771.45	-4061.57
Mass Cp	Btu/(lb*°F)	0.516476	0.514774	0.591743	0.969367	0.790315
Ideal Gas CpCv Ratio		1.22029	1.22043	1.07393	1.32341	1.19611
Dynamic Viscosity	cP		0.0123244	0.174541	0.571346	0.332846
Kinematic Viscosity	cSt		0.391838	0.295214	0.57837	0.408179
Thermal Conductivity	Btu/(h*ft*°F)		0.0198426	0.0608617	0.366254	0.182698
Surface Tension	lbf/ft			0.000677986 ?	0.00466184	0.00226734 ?
Net Ideal Gas Heating Value	Btu/ft^3	1143.01	1145.56	3472.92	0.519146	668.448
Net Liquid Heating Value	Btu/lb	18007.2	18066.1	19156	-1047.34	8532.17
Gross Ideal Gas Heating Value	Btu/ft^3	1257.7	1260.36	3757.43	50.8389	763.814
Gross Liquid Heating Value	Btu/lb	19821.7	19883.8	20737.9	11.9647	9839.28

Remarks

* User Specified Values
 ? Extrapolated or Approximate Values

Process Streams Report
Stream: 15
 Phases Grouped by Columns

Client Name:	PTSDK	Job: J877
Location:		Modified: 10:43 AM, 12/15/2010
Flowsheet:	Inlet Compression	Status: Solved 8:55 AM, 4/28/2011

Connections

From: VSSL-103	To: --
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Composition

Mole Fraction	Total %				
Nitrogen					
Oxygen					
Carbon Dioxide					
Methane					
Ethane					
Propane					
i-Butane					
n-Butane					
i-Pentane					
n-Pentane					
n-Hexane					
n-Heptane					
Water					
Ethylene Glycol					
Therminol 55					

Properties

Property	Units	Total			
Temperature	°F	68.7202			
Pressure	psia	24.6959			
Mole Fraction Vapor	%				
Mole Fraction Light Liquid	%				
Mole Fraction Heavy Liquid	%				
Molecular Weight	lb/lbmol				
Mass Density	lb/ft ³				
Molar Flow	lbmol/h	0			
Mass Flow	lb/h	0			
Vapor Volumetric Flow	ft ³ /h				
Liquid Volumetric Flow	gpm				
Std Vapor Volumetric Flow	MMSCFD	0			
Std Liquid Volumetric Flow	sgpm	0			
Compressibility					
Specific Gravity					
API Gravity					
Enthalpy	Btu/h	0			
Mass Enthalpy	Btu/lb				
Mass Cp	Btu/(lb*°F)				
Ideal Gas CpCv Ratio					
Dynamic Viscosity	cP				
Kinematic Viscosity	cSt				
Thermal Conductivity	Btu/(h*ft*°F)				
Surface Tension	lbf/ft				
Net Ideal Gas Heating Value	Btu/ft ³				
Net Liquid Heating Value	Btu/lb				
Gross Ideal Gas Heating Value	Btu/ft ³				
Gross Liquid Heating Value	Btu/lb				

Remarks

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Process Streams Report
Stream: 16
 Phases Grouped by Columns

Client Name:	PTSDK	Job: J877
Location:		Modified: 10:43 AM, 12/15/2010
Flowsheet:	Inlet Compression	Status: Solved 8:55 AM, 4/28/2011

Connections

From: VSSL-103 To: VSSL-104

Composition

Mole Fraction	Total %	Vapor %		
Nitrogen	3.0274	3.0274		
Oxygen	0	0		
Carbon Dioxide	4.71379	4.71379		
Methane	71.0492	71.0492		
Ethane	5.36984	5.36984		
Propane	8.21893	8.21893		
i-Butane	1.54407	1.54407		
n-Butane	2.28765	2.28765		
i-Pentane	0.801208	0.801208		
n-Pentane	0.602886	0.602886		
n-Hexane	0.511372	0.511372		
n-Heptane	0.455518	0.455518		
Water	1.41814	1.41814		
Ethylene Glycol	0	0		
Therminol 55	0	0		

Properties

Property	Units	Total	Vapor	
Temperature	°F	68.7202	68.7202	
Pressure	psia	24.6959	24.6959	
Mole Fraction Vapor	%	100	100	
Mole Fraction Light Liquid	%	0	0	
Mole Fraction Heavy Liquid	%	0	0	
Molecular Weight	lb/lbmol	23.9522	23.9522	
Mass Density	lb/ft ³	0.104997	0.104997	
Molar Flow	lbmol/h	389.821	389.821	
Mass Flow	lb/h	9337.08	9337.08	
Vapor Volumetric Flow	ft ³ /h	88926.9	88926.9	
Liquid Volumetric Flow	gpm	11087	11087	
Std Vapor Volumetric Flow	MMSCFD	3.55035	3.55035	
Std Liquid Volumetric Flow	sgpm	47.0262	47.0262	
Compressibility		0.993515	0.993515	
Specific Gravity		0.827004	0.827004	
API Gravity				
Enthalpy	Btu/h	-1.62774E+07	-1.62774E+07	
Mass Enthalpy	Btu/lb	-1743.3	-1743.3	
Mass Cp	Btu/(lb*°F)	0.44077	0.44077	
Ideal Gas CpCv Ratio		1.23363	1.23363	
Dynamic Viscosity	cP	0.010691	0.010691	
Kinematic Viscosity	cSt	6.35649	6.35649	
Thermal Conductivity	Btu/(h*ft*°F)	0.0162167	0.0162167	
Surface Tension	lbf/ft			
Net Ideal Gas Heating Value	Btu/ft ³	1136.27	1136.27	
Net Liquid Heating Value	Btu/lb	17922.6	17922.6	
Gross Ideal Gas Heating Value	Btu/ft ³	1250.59	1250.59	
Gross Liquid Heating Value	Btu/lb	19733.8	19733.8	

Remarks

Process Streams Report
Stream: 17
 Phases Grouped by Columns

Client Name:	PTSDK	Job: J877
Location:		Modified: 10:43 AM, 12/15/2010
Flowsheet:	Inlet Compression	Status: Solved 8:55 AM, 4/28/2011

Connections

From: VSSL-104	To: --
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Composition

Mole Fraction	Total %				
Nitrogen					
Oxygen					
Carbon Dioxide					
Methane					
Ethane					
Propane					
i-Butane					
n-Butane					
i-Pentane					
n-Pentane					
n-Hexane					
n-Heptane					
Water					
Ethylene Glycol					
Therminol 55					

Properties

Property	Units	Total			
Temperature	°F	68.7202			
Pressure	psia	24.6959			
Mole Fraction Vapor	%				
Mole Fraction Light Liquid	%				
Mole Fraction Heavy Liquid	%				
Molecular Weight	lb/lbmol				
Mass Density	lb/ft ³				
Molar Flow	lbmol/h	0			
Mass Flow	lb/h	0			
Vapor Volumetric Flow	ft ³ /h				
Liquid Volumetric Flow	gpm				
Std Vapor Volumetric Flow	MMSCFD	0			
Std Liquid Volumetric Flow	sgpm	0			
Compressibility					
Specific Gravity					
API Gravity					
Enthalpy	Btu/h	0			
Mass Enthalpy	Btu/lb				
Mass Cp	Btu/(lb*°F)				
Ideal Gas CpCv Ratio					
Dynamic Viscosity	cP				
Kinematic Viscosity	cSt				
Thermal Conductivity	Btu/(h*ft*°F)				
Surface Tension	lbf/ft				
Net Ideal Gas Heating Value	Btu/ft ³				
Net Liquid Heating Value	Btu/lb				
Gross Ideal Gas Heating Value	Btu/ft ³				
Gross Liquid Heating Value	Btu/lb				

Remarks

Process Streams Report
Stream: 18
 Phases Grouped by Columns

Client Name:	PTSDK	Job: J877
Location:		Modified: 10:43 AM, 12/15/2010
Flowsheet:	Inlet Compression	Status: Solved 8:55 AM, 4/28/2011

Connections

From: VSSL-104 To: CMPR-100

Composition

Mole Fraction	Total %	Vapor %		
Nitrogen	3.0274	3.0274		
Oxygen	0	0		
Carbon Dioxide	4.71379	4.71379		
Methane	71.0492	71.0492		
Ethane	5.36984	5.36984		
Propane	8.21893	8.21893		
i-Butane	1.54407	1.54407		
n-Butane	2.28765	2.28765		
i-Pentane	0.801208	0.801208		
n-Pentane	0.602886	0.602886		
n-Hexane	0.511372	0.511372		
n-Heptane	0.455518	0.455518		
Water	1.41814	1.41814		
Ethylene Glycol	0	0		
Therminol 55	0	0		

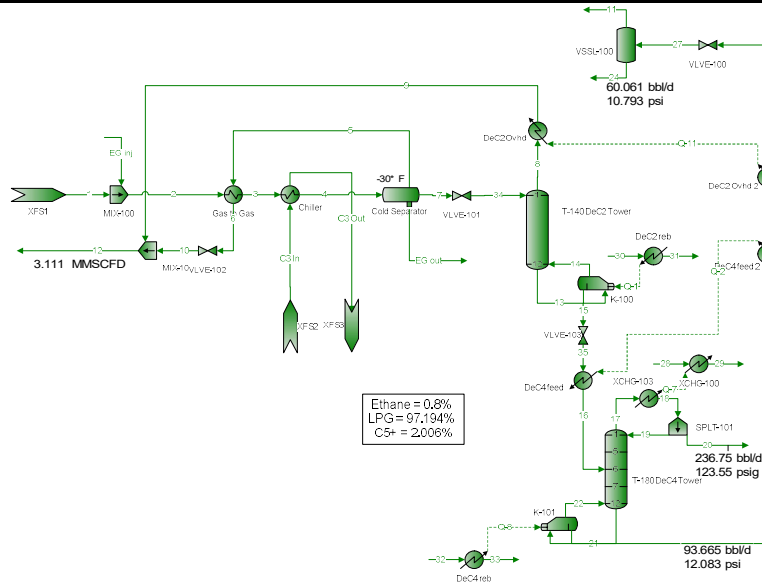
Properties

Property	Units	Total	Vapor	
Temperature	°F	68.7202	68.7202	
Pressure	psia	24.6959	24.6959	
Mole Fraction Vapor	%	100	100	
Mole Fraction Light Liquid	%	0	0	
Mole Fraction Heavy Liquid	%	0	0	
Molecular Weight	lb/lbmol	23.9522	23.9522	
Mass Density	lb/ft ³	0.104997	0.104997	
Molar Flow	lbmol/h	389.821	389.821	
Mass Flow	lb/h	9337.08	9337.08	
Vapor Volumetric Flow	ft ³ /h	88926.9	88926.9	
Liquid Volumetric Flow	gpm	11087	11087	
Std Vapor Volumetric Flow	MMSCFD	3.55035	3.55035	
Std Liquid Volumetric Flow	sgpm	47.0262	47.0262	
Compressibility		0.993515	0.993515	
Specific Gravity		0.827004	0.827004	
API Gravity				
Enthalpy	Btu/h	-1.62774E+07	-1.62774E+07	
Mass Enthalpy	Btu/lb	-1743.3	-1743.3	
Mass Cp	Btu/(lb*°F)	0.44077	0.44077	
Ideal Gas Cp/Cv Ratio		1.23363	1.23363	
Dynamic Viscosity	cP	0.010691	0.010691	
Kinematic Viscosity	cSt	6.35649	6.35649	
Thermal Conductivity	Btu/(h*ft*°F)	0.0162167	0.0162167	
Surface Tension	lbf/ft			
Net Ideal Gas Heating Value	Btu/ft ³	1136.27	1136.27	
Net Liquid Heating Value	Btu/lb	17922.6	17922.6	
Gross Ideal Gas Heating Value	Btu/ft ³	1250.59	1250.59	
Gross Liquid Heating Value	Btu/lb	19733.8	19733.8	

Remarks

Process Plant Plant Schematic

Client Name:	PTSDK	Job: J877
Location:		
Flowsheet:	Process Plant	



* User Specified Values
? Extrapolated or Approximate Values

Process Streams Report
All Streams
Tabulated by Total Phase

Client Name:	PTSDK	Job: J877
Location:		
Flowsheet:	Process Plant	

Connections

	C3 In	C3 Out	EG inj	EG out	1
From Block	XFS2	Chiller	--	Cold Separator	XFS1
To Block	Chiller	XFS3	MIX-100	--	MIX-100

Stream Composition

Mole Fraction	C3 In %	C3 Out %	EG inj %	EG out %	1 %
Nitrogen	0	0	0 *	0.00259809	3.06154
Oxygen	0	0	0 *	0	0
Carbon Dioxide	0	0	0 *	0.683487	4.76543
Methane	0	0	0 *	0.0848277	71.8434
Ethane	6.1224	6.1224	0 *	0.0102353	5.42737
Propane	93.8776	93.8776	0 *	0.00705712	8.29901
i-Butane	0	0	0 *	0.000283558	1.55629
n-Butane	0	0	0 *	0.000601948	2.30318
i-Pentane	0	0	0 *	8.18995E-05	0.803021
n-Pentane	0	0	0 *	5.47444E-05	0.602984
n-Hexane	0	0	0 *	1.17556E-05	0.50244
n-Heptane	0	0	0 *	1.30043E-05	0.431428
Water	0	0	46.2747 *	51.5664	0.403885
Ethylene Glycol	0	0	53.7253 *	47.6443	0
Therminol 55	0	0	0 *	0	0

Stream Properties

Property	Units	C3 In	C3 Out	EG inj	EG out	1
Temperature	°F	-40	-30 *	100 *	-30	120
Pressure	psia	18.6626 *	17.6626	469.696 *	454.696	464.696
Mole Fraction Vapor	%	21.8912	100	0	0	100
Mole Fraction Light Liquid	%	78.1088	0	100	100	0
Mole Fraction Heavy Liquid	%	0	0	0	0	0
Molecular Weight	lb/lbmol	43.2369	43.2369	41.6826	39.1836	23.9675
Mass Density	lb/ft^3	0.833602	0.171496	67.8868	71.4234	1.96353
Molar Flow	lbmol/h	117.417	117.417	13.0933	14.7644	385.449
Mass Flow	lb/h	5076.74	5076.74	545.764	578.522	9238.24
Vapor Volumetric Flow	ft^3/h	6090.12	29602.6	8.03932	8.09989	4704.92
Liquid Volumetric Flow	gpm	759.288	3690.71	1.00231	1.00986	586.587
Std Vapor Volumetric Flow	MMSCFD	1.06939	1.06939	0.119249	0.134468	3.51053
Std Liquid Volumetric Flow	sgpm	20.3708	20.3708	1 *	1.06868	46.7943
Compressibility		0.21493	0.96573	0.0480165	0.0540986	0.911819
Specific Gravity			1.49285	1.08847	1.14517	0.827531
API Gravity				-3.3923	-14.0444	
Enthalpy	Btu/h	-6.18909E+06	-5.4298E+06	-2.11337E+06	-2.37428E+06	-1.57616E+07
Mass Enthalpy	Btu/lb	-1219.11	-1069.55	-3872.32	-4104.05	-1706.12
Mass Cp	Btu/(lb*°F)	0.501121	0.345083	0.686767	0.694217 ?	0.514774
Ideal Gas CpCv Ratio		1.15977	1.15687	1.19026	1.22606	1.22043
Dynamic Viscosity	cP		0.00669935	5.56728	160.856	0.0123244
Kinematic Viscosity	cSt		2.43869	5.11961	140.597	0.391838
Thermal Conductivity	Btu/(h*ft*°F)		0.00677415	0.178712	0.166321 ?	0.0198426
Surface Tension	lbf/ft			0.00367973	0.00432732 ?	
Net Ideal Gas Heating Value	Btu/ft^3	2272.39	2272.39	684.961	608.567	1145.56
Net Liquid Heating Value	Btu/lb	19782.6	19782.6	5654.91	5293.76	18066.1
Gross Ideal Gas Heating Value	Btu/ft^3	2470.4	2470.4	789.239	706.457	1260.36
Gross Liquid Heating Value	Btu/lb	21520.5	21520.5	6604.27	6241.8	19883.8

Remarks

Process Streams Report
All Streams
 Tabulated by Total Phase

Client Name:	PTSDK	Job: J877
Location:		
Flowsheet:	Process Plant	

Connections

	2	3	4	5	6
From Block	MIX-100	Gas to Gas	Chiller	Cold Separator	Gas to Gas
To Block	Gas to Gas	Chiller	Cold Separator	Gas to Gas	VLVE-102

Stream Composition

Mole Fraction	2 %	3 %	4 %	5 %	6 %
Nitrogen	2.96096	2.96096	2.96096	3.74344	3.74344
Oxygen	0	0	0	0	0
Carbon Dioxide	4.60887	4.60887	4.60887	4.79867	4.79867
Methane	69.4831	69.4831	69.4831	83.7462	83.7462
Ethane	5.24906	5.24906	5.24906	4.31534	4.31534
Propane	8.02637	8.02637	8.02637	2.89644	2.89644
i-Butane	1.50516	1.50516	1.50516	0.230864	0.230864
n-Butane	2.22751	2.22751	2.22751	0.220382	0.220382
i-Pentane	0.776639	0.776639	0.776639	0.0286862	0.0286862
n-Pentane	0.583174	0.583174	0.583174	0.0159677	0.0159677
n-Hexane	0.485933	0.485933	0.485933	0.00262885	0.00262885
n-Heptane	0.417254	0.417254	0.417254	0.000723801	0.000723801
Water	1.91088	1.91088	1.91088	0.0006182	0.0006182
Ethylene Glycol	1.76504	1.76504	1.76504	3.26139E-07	3.26139E-07
Therminol 55	0	0	0	0	0

Stream Properties

Property	Units	2	3	4	5	6
Temperature	°F	121.321	60.6355	-30 *	-30	111.321
Pressure	psia	464.696	459.696	454.696	454.696	449.696
Mole Fraction Vapor	%	96.5098	91.8227	77.7462	100	100
Mole Fraction Light Liquid	%	3.49021	4.51923	18.5492	0	0
Mole Fraction Heavy Liquid	%	0	3.65805	3.70459	0	0
Molecular Weight	lb/lbmol	24.5495	24.5495	24.5495	19.4679	19.4679
Mass Density	lb/ft^3	2.07382	2.45185	3.55056	2.26804	1.50647
Molar Flow	lbmol/h	398.542	398.542	398.542	309.852	309.852
Mass Flow	lb/h	9784	9784	9784	6032.15	6032.15
Vapor Volumetric Flow	ft^3/h	4717.85	3990.46	2755.62	2659.63	4004.17
Liquid Volumetric Flow	gpm	588.2	497.512	343.558	331.59	499.222
Std Vapor Volumetric Flow	MMSCFD	3.62978	3.62978	3.62978	2.82201	2.82201
Std Liquid Volumetric Flow	sgpm	47.7943	47.7943	47.7943	34.292	34.292
Compressibility		0.882277	0.824322	0.681816	0.846426	0.948384
Specific Gravity					0.672173	0.672173
API Gravity						
Enthalpy	Btu/h	-1.78749E+07	-1.83208E+07	-1.90801E+07 ?	-1.22349E+07	-1.17889E+07
Mass Enthalpy	Btu/lb	-1826.96	-1872.53	-1950.14 ?	-2028.27	-1954.35
Mass Cp	Btu/(lb*°F)	0.525786	0.529787	0.564357 ?	0.550844 ?	0.516503
Ideal Gas CpCv Ratio		1.21867	1.2342	1.25649	1.30736	1.27478
Dynamic Viscosity	cP				0.0103216	0.0126146
Kinematic Viscosity	cSt				0.284102	0.522751
Thermal Conductivity	Btu/(h*ft*°F)				0.0161162 ?	0.0208635
Surface Tension	lbf/ft					
Net Ideal Gas Heating Value	Btu/ft^3	1130.43	1130.43	1130.43	913.874	913.874
Net Liquid Heating Value	Btu/lb	17373.8	17373.8	17373.8	17782.9	17782.9
Gross Ideal Gas Heating Value	Btu/ft^3	1244.88	1244.88	1244.88	1011.73	1011.73
Gross Liquid Heating Value	Btu/lb	19143	19143	19143	19690.4	19690.4

Remarks

Process Streams Report
All Streams
 Tabulated by Total Phase

Client Name:	PTSDK	Job: J877
Location:		
Flowsheet:	Process Plant	

Connections

	7	8	9	10	11
From Block	Cold Separator	T-140 DeC2 Tower	DeC2 Ovhd	VLVE-102	VSSL-100
To Block	VLVE-101	DeC2 Ovhd	MIX-101	MIX-101	--

Stream Composition

Mole Fraction	7 %	8 %	9 %	10 %	11 %
Nitrogen	0.272165	0.634087	0.634087	3.74344	0
Oxygen	0	0	0	0	0
Carbon Dioxide	4.59736	10.7106	10.7106	4.79867	1.31372E-11
Methane	23.5615	54.8934	54.8934	83.7462	0
Ethane	10.2089	22.8387	22.8387	4.31534	3.83376E-06
Propane	31.1293	9.18384	9.18384	2.89644	0.0340824
i-Butane	7.14675	0.750578	0.750578	0.230864	0.401138
n-Butane	11.0848	0.787012	0.787012	0.220382	5.07236
i-Pentane	4.06666	0.115019	0.115019	0.0286862	45.1795
n-Pentane	3.07699	0.0672913	0.0672913	0.0159677	33.0067
n-Hexane	2.60868	0.0139813	0.0139813	0.00262885	12.24
n-Heptane	2.24641	0.00461361	0.00461361	0.000723801	4.0661
Water	0.000395544	0.000921529	0.000921529	0.0006182	0
Ethylene Glycol	2.91383E-05	1.38272E-06	1.38272E-06	3.26139E-07	8.48346E-05
Therminol 55	0	0	0	0	0

Stream Properties

Property	Units	7	8	9	10	11
Temperature	°F	-30	25.666	115 *	101.814	115.941
Pressure	psia	454.696	340	335	275 *	14.696
Mole Fraction Vapor	%	0	100	100	100	100
Mole Fraction Light Liquid	%	100	0	0	0	0
Mole Fraction Heavy Liquid	%	0	0	0	0	0
Molecular Weight	lb/lbmol	42.9255	25.6567	25.6567	19.4679	74.229
Mass Density	lb/ft^3	36.104	1.952	1.50802	0.920107	0.182967
Molar Flow	lbmol/h	73.9265	31.731	31.731	309.852	1.70982
Mass Flow	lb/h	3173.33	814.111	814.111	6032.15	126.919
Vapor Volumetric Flow	ft^3/h	87.894	417.064	539.854	6555.92	693.67
Liquid Volumetric Flow	gpm	10.9582	51.9976	67.3064	817.362	86.4836
Std Vapor Volumetric Flow	MMSCFD	0.673295	0.288994	0.288994	2.82201	0.0155724
Std Liquid Volumetric Flow	sgpm	12.4337	4.08561	4.08561	34.292	0.400574
Compressibility		0.117242	0.858009	0.924176	0.965631	0.965178
Specific Gravity		0.578878	0.885855	0.885855	0.672173	2.56293
API Gravity		150.123				
Enthalpy	Btu/h	-4.471E+06	-1.58858E+06	-1.5546E+06	-1.17889E+07	-110574
Mass Enthalpy	Btu/lb	-1408.93	-1951.31	-1909.57	-1954.35	-871.218
Mass Cp	Btu/(lb*°F)	0.56637 ?	0.467681	0.469237	0.496434	0.423163
Ideal Gas CpCv Ratio		1.15388	1.24584	1.22117	1.27724	1.0682
Dynamic Viscosity	cP	0.166809	0.010641	0.0120685	0.012197	0.00752245
Kinematic Viscosity	cSt	0.288432	0.340315	0.499604	0.827552	2.56665
Thermal Conductivity	Btu/(h*ft*°F)	0.0711484 ?	0.0149257	0.0180003	0.019881	0.00959598
Surface Tension	lb/ft	0.000718247 ?				
Net Ideal Gas Heating Value	Btu/ft^3	2142.3	1135.38	1135.38	913.874	3806.72
Net Liquid Heating Value	Btu/lb	18798.4	16707.5	16707.5	17782.9	19303.8
Gross Ideal Gas Heating Value	Btu/ft^3	2329.64	1247.97	1247.97	1011.73	4115.97
Gross Liquid Heating Value	Btu/lb	20454.5	18372.9	18372.9	19690.4	20884.8

Remarks

Process Streams Report
All Streams
 Tabulated by Total Phase

Client Name:	PTSDK	Job: J877
Location:		
Flowsheet:	Process Plant	

Connections

	12	13	14	15	16
From Block	MIX-101	T-140 DeC2 Tower	K-100	K-100	DeC4 feed
To Block	--	K-100	T-140 DeC2 Tower	VLVE-103	T-180 DeC4 Tower

Stream Composition

Mole Fraction	12 %	13 %	14 %	15 %	16 %
Nitrogen	3.4546	2.50244E-11	3.63229E-11	3.67777E-12	3.67777E-12
Oxygen	0	0	0	0	0
Carbon Dioxide	5.34785	0.000554133	0.000752733	0.000178912	0.000178912
Methane	81.066	7.9908E-06	1.1206E-05	1.91615E-06	1.91615E-06
Ethane	6.03604	1.43956	1.82499	0.71137	0.71137
Propane	3.4805	60.0138	66.5672	47.6322	47.6322
i-Butane	0.279143	11.0561	10.5794	11.9567	11.9567
n-Butane	0.273018	15.5928	13.8799	18.8288	18.8288
i-Pentane	0.036706	4.62055	3.34086	7.0383	7.0383
n-Pentane	0.0207353	3.3315	2.26828	5.34028	5.34028
n-Hexane	0.00368342	2.23439	1.00352	4.55989	4.55989
n-Heptane	0.00108514	1.71077	0.534972	3.93224	3.93224
Water	0.000646377	1.0608E-08	1.44857E-08	3.28193E-09	3.28193E-09
Ethylene Glycol	4.24289E-07	3.81212E-05	3.18284E-05	5.00105E-05	5.00105E-05
Therminol 55	0	0	0	0	0

Stream Properties

Property	Units	12	13	14	15	16
Temperature	°F	102.598	184.277	205.421	205.421	160 *
Pressure	psia	275	345	345	345	180
Mole Fraction Vapor	%	100	0	100	0	42.709
Mole Fraction Light Liquid	%	0	100	0	100	57.291
Mole Fraction Heavy Liquid	%	0	0	0	0	0
Molecular Weight	lb/lbmol	20.0428	51.7625	49.5664	55.9116	55.9116
Mass Density	lb/ft^3	0.948347	27.5541	3.44428	28.1635	4.00278
Molar Flow	lbmol/h	341.583	121.917	79.7212	42.1955	42.1955
Mass Flow	lb/h	6846.26	6310.71	3951.49	2359.22	2359.22
Vapor Volumetric Flow	ft^3/h	7219.15	229.029	1147.26	83.7686	589.394
Liquid Volumetric Flow	gpm	900.05	28.5543	143.035	10.4439	73.4829
Std Vapor Volumetric Flow	MMSCFD	3.11101	1.11037	0.726071	0.384301	0.384301
Std Liquid Volumetric Flow	sgpm	38.3776	23.1185	14.7705	8.34806	8.34806
Compressibility		0.963198	0.093785	0.695606	0.0959598	0.378083
Specific Gravity		0.692023	0.441792	1.71139	0.451562	
API Gravity			123.45		114.449	
Enthalpy	Btu/h	-1.33435E+07	-6.67267E+06	-3.79025E+06	-2.41139E+06	-2.38125E+06
Mass Enthalpy	Btu/lb	-1949.03	-1057.36	-959.195	-1022.12	-1009.34
Mass Cp	Btu/(lb*°F)	0.491614	0.858637	0.62041	0.831763	0.611113
Ideal Gas CpCv Ratio		1.27114	1.09021	1.09177	1.08067	1.086
Dynamic Viscosity	cP	0.0121649	0.0698353	0.0114074	0.0728087	
Kinematic Viscosity	cSt	0.800792	0.158222	0.206759	0.16139	
Thermal Conductivity	Btu/(h*ft*°F)	0.0196586	0.0464675	0.0164818	0.0464974	
Surface Tension	lbf/ft		0.000186439 ?		0.000196388 ?	
Net Ideal Gas Heating Value	Btu/ft^3	934.45	2693.87	2585.03	2899.51	2899.51
Net Liquid Heating Value	Btu/lb	17655	19589.4	19630.8	19519.9	19519.9
Gross Ideal Gas Heating Value	Btu/ft^3	1033.68	2922.51	2805.79	3143.05	3143.05
Gross Liquid Heating Value	Btu/lb	19533.8	21265.6	21321	21172.8	21172.8

Remarks

* User Specified Values
 ? Extrapolated or Approximate Values

Process Streams Report
All Streams
 Tabulated by Total Phase

Client Name:	PTSDK	Job: J877
Location:		
Flowsheet:	Process Plant	

Connections

	17	18	19	20	21
From Block	T-180 DeC4 Tower	XCHG-103	SPLT-101	SPLT-101	T-180 DeC4 Tower
To Block	XCHG-103	SPLT-101	T-180 DeC4 Tower	--	K-101

Stream Composition

Mole Fraction	17 %	18 %	19 %	20 %	21 %
Nitrogen	4.58857E-12	4.58857E-12	4.58857E-12	4.58857E-12	0
Oxygen	0	0	0	0	0
Carbon Dioxide	0.00022322	0.00022322	0.00022322	0.00022322	2.50703E-11
Methane	2.39069E-06	2.39069E-06	2.39069E-06	2.39069E-06	0
Ethane	0.887541	0.887541	0.887541	0.887541	4.83665E-06
Propane	59.4262	59.4262	59.4262	59.4262	0.0304978
i-Butane	14.8841	14.8841	14.8841	14.8841	0.310642
n-Butane	22.9859	22.9859	22.9859	22.9859	3.92844
i-Pentane	1.5016	1.5016	1.5016	1.5016	38.4533
n-Pentane	0.3138	0.3138	0.3138	0.3138	30.4009
n-Hexane	0.000592414	0.000592414	0.000592414	0.000592414	17.1124
n-Heptane	8.71872E-06	8.71872E-06	8.71872E-06	8.71872E-06	9.76371
Water	4.09471E-09	4.09471E-09	4.09471E-09	4.09471E-09	0
Ethylene Glycol	4.84011E-05	4.84011E-05	4.84011E-05	4.84011E-05	7.97332E-05
Therminol 55	0	0	0	0	0

Stream Properties

Property	Units	17	18	19	20	21
Temperature	°F	141.664	119.946	119.946	119.946	285.384
Pressure	psia	177.727	177.727	177.727	177.727	182.727
Mole Fraction Vapor	%	100	0.0310494	0.0310494	0.0310494	0
Mole Fraction Light Liquid	%	0	99.969	99.969	99.969	100
Mole Fraction Heavy Liquid	%	0	0	0	0	0
Molecular Weight	lb/lbmol	49.7925	49.7925	49.7925	49.7925	76.6849
Mass Density	lb/ft^3	1.70885	30.4052	30.4052	30.4052	30.772
Molar Flow	lbmol/h	101.46	101.46	67.6399	33.8199	78.6683
Mass Flow	lb/h	5051.94	5051.94	3367.96	1683.98	6032.67
Vapor Volumetric Flow	ft^3/h	2956.34	166.154	110.769	55.3847	196.044
Liquid Volumetric Flow	gpm	368.583	20.7153	13.8102	6.9051	24.4419
Std Vapor Volumetric Flow	MMSCFD	0.924058	0.924058	0.616039	0.308019	0.716481
Std Liquid Volumetric Flow	sgpm	18.8115	18.8115	12.541	6.2705	18.8454
Compressibility		0.802482	0.0467914	0.0467914	0.0467914	0.0569517
Specific Gravity		1.7192				0.493386
API Gravity						88.1352
Enthalpy	Btu/h	-4.93456E+06	-5.65106E+06	-3.76737E+06	-1.88369E+06	-5.42615E+06
Mass Enthalpy	Btu/lb	-976.765	-1118.59	-1118.59	-1118.59	-899.46
Mass Cp	Btu/(lb*°F)	0.496893	0.711907	0.711907	0.711907	0.768304
Ideal Gas CpCv Ratio		1.09993	1.10332	1.10332	1.10332	1.05247
Dynamic Viscosity	cP	0.00953469				0.0874196
Kinematic Viscosity	cSt	0.348323				0.17735
Thermal Conductivity	Btu/(h*ft*°F)	0.0129257				0.0440912 ?
Surface Tension	lbf/ft					0.000301691 ?
Net Ideal Gas Heating Value	Btu/ft^3	2595.92	2595.92	2595.92	2595.92	3929.24
Net Liquid Heating Value	Btu/lb	19624.1	19624.1	19624.1	19624.1	19286.4
Gross Ideal Gas Heating Value	Btu/ft^3	2817.5	2817.5	2817.5	2817.5	4247.29
Gross Liquid Heating Value	Btu/lb	21312.8	21312.8	21312.8	21312.8	20860.3

Remarks

Process Streams Report
All Streams
 Tabulated by Total Phase

Client Name:	PTSDK	Job: J877
Location:		
Flowsheet:	Process Plant	

Connections

	22	23	24	25	26
From Block	K-101	K-101	VSSL-100	DeC4 feed 2	DeC2 Ovhd 2
To Block	T-180 DeC4 Tower	DeC4 feed 2	--	DeC2 Ovhd 2	VLVE-100

Stream Composition

Mole Fraction	22 %	23 %	24 %	25 %	26 %
Nitrogen	0	0	0	0	0
Oxygen	0	0	0	0	0
Carbon Dioxide	2.77238E-11	2.80046E-12	1.48982E-13	2.80046E-12	2.80046E-12
Methane	0	0	0	0	0
Ethane	5.31079E-06	8.57364E-07	9.3885E-08	8.57364E-07	8.57364E-07
Propane	0.0330691	0.00891835	0.00246351	0.00891835	0.00891835
i-Butane	0.331477	0.135776	0.0677081	0.135776	0.135776
n-Butane	4.15313	2.04273	1.2656	2.04273	2.04273
i-Pentane	39.5326	29.3952	25.3463	29.3952	29.3952
n-Pentane	30.9685	25.6369	23.7465	25.6369	25.6369
n-Hexane	16.4145	22.9701	25.7225	22.9701	22.9701
n-Heptane	8.56663	19.8103	23.8489	19.8103	19.8103
Water	0	0	0	0	0
Ethylene Glycol	8.25004E-05	5.65091E-05	4.92433E-05	5.65091E-05	5.65091E-05
Therminol 55	0	0	0	0	0

Stream Properties

Property	Units	22	23	24	25	26
Temperature	°F	304.528	304.528	115.941	242.506	163.561
Pressure	psia	182.727	182.727	14.696	177.727	172.727
Mole Fraction Vapor	%	100	0	0	0	0
Mole Fraction Light Liquid	%	0	100	100	100	100
Mole Fraction Heavy Liquid	%	0	0	0	0	0
Molecular Weight	lb/lbmol	76.2161	80.62	82.2594	80.62	80.62
Mass Density	lb/ft^3	2.22019	30.8157	39.0244	33.948	37.1609
Molar Flow	lbmol/h	70.2927	8.37553	6.6657	8.37553	8.37553
Mass Flow	lb/h	5357.43	675.235	548.317	675.235	675.235
Vapor Volumetric Flow	ft^3/h	2413.05	21.9121	14.0506	19.8903	18.1706
Liquid Volumetric Flow	gpm	300.848	2.7319	1.75177	2.47983	2.26542
Std Vapor Volumetric Flow	MMSCFD	0.6402	0.0762812	0.0607088	0.0762812	0.0762812
Std Liquid Volumetric Flow	sgpm	16.7678	2.07756	1.67698	2.07756	2.07756
Compressibility		0.764874	0.0582915	0.00501482	0.0560109	0.0560279
Specific Gravity		2.63153	0.494086	0.625702	0.544308	0.595823
API Gravity			84.9424	84.2238	84.9576	84.9729
Enthalpy	Btu/h	-4.21209E+06	-588969	-542524	-619113	-653098
Mass Enthalpy	Btu/lb	-786.213	-872.243	-989.436	-916.885	-967.215
Mass Cp	Btu/(lb*°F)	0.587639	0.772487	0.563882	0.677582	0.601477
Ideal Gas CpCv Ratio		1.05166	1.04877	1.06127	1.0525	1.05834
Dynamic Viscosity	cP	0.0106614	0.0879004	0.225341	0.121938	0.181027
Kinematic Viscosity	cSt	0.299782	0.178073	0.360483	0.224236	0.304115
Thermal Conductivity	Btu/(h*ft*°F)	0.0171675	0.0439118 ?	0.0636485	0.0496111 ?	0.0580145
Surface Tension	lbf/ft		0.000297092 ?	0.00101145	0.000508984 ?	0.000802443 ?
Net Ideal Gas Heating Value	Btu/ft^3	3905.87	4125.41	4207.15	4125.41	4125.41
Net Liquid Heating Value	Btu/lb	19289.7	19260.1	19250	19260.1	19260.1
Gross Ideal Gas Heating Value	Btu/ft^3	4222.24	4457.58	4545.2	4457.58	4457.58
Gross Liquid Heating Value	Btu/lb	20865	20823.7	20809.6	20823.7	20823.7

Remarks

Process Streams Report
All Streams
 Tabulated by Total Phase

Client Name:	PTSDK	Job: J877
Location:		
Flowsheet:	Process Plant	

Connections

	27	28	29	30	31
From Block	VLVE-100	--	XCHG-100	--	DeC2 reb
To Block	VSSL-100	XCHG-100	--	DeC2 reb	--

Stream Composition

Mole Fraction	27 %	28 %	29 %	30 %	31 %
Nitrogen	0	79 *	79	0 *	0
Oxygen	0	21 *	21	0 *	0
Carbon Dioxide	2.80046E-12	0 *	0	0 *	0
Methane	0	0 *	0	0 *	0
Ethane	8.57364E-07	0 *	0	0 *	0
Propane	0.00891835	0 *	0	0 *	0
i-Butane	0.135776	0 *	0	0 *	0
n-Butane	2.04273	0 *	0	0 *	0
i-Pentane	29.3952	0 *	0	0 *	0
n-Pentane	25.6369	0 *	0	0 *	0
n-Hexane	22.9701	0 *	0	0 *	0
n-Heptane	19.8103	0 *	0	0 *	0
Water	0	0 *	0	0 *	0
Ethylene Glycol	5.65091E-05	0 *	0	0 *	0
Therminol 55	0	0 *	0	100 *	100

Stream Properties

Property	Units	27	28	29	30	31
Temperature	°F	115.941	100 *	115 *	450 *	350 *
Pressure	psia	14.696 *	14.696 *	14.696	50 *	45
Mole Fraction Vapor	%	20.4145	100	100	0	0
Mole Fraction Light Liquid	%	79.5855	0	0	100	100
Mole Fraction Heavy Liquid	%	0	0	0	0	0
Molecular Weight	lb/lbmol	80.62	28.8503	28.8503	320	320
Mass Density	lb/ft^3	0.954099	0.0706038	0.0687571	46.0964	48.9335
Molar Flow	lbmol/h	8.37553	6835.88	6835.88	24.1371	24.1371
Mass Flow	lb/h	675.235	197217	197217	7723.87	7723.87
Vapor Volumetric Flow	ft^3/h	707.721	2.7933E+06	2.86832E+06	167.559	157.844
Liquid Volumetric Flow	gpm	88.2353	348255	357609	20.8905	19.6793
Std Vapor Volumetric Flow	MMSCFD	0.0762812	62.2586	62.2586	0.219832	0.219832
Std Liquid Volumetric Flow	sgpm	2.07756	455.194	455.194	17.637	17.637
Compressibility		0.201028	0.99983	0.999885	0.0355554	0.0338676
Specific Gravity			0.996124	0.996124	0.739091	0.78458
API Gravity					24.3774	24.3817
Enthalpy	Btu/h	-653098	1.07955E+06	1.79605E+06	931146	460122
Mass Enthalpy	Btu/lb	-967.215	5.47392	9.10696	120.554	59.5713
Mass Cp	Btu/(lb*°F)	0.537432	0.242146	0.242261	0.635503	0.584512
Ideal Gas CpCv Ratio		1.06257	1.39803	1.39771	1.00989	1.01074
Dynamic Viscosity	cP		0.0187861	0.0191476	0.578415	0.957959
Kinematic Viscosity	cSt		16.6107	17.3851	0.783344	1.22214
Thermal Conductivity	Btu/(h*ft*°F)		0.0154172	0.0157485	0.0598769	0.0636288
Surface Tension	lbf/ft				0.00109838	0.00137056
Net Ideal Gas Heating Value	Btu/ft^3	4125.41	0	0	0	0
Net Liquid Heating Value	Btu/lb	19260.1	0	0	-79.7838	-79.7838
Gross Ideal Gas Heating Value	Btu/ft^3	4457.58	0	0	0	0
Gross Liquid Heating Value	Btu/lb	20823.7	0	0	-79.7838	-79.7838

Remarks

Process Streams Report
All Streams
Tabulated by Total Phase

Client Name:	PTSDK	Job: J877
Location:		
Flowsheet:	Process Plant	

Connections

	32	33	34	35
From Block	--	DeC4 reb	VLVE-101	VLVE-103
To Block	DeC4 reb	--	T-140 DeC2 Tower	DeC4 feed

Stream Composition

Mole Fraction	32 %	33 %	34 %	35 %
Nitrogen	0 *	0	0.272165	3.67777E-12
Oxygen	0 *	0	0	0
Carbon Dioxide	0 *	0	4.59736	0.000178912
Methane	0 *	0	23.5615	1.91615E-06
Ethane	0 *	0	10.2089	0.71137
Propane	0 *	0	31.1293	47.6322
i-Butane	0 *	0	7.14675	11.9567
n-Butane	0 *	0	11.0848	18.8288
i-Pentane	0 *	0	4.06666	7.0383
n-Pentane	0 *	0	3.07699	5.34028
n-Hexane	0 *	0	2.60868	4.55989
n-Heptane	0 *	0	2.24641	3.93224
Water	0 *	0	0.000395544	3.28193E-09
Ethylene Glycol	0 *	0	2.91383E-05	5.00105E-05
Therminol 55	100 *	100	0	0

Stream Properties

Property	Units	32	33	34	35
Temperature	°F	450 *	350 *	-36.5537	157.142
Pressure	psia	50 *	45	340 *	185 *
Mole Fraction Vapor	%	0	0	7.47406	33.2155
Mole Fraction Light Liquid	%	100	100	92.5259	66.7845
Mole Fraction Heavy Liquid	%	0	0	0	0
Molecular Weight	lb/lbmol	320	320	42.9255	55.9116
Mass Density	lb/ft^3	46.0964	48.9335	21.5419	5.13549
Molar Flow	lbmol/h	32.0321	32.0321	73.9265	42.1955
Mass Flow	lb/h	10250.3	10250.3	3173.33	2359.22
Vapor Volumetric Flow	ft^3/h	222.366	209.473	147.309	459.395
Liquid Volumetric Flow	gpm	27.7235	26.1161	18.3659	57.2752
Std Vapor Volumetric Flow	MMSCFD	0.291736	0.291736	0.673295	0.384301
Std Liquid Volumetric Flow	sgpm	23.4059	23.4059	12.4337	8.34806
Compressibility		0.0355554	0.0338676	0.149206	0.304281
Specific Gravity		0.739091	0.78458		
API Gravity		24.3774	24.3817		
Enthalpy	Btu/h	1.23571E+06	610622	-4.471E+06	-2.41139E+06
Mass Enthalpy	Btu/lb	120.554	59.5713	-1408.93	-1022.12
Mass Cp	Btu/(lb*°F)	0.635503	0.584512	0.547743 ?	0.630233
Ideal Gas CpCv Ratio		1.00989	1.01074	1.15549	1.08636
Dynamic Viscosity	cP	0.578415	0.957959		
Kinematic Viscosity	cSt	0.783344	1.22214		
Thermal Conductivity	Btu/(h*ft*°F)	0.0598769	0.0636288		
Surface Tension	lbf/ft	0.00109838	0.00137056		
Net Ideal Gas Heating Value	Btu/ft^3	0	0	2142.3	2899.51
Net Liquid Heating Value	Btu/lb	-79.7838	-79.7838	18798.4	19519.9
Gross Ideal Gas Heating Value	Btu/ft^3	0	0	2329.64	3143.05
Gross Liquid Heating Value	Btu/lb	-79.7838	-79.7838	20454.5	21172.8

Remarks

Process Streams Report
Stream: C3 In
 Phases Grouped by Columns

Client Name:	PTSDK	Job: J877
Location:		Modified: 3:05 PM, 2/17/2009
Flowsheet:	Process Plant	Status: Solved 9:00 AM, 4/28/2011

Connections

From: XFS2 To: Chiller

Composition

Mole Fraction	Total %	Vapor %	Light Liquid %
Nitrogen	0	0	0
Oxygen	0	0	0
Carbon Dioxide	0	0	0
Methane	0	0	0
Ethane	6.1224	17.2045	3.01647
Propane	93.8776	82.7955	96.9835
i-Butane	0	0	0
n-Butane	0	0	0
i-Pentane	0	0	0
n-Pentane	0	0	0
n-Hexane	0	0	0
n-Heptane	0	0	0
Water	0	0	0
Ethylene Glycol	0	0	0
Therminol 55	0	0	0

Properties

Property	Units	Total	Vapor	Light Liquid
Temperature	°F	-40	-40	-40
Pressure	psia	18.6626 *	18.6626	18.6626
Mole Fraction Vapor	%	21.8912	100	0
Mole Fraction Light Liquid	%	78.1088	0	100
Mole Fraction Heavy Liquid	%	0	0	0
Molecular Weight	lb/lbmol	43.2369	41.6824	43.6725
Mass Density	lb/ft^3	0.833602	0.179196	36.0269
Molar Flow	lbmol/h	117.417	25.704	91.7128
Mass Flow	lb/h	5076.74	1071.4	4005.33
Vapor Volumetric Flow	ft^3/h	6090.12	5978.94	111.176
Liquid Volumetric Flow	gpm	759.288	745.427	13.8609
Std Vapor Volumetric Flow	MMSCFD	1.06939	0.234102	0.835287
Std Liquid Volumetric Flow	sgpm	20.3708	4.44494	15.9259
Compressibility		0.21493	0.963884	0.00502323
Specific Gravity			1.43918	0.577641
API Gravity				148.918
Enthalpy	Btu/h	-6.18909E+06	-1.16562E+06	-5.02347E+06
Mass Enthalpy	Btu/lb	-1219.11	-1087.94	-1254.2
Mass Cp	Btu/(lb*°F)	0.501121	0.342482	0.543555
Ideal Gas Cp/Cv Ratio		1.15977	1.16548	1.15824
Dynamic Viscosity	cP		0.00664084	0.19019
Kinematic Viscosity	cSt		2.31352	0.329564
Thermal Conductivity	Btu/(h*ft*°F)		0.00667148	0.0737216
Surface Tension	lbf/ft			0.00102381
Net Ideal Gas Heating Value	Btu/ft^3	2272.39	2195.26	2294.01
Net Liquid Heating Value	Btu/lb	19782.6	19825.2	19771.2
Gross Ideal Gas Heating Value	Btu/ft^3	2470.4	2387.69	2493.59
Gross Liquid Heating Value	Btu/lb	21520.5	21577.1	21505.4

Remarks

Process Streams Report
Stream: C3 Out
 Phases Grouped by Columns

Client Name:	PTSDK	Job: J877
Location:		Modified: 9:00 AM, 4/28/2011
Flowsheet:	Process Plant	Status: Solved 9:00 AM, 4/28/2011

Connections

From: Chiller To: XFS3

Composition

Mole Fraction	Total %	Vapor %		
Nitrogen	0	0		
Oxygen	0	0		
Carbon Dioxide	0	0		
Methane	0	0		
Ethane	6.1224	6.1224		
Propane	93.8776	93.8776		
i-Butane	0	0		
n-Butane	0	0		
i-Pentane	0	0		
n-Pentane	0	0		
n-Hexane	0	0		
n-Heptane	0	0		
Water	0	0		
Ethylene Glycol	0	0		
Therminol 55	0	0		

Properties

Property	Units	Total	Vapor	
Temperature	°F	-30 *	-30	
Pressure	psia	17.6626	17.6626	
Mole Fraction Vapor	%	100	100	
Mole Fraction Light Liquid	%	0	0	
Mole Fraction Heavy Liquid	%	0	0	
Molecular Weight	lb/lbmol	43.2369	43.2369	
Mass Density	lb/ft ³	0.171496	0.171496	
Molar Flow	lbmol/h	117.417	117.417	
Mass Flow	lb/h	5076.74	5076.74	
Vapor Volumetric Flow	ft ³ /h	29602.6	29602.6	
Liquid Volumetric Flow	gpm	3690.71	3690.71	
Std Vapor Volumetric Flow	MMSCFD	1.06939	1.06939	
Std Liquid Volumetric Flow	sgpm	20.3708	20.3708	
Compressibility		0.96573	0.96573	
Specific Gravity		1.49285	1.49285	
API Gravity				
Enthalpy	Btu/h	-5.4298E+06	-5.4298E+06	
Mass Enthalpy	Btu/lb	-1069.55	-1069.55	
Mass Cp	Btu/(lb*°F)	0.345083	0.345083	
Ideal Gas Cp/Cv Ratio		1.15687	1.15687	
Dynamic Viscosity	cP	0.00669935	0.00669935	
Kinematic Viscosity	cSt	2.43869	2.43869	
Thermal Conductivity	Btu/(h*ft*°F)	0.00677415	0.00677415	
Surface Tension	lbf/ft			
Net Ideal Gas Heating Value	Btu/ft ³	2272.39	2272.39	
Net Liquid Heating Value	Btu/lb	19782.6	19782.6	
Gross Ideal Gas Heating Value	Btu/ft ³	2470.4	2470.4	
Gross Liquid Heating Value	Btu/lb	21520.5	21520.5	

Remarks

Process Streams Report
Stream: EG inj
 Phases Grouped by Columns

Client Name:	PTSDK	Job: J877
Location:		Modified: 11:13 AM, 12/8/2010
Flowsheet:	Process Plant	Status: Solved 8:55 AM, 4/28/2011

Connections

From: -- To: MIX-100

Composition

Mole Fraction	Total %	Light Liquid %		
Nitrogen	0 *	0		
Oxygen	0 *	0		
Carbon Dioxide	0 *	0		
Methane	0 *	0		
Ethane	0 *	0		
Propane	0 *	0		
i-Butane	0 *	0		
n-Butane	0 *	0		
i-Pentane	0 *	0		
n-Pentane	0 *	0		
n-Hexane	0 *	0		
n-Heptane	0 *	0		
Water	46.2747 *	46.2747		
Ethylene Glycol	53.7253 *	53.7253		
Therminol 55	0 *	0		

Properties

Property	Units	Total	Light Liquid	
Temperature	°F	100 *	100	
Pressure	psia	469.696 *	469.696	
Mole Fraction Vapor	%	0	0	
Mole Fraction Light Liquid	%	100	100	
Mole Fraction Heavy Liquid	%	0	0	
Molecular Weight	lb/lbmol	41.6826	41.6826	
Mass Density	lb/ft^3	67.8868	67.8868	
Molar Flow	lbmol/h	13.0933	13.0933	
Mass Flow	lb/h	545.764	545.764	
Vapor Volumetric Flow	ft^3/h	8.03932	8.03932	
Liquid Volumetric Flow	gpm	1.00231	1.00231	
Std Vapor Volumetric Flow	MMSCFD	0.119249	0.119249	
Std Liquid Volumetric Flow	sgpm	1 *	1	
Compressibility		0.0480165	0.0480165	
Specific Gravity		1.08847	1.08847	
API Gravity		-3.3923	-3.3923	
Enthalpy	Btu/h	-2.11337E+06	-2.11337E+06	
Mass Enthalpy	Btu/lb	-3872.32	-3872.32	
Mass Cp	Btu/(lb*°F)	0.686767	0.686767	
Ideal Gas CpCv Ratio		1.19026	1.19026	
Dynamic Viscosity	cP	5.56728	5.56728	
Kinematic Viscosity	cSt	5.11961	5.11961	
Thermal Conductivity	Btu/(h*ft*°F)	0.178712	0.178712	
Surface Tension	lbf/ft	0.00367973	0.00367973	
Net Ideal Gas Heating Value	Btu/ft^3	684.961	684.961	
Net Liquid Heating Value	Btu/lb	5654.91	5654.91	
Gross Ideal Gas Heating Value	Btu/ft^3	789.239	789.239	
Gross Liquid Heating Value	Btu/lb	6604.27	6604.27	

Remarks

Process Streams Report
Stream: EG out
 Phases Grouped by Columns

Client Name:	PTSDK	Job: J877
Location:		Modified: 12:08 PM, 2/24/2005
Flowsheet:	Process Plant	Status: Solved 8:55 AM, 4/28/2011

Connections

From: Cold Separator	To: --
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Composition

Mole Fraction	Total %	Light Liquid %		
Nitrogen	0.00259809	0.00259809		
Oxygen	0	0		
Carbon Dioxide	0.683487	0.683487		
Methane	0.0848277	0.0848277		
Ethane	0.0102353	0.0102353		
Propane	0.00705712	0.00705712		
i-Butane	0.000283558	0.000283558		
n-Butane	0.000601948	0.000601948		
i-Pentane	8.18995E-05	8.18995E-05		
n-Pentane	5.47444E-05	5.47444E-05		
n-Hexane	1.17556E-05	1.17556E-05		
n-Heptane	1.30043E-05	1.30043E-05		
Water	51.5664	51.5664		
Ethylene Glycol	47.6443	47.6443		
Therminol 55	0	0		

Properties

Property	Units	Total	Light Liquid	
Temperature	°F	-30	-30	
Pressure	psia	454.696	454.696	
Mole Fraction Vapor	%	0	0	
Mole Fraction Light Liquid	%	100	100	
Mole Fraction Heavy Liquid	%	0	0	
Molecular Weight	lb/lbmol	39.1836	42.9255	
Mass Density	lb/ft ³	71.4234	71.4234	
Molar Flow	lbmol/h	14.7644	14.7644	
Mass Flow	lb/h	578.522	578.522	
Vapor Volumetric Flow	ft ³ /h	8.09989	8.09989	
Liquid Volumetric Flow	gpm	1.00986	1.00986	
Std Vapor Volumetric Flow	MMSCFD	0.134468	0.134468	
Std Liquid Volumetric Flow	sgpm	1.06868	1.06868	
Compressibility		0.0540986	0.0540986	
Specific Gravity		1.14517	1.14517	
API Gravity		-14.0444	-14.0444	
Enthalpy	Btu/h	-2.37428E+06	-2.37428E+06	
Mass Enthalpy	Btu/lb	-4104.05	-4104.05	?
Mass Cp	Btu/(lb*°F)	0.694217	0.633701	?
Ideal Gas CpCv Ratio		1.22606	1.22606	
Dynamic Viscosity	cP	160.856	160.856	
Kinematic Viscosity	cSt	140.597	140.597	
Thermal Conductivity	Btu/(h*ft*°F)	0.166321	0.166321	?
Surface Tension	lbf/ft	0.00432732	0.00432732	?
Net Ideal Gas Heating Value	Btu/ft ³	608.567	608.567	
Net Liquid Heating Value	Btu/lb	5293.76	4832.3	
Gross Ideal Gas Heating Value	Btu/ft ³	706.457	706.457	
Gross Liquid Heating Value	Btu/lb	6241.8	5697.7	

Remarks

Process Streams Report

Stream: 1

Phases Grouped by Columns

Client Name:	PTSDK	Job: J877
Location:		Modified: 9:01 PM, 6/27/2008
Flowsheet:	Process Plant	Status: Solved 8:55 AM, 4/28/2011

Connections

From: XFS1 To: MIX-100

Composition

Mole Fraction	Total %	Vapor %		
Nitrogen	3.06154	3.06154		
Oxygen	0	0		
Carbon Dioxide	4.76543	4.76543		
Methane	71.8434	71.8434		
Ethane	5.42737	5.42737		
Propane	8.29901	8.29901		
i-Butane	1.55629	1.55629		
n-Butane	2.30318	2.30318		
i-Pentane	0.803021	0.803021		
n-Pentane	0.602984	0.602984		
n-Hexane	0.50244	0.50244		
n-Heptane	0.431428	0.431428		
Water	0.403885	0.403885		
Ethylene Glycol	0	0		
Therminol 55	0	0		

Properties

Property	Units	Total	Vapor	
Temperature	°F	120	120	
Pressure	psia	464.696	464.696	
Mole Fraction Vapor	%	100	100	
Mole Fraction Light Liquid	%	0	0	
Mole Fraction Heavy Liquid	%	0	0	
Molecular Weight	lb/lbmol	23.9675	23.9675	
Mass Density	lb/ft ³	1.96353	1.96353	
Molar Flow	lbmol/h	385.449	385.449	
Mass Flow	lb/h	9238.24	9238.24	
Vapor Volumetric Flow	ft ³ /h	4704.92	4704.92	
Liquid Volumetric Flow	gpm	586.587	586.587	
Std Vapor Volumetric Flow	MMSCFD	3.51053	3.51053	
Std Liquid Volumetric Flow	sgpm	46.7943	46.7943	
Compressibility		0.911819	0.911819	
Specific Gravity		0.827531	0.827531	
API Gravity				
Enthalpy	Btu/h	-1.57616E+07	-1.57616E+07	
Mass Enthalpy	Btu/lb	-1706.12	-1706.12	
Mass Cp	Btu/(lb*°F)	0.514774	0.514774	
Ideal Gas CpCv Ratio		1.22043	1.22043	
Dynamic Viscosity	cP	0.0123244	0.0123244	
Kinematic Viscosity	cSt	0.391838	0.391838	
Thermal Conductivity	Btu/(h*ft*°F)	0.0198426	0.0198426	
Surface Tension	lbf/ft			
Net Ideal Gas Heating Value	Btu/ft ³	1145.56	1145.56	
Net Liquid Heating Value	Btu/lb	18066.1	18066.1	
Gross Ideal Gas Heating Value	Btu/ft ³	1260.36	1260.36	
Gross Liquid Heating Value	Btu/lb	19883.8	19883.8	

Remarks

Process Streams Report
Stream: 2
 Phases Grouped by Columns

Client Name:	PTSDK	Job: J877
Location:		Modified: 2:48 PM, 1/26/2005
Flowsheet:	Process Plant	Status: Solved 8:55 AM, 4/28/2011

Connections

From: MIX-100 To: Gas to Gas

Composition

Mole Fraction	Total %	Vapor %	Light Liquid %		
Nitrogen	2.96096	3.06789	0.00415277		
Oxygen	0	0	0		
Carbon Dioxide	4.60887	4.77045	0.141063		
Methane	69.4831	71.9926	0.0916218		
Ethane	5.24906	5.43852	0.0102165		
Propane	8.02637	8.31613	0.0140449		
i-Butane	1.50516	1.55954	0.00164607		
n-Butane	2.22751	2.30791	0.00439053		
i-Pentane	0.776639	0.804676	0.00136159		
n-Pentane	0.583174	0.604221	0.00117217		
n-Hexane	0.485933	0.50347	0.00102512		
n-Heptane	0.417254	0.432304	0.00109146		
Water	1.91088	0.200088	49.217		
Ethylene Glycol	1.76504	0.00216736	50.5112		
Therminol 55	0	0	0		

Properties

Property	Units	Total	Vapor	Light Liquid	
Temperature	°F	121.321	121.321	121.321	
Pressure	psia	464.696	464.696	464.696	
Mole Fraction Vapor	%	96.5098	100	0	
Mole Fraction Light Liquid	%	3.49021	0	100	
Mole Fraction Heavy Liquid	%	0	0	0	
Molecular Weight	lb/lbmol	24.5495	23.9794	40.3123	
Mass Density	lb/ft ³	2.07382	1.95844	67.1171	
Molar Flow	lbmol/h	398.542	384.632	13.9099	
Mass Flow	lb/h	9784	9223.26	560.742	
Vapor Volumetric Flow	ft ³ /h	4717.85	4709.5	8.35469	
Liquid Volumetric Flow	gpm	588.2	587.158	1.04162	
Std Vapor Volumetric Flow	MMSCFD	3.62978	3.50309	0.126687	
Std Liquid Volumetric Flow	sgpm	47.7943	46.7625	1.03185	
Compressibility		0.882277	0.912565	0.0447651	
Specific Gravity			0.827944	1.07613	
API Gravity				-2.99868	
Enthalpy	Btu/h	-1.78749E+07	-1.56709E+07	-2.20399E+06	
Mass Enthalpy	Btu/lb	-1826.96	-1699.07	-3930.49	
Mass Cp	Btu/(lb*°F)	0.525786	0.514961	0.703836	
Ideal Gas Cp/Cv Ratio		1.21867	1.21995	1.18831	
Dynamic Viscosity	cP		0.012338	3.59406	
Kinematic Viscosity	cSt		0.39329	3.34296	
Thermal Conductivity	Btu/(h*ft*°F)		0.0198955	0.183029	
Surface Tension	lbf/ft			0.00361675	
Net Ideal Gas Heating Value	Btu/ft ³	1130.43	1147.96	645.684	
Net Liquid Heating Value	Btu/lb	17373.8	18096.5	5486.11	
Gross Ideal Gas Heating Value	Btu/ft ³	1244.88	1262.9	746.763	
Gross Liquid Heating Value	Btu/lb	19143	19915.5	6437.63	

Remarks

Process Streams Report
Stream: 3
 Phases Grouped by Columns

Client Name:	PTSDK	Job: J877
Location:		Modified: 2:48 PM, 1/26/2005
Flowsheet:	Process Plant	Status: Solved 8:55 AM, 4/28/2011

Connections

From: Gas to Gas To: Chiller

Composition

Mole Fraction	Total %	Vapor %	Light Liquid %	Heavy Liquid %	Mixed Liquid %
Nitrogen	2.96096	3.21443	0.20503	0.00318564	0.114736
Oxygen	0	0	0	0	0
Carbon Dioxide	4.60887	4.90674	2.10658	0.223438	1.26417
Methane	69.4831	74.9889	13.7928	0.0808342	7.65884
Ethane	5.24906	5.4691	5.01899	0.0100339	2.77827
Propane	8.02637	7.66995	21.7545	0.0130459	12.0286
i-Butane	1.50516	1.23859	8.13891	0.00120817	4.49856
n-Butane	2.22751	1.65391	15.6825	0.00314487	8.66847
i-Pentane	0.776639	0.415509	8.74221	0.000725679	4.83176
n-Pentane	0.583174	0.273375	7.34932	0.000554872	4.0619
n-Hexane	0.485933	0.0992912	8.73497	0.00022055	4.82754
n-Heptane	0.417254	0.0380072	8.4605	0.000145696	4.67582
Water	1.91088	0.0320618	0.011469	51.4187	23.0081
Ethylene Glycol	1.76504	0.000126742	0.00221662	48.2448	21.5832
Therminol 55	0	0	0	0	0

Properties

Property	Units	Total	Vapor	Light Liquid	Heavy Liquid	Mixed Liquid
Temperature	°F	60.6355	60.6355	60.6355	60.6355	60.6355
Pressure	psia	459.696	459.696	459.696	459.696	459.696
Mole Fraction Vapor	%	91.8227	100	0	0	0
Mole Fraction Light Liquid	%	4.51923	0	100	0	55.2657
Mole Fraction Heavy Liquid	%	3.65805	0	0	100	44.7343
Molecular Weight	lb/lbmol	24.5495	22.4243	55.763	39.3325	48.4129
Mass Density	lb/ft ³	2.45185	2.07524	36.204	68.5596	43.6993
Molar Flow	lbmol/h	398.542	365.952	18.0111	14.5789	32.5899
Mass Flow	lb/h	9784	8206.23	1004.35	573.424	1577.77
Vapor Volumetric Flow	ft ³ /h	3990.46	3954.35	27.7414	8.36386	36.1052
Liquid Volumetric Flow	gpm	497.512	493.01	3.45867	1.04277	4.50143
Std Vapor Volumetric Flow	MMSCFD	3.62978	3.33296	0.164038	0.132779	0.296817
Std Liquid Volumetric Flow	sgpm	47.7943	43.2124	3.52474	1.05723	4.58198
Compressibility		0.824322	0.889609	0.126805	0.0472314	0.0912084
Specific Gravity			0.77425	0.580481	1.09926	0.700657
API Gravity				112.078	-2.80398	70.34
Enthalpy	Btu/h	-1.83208E+07	-1.48325E+07	-1.17683E+06	-2.31152E+06	-3.48835E+06
Mass Enthalpy	Btu/lb	-1872.53	-1807.47	-1171.73	-4031.09	-2210.93
Mass Cp	Btu/(lb*°F)	0.529787	0.51224	0.579697	0.693475	0.621048
Ideal Gas CpCv Ratio		1.2342	1.25192	1.10028	1.20993	1.13086
Dynamic Viscosity	cP		0.0115298	0.164424	10.2613	2.50339
Kinematic Viscosity	cSt		0.346843	0.283522	9.34357	2.3823
Thermal Conductivity	Btu/(h*ft*°F)		0.0180937	0.0633682	0.180348	0.0904668
Surface Tension	lbf/ft			0.000671965 ?	0.00388414 ?	0.00141607 ?
Net Ideal Gas Heating Value	Btu/ft ³	1130.43	1066.83	2838.69	616.484	1844.6
Net Liquid Heating Value	Btu/lb	17373.8	17994.7	19166.9	5346.81	14144.2
Gross Ideal Gas Heating Value	Btu/ft ³	1244.88	1175.81	3077.16	715.226	2020.57
Gross Liquid Heating Value	Btu/lb	19143	19839	20789.8	6299.49	15523.5

Remarks

Process Streams Report
Stream: 4
 Phases Grouped by Columns

Client Name:	PTSDK	Job: J877
Location:		Modified: 9:34 PM, 6/27/2008
Flowsheet:	Process Plant	Status: Solved 8:55 AM, 4/28/2011

Connections

From: Chiller To: Cold Separator

Composition

Mole Fraction	Total %	Vapor %	Light Liquid %	Heavy Liquid %	Mixed Liquid %
Nitrogen	2.96096	3.74344	0.272165	0.00259809	0.22729
Oxygen	0	0	0	0	0
Carbon Dioxide	4.60887	4.79867	4.59736	0.683487	3.94582
Methane	69.4831	83.7462	23.5615	0.0848277	19.6534
Ethane	5.24906	4.31534	10.2089	0.0102353	8.51115
Propane	8.02637	2.89644	31.1293	0.00705712	25.9483
i-Butane	1.50516	0.230864	7.14675	0.000283558	5.95708
n-Butane	2.22751	0.220382	11.0848	0.000601948	9.23965
i-Pentane	0.776639	0.0286862	4.06666	8.18995E-05	3.3897
n-Pentane	0.583174	0.0159677	3.07699	5.47444E-05	2.56477
n-Hexane	0.485933	0.00262885	2.60868	1.17556E-05	2.17441
n-Heptane	0.417254	0.000723801	2.24641	1.30043E-05	1.87245
Water	1.91088	0.0006182	0.000395544	51.5664	8.5846
Ethylene Glycol	1.76504	3.26139E-07	2.91383E-05	47.6443	7.93139
Therminol 55	0	0	0	0	0

Properties

Property	Units	Total	Vapor	Light Liquid	Heavy Liquid	Mixed Liquid
Temperature	°F	-30 *	-30	-30	-30	-30
Pressure	psia	454.696	454.696	454.696	454.696	454.696
Mole Fraction Vapor	%	77.7462	100	0	0	0
Mole Fraction Light Liquid	%	18.5492	0	100	0	83.353
Mole Fraction Heavy Liquid	%	3.70459	0	0	100	16.647
Molecular Weight	lb/lbmol	24.5495	19.4679	42.9255	39.1836	42.3026
Mass Density	lb/ft ³	3.55056	2.26804	36.104	71.4234	39.0842
Molar Flow	lbmol/h	398.542	309.852	73.9265	14.7644	88.6908
Mass Flow	lb/h	9784	6032.15	3173.33	578.522	3751.85
Vapor Volumetric Flow	ft ³ /h	2755.62	2659.63	87.894	8.09989	95.9939
Liquid Volumetric Flow	gpm	343.558	331.59	10.9582	1.00986	11.9681
Std Vapor Volumetric Flow	MMSCFD	3.62978	2.82201	0.673295	0.134468	0.807763
Std Liquid Volumetric Flow	sgpm	47.7943	34.292	12.4337	1.06868	13.5023
Compressibility		0.681816	0.846426	0.117242	0.0540986	0.10673
Specific Gravity			0.672173	0.578878	1.14517	0.626661
API Gravity				150.123	-2.82792	124.451
Enthalpy	Btu/h	-1.90801E+07 ?	-1.22349E+07 ?	-4.471E+06 ?	-2.37428E+06 ?	-6.84528E+06 ?
Mass Enthalpy	Btu/lb	-1950.14 ?	-2028.27 ?	-1408.93 ?	-4104.05 ?	-1824.51 ?
Mass Cp	Btu/(lb*°F)	0.564357 ?	0.550844 ?	0.56637 ?	0.694217 ?	0.586084 ?
Ideal Gas Cp/Cv Ratio		1.25649	1.30736	1.15388	1.22606	1.16252
Dynamic Viscosity	cP		0.0103216	0.166809	160.856	13.7257
Kinematic Viscosity	cSt		0.284102	0.288432	140.597	12.1276
Thermal Conductivity	Btu/(h*ft*°F)		0.0161162 ?	0.0711484 ?	0.166321 ?	0.079179 ?
Surface Tension	lbf/ft			0.000718247 ?	0.00432732 ?	0.00102278 ?
Net Ideal Gas Heating Value	Btu/ft ³	1130.43	913.874	2142.3	608.567	1886.98
Net Liquid Heating Value	Btu/lb	17373.8	17782.9	18798.4	5293.76	16716
Gross Ideal Gas Heating Value	Btu/ft ³	1244.88	1011.73	2329.64	706.457	2059.43
Gross Liquid Heating Value	Btu/lb	19143	19690.4	20454.5	6241.8	18263

Remarks

Process Streams Report
Stream: 5
 Phases Grouped by Columns

Client Name:	PTSDK	Job: J877
Location:		Modified: 5:25 PM, 1/26/2005
Flowsheet:	Process Plant	Status: Solved 8:55 AM, 4/28/2011

Connections

From: Cold Separator To: Gas to Gas

Composition

Mole Fraction	Total %	Vapor %		
Nitrogen	3.74344	3.74344		
Oxygen	0	0		
Carbon Dioxide	4.79867	4.79867		
Methane	83.7462	83.7462		
Ethane	4.31534	4.31534		
Propane	2.89644	2.89644		
i-Butane	0.230864	0.230864		
n-Butane	0.220382	0.220382		
i-Pentane	0.0286862	0.0286862		
n-Pentane	0.0159677	0.0159677		
n-Hexane	0.00262885	0.00262885		
n-Heptane	0.000723801	0.000723801		
Water	0.0006182	0.0006182		
Ethylene Glycol	3.26139E-07	3.26139E-07		
Therminol 55	0	0		

Properties

Property	Units	Total	Vapor	
Temperature	°F	-30	-30	
Pressure	psia	454.696	454.696	
Mole Fraction Vapor	%	100	100	
Mole Fraction Light Liquid	%	0	0	
Mole Fraction Heavy Liquid	%	0	0	
Molecular Weight	lb/lbmol	19.4679	19.4679	
Mass Density	lb/ft^3	2.26804	2.26804	
Molar Flow	lbmol/h	309.852	309.852	
Mass Flow	lb/h	6032.15	6032.15	
Vapor Volumetric Flow	ft^3/h	2659.63	2659.63	
Liquid Volumetric Flow	gpm	331.59	331.59	
Std Vapor Volumetric Flow	MMSCFD	2.82201	2.82201	
Std Liquid Volumetric Flow	sgpm	34.292	34.292	
Compressibility		0.846426	0.846426	
Specific Gravity		0.672173	0.672173	
API Gravity				
Enthalpy	Btu/h	-1.22349E+07	-1.22349E+07	?
Mass Enthalpy	Btu/lb	-2028.27	-2028.27	?
Mass Cp	Btu/(lb*°F)	0.550844	0.550844	?
Ideal Gas CpCv Ratio		1.30736	1.30736	
Dynamic Viscosity	cP	0.0103216	0.0103216	
Kinematic Viscosity	cSt	0.284102	0.284102	
Thermal Conductivity	Btu/(h*ft*°F)	0.0161162	0.0161162	?
Surface Tension	lbf/ft			
Net Ideal Gas Heating Value	Btu/ft^3	913.874	913.874	
Net Liquid Heating Value	Btu/lb	17782.9	17782.9	
Gross Ideal Gas Heating Value	Btu/ft^3	1011.73	1011.73	
Gross Liquid Heating Value	Btu/lb	19690.4	19690.4	

Remarks

Process Streams Report
Stream: 6
 Phases Grouped by Columns

Client Name:	PTSDK	Job: J877
Location:		Modified: 8:21 AM, 4/14/2011
Flowsheet:	Process Plant	Status: Solved 8:55 AM, 4/28/2011

Connections

From: Gas to Gas To: VLVE-102

Composition

Mole Fraction	Total %	Vapor %		
Nitrogen	3.74344	3.74344		
Oxygen	0	0		
Carbon Dioxide	4.79867	4.79867		
Methane	83.7462	83.7462		
Ethane	4.31534	4.31534		
Propane	2.89644	2.89644		
i-Butane	0.230864	0.230864		
n-Butane	0.220382	0.220382		
i-Pentane	0.0286862	0.0286862		
n-Pentane	0.0159677	0.0159677		
n-Hexane	0.00262885	0.00262885		
n-Heptane	0.000723801	0.000723801		
Water	0.0006182	0.0006182		
Ethylene Glycol	3.26139E-07	3.26139E-07		
Therminol 55	0	0		

Properties

Property	Units	Total	Vapor	
Temperature	°F	111.321	111.321	
Pressure	psia	449.696	449.696	
Mole Fraction Vapor	%	100	100	
Mole Fraction Light Liquid	%	0	0	
Mole Fraction Heavy Liquid	%	0	0	
Molecular Weight	lb/lbmol	19.4679	19.4679	
Mass Density	lb/ft ³	1.50647	1.50647	
Molar Flow	lbmol/h	309.852	309.852	
Mass Flow	lb/h	6032.15	6032.15	
Vapor Volumetric Flow	ft ³ /h	4004.17	4004.17	
Liquid Volumetric Flow	gpm	499.222	499.222	
Std Vapor Volumetric Flow	MMSCFD	2.82201	2.82201	
Std Liquid Volumetric Flow	sgpm	34.292	34.292	
Compressibility		0.948384	0.948384	
Specific Gravity		0.672173	0.672173	
API Gravity				
Enthalpy	Btu/h	-1.17889E+07	-1.17889E+07	
Mass Enthalpy	Btu/lb	-1954.35	-1954.35	
Mass Cp	Btu/(lb*°F)	0.516503	0.516503	
Ideal Gas CpCv Ratio		1.27478	1.27478	
Dynamic Viscosity	cP	0.0126146	0.0126146	
Kinematic Viscosity	cSt	0.522751	0.522751	
Thermal Conductivity	Btu/(h*ft*°F)	0.0208635	0.0208635	
Surface Tension	lbf/ft			
Net Ideal Gas Heating Value	Btu/ft ³	913.874	913.874	
Net Liquid Heating Value	Btu/lb	17782.9	17782.9	
Gross Ideal Gas Heating Value	Btu/ft ³	1011.73	1011.73	
Gross Liquid Heating Value	Btu/lb	19690.4	19690.4	

Remarks

Process Streams Report
Stream: 7
 Phases Grouped by Columns

Client Name:	PTSDK	Job: J877
Location:		Modified: 2:35 PM, 5/2/2011
Flowsheet:	Process Plant	Status: Solved 8:55 AM, 4/28/2011

Connections

From: Cold Separator To: VLVE-101

Composition

Mole Fraction	Total %	Light Liquid %		
Nitrogen	0.272165	0.272165		
Oxygen	0	0		
Carbon Dioxide	4.59736	4.59736		
Methane	23.5615	23.5615		
Ethane	10.2089	10.2089		
Propane	31.1293	31.1293		
i-Butane	7.14675	7.14675		
n-Butane	11.0848	11.0848		
i-Pentane	4.06666	4.06666		
n-Pentane	3.07699	3.07699		
n-Hexane	2.60868	2.60868		
n-Heptane	2.24641	2.24641		
Water	0.000395544	0.000395544		
Ethylene Glycol	2.91383E-05	2.91383E-05		
Therminol 55	0	0		

Properties

Property	Units	Total	Light Liquid	
Temperature	°F	-30	-30	
Pressure	psia	454.696	454.696	
Mole Fraction Vapor	%	0	0	
Mole Fraction Light Liquid	%	100	100	
Mole Fraction Heavy Liquid	%	0	0	
Molecular Weight	lb/lbmol	42.9255	42.9255	
Mass Density	lb/ft ³	36.104	36.104	
Molar Flow	lbmol/h	73.9265	73.9265	
Mass Flow	lb/h	3173.33	3173.33	
Vapor Volumetric Flow	ft ³ /h	87.894	87.894	
Liquid Volumetric Flow	gpm	10.9582	10.9582	
Std Vapor Volumetric Flow	MMSCFD	0.673295	0.673295	
Std Liquid Volumetric Flow	sgpm	12.4337	12.4337	
Compressibility		0.117242	0.117242	
Specific Gravity		0.578878	0.578878	
API Gravity		150.123	150.123	
Enthalpy	Btu/h	-4.471E+06	-4.471E+06	
Mass Enthalpy	Btu/lb	-1408.93	-1408.93	?
Mass Cp	Btu/(lb*°F)	0.56637	0.56637	?
Ideal Gas CpCv Ratio		1.15388	1.15388	
Dynamic Viscosity	cP	0.166809	0.166809	
Kinematic Viscosity	cSt	0.288432	0.288432	
Thermal Conductivity	Btu/(h*ft*°F)	0.0711484	0.0711484	?
Surface Tension	lbf/ft	0.000718247	0.000718247	?
Net Ideal Gas Heating Value	Btu/ft ³	2142.3	2142.3	
Net Liquid Heating Value	Btu/lb	18798.4	18798.4	
Gross Ideal Gas Heating Value	Btu/ft ³	2329.64	2329.64	
Gross Liquid Heating Value	Btu/lb	20454.5	20454.5	

Remarks

Process Streams Report
Stream: 8
 Phases Grouped by Columns

Client Name:	PTSDK	Job: J877
Location:		Modified: 12:23 PM, 12/17/2008
Flowsheet:	Process Plant	Status: Solved 2:43 PM, 5/2/2011

Connections

From: T-140 DeC2 Tower To: DeC2 Ovhd

Composition

Mole Fraction	Total %	Vapor %		
Nitrogen	0.634087	0.634087		
Oxygen	0	0		
Carbon Dioxide	10.7106	10.7106		
Methane	54.8934	54.8934		
Ethane	22.8387	22.8387		
Propane	9.18384	9.18384		
i-Butane	0.750578	0.750578		
n-Butane	0.787012	0.787012		
i-Pentane	0.115019	0.115019		
n-Pentane	0.0672913	0.0672913		
n-Hexane	0.0139813	0.0139813		
n-Heptane	0.00461361	0.00461361		
Water	0.000921529	0.000921529		
Ethylene Glycol	1.38272E-06	1.38272E-06		
Therminol 55	0	0		

Properties

Property	Units	Total	Vapor	
Temperature	°F	25.666	25.666	
Pressure	psia	340	340	
Mole Fraction Vapor	%	100	100	
Mole Fraction Light Liquid	%	0	0	
Mole Fraction Heavy Liquid	%	0	0	
Molecular Weight	lb/lbmol	25.6567	25.6567	
Mass Density	lb/ft ³	1.952	1.952	
Molar Flow	lbmol/h	31.731	31.731	
Mass Flow	lb/h	814.111	814.111	
Vapor Volumetric Flow	ft ³ /h	417.064	417.064	
Liquid Volumetric Flow	gpm	51.9976	51.9976	
Std Vapor Volumetric Flow	MMSCFD	0.288994	0.288994	
Std Liquid Volumetric Flow	sgpm	4.08561	4.08561	
Compressibility		0.858009	0.858009	
Specific Gravity		0.885855	0.885855	
API Gravity				
Enthalpy	Btu/h	-1.58858E+06	-1.58858E+06	
Mass Enthalpy	Btu/lb	-1951.31	-1951.31	
Mass Cp	Btu/(lb*°F)	0.467681	0.467681	
Ideal Gas CpCv Ratio		1.24584	1.24584	
Dynamic Viscosity	cP	0.010641	0.010641	
Kinematic Viscosity	cSt	0.340315	0.340315	
Thermal Conductivity	Btu/(h*ft*°F)	0.0149257	0.0149257	
Surface Tension	lbf/ft			
Net Ideal Gas Heating Value	Btu/ft ³	1135.38	1135.38	
Net Liquid Heating Value	Btu/lb	16707.5	16707.5	
Gross Ideal Gas Heating Value	Btu/ft ³	1247.97	1247.97	
Gross Liquid Heating Value	Btu/lb	18372.9	18372.9	

Remarks

Process Streams Report
Stream: 9
 Phases Grouped by Columns

Client Name:	PTSDK	Job: J877
Location:		Modified: 11:10 AM, 4/28/2011
Flowsheet:	Process Plant	Status: Solved 2:43 PM, 5/2/2011

Connections

From: DeC2 Ovhd To: MIX-101

Composition

Mole Fraction	Total %	Vapor %		
Nitrogen	0.634087	0.634087		
Oxygen	0	0		
Carbon Dioxide	10.7106	10.7106		
Methane	54.8934	54.8934		
Ethane	22.8387	22.8387		
Propane	9.18384	9.18384		
i-Butane	0.750578	0.750578		
n-Butane	0.787012	0.787012		
i-Pentane	0.115019	0.115019		
n-Pentane	0.0672913	0.0672913		
n-Hexane	0.0139813	0.0139813		
n-Heptane	0.00461361	0.00461361		
Water	0.000921529	0.000921529		
Ethylene Glycol	1.38272E-06	1.38272E-06		
Therminol 55	0	0		

Properties

Property	Units	Total	Vapor	
Temperature	°F	115 *	115	
Pressure	psia	335	335	
Mole Fraction Vapor	%	100	100	
Mole Fraction Light Liquid	%	0	0	
Mole Fraction Heavy Liquid	%	0	0	
Molecular Weight	lb/lbmol	25.6567	25.6567	
Mass Density	lb/ft^3	1.50802	1.50802	
Molar Flow	lbmol/h	31.731	31.731	
Mass Flow	lb/h	814.111	814.111	
Vapor Volumetric Flow	ft^3/h	539.854	539.854	
Liquid Volumetric Flow	gpm	67.3064	67.3064	
Std Vapor Volumetric Flow	MMSCFD	0.288994	0.288994	
Std Liquid Volumetric Flow	sgpm	4.08561	4.08561	
Compressibility		0.924176	0.924176	
Specific Gravity		0.885855	0.885855	
API Gravity				
Enthalpy	Btu/h	-1.5546E+06	-1.5546E+06	
Mass Enthalpy	Btu/lb	-1909.57	-1909.57	
Mass Cp	Btu/(lb*°F)	0.469237	0.469237	
Ideal Gas Cp/Cv Ratio		1.22117	1.22117	
Dynamic Viscosity	cP	0.0120685	0.0120685	
Kinematic Viscosity	cSt	0.499604	0.499604	
Thermal Conductivity	Btu/(h*ft*°F)	0.0180003	0.0180003	
Surface Tension	lbf/ft			
Net Ideal Gas Heating Value	Btu/ft^3	1135.38	1135.38	
Net Liquid Heating Value	Btu/lb	16707.5	16707.5	
Gross Ideal Gas Heating Value	Btu/ft^3	1247.97	1247.97	
Gross Liquid Heating Value	Btu/lb	18372.9	18372.9	

Remarks

Process Streams Report
Stream: 10
 Phases Grouped by Columns

Client Name:	PTSDK	Job: J877
Location:		Modified: 8:22 AM, 4/14/2011
Flowsheet:	Process Plant	Status: Solved 8:55 AM, 4/28/2011

Connections

From: VLVE-102 To: MIX-101

Composition

Mole Fraction	Total %	Vapor %		
Nitrogen	3.74344	3.74344		
Oxygen	0	0		
Carbon Dioxide	4.79867	4.79867		
Methane	83.7462	83.7462		
Ethane	4.31534	4.31534		
Propane	2.89644	2.89644		
i-Butane	0.230864	0.230864		
n-Butane	0.220382	0.220382		
i-Pentane	0.0286862	0.0286862		
n-Pentane	0.0159677	0.0159677		
n-Hexane	0.00262885	0.00262885		
n-Heptane	0.000723801	0.000723801		
Water	0.0006182	0.0006182		
Ethylene Glycol	3.26139E-07	3.26139E-07		
Therminol 55	0	0		

Properties

Property	Units	Total	Vapor	
Temperature	°F	101.814	101.814	
Pressure	psia	275 *	275	
Mole Fraction Vapor	%	100	100	
Mole Fraction Light Liquid	%	0	0	
Mole Fraction Heavy Liquid	%	0	0	
Molecular Weight	lb/lbmol	19.4679	19.4679	
Mass Density	lb/ft^3	0.920107	0.920107	
Molar Flow	lbmol/h	309.852	309.852	
Mass Flow	lb/h	6032.15	6032.15	
Vapor Volumetric Flow	ft^3/h	6555.92	6555.92	
Liquid Volumetric Flow	gpm	817.362	817.362	
Std Vapor Volumetric Flow	MMSCFD	2.82201	2.82201	
Std Liquid Volumetric Flow	sgpm	34.292	34.292	
Compressibility		0.965631	0.965631	
Specific Gravity		0.672173	0.672173	
API Gravity				
Enthalpy	Btu/h	-1.17889E+07	-1.17889E+07	
Mass Enthalpy	Btu/lb	-1954.35	-1954.35	
Mass Cp	Btu/(lb*°F)	0.496434	0.496434	
Ideal Gas CpCv Ratio		1.27724	1.27724	
Dynamic Viscosity	cP	0.012197	0.012197	
Kinematic Viscosity	cSt	0.827552	0.827552	
Thermal Conductivity	Btu/(h*ft*°F)	0.019881	0.019881	
Surface Tension	lbf/ft			
Net Ideal Gas Heating Value	Btu/ft^3	913.874	913.874	
Net Liquid Heating Value	Btu/lb	17782.9	17782.9	
Gross Ideal Gas Heating Value	Btu/ft^3	1011.73	1011.73	
Gross Liquid Heating Value	Btu/lb	19690.4	19690.4	

Remarks

Process Streams Report
Stream: 11
 Phases Grouped by Columns

Client Name:	PTSDK	Job: J877
Location:		Modified: 11:10 AM, 4/28/2011
Flowsheet:	Process Plant	Status: Solved 2:45 PM, 5/2/2011

Connections

From: VSSL-100	To: --
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Composition

Mole Fraction	Total %	Vapor %		
Nitrogen	0	0		
Oxygen	0	0		
Carbon Dioxide	1.31372E-11	1.31372E-11		
Methane	0	0		
Ethane	3.83376E-06	3.83376E-06		
Propane	0.0340824	0.0340824		
i-Butane	0.401138	0.401138		
n-Butane	5.07236	5.07236		
i-Pentane	45.1795	45.1795		
n-Pentane	33.0067	33.0067		
n-Hexane	12.24	12.24		
n-Heptane	4.0661	4.0661		
Water	0	0		
Ethylene Glycol	8.48346E-05	8.48346E-05		
Therminol 55	0	0		

Properties

Property	Units	Total	Vapor	
Temperature	°F	115.941	115.941	
Pressure	psia	14.696	14.696	
Mole Fraction Vapor	%	100	100	
Mole Fraction Light Liquid	%	0	0	
Mole Fraction Heavy Liquid	%	0	0	
Molecular Weight	lb/lbmol	74.229	74.229	
Mass Density	lb/ft ³	0.182967	0.182967	
Molar Flow	lbmol/h	1.70982	1.70982	
Mass Flow	lb/h	126.919	126.919	
Vapor Volumetric Flow	ft ³ /h	693.67	693.67	
Liquid Volumetric Flow	gpm	86.4836	86.4836	
Std Vapor Volumetric Flow	MMSCFD	0.0155724	0.0155724	
Std Liquid Volumetric Flow	sgpm	0.400574	0.400574	
Compressibility		0.965178	0.965178	
Specific Gravity		2.56293	2.56293	
API Gravity				
Enthalpy	Btu/h	-110574	-110574	
Mass Enthalpy	Btu/lb	-871.218	-871.218	
Mass Cp	Btu/(lb*°F)	0.423163	0.423163	
Ideal Gas CpCv Ratio		1.0682	1.0682	
Dynamic Viscosity	cP	0.00752245	0.00752245	
Kinematic Viscosity	cSt	2.56665	2.56665	
Thermal Conductivity	Btu/(h*ft*°F)	0.00959598	0.00959598	
Surface Tension	lbf/ft			
Net Ideal Gas Heating Value	Btu/ft ³	3806.72	3806.72	
Net Liquid Heating Value	Btu/lb	19303.8	19303.8	
Gross Ideal Gas Heating Value	Btu/ft ³	4115.97	4115.97	
Gross Liquid Heating Value	Btu/lb	20884.8	20884.8	

Remarks

Process Streams Report
Stream: 12
 Phases Grouped by Columns

Client Name:	PTSDK	Job: J877
Location:		Modified: 3:20 PM, 2/4/2005
Flowsheet:	Process Plant	Status: Solved 2:43 PM, 5/2/2011

Connections

From: MIX-101	To: --
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Composition

Mole Fraction	Total %	Vapor %		
Nitrogen	3.4546	3.4546		
Oxygen	0	0		
Carbon Dioxide	5.34785	5.34785		
Methane	81.066	81.066		
Ethane	6.03604	6.03604		
Propane	3.4805	3.4805		
i-Butane	0.279143	0.279143		
n-Butane	0.273018	0.273018		
i-Pentane	0.036706	0.036706		
n-Pentane	0.0207353	0.0207353		
n-Hexane	0.00368342	0.00368342		
n-Heptane	0.00108514	0.00108514		
Water	0.000646377	0.000646377		
Ethylene Glycol	4.24289E-07	4.24289E-07		
Therminol 55	0	0		

Properties

Property	Units	Total	Vapor	
Temperature	°F	102.598	102.598	
Pressure	psia	275	275	
Mole Fraction Vapor	%	100	100	
Mole Fraction Light Liquid	%	0	0	
Mole Fraction Heavy Liquid	%	0	0	
Molecular Weight	lb/lbmol	20.0428	20.0428	
Mass Density	lb/ft^3	0.948347	0.948347	
Molar Flow	lbmol/h	341.583	341.583	
Mass Flow	lb/h	6846.26	6846.26	
Vapor Volumetric Flow	ft^3/h	7219.15	7219.15	
Liquid Volumetric Flow	gpm	900.05	900.05	
Std Vapor Volumetric Flow	MMSCFD	3.11101	3.11101	
Std Liquid Volumetric Flow	sgpm	38.3776	38.3776	
Compressibility		0.963198	0.963198	
Specific Gravity		0.692023	0.692023	
API Gravity				
Enthalpy	Btu/h	-1.33435E+07	-1.33435E+07	
Mass Enthalpy	Btu/lb	-1949.03	-1949.03	
Mass Cp	Btu/(lb*°F)	0.491614	0.491614	
Ideal Gas CpCv Ratio		1.27114	1.27114	
Dynamic Viscosity	cP	0.0121649	0.0121649	
Kinematic Viscosity	cSt	0.800792	0.800792	
Thermal Conductivity	Btu/(h*ft*°F)	0.0196586	0.0196586	
Surface Tension	lbf/ft			
Net Ideal Gas Heating Value	Btu/ft^3	934.45	934.45	
Net Liquid Heating Value	Btu/lb	17655	17655	
Gross Ideal Gas Heating Value	Btu/ft^3	1033.68	1033.68	
Gross Liquid Heating Value	Btu/lb	19533.8	19533.8	

Remarks

Process Streams Report
Stream: 13
 Phases Grouped by Columns

Client Name:	PTSDK	Job: J877
Location:		Modified: 3:58 PM, 1/31/2005
Flowsheet:	Process Plant	Status: Solved 2:43 PM, 5/2/2011

Connections

From: T-140 DeC2 Tower To: K-100

Composition

Mole Fraction	Total %	Light Liquid %		
Nitrogen	2.50244E-11	2.50244E-11		
Oxygen	0	0		
Carbon Dioxide	0.000554133	0.000554133		
Methane	7.9908E-06	7.9908E-06		
Ethane	1.43956	1.43956		
Propane	60.0138	60.0138		
i-Butane	11.0561	11.0561		
n-Butane	15.5928	15.5928		
i-Pentane	4.62055	4.62055		
n-Pentane	3.3315	3.3315		
n-Hexane	2.23439	2.23439		
n-Heptane	1.71077	1.71077		
Water	1.0608E-08	1.0608E-08		
Ethylene Glycol	3.81212E-05	3.81212E-05		
Therminol 55	0	0		

Properties

Property	Units	Total	Light Liquid	
Temperature	°F	184.277	184.277	
Pressure	psia	345	345	
Mole Fraction Vapor	%	0	0	
Mole Fraction Light Liquid	%	100	100	
Mole Fraction Heavy Liquid	%	0	0	
Molecular Weight	lb/lbmol	51.7625	51.7625	
Mass Density	lb/ft^3	27.5541	27.5541	
Molar Flow	lbmol/h	121.917	121.917	
Mass Flow	lb/h	6310.71	6310.71	
Vapor Volumetric Flow	ft^3/h	229.029	229.029	
Liquid Volumetric Flow	gpm	28.5543	28.5543	
Std Vapor Volumetric Flow	MMSCFD	1.11037	1.11037	
Std Liquid Volumetric Flow	sgpm	23.1185	23.1185	
Compressibility		0.093785	0.093785	
Specific Gravity		0.441792	0.441792	
API Gravity		123.45	123.45	
Enthalpy	Btu/h	-6.67267E+06	-6.67267E+06	
Mass Enthalpy	Btu/lb	-1057.36	-1057.36	
Mass Cp	Btu/(lb*°F)	0.858637	0.858637	
Ideal Gas CpCv Ratio		1.09021	1.09021	
Dynamic Viscosity	cP	0.0698353	0.0698353	
Kinematic Viscosity	cSt	0.158222	0.158222	
Thermal Conductivity	Btu/(h*ft*°F)	0.0464675	0.0464675	
Surface Tension	lbf/ft	0.000186439 ?	0.000186439 ?	
Net Ideal Gas Heating Value	Btu/ft^3	2693.87	2693.87	
Net Liquid Heating Value	Btu/lb	19589.4	19589.4	
Gross Ideal Gas Heating Value	Btu/ft^3	2922.51	2922.51	
Gross Liquid Heating Value	Btu/lb	21265.6	21265.6	

Remarks

Process Streams Report
Stream: 14
 Phases Grouped by Columns

Client Name:	PTSDK	Job: J877
Location:		Modified: 3:58 PM, 1/31/2005
Flowsheet:	Process Plant	Status: Solved 2:43 PM, 5/2/2011

Connections

From: K-100 To: T-140 DeC2 Tower

Composition

Mole Fraction	Total %	Vapor %		
Nitrogen	3.63229E-11	3.63229E-11		
Oxygen	0	0		
Carbon Dioxide	0.000752733	0.000752733		
Methane	1.1206E-05	1.1206E-05		
Ethane	1.82499	1.82499		
Propane	66.5672	66.5672		
i-Butane	10.5794	10.5794		
n-Butane	13.8799	13.8799		
i-Pentane	3.34086	3.34086		
n-Pentane	2.26828	2.26828		
n-Hexane	1.00352	1.00352		
n-Heptane	0.534972	0.534972		
Water	1.44857E-08	1.44857E-08		
Ethylene Glycol	3.18284E-05	3.18284E-05		
Therminol 55	0	0		

Properties

Property	Units	Total	Vapor	
Temperature	°F	205.421	205.421	
Pressure	psia	345	345	
Mole Fraction Vapor	%	100	100	
Mole Fraction Light Liquid	%	0	0	
Mole Fraction Heavy Liquid	%	0	0	
Molecular Weight	lb/lbmol	49.5664	49.5664	
Mass Density	lb/ft^3	3.44428	3.44428	
Molar Flow	lbmol/h	79.7212	79.7212	
Mass Flow	lb/h	3951.49	3951.49	
Vapor Volumetric Flow	ft^3/h	1147.26	1147.26	
Liquid Volumetric Flow	gpm	143.035	143.035	
Std Vapor Volumetric Flow	MMSCFD	0.726071	0.726071	
Std Liquid Volumetric Flow	sgpm	14.7705	14.7705	
Compressibility		0.695606	0.695606	
Specific Gravity		1.71139	1.71139	
API Gravity				
Enthalpy	Btu/h	-3.79025E+06	-3.79025E+06	
Mass Enthalpy	Btu/lb	-959.195	-959.195	
Mass Cp	Btu/(lb*°F)	0.62041	0.62041	
Ideal Gas Cp/Cv Ratio		1.09177	1.09177	
Dynamic Viscosity	cP	0.0114074	0.0114074	
Kinematic Viscosity	cSt	0.206759	0.206759	
Thermal Conductivity	Btu/(h*ft*°F)	0.0164818	0.0164818	
Surface Tension	lbf/ft			
Net Ideal Gas Heating Value	Btu/ft^3	2585.03	2585.03	
Net Liquid Heating Value	Btu/lb	19630.8	19630.8	
Gross Ideal Gas Heating Value	Btu/ft^3	2805.79	2805.79	
Gross Liquid Heating Value	Btu/lb	21321	21321	

Remarks

Process Streams Report
Stream: 15
 Phases Grouped by Columns

Client Name:	PTSDK	Job: J877
Location:		Modified: 2:41 PM, 5/2/2011
Flowsheet:	Process Plant	Status: Solved 2:43 PM, 5/2/2011

Connections

From: K-100 To: VLVE-103

Composition

Mole Fraction	Total %	Light Liquid %		
Nitrogen	3.67777E-12	3.67777E-12		
Oxygen	0	0		
Carbon Dioxide	0.000178912	0.000178912		
Methane	1.91615E-06	1.91615E-06		
Ethane	0.71137	0.71137		
Propane	47.6322	47.6322		
i-Butane	11.9567	11.9567		
n-Butane	18.8288	18.8288		
i-Pentane	7.0383	7.0383		
n-Pentane	5.34028	5.34028		
n-Hexane	4.55989	4.55989		
n-Heptane	3.93224	3.93224		
Water	3.28193E-09	3.28193E-09		
Ethylene Glycol	5.00105E-05	5.00105E-05		
Therminol 55	0	0		

Properties

Property	Units	Total	Light Liquid	
Temperature	°F	205.421	205.421	
Pressure	psia	345	345	
Mole Fraction Vapor	%	0	0	
Mole Fraction Light Liquid	%	100	100	
Mole Fraction Heavy Liquid	%	0	0	
Molecular Weight	lb/lbmol	55.9116	55.9116	
Mass Density	lb/ft^3	28.1635	28.1635	
Molar Flow	lbmol/h	42.1955	42.1955	
Mass Flow	lb/h	2359.22	2359.22	
Vapor Volumetric Flow	ft^3/h	83.7686	83.7686	
Liquid Volumetric Flow	gpm	10.4439	10.4439	
Std Vapor Volumetric Flow	MMSCFD	0.384301	0.384301	
Std Liquid Volumetric Flow	sgpm	8.34806	8.34806	
Compressibility		0.0959598	0.0959598	
Specific Gravity		0.451562	0.451562	
API Gravity		114.449	114.449	
Enthalpy	Btu/h	-2.41139E+06	-2.41139E+06	
Mass Enthalpy	Btu/lb	-1022.12	-1022.12	
Mass Cp	Btu/(lb*°F)	0.831763	0.831763	
Ideal Gas Cp/Cv Ratio		1.08067	1.08067	
Dynamic Viscosity	cP	0.0728087	0.0728087	
Kinematic Viscosity	cSt	0.16139	0.16139	
Thermal Conductivity	Btu/(h*ft*°F)	0.0464974	0.0464974	
Surface Tension	lbf/ft	0.000196388 ?	0.000196388 ?	
Net Ideal Gas Heating Value	Btu/ft^3	2899.51	2899.51	
Net Liquid Heating Value	Btu/lb	19519.9	19519.9	
Gross Ideal Gas Heating Value	Btu/ft^3	3143.05	3143.05	
Gross Liquid Heating Value	Btu/lb	21172.8	21172.8	

Remarks

Process Streams Report
Stream: 16
 Phases Grouped by Columns

Client Name:	PTSDK	Job: J877
Location:		Modified: 2:43 PM, 5/2/2011
Flowsheet:	Process Plant	Status: Solved 2:43 PM, 5/2/2011

Connections

From: DeC4 feed To: T-180 DeC4 Tower

Composition

Mole Fraction	Total %	Vapor %	Light Liquid %
Nitrogen	3.67777E-12	8.22696E-12	2.86455E-13
Oxygen	0	0	0
Carbon Dioxide	0.000178912	0.000359256	4.44701E-05
Methane	1.91615E-06	4.08127E-06	3.02104E-07
Ethane	0.71137	1.26318	0.300006
Propane	47.6322	63.8866	35.515
i-Butane	11.9567	11.6132	12.2127
n-Butane	18.8288	15.5473	21.2751
i-Pentane	7.0383	3.75898	9.48294
n-Pentane	5.34028	2.5022	7.45601
n-Hexane	4.55989	0.982732	7.22657
n-Heptane	3.93224	0.445381	6.5316
Water	3.28193E-09	6.66592E-09	7.59255E-10
Ethylene Glycol	5.00105E-05	3.37868E-05	6.21048E-05
Therminol 55	0	0	0

Properties

Property	Units	Total	Vapor	Light Liquid
Temperature	°F	160 *	160	160
Pressure	psia	180	180	180
Mole Fraction Vapor	%	42.709	100	0
Mole Fraction Light Liquid	%	57.291	0	100
Mole Fraction Heavy Liquid	%	0	0	0
Molecular Weight	lb/lbmol	55.9116	50.148	60.2082
Mass Density	lb/ft^3	4.00278	1.65973	32.4234
Molar Flow	lbmol/h	42.1955	18.0213	24.1742
Mass Flow	lb/h	2359.22	903.732	1455.49
Vapor Volumetric Flow	ft^3/h	589.394	544.504	44.89
Liquid Volumetric Flow	gpm	73.4829	67.8862	5.59667
Std Vapor Volumetric Flow	MMSCFD	0.384301	0.164131	0.22017
Std Liquid Volumetric Flow	sgpm	8.34806	3.35744	4.99061
Compressibility		0.378083	0.817831	0.0502626
Specific Gravity			1.73147	0.519864
API Gravity				107.64
Enthalpy	Btu/h	-2.38125E+06	-871574	-1.50967E+06
Mass Enthalpy	Btu/lb	-1009.34	-964.417	-1037.23
Mass Cp	Btu/(lb*°F)	0.611113	0.501198	0.679361
Ideal Gas CpCv Ratio		1.086	1.09665	1.07947
Dynamic Viscosity	cP		0.00976417	0.108799
Kinematic Viscosity	cSt		0.367262	0.209482
Thermal Conductivity	Btu/(h*ft*°F)		0.0135908	0.0507643
Surface Tension	lbf/ft			0.000454527 ?
Net Ideal Gas Heating Value	Btu/ft^3	2899.51	2613.75	3112.54
Net Liquid Heating Value	Btu/lb	19519.9	19618.7	19458.5
Gross Ideal Gas Heating Value	Btu/ft^3	3143.05	2836.6	3371.49
Gross Liquid Heating Value	Btu/lb	21172.8	21305.1	21090.7

Remarks

Process Streams Report
Stream: 17
 Phases Grouped by Columns

Client Name:	PTSDK	Job: J877
Location:		Modified: 12:41 PM, 2/24/2005
Flowsheet:	Process Plant	Status: Solved 2:43 PM, 5/2/2011

Connections

From: T-180 DeC4 Tower To: XCHG-103

Composition

Mole Fraction	Total %	Vapor %		
Nitrogen	4.58857E-12	4.58857E-12		
Oxygen	0	0		
Carbon Dioxide	0.00022322	0.00022322		
Methane	2.39069E-06	2.39069E-06		
Ethane	0.887541	0.887541		
Propane	59.4262	59.4262		
i-Butane	14.8841	14.8841		
n-Butane	22.9859	22.9859		
i-Pentane	1.5016	1.5016		
n-Pentane	0.3138	0.3138		
n-Hexane	0.000592414	0.000592414		
n-Heptane	8.71872E-06	8.71872E-06		
Water	4.09471E-09	4.09471E-09		
Ethylene Glycol	4.84011E-05	4.84011E-05		
Therminol 55	0	0		

Properties

Property	Units	Total	Vapor	
Temperature	°F	141.664	141.664	
Pressure	psia	177.727	177.727	
Mole Fraction Vapor	%	100	100	
Mole Fraction Light Liquid	%	0	0	
Mole Fraction Heavy Liquid	%	0	0	
Molecular Weight	lb/lbmol	49.7925	49.7925	
Mass Density	lb/ft^3	1.70885	1.70885	
Molar Flow	lbmol/h	101.46	101.46	
Mass Flow	lb/h	5051.94	5051.94	
Vapor Volumetric Flow	ft^3/h	2956.34	2956.34	
Liquid Volumetric Flow	gpm	368.583	368.583	
Std Vapor Volumetric Flow	MMSCFD	0.924058	0.924058	
Std Liquid Volumetric Flow	sgpm	18.8115	18.8115	
Compressibility		0.802482	0.802482	
Specific Gravity		1.7192	1.7192	
API Gravity				
Enthalpy	Btu/h	-4.93456E+06	-4.93456E+06	
Mass Enthalpy	Btu/lb	-976.765	-976.765	
Mass Cp	Btu/(lb*°F)	0.496893	0.496893	
Ideal Gas Cp/Cv Ratio		1.09993	1.09993	
Dynamic Viscosity	cP	0.00953469	0.00953469	
Kinematic Viscosity	cSt	0.348323	0.348323	
Thermal Conductivity	Btu/(h*ft*°F)	0.0129257	0.0129257	
Surface Tension	lbf/ft			
Net Ideal Gas Heating Value	Btu/ft^3	2595.92	2595.92	
Net Liquid Heating Value	Btu/lb	19624.1	19624.1	
Gross Ideal Gas Heating Value	Btu/ft^3	2817.5	2817.5	
Gross Liquid Heating Value	Btu/lb	21312.8	21312.8	

Remarks

Process Streams Report
Stream: 18
 Phases Grouped by Columns

Client Name:	PTSDK	Job: J877
Location:		Modified: 12:41 PM, 2/24/2005
Flowsheet:	Process Plant	Status: Solved 2:43 PM, 5/2/2011

Connections

From: XCHG-103 To: SPLT-101

Composition

Mole Fraction	Total %	Vapor %	Light Liquid %		
Nitrogen	4.58857E-12	1.20037E-10	4.55271E-12		
Oxygen	0	0	0		
Carbon Dioxide	0.00022322	0.00152141	0.000222817		
Methane	2.39069E-06	2.83899E-05	2.38261E-06		
Ethane	0.887541	2.96208	0.886897		
Propane	59.4262	75.7627	59.4211		
i-Butane	14.8841	9.54282	14.8858		
n-Butane	22.9859	11.281	22.9895		
i-Pentane	1.5016	0.38226	1.50195		
n-Pentane	0.3138	0.0675581	0.313876		
n-Hexane	0.000592414	4.38372E-05	0.000592585		
n-Heptane	8.71872E-06	3.27545E-07	8.72132E-06		
Water	4.09471E-09	3.36315E-08	4.08553E-09		
Ethylene Glycol	4.84011E-05	2.20067E-05	4.84093E-05		
Therminol 55	0	0	0		

Properties

Property	Units	Total	Vapor	Light Liquid	
Temperature	°F	119.946	119.946	119.946	
Pressure	psia	177.727	177.727	177.727	
Mole Fraction Vapor	%	0.0310494	100	0	
Mole Fraction Light Liquid	%	99.969	0	100	
Mole Fraction Heavy Liquid	%	0	0	0	
Molecular Weight	lb/lbmol	49.7925	46.7272	49.7935	
Mass Density	lb/ft ³	30.4052	1.66003	30.5594	
Molar Flow	lbmol/h	101.46	0.0315027	101.428	
Mass Flow	lb/h	5051.94	1.47203	5050.47	
Vapor Volumetric Flow	ft ³ /h	166.154	0.886749	165.267	
Liquid Volumetric Flow	gpm	20.7153	0.110556	20.6048	
Std Vapor Volumetric Flow	MMSCFD	0.924058	0.000286915	0.923771	
Std Liquid Volumetric Flow	sgpm	18.8115	0.00566576	18.8058	
Compressibility		0.0467914	0.804271	0.0465562	
Specific Gravity			1.61336	0.489977	
API Gravity				130.381	
Enthalpy	Btu/h	-5.65106E+06	-1478.03	-5.64958E+06	
Mass Enthalpy	Btu/lb	-1118.59	-1004.07	-1118.62	
Mass Cp	Btu/(lb*°F)	0.711907	0.485459	0.711973	
Ideal Gas CpCv Ratio		1.10332	1.11096	1.10332	
Dynamic Viscosity	cP		0.00938002	0.0941052	
Kinematic Viscosity	cSt		0.352749	0.192242	
Thermal Conductivity	Btu/(h*ft*°F)		0.012353	0.0502349	
Surface Tension	lbf/ft			0.000396079 ?	
Net Ideal Gas Heating Value	Btu/ft ³	2595.92	2444.46	2595.96	
Net Liquid Heating Value	Btu/lb	19624.1	19691.4	19624	
Gross Ideal Gas Heating Value	Btu/ft ³	2817.5	2655.03	2817.55	
Gross Liquid Heating Value	Btu/lb	21312.8	21401.4	21312.8	

Remarks

Process Streams Report
Stream: 19
 Phases Grouped by Columns

Client Name:	PTSDK	Job: J877
Location:		Modified: 12:41 PM, 2/24/2005
Flowsheet:	Process Plant	Status: Solved 2:43 PM, 5/2/2011

Connections

From: SPLT-101 To: T-180 DeC4 Tower

Composition

Mole Fraction	Total %	Vapor %	Light Liquid %		
Nitrogen	4.58857E-12	1.20037E-10	4.55271E-12		
Oxygen	0	0	0		
Carbon Dioxide	0.00022322	0.00152141	0.000222817		
Methane	2.39069E-06	2.83899E-05	2.38261E-06		
Ethane	0.887541	2.96208	0.886897		
Propane	59.4262	75.7627	59.4211		
i-Butane	14.8841	9.54282	14.8858		
n-Butane	22.9859	11.281	22.9895		
i-Pentane	1.5016	0.38226	1.50195		
n-Pentane	0.3138	0.0675581	0.313876		
n-Hexane	0.000592414	4.38372E-05	0.000592585		
n-Heptane	8.71872E-06	3.27545E-07	8.72132E-06		
Water	4.09471E-09	3.36315E-08	4.08553E-09		
Ethylene Glycol	4.84011E-05	2.20067E-05	4.84093E-05		
Therminol 55	0	0	0		

Properties

Property	Units	Total	Vapor	Light Liquid	
Temperature	°F	119.946	119.946	119.946	
Pressure	psia	177.727	177.727	177.727	
Mole Fraction Vapor	%	0.0310494	100	0	
Mole Fraction Light Liquid	%	99.969	0	100	
Mole Fraction Heavy Liquid	%	0	0	0	
Molecular Weight	lb/lbmol	49.7925	46.7272	49.7935	
Mass Density	lb/ft ³	30.4052	1.66003	30.5594	
Molar Flow	lbmol/h	67.6399	0.0210018	67.6189	
Mass Flow	lb/h	3367.96	0.981355	3366.98	
Vapor Volumetric Flow	ft ³ /h	110.769	0.591166	110.178	
Liquid Volumetric Flow	gpm	13.8102	0.0737038	13.7365	
Std Vapor Volumetric Flow	MMSCFD	0.616039	0.000191276	0.615848	
Std Liquid Volumetric Flow	sgpm	12.541	0.00377717	12.5372	
Compressibility		0.0467914	0.804271	0.0465562	
Specific Gravity			1.61336	0.489977	
API Gravity				130.381	
Enthalpy	Btu/h	-3.76737E+06	-985.353	-3.76639E+06	
Mass Enthalpy	Btu/lb	-1118.59	-1004.07	-1118.62	
Mass Cp	Btu/(lb*°F)	0.711907	0.485459	0.711973	
Ideal Gas CpCv Ratio		1.10332	1.11096	1.10332	
Dynamic Viscosity	cP		0.00938002	0.0941052	
Kinematic Viscosity	cSt		0.352749	0.192242	
Thermal Conductivity	Btu/(h*ft*°F)		0.012353	0.0502349	
Surface Tension	lbf/ft			0.000396079 ?	
Net Ideal Gas Heating Value	Btu/ft ³	2595.92	2444.46	2595.96	
Net Liquid Heating Value	Btu/lb	19624.1	19691.4	19624	
Gross Ideal Gas Heating Value	Btu/ft ³	2817.5	2655.03	2817.55	
Gross Liquid Heating Value	Btu/lb	21312.8	21401.4	21312.8	

Remarks

Process Streams Report
Stream: 20
 Phases Grouped by Columns

Client Name:	PTSDK	Job: J877
Location:		Modified: 12:43 PM, 2/24/2005
Flowsheet:	Process Plant	Status: Solved 2:43 PM, 5/2/2011

Connections

From: SPLT-101	To: --
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Composition

Mole Fraction	Total %	Vapor %	Light Liquid %		
Nitrogen	4.58857E-12	1.20037E-10	4.55271E-12		
Oxygen	0	0	0		
Carbon Dioxide	0.00022322	0.00152141	0.000222817		
Methane	2.39069E-06	2.83899E-05	2.38261E-06		
Ethane	0.887541	2.96208	0.886897		
Propane	59.4262	75.7627	59.4211		
i-Butane	14.8841	9.54282	14.8858		
n-Butane	22.9859	11.281	22.9895		
i-Pentane	1.5016	0.38226	1.50195		
n-Pentane	0.3138	0.0675581	0.313876		
n-Hexane	0.000592414	4.38372E-05	0.000592585		
n-Heptane	8.71872E-06	3.27545E-07	8.72132E-06		
Water	4.09471E-09	3.36315E-08	4.08553E-09		
Ethylene Glycol	4.84011E-05	2.20067E-05	4.84093E-05		
Therminol 55	0	0	0		

Properties

Property	Units	Total	Vapor	Light Liquid	
Temperature	°F	119.946	119.946	119.946	
Pressure	psia	177.727	177.727	177.727	
Mole Fraction Vapor	%	0.0310494	100	0	
Mole Fraction Light Liquid	%	99.969	0	100	
Mole Fraction Heavy Liquid	%	0	0	0	
Molecular Weight	lb/lbmol	49.7925	46.7272	49.7935	
Mass Density	lb/ft ³	30.4052	1.66003	30.5594	
Molar Flow	lbmol/h	33.8199	0.0105009	33.8094	
Mass Flow	lb/h	1683.98	0.490677	1683.49	
Vapor Volumetric Flow	ft ³ /h	55.3847	0.295583	55.0891	
Liquid Volumetric Flow	gpm	6.9051	0.0368519	6.86825	
Std Vapor Volumetric Flow	MMSCFD	0.308019	9.56382E-05	0.307924	
Std Liquid Volumetric Flow	sgpm	6.2705	0.00188859	6.26861	
Compressibility		0.0467914	0.804271	0.0465562	
Specific Gravity			1.61336	0.489977	
API Gravity				130.381	
Enthalpy	Btu/h	-1.88369E+06	-492.676	-1.88319E+06	
Mass Enthalpy	Btu/lb	-1118.59	-1004.07	-1118.62	
Mass Cp	Btu/(lb*°F)	0.711907	0.485459	0.711973	
Ideal Gas CpCv Ratio		1.10332	1.11096	1.10332	
Dynamic Viscosity	cP		0.00938002	0.0941052	
Kinematic Viscosity	cSt		0.352749	0.192242	
Thermal Conductivity	Btu/(h*ft*°F)		0.012353	0.0502349	
Surface Tension	lbf/ft			0.000396079 ?	
Net Ideal Gas Heating Value	Btu/ft ³	2595.92	2444.46	2595.96	
Net Liquid Heating Value	Btu/lb	19624.1	19691.4	19624	
Gross Ideal Gas Heating Value	Btu/ft ³	2817.5	2655.03	2817.55	
Gross Liquid Heating Value	Btu/lb	21312.8	21401.4	21312.8	

Remarks

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Process Streams Report
Stream: 21
 Phases Grouped by Columns

Client Name:	PTSDK	Job: J877
Location:		Modified: 12:41 PM, 2/24/2005
Flowsheet:	Process Plant	Status: Solved 2:43 PM, 5/2/2011

Connections

From: T-180 DeC4 Tower To: K-101

Composition

Mole Fraction	Total %	Light Liquid %		
Nitrogen	0	0		
Oxygen	0	0		
Carbon Dioxide	2.50703E-11	2.50703E-11		
Methane	0	0		
Ethane	4.83665E-06	4.83665E-06		
Propane	0.0304978	0.0304978		
i-Butane	0.310642	0.310642		
n-Butane	3.92844	3.92844		
i-Pentane	38.4533	38.4533		
n-Pentane	30.4009	30.4009		
n-Hexane	17.1124	17.1124		
n-Heptane	9.76371	9.76371		
Water	0	0		
Ethylene Glycol	7.97332E-05	7.97332E-05		
Therminol 55	0	0		

Properties

Property	Units	Total	Light Liquid	
Temperature	°F	285.384	285.384	
Pressure	psia	182.727	182.727	
Mole Fraction Vapor	%	0	0	
Mole Fraction Light Liquid	%	100	100	
Mole Fraction Heavy Liquid	%	0	0	
Molecular Weight	lb/lbmol	76.6849	76.6849	
Mass Density	lb/ft ³	30.772	30.772	
Molar Flow	lbmol/h	78.6683	78.6683	
Mass Flow	lb/h	6032.67	6032.67	
Vapor Volumetric Flow	ft ³ /h	196.044	196.044	
Liquid Volumetric Flow	gpm	24.4419	24.4419	
Std Vapor Volumetric Flow	MMSCFD	0.716481	0.716481	
Std Liquid Volumetric Flow	sgpm	18.8454	18.8454	
Compressibility		0.0569517	0.0569517	
Specific Gravity		0.493386	0.493386	
API Gravity		88.1352	88.1352	
Enthalpy	Btu/h	-5.42615E+06	-5.42615E+06	
Mass Enthalpy	Btu/lb	-899.46	-899.46	
Mass Cp	Btu/(lb*°F)	0.768304	0.768304	
Ideal Gas Cp/Cv Ratio		1.05247	1.05247	
Dynamic Viscosity	cP	0.0874196	0.0874196	
Kinematic Viscosity	cSt	0.17735	0.17735	
Thermal Conductivity	Btu/(h*ft*°F)	0.0440912 ?	0.0440912 ?	
Surface Tension	lbf/ft	0.000301691 ?	0.000301691 ?	
Net Ideal Gas Heating Value	Btu/ft ³	3929.24	3929.24	
Net Liquid Heating Value	Btu/lb	19286.4	19286.4	
Gross Ideal Gas Heating Value	Btu/ft ³	4247.29	4247.29	
Gross Liquid Heating Value	Btu/lb	20860.3	20860.3	

Remarks

Process Streams Report
Stream: 22
 Phases Grouped by Columns

Client Name:	PTSDK	Job: J877
Location:		Modified: 3:10 PM, 7/14/2010
Flowsheet:	Process Plant	Status: Solved 2:43 PM, 5/2/2011

Connections

From: K-101 To: T-180 DeC4 Tower

Composition

Mole Fraction	Total %	Vapor %		
Nitrogen	0	0		
Oxygen	0	0		
Carbon Dioxide	2.77238E-11	2.77238E-11		
Methane	0	0		
Ethane	5.31079E-06	5.31079E-06		
Propane	0.0330691	0.0330691		
i-Butane	0.331477	0.331477		
n-Butane	4.15313	4.15313		
i-Pentane	39.5326	39.5326		
n-Pentane	30.9685	30.9685		
n-Hexane	16.4145	16.4145		
n-Heptane	8.56663	8.56663		
Water	0	0		
Ethylene Glycol	8.25004E-05	8.25004E-05		
Therminol 55	0	0		

Properties

Property	Units	Total	Vapor	
Temperature	°F	304.528	304.528	
Pressure	psia	182.727	182.727	
Mole Fraction Vapor	%	100	100	
Mole Fraction Light Liquid	%	0	0	
Mole Fraction Heavy Liquid	%	0	0	
Molecular Weight	lb/lbmol	76.2161	76.2161	
Mass Density	lb/ft ³	2.22019	2.22019	
Molar Flow	lbmol/h	70.2927	70.2927	
Mass Flow	lb/h	5357.43	5357.43	
Vapor Volumetric Flow	ft ³ /h	2413.05	2413.05	
Liquid Volumetric Flow	gpm	300.848	300.848	
Std Vapor Volumetric Flow	MMSCFD	0.6402	0.6402	
Std Liquid Volumetric Flow	sgpm	16.7678	16.7678	
Compressibility		0.764874	0.764874	
Specific Gravity		2.63153	2.63153	
API Gravity				
Enthalpy	Btu/h	-4.21209E+06	-4.21209E+06	
Mass Enthalpy	Btu/lb	-786.213	-786.213	
Mass Cp	Btu/(lb*°F)	0.587639	0.587639	
Ideal Gas CpCv Ratio		1.05166	1.05166	
Dynamic Viscosity	cP	0.0106614	0.0106614	
Kinematic Viscosity	cSt	0.299782	0.299782	
Thermal Conductivity	Btu/(h*ft*°F)	0.0171675	0.0171675	
Surface Tension	lbf/ft			
Net Ideal Gas Heating Value	Btu/ft ³	3905.87	3905.87	
Net Liquid Heating Value	Btu/lb	19289.7	19289.7	
Gross Ideal Gas Heating Value	Btu/ft ³	4222.24	4222.24	
Gross Liquid Heating Value	Btu/lb	20865	20865	

Remarks

Process Streams Report
Stream: 23
 Phases Grouped by Columns

Client Name:	PTSDK	Job: J877
Location:		Modified: 2:45 PM, 5/2/2011
Flowsheet:	Process Plant	Status: Solved 2:43 PM, 5/2/2011

Connections

From: K-101 To: DeC4 feed 2

Composition

Mole Fraction	Total %	Light Liquid %		
Nitrogen	0	0		
Oxygen	0	0		
Carbon Dioxide	2.80046E-12	2.80046E-12		
Methane	0	0		
Ethane	8.57364E-07	8.57364E-07		
Propane	0.00891835	0.00891835		
i-Butane	0.135776	0.135776		
n-Butane	2.04273	2.04273		
i-Pentane	29.3952	29.3952		
n-Pentane	25.6369	25.6369		
n-Hexane	22.9701	22.9701		
n-Heptane	19.8103	19.8103		
Water	0	0		
Ethylene Glycol	5.65091E-05	5.65091E-05		
Therminol 55	0	0		

Properties

Property	Units	Total	Light Liquid	
Temperature	°F	304.528	304.528	
Pressure	psia	182.727	182.727	
Mole Fraction Vapor	%	0	0	
Mole Fraction Light Liquid	%	100	100	
Mole Fraction Heavy Liquid	%	0	0	
Molecular Weight	lb/lbmol	80.62	80.62	
Mass Density	lb/ft ³	30.8157	30.8157	
Molar Flow	lbmol/h	8.37553	8.37553	
Mass Flow	lb/h	675.235	675.235	
Vapor Volumetric Flow	ft ³ /h	21.9121	21.9121	
Liquid Volumetric Flow	gpm	2.7319	2.7319	
Std Vapor Volumetric Flow	MMSCFD	0.0762812	0.0762812	
Std Liquid Volumetric Flow	sgpm	2.07756	2.07756	
Compressibility		0.0582915	0.0582915	
Specific Gravity		0.494086	0.494086	
API Gravity		84.9424	84.9424	
Enthalpy	Btu/h	-588969	-588969	
Mass Enthalpy	Btu/lb	-872.243	-872.243	
Mass Cp	Btu/(lb*°F)	0.772487	0.772487	
Ideal Gas CpCv Ratio		1.04877	1.04877	
Dynamic Viscosity	cP	0.0879004	0.0879004	
Kinematic Viscosity	cSt	0.178073	0.178073	
Thermal Conductivity	Btu/(h*ft*°F)	0.0439118 ?	0.0439118 ?	
Surface Tension	lbf/ft	0.000297092 ?	0.000297092 ?	
Net Ideal Gas Heating Value	Btu/ft ³	4125.41	4125.41	
Net Liquid Heating Value	Btu/lb	19260.1	19260.1	
Gross Ideal Gas Heating Value	Btu/ft ³	4457.58	4457.58	
Gross Liquid Heating Value	Btu/lb	20823.7	20823.7	

Remarks

Process Streams Report
Stream: 24
 Phases Grouped by Columns

Client Name:	PTSDK	Job: J877
Location:		Modified: 10:53 AM, 4/28/2011
Flowsheet:	Process Plant	Status: Solved 2:45 PM, 5/2/2011

Connections

From: VSSL-100	To: --
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Composition

Mole Fraction	Total %	Light Liquid %		
Nitrogen	0	0		
Oxygen	0	0		
Carbon Dioxide	1.48982E-13	1.48982E-13		
Methane	0	0		
Ethane	9.3885E-08	9.3885E-08		
Propane	0.00246351	0.00246351		
i-Butane	0.0677081	0.0677081		
n-Butane	1.2656	1.2656		
i-Pentane	25.3463	25.3463		
n-Pentane	23.7465	23.7465		
n-Hexane	25.7225	25.7225		
n-Heptane	23.8489	23.8489		
Water	0	0		
Ethylene Glycol	4.92433E-05	4.92433E-05		
Therminol 55	0	0		

Properties

Property	Units	Total	Light Liquid	
Temperature	°F	115.941	115.941	
Pressure	psia	14.696	14.696	
Mole Fraction Vapor	%	0	0	
Mole Fraction Light Liquid	%	100	100	
Mole Fraction Heavy Liquid	%	0	0	
Molecular Weight	lb/lbmol	82.2594	82.2594	
Mass Density	lb/ft^3	39.0244	39.0244	
Molar Flow	lbmol/h	6.6657	6.6657	
Mass Flow	lb/h	548.317	548.317	
Vapor Volumetric Flow	ft^3/h	14.0506	14.0506	
Liquid Volumetric Flow	gpm	1.75177	1.75177	
Std Vapor Volumetric Flow	MMSCFD	0.0607088	0.0607088	
Std Liquid Volumetric Flow	sgpm	1.67698	1.67698	
Compressibility		0.00501482	0.00501482	
Specific Gravity		0.625702	0.625702	
API Gravity		84.2238	84.2238	
Enthalpy	Btu/h	-542524	-542524	
Mass Enthalpy	Btu/lb	-989.436	-989.436	
Mass Cp	Btu/(lb*°F)	0.563882	0.563882	
Ideal Gas Cp/Cv Ratio		1.06127	1.06127	
Dynamic Viscosity	cP	0.225341	0.225341	
Kinematic Viscosity	cSt	0.360483	0.360483	
Thermal Conductivity	Btu/(h*ft*°F)	0.0636485	0.0636485	
Surface Tension	lbf/ft	0.00101145	0.00101145	
Net Ideal Gas Heating Value	Btu/ft^3	4207.15	4207.15	
Net Liquid Heating Value	Btu/lb	19250	19250	
Gross Ideal Gas Heating Value	Btu/ft^3	4545.2	4545.2	
Gross Liquid Heating Value	Btu/lb	20809.6	20809.6	

Remarks

Process Streams Report
Stream: 25
 Phases Grouped by Columns

Client Name:	PTSDK	Job: J877
Location:		Modified: 12:22 PM, 12/17/2008
Flowsheet:	Process Plant	Status: Solved 2:45 PM, 5/2/2011

Connections

From: DeC4 feed 2 To: DeC2 Ovhd 2

Composition

Mole Fraction	Total %	Light Liquid %		
Nitrogen	0	0		
Oxygen	0	0		
Carbon Dioxide	2.80046E-12	2.80046E-12		
Methane	0	0		
Ethane	8.57364E-07	8.57364E-07		
Propane	0.00891835	0.00891835		
i-Butane	0.135776	0.135776		
n-Butane	2.04273	2.04273		
i-Pentane	29.3952	29.3952		
n-Pentane	25.6369	25.6369		
n-Hexane	22.9701	22.9701		
n-Heptane	19.8103	19.8103		
Water	0	0		
Ethylene Glycol	5.65091E-05	5.65091E-05		
Therminol 55	0	0		

Properties

Property	Units	Total	Light Liquid	
Temperature	°F	242.506	242.506	
Pressure	psia	177.727	177.727	
Mole Fraction Vapor	%	0	0	
Mole Fraction Light Liquid	%	100	100	
Mole Fraction Heavy Liquid	%	0	0	
Molecular Weight	lb/lbmol	80.62	80.62	
Mass Density	lb/ft^3	33.948	33.948	
Molar Flow	lbmol/h	8.37553	8.37553	
Mass Flow	lb/h	675.235	675.235	
Vapor Volumetric Flow	ft^3/h	19.8903	19.8903	
Liquid Volumetric Flow	gpm	2.47983	2.47983	
Std Vapor Volumetric Flow	MMSCFD	0.0762812	0.0762812	
Std Liquid Volumetric Flow	sgpm	2.07756	2.07756	
Compressibility		0.0560109	0.0560109	
Specific Gravity		0.544308	0.544308	
API Gravity		84.9576	84.9576	
Enthalpy	Btu/h	-619113	-619113	
Mass Enthalpy	Btu/lb	-916.885	-916.885	
Mass Cp	Btu/(lb*°F)	0.677582	0.677582	
Ideal Gas Cp/Cv Ratio		1.0525	1.0525	
Dynamic Viscosity	cP	0.121938	0.121938	
Kinematic Viscosity	cSt	0.224236	0.224236	
Thermal Conductivity	Btu/(h*ft*°F)	0.0496111 ?	0.0496111 ?	
Surface Tension	lbf/ft	0.000508984 ?	0.000508984 ?	
Net Ideal Gas Heating Value	Btu/ft^3	4125.41	4125.41	
Net Liquid Heating Value	Btu/lb	19260.1	19260.1	
Gross Ideal Gas Heating Value	Btu/ft^3	4457.58	4457.58	
Gross Liquid Heating Value	Btu/lb	20823.7	20823.7	

Remarks

Process Streams Report
Stream: 26
 Phases Grouped by Columns

Client Name:	PTSDK	Job: J877
Location:		Modified: 10:47 AM, 12/8/2010
Flowsheet:	Process Plant	Status: Solved 2:45 PM, 5/2/2011

Connections

From: DeC2 Ovhd 2 To: VLVE-100

Composition

Mole Fraction	Total %	Light Liquid %		
Nitrogen	0	0		
Oxygen	0	0		
Carbon Dioxide	2.80046E-12	2.80046E-12		
Methane	0	0		
Ethane	8.57364E-07	8.57364E-07		
Propane	0.00891835	0.00891835		
i-Butane	0.135776	0.135776		
n-Butane	2.04273	2.04273		
i-Pentane	29.3952	29.3952		
n-Pentane	25.6369	25.6369		
n-Hexane	22.9701	22.9701		
n-Heptane	19.8103	19.8103		
Water	0	0		
Ethylene Glycol	5.65091E-05	5.65091E-05		
Therminol 55	0	0		

Properties

Property	Units	Total	Light Liquid	
Temperature	°F	163.561	163.561	
Pressure	psia	172.727	172.727	
Mole Fraction Vapor	%	0	0	
Mole Fraction Light Liquid	%	100	100	
Mole Fraction Heavy Liquid	%	0	0	
Molecular Weight	lb/lbmol	80.62	80.62	
Mass Density	lb/ft ³	37.1609	37.1609	
Molar Flow	lbmol/h	8.37553	8.37553	
Mass Flow	lb/h	675.235	675.235	
Vapor Volumetric Flow	ft ³ /h	18.1706	18.1706	
Liquid Volumetric Flow	gpm	2.26542	2.26542	
Std Vapor Volumetric Flow	MMSCFD	0.0762812	0.0762812	
Std Liquid Volumetric Flow	sgpm	2.07756	2.07756	
Compressibility		0.0560279	0.0560279	
Specific Gravity		0.595823	0.595823	
API Gravity		84.9729	84.9729	
Enthalpy	Btu/h	-653098	-653098	
Mass Enthalpy	Btu/lb	-967.215	-967.215	
Mass Cp	Btu/(lb*°F)	0.601477	0.601477	
Ideal Gas Cp/Cv Ratio		1.05834	1.05834	
Dynamic Viscosity	cP	0.181027	0.181027	
Kinematic Viscosity	cSt	0.304115	0.304115	
Thermal Conductivity	Btu/(h*ft*°F)	0.0580145	0.0580145	
Surface Tension	lbf/ft	0.000802443 ?	0.000802443 ?	
Net Ideal Gas Heating Value	Btu/ft ³	4125.41	4125.41	
Net Liquid Heating Value	Btu/lb	19260.1	19260.1	
Gross Ideal Gas Heating Value	Btu/ft ³	4457.58	4457.58	
Gross Liquid Heating Value	Btu/lb	20823.7	20823.7	

Remarks

Process Streams Report
Stream: 27
 Phases Grouped by Columns

Client Name:	PTSDK	Job: J877
Location:		Modified: 10:53 AM, 4/28/2011
Flowsheet:	Process Plant	Status: Solved 2:45 PM, 5/2/2011

Connections

From: VLVE-100 To: VSSL-100

Composition

Mole Fraction	Total %	Vapor %	Light Liquid %		
Nitrogen	0	0	0		
Oxygen	0	0	0		
Carbon Dioxide	2.80046E-12	1.31372E-11	1.48982E-13		
Methane	0	0	0		
Ethane	8.57364E-07	3.83376E-06	9.3885E-08		
Propane	0.00891835	0.0340824	0.00246351		
i-Butane	0.135776	0.401138	0.0677081		
n-Butane	2.04273	5.07236	1.2656		
i-Pentane	29.3952	45.1795	25.3463		
n-Pentane	25.6369	33.0067	23.7465		
n-Hexane	22.9701	12.24	25.7225		
n-Heptane	19.8103	4.0661	23.8489		
Water	0	0	0		
Ethylene Glycol	5.65091E-05	8.48346E-05	4.92433E-05		
Therminol 55	0	0	0		

Properties

Property	Units	Total	Vapor	Light Liquid	
Temperature	°F	115.941	115.941	115.941	
Pressure	psia	14.696 *	14.696	14.696	
Mole Fraction Vapor	%	20.4145	100	0	
Mole Fraction Light Liquid	%	79.5855	0	100	
Mole Fraction Heavy Liquid	%	0	0	0	
Molecular Weight	lb/lbmol	80.62	74.229	82.2594	
Mass Density	lb/ft^3	0.954099	0.182967	39.0244	
Molar Flow	lbmol/h	8.37553	1.70982	6.6657	
Mass Flow	lb/h	675.235	126.919	548.317	
Vapor Volumetric Flow	ft^3/h	707.721	693.67	14.0506	
Liquid Volumetric Flow	gpm	88.2353	86.4836	1.75177	
Std Vapor Volumetric Flow	MMSCFD	0.0762812	0.0155724	0.0607088	
Std Liquid Volumetric Flow	sgpm	2.07756	0.400574	1.67698	
Compressibility		0.201028	0.965178	0.00501482	
Specific Gravity			2.56293	0.625702	
API Gravity				84.2238	
Enthalpy	Btu/h	-653098	-110574	-542524	
Mass Enthalpy	Btu/lb	-967.215	-871.218	-989.436	
Mass Cp	Btu/(lb*°F)	0.537432	0.423163	0.563882	
Ideal Gas CpCv Ratio		1.06257	1.0682	1.06127	
Dynamic Viscosity	cP		0.00752245	0.225341	
Kinematic Viscosity	cSt		2.56665	0.360483	
Thermal Conductivity	Btu/(h*ft*°F)		0.00959598	0.0636485	
Surface Tension	lbf/ft			0.00101145	
Net Ideal Gas Heating Value	Btu/ft^3	4125.41	3806.72	4207.15	
Net Liquid Heating Value	Btu/lb	19260.1	19303.8	19250	
Gross Ideal Gas Heating Value	Btu/ft^3	4457.58	4115.97	4545.2	
Gross Liquid Heating Value	Btu/lb	20823.7	20884.8	20809.6	

Remarks

Process Streams Report
Stream: 28
 Phases Grouped by Columns

Client Name:	PTSDK	Job: J877
Location:		Modified: 2:21 PM, 6/24/2010
Flowsheet:	Process Plant	Status: Solved 2:43 PM, 5/2/2011

Connections

From: -- To: XCHG-100

Composition

Mole Fraction	Total %	Vapor %			
Nitrogen	79 *	79			
Oxygen	21 *	21			
Carbon Dioxide	0 *	0			
Methane	0 *	0			
Ethane	0 *	0			
Propane	0 *	0			
i-Butane	0 *	0			
n-Butane	0 *	0			
i-Pentane	0 *	0			
n-Pentane	0 *	0			
n-Hexane	0 *	0			
n-Heptane	0 *	0			
Water	0 *	0			
Ethylene Glycol	0 *	0			
Therminol 55	0 *	0			

Properties

Property	Units	Total	Vapor		
Temperature	°F	100 *	100		
Pressure	psia	14.696 *	14.696		
Mole Fraction Vapor	%	100	100		
Mole Fraction Light Liquid	%	0	0		
Mole Fraction Heavy Liquid	%	0	0		
Molecular Weight	lb/lbmol	28.8503	28.8503		
Mass Density	lb/ft^3	0.0706038	0.0706038		
Molar Flow	lbmol/h	6835.88	6835.88		
Mass Flow	lb/h	197217	197217		
Vapor Volumetric Flow	ft^3/h	2.7933E+06	2.7933E+06		
Liquid Volumetric Flow	gpm	348255	348255		
Std Vapor Volumetric Flow	MMSCFD	62.2586	62.2586		
Std Liquid Volumetric Flow	sgpm	455.194	455.194		
Compressibility		0.99983	0.99983		
Specific Gravity		0.996124	0.996124		
API Gravity					
Enthalpy	Btu/h	1.07955E+06	1.07955E+06		
Mass Enthalpy	Btu/lb	5.47392	5.47392		
Mass Cp	Btu/(lb*°F)	0.242146	0.242146		
Ideal Gas Cp/Cv Ratio		1.39803	1.39803		
Dynamic Viscosity	cP	0.0187861	0.0187861		
Kinematic Viscosity	cSt	16.6107	16.6107		
Thermal Conductivity	Btu/(h*ft*°F)	0.0154172	0.0154172		
Surface Tension	lbf/ft				
Net Ideal Gas Heating Value	Btu/ft^3	0	0		
Net Liquid Heating Value	Btu/lb	0	0		
Gross Ideal Gas Heating Value	Btu/ft^3	0	0		
Gross Liquid Heating Value	Btu/lb	0	0		

Remarks

Process Streams Report
Stream: 29
 Phases Grouped by Columns

Client Name:	PTSDK	Job: J877
Location:		Modified: 2:29 PM, 6/24/2010
Flowsheet:	Process Plant	Status: Solved 2:43 PM, 5/2/2011

Connections

From: XCHG-100	To: --
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Composition

Mole Fraction	Total %	Vapor %			
Nitrogen	79	79			
Oxygen	21	21			
Carbon Dioxide	0	0			
Methane	0	0			
Ethane	0	0			
Propane	0	0			
i-Butane	0	0			
n-Butane	0	0			
i-Pentane	0	0			
n-Pentane	0	0			
n-Hexane	0	0			
n-Heptane	0	0			
Water	0	0			
Ethylene Glycol	0	0			
Therminol 55	0	0			

Properties

Property	Units	Total	Vapor		
Temperature	°F	115 *	115		
Pressure	psia	14.696	14.696		
Mole Fraction Vapor	%	100	100		
Mole Fraction Light Liquid	%	0	0		
Mole Fraction Heavy Liquid	%	0	0		
Molecular Weight	lb/lbmol	28.8503	28.8503		
Mass Density	lb/ft ³	0.0687571	0.0687571		
Molar Flow	lbmol/h	6835.88	6835.88		
Mass Flow	lb/h	197217	197217		
Vapor Volumetric Flow	ft ³ /h	2.86832E+06	2.86832E+06		
Liquid Volumetric Flow	gpm	357609	357609		
Std Vapor Volumetric Flow	MMSCFD	62.2586	62.2586		
Std Liquid Volumetric Flow	sgpm	455.194	455.194		
Compressibility		0.999885	0.999885		
Specific Gravity		0.996124	0.996124		
API Gravity					
Enthalpy	Btu/h	1.79605E+06	1.79605E+06		
Mass Enthalpy	Btu/lb	9.10696	9.10696		
Mass Cp	Btu/(lb*°F)	0.242261	0.242261		
Ideal Gas Cp/Cv Ratio		1.39771	1.39771		
Dynamic Viscosity	cP	0.0191476	0.0191476		
Kinematic Viscosity	cSt	17.3851	17.3851		
Thermal Conductivity	Btu/(h*ft*°F)	0.0157485	0.0157485		
Surface Tension	lbf/ft				
Net Ideal Gas Heating Value	Btu/ft ³	0	0		
Net Liquid Heating Value	Btu/lb	0	0		
Gross Ideal Gas Heating Value	Btu/ft ³	0	0		
Gross Liquid Heating Value	Btu/lb	0	0		

Remarks

Process Streams Report
Stream: 30
 Phases Grouped by Columns

Client Name:	PTSDK	Job: J877
Location:		Modified: 3:11 PM, 7/14/2010
Flowsheet:	Process Plant	Status: Solved 2:43 PM, 5/2/2011

Connections

From: -- To: DeC2 reb

Composition

Mole Fraction	Total %	Light Liquid %			
Nitrogen	0 *	0			
Oxygen	0 *	0			
Carbon Dioxide	0 *	0			
Methane	0 *	0			
Ethane	0 *	0			
Propane	0 *	0			
i-Butane	0 *	0			
n-Butane	0 *	0			
i-Pentane	0 *	0			
n-Pentane	0 *	0			
n-Hexane	0 *	0			
n-Heptane	0 *	0			
Water	0 *	0			
Ethylene Glycol	0 *	0			
Therminol 55	100 *	100			

Properties

Property	Units	Total	Light Liquid		
Temperature	°F	450 *	450		
Pressure	psia	50 *	50		
Mole Fraction Vapor	%	0	0		
Mole Fraction Light Liquid	%	100	100		
Mole Fraction Heavy Liquid	%	0	0		
Molecular Weight	lb/lbmol	320	320		
Mass Density	lb/ft^3	46.0964	46.0964		
Molar Flow	lbmol/h	24.1371	24.1371		
Mass Flow	lb/h	7723.87	7723.87		
Vapor Volumetric Flow	ft^3/h	167.559	167.559		
Liquid Volumetric Flow	gpm	20.8905	20.8905		
Std Vapor Volumetric Flow	MMSCFD	0.219832	0.219832		
Std Liquid Volumetric Flow	sgpm	17.637	17.637		
Compressibility		0.0355554	0.0355554		
Specific Gravity		0.739091	0.739091		
API Gravity		24.3774	24.3774		
Enthalpy	Btu/h	931146	931146		
Mass Enthalpy	Btu/lb	120.554	120.554		
Mass Cp	Btu/(lb*°F)	0.635503	0.635503		
Ideal Gas Cp/Cv Ratio		1.00989	1.00989		
Dynamic Viscosity	cP	0.578415	0.578415		
Kinematic Viscosity	cSt	0.783344	0.783344		
Thermal Conductivity	Btu/(h*ft*°F)	0.0598769	0.0598769		
Surface Tension	lbf/ft	0.00109838	0.00109838		
Net Ideal Gas Heating Value	Btu/ft^3	0	0		
Net Liquid Heating Value	Btu/lb	-79.7838	-79.7838		
Gross Ideal Gas Heating Value	Btu/ft^3	0	0		
Gross Liquid Heating Value	Btu/lb	-79.7838	-79.7838		

Remarks

Process Streams Report
Stream: 31
 Phases Grouped by Columns

Client Name:	PTSDK	Job: J877
Location:		Modified: 3:11 PM, 7/14/2010
Flowsheet:	Process Plant	Status: Solved 2:43 PM, 5/2/2011

Connections

From: DeC2 reb	To: --
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Composition

Mole Fraction	Total %	Light Liquid %		
Nitrogen	0	0		
Oxygen	0	0		
Carbon Dioxide	0	0		
Methane	0	0		
Ethane	0	0		
Propane	0	0		
i-Butane	0	0		
n-Butane	0	0		
i-Pentane	0	0		
n-Pentane	0	0		
n-Hexane	0	0		
n-Heptane	0	0		
Water	0	0		
Ethylene Glycol	0	0		
Therminol 55	100	100		

Properties

Property	Units	Total	Light Liquid	
Temperature	°F	350 *	350	
Pressure	psia	45	45	
Mole Fraction Vapor	%	0	0	
Mole Fraction Light Liquid	%	100	100	
Mole Fraction Heavy Liquid	%	0	0	
Molecular Weight	lb/lbmol	320	320	
Mass Density	lb/ft^3	48.9335	48.9335	
Molar Flow	lbmol/h	24.1371	24.1371	
Mass Flow	lb/h	7723.87	7723.87	
Vapor Volumetric Flow	ft^3/h	157.844	157.844	
Liquid Volumetric Flow	gpm	19.6793	19.6793	
Std Vapor Volumetric Flow	MMSCFD	0.219832	0.219832	
Std Liquid Volumetric Flow	sgpm	17.637	17.637	
Compressibility		0.0338676	0.0338676	
Specific Gravity		0.78458	0.78458	
API Gravity		24.3817	24.3817	
Enthalpy	Btu/h	460122	460122	
Mass Enthalpy	Btu/lb	59.5713	59.5713	
Mass Cp	Btu/(lb*°F)	0.584512	0.584512	
Ideal Gas CpCv Ratio		1.01074	1.01074	
Dynamic Viscosity	cP	0.957959	0.957959	
Kinematic Viscosity	cSt	1.22214	1.22214	
Thermal Conductivity	Btu/(h*ft*°F)	0.0636288	0.0636288	
Surface Tension	lbf/ft	0.00137056	0.00137056	
Net Ideal Gas Heating Value	Btu/ft^3	0	0	
Net Liquid Heating Value	Btu/lb	-79.7838	-79.7838	
Gross Ideal Gas Heating Value	Btu/ft^3	0	0	
Gross Liquid Heating Value	Btu/lb	-79.7838	-79.7838	

Remarks

Process Streams Report
Stream: 32
 Phases Grouped by Columns

Client Name:	PTSDK	Job: J877
Location:		Modified: 3:11 PM, 7/14/2010
Flowsheet:	Process Plant	Status: Solved 2:43 PM, 5/2/2011

Connections

From: -- To: DeC4 reb

Composition

Mole Fraction	Total %	Light Liquid %			
Nitrogen	0 *	0			
Oxygen	0 *	0			
Carbon Dioxide	0 *	0			
Methane	0 *	0			
Ethane	0 *	0			
Propane	0 *	0			
i-Butane	0 *	0			
n-Butane	0 *	0			
i-Pentane	0 *	0			
n-Pentane	0 *	0			
n-Hexane	0 *	0			
n-Heptane	0 *	0			
Water	0 *	0			
Ethylene Glycol	0 *	0			
Therminol 55	100 *	100			

Properties

Property	Units	Total	Light Liquid		
Temperature	°F	450 *	450		
Pressure	psia	50 *	50		
Mole Fraction Vapor	%	0	0		
Mole Fraction Light Liquid	%	100	100		
Mole Fraction Heavy Liquid	%	0	0		
Molecular Weight	lb/lbmol	320	320		
Mass Density	lb/ft^3	46.0964	46.0964		
Molar Flow	lbmol/h	32.0321	32.0321		
Mass Flow	lb/h	10250.3	10250.3		
Vapor Volumetric Flow	ft^3/h	222.366	222.366		
Liquid Volumetric Flow	gpm	27.7235	27.7235		
Std Vapor Volumetric Flow	MMSCFD	0.291736	0.291736		
Std Liquid Volumetric Flow	sgpm	23.4059	23.4059		
Compressibility		0.0355554	0.0355554		
Specific Gravity		0.739091	0.739091		
API Gravity		24.3774	24.3774		
Enthalpy	Btu/h	1.23571E+06	1.23571E+06		
Mass Enthalpy	Btu/lb	120.554	120.554		
Mass Cp	Btu/(lb*°F)	0.635503	0.635503		
Ideal Gas CpCv Ratio		1.00989	1.00989		
Dynamic Viscosity	cP	0.578415	0.578415		
Kinematic Viscosity	cSt	0.783344	0.783344		
Thermal Conductivity	Btu/(h*ft*°F)	0.0598769	0.0598769		
Surface Tension	lbf/ft	0.00109838	0.00109838		
Net Ideal Gas Heating Value	Btu/ft^3	0	0		
Net Liquid Heating Value	Btu/lb	-79.7838	-79.7838		
Gross Ideal Gas Heating Value	Btu/ft^3	0	0		
Gross Liquid Heating Value	Btu/lb	-79.7838	-79.7838		

Remarks

Process Streams Report
Stream: 33
 Phases Grouped by Columns

Client Name:	PTSDK	Job: J877
Location:		Modified: 3:11 PM, 7/14/2010
Flowsheet:	Process Plant	Status: Solved 2:43 PM, 5/2/2011

Connections

From: DeC4 reb	To: --
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Composition

Mole Fraction	Total %	Light Liquid %		
Nitrogen	0	0		
Oxygen	0	0		
Carbon Dioxide	0	0		
Methane	0	0		
Ethane	0	0		
Propane	0	0		
i-Butane	0	0		
n-Butane	0	0		
i-Pentane	0	0		
n-Pentane	0	0		
n-Hexane	0	0		
n-Heptane	0	0		
Water	0	0		
Ethylene Glycol	0	0		
Therminol 55	100	100		

Properties

Property	Units	Total	Light Liquid	
Temperature	°F	350 *	350	
Pressure	psia	45	45	
Mole Fraction Vapor	%	0	0	
Mole Fraction Light Liquid	%	100	100	
Mole Fraction Heavy Liquid	%	0	0	
Molecular Weight	lb/lbmol	320	320	
Mass Density	lb/ft^3	48.9335	48.9335	
Molar Flow	lbmol/h	32.0321	32.0321	
Mass Flow	lb/h	10250.3	10250.3	
Vapor Volumetric Flow	ft^3/h	209.473	209.473	
Liquid Volumetric Flow	gpm	26.1161	26.1161	
Std Vapor Volumetric Flow	MMSCFD	0.291736	0.291736	
Std Liquid Volumetric Flow	sgpm	23.4059	23.4059	
Compressibility		0.0338676	0.0338676	
Specific Gravity		0.78458	0.78458	
API Gravity		24.3817	24.3817	
Enthalpy	Btu/h	610622	610622	
Mass Enthalpy	Btu/lb	59.5713	59.5713	
Mass Cp	Btu/(lb*°F)	0.584512	0.584512	
Ideal Gas CpCv Ratio		1.01074	1.01074	
Dynamic Viscosity	cP	0.957959	0.957959	
Kinematic Viscosity	cSt	1.22214	1.22214	
Thermal Conductivity	Btu/(h*ft*°F)	0.0636288	0.0636288	
Surface Tension	lbf/ft	0.00137056	0.00137056	
Net Ideal Gas Heating Value	Btu/ft^3	0	0	
Net Liquid Heating Value	Btu/lb	-79.7838	-79.7838	
Gross Ideal Gas Heating Value	Btu/ft^3	0	0	
Gross Liquid Heating Value	Btu/lb	-79.7838	-79.7838	

Remarks

Process Streams Report
Stream: 34
 Phases Grouped by Columns

Client Name:	PTSDK	Job: J877
Location:		Modified: 2:35 PM, 5/2/2011
Flowsheet:	Process Plant	Status: Solved 2:35 PM, 5/2/2011

Connections

From: VLVE-101 To: T-140 DeC2 Tower

Composition

Mole Fraction	Total %	Vapor %	Light Liquid %
Nitrogen	0.272165	2.21604	0.115143
Oxygen	0	0	0
Carbon Dioxide	4.59736	5.43886	4.52938
Methane	23.5615	84.0181	18.678
Ethane	10.2089	4.86003	10.641
Propane	31.1293	2.99936	33.4015
i-Butane	7.14675	0.221552	7.70616
n-Butane	11.0848	0.204787	11.9637
i-Pentane	4.06666	0.0247114	4.39316
n-Pentane	3.07699	0.0134187	3.32446
n-Hexane	2.60868	0.00195057	2.81924
n-Heptane	2.24641	0.000493182	2.42783
Water	0.000395544	0.000700336	0.000370923
Ethylene Glycol	2.91383E-05	2.85952E-07	3.14689E-05
Therminol 55	0	0	0

Properties

Property	Units	Total	Vapor	Light Liquid
Temperature	°F	-36.5537	-36.5537	-36.5537
Pressure	psia	340 *	340	340
Mole Fraction Vapor	%	7.47406	100	0
Mole Fraction Light Liquid	%	92.5259	0	100
Mole Fraction Heavy Liquid	%	0	0	0
Molecular Weight	lb/lbmol	42.9255	19.5545	44.8133
Mass Density	lb/ft^3	21.5419	1.6701	37.1028
Molar Flow	lbmol/h	73.9265	5.5253	68.4011
Mass Flow	lb/h	3173.33	108.045	3065.28
Vapor Volumetric Flow	ft^3/h	147.309	64.6935	82.6159
Liquid Volumetric Flow	gpm	18.3659	8.06568	10.3002
Std Vapor Volumetric Flow	MMSCFD	0.673295	0.0503224	0.622972
Std Liquid Volumetric Flow	sgpm	12.4337	0.616748	11.8169
Compressibility		0.149206	0.876717	0.090439
Specific Gravity			0.675165	0.594892
API Gravity				142.013
Enthalpy	Btu/h	-4.471E+06	-225662 ?	-4.24534E+06 ?
Mass Enthalpy	Btu/lb	-1408.93	-2088.6 ?	-1384.97 ?
Mass Cp	Btu/(lb*°F)	0.547743 ?	0.516721 ?	0.548837 ?
Ideal Gas Cp/Cv Ratio		1.15549	1.30685	1.14953
Dynamic Viscosity	cP		0.00983325	0.188113
Kinematic Viscosity	cSt		0.367564	0.316513
Thermal Conductivity	Btu/(h*ft*°F)		0.0152134 ?	0.072671 ?
Surface Tension	lbf/ft			0.000852757 ?
Net Ideal Gas Heating Value	Btu/ft^3	2142.3	926.515	2240.51
Net Liquid Heating Value	Btu/lb	18798.4	17946.9	18828.4
Gross Ideal Gas Heating Value	Btu/ft^3	2329.64	1025.59	2434.97
Gross Liquid Heating Value	Btu/lb	20454.5	19869.5	20475.1

Remarks

Process Streams Report
Stream: 35
 Phases Grouped by Columns

Client Name:	PTSDK	Job: J877
Location:		Modified: 2:41 PM, 5/2/2011
Flowsheet:	Process Plant	Status: Solved 2:43 PM, 5/2/2011

Connections

From: VLVE-103 To: DeC4 feed

Composition

Mole Fraction	Total %	Vapor %	Light Liquid %		
Nitrogen	3.67777E-12	1.03172E-11	3.75611E-13		
Oxygen	0	0	0		
Carbon Dioxide	0.000178912	0.000427637	5.52079E-05		
Methane	1.91615E-06	4.9932E-06	3.85767E-07		
Ethane	0.71137	1.42878	0.354562		
Propane	47.6322	66.0131	38.4904		
i-Butane	11.9567	11.1918	12.3371		
n-Butane	18.8288	14.5992	20.9324		
i-Pentane	7.0383	3.35617	8.86961		
n-Pentane	5.34028	2.21187	6.89621		
n-Hexane	4.55989	0.827687	6.41611		
n-Heptane	3.93224	0.3709	5.70348		
Water	3.28193E-09	7.98833E-09	9.41195E-10		
Ethylene Glycol	5.00105E-05	3.14219E-05	5.92556E-05		
Therminol 55	0	0	0		

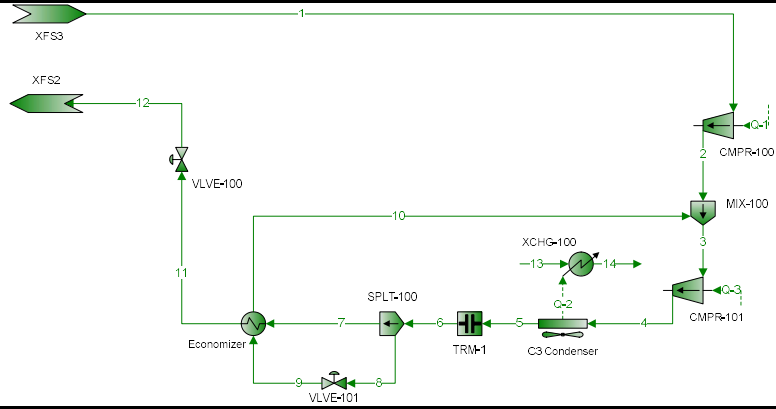
Properties

Property	Units	Total	Vapor	Light Liquid	
Temperature	°F	157.142	157.142	157.142	
Pressure	psia	185 *	185	185	
Mole Fraction Vapor	%	33.2155	100	0	
Mole Fraction Light Liquid	%	66.7845	0	100	
Mole Fraction Heavy Liquid	%	0	0	0	
Molecular Weight	lb/lbmol	55.9116	49.6312	59.0352	
Mass Density	lb/ft ³	5.13549	1.70617	32.1807	
Molar Flow	lbmol/h	42.1955	14.0154	28.18	
Mass Flow	lb/h	2359.22	695.603	1663.61	
Vapor Volumetric Flow	ft ³ /h	459.395	407.699	51.6961	
Liquid Volumetric Flow	gpm	57.2752	50.8299	6.44523	
Std Vapor Volumetric Flow	MMSCFD	0.384301	0.127647	0.256653	
Std Liquid Volumetric Flow	sgpm	8.34806	2.59723	5.75083	
Compressibility		0.304281	0.812995	0.0512709	
Specific Gravity			1.71363	0.515972	
API Gravity				109.59	
Enthalpy	Btu/h	-2.41139E+06	-674151	-1.73724E+06	
Mass Enthalpy	Btu/lb	-1022.12	-969.161	-1044.26	
Mass Cp	Btu/(lb*°F)	0.630233	0.50211	0.683804	
Ideal Gas CpCv Ratio		1.08636	1.09816	1.08148	
Dynamic Viscosity	cP		0.00977467	0.106548	
Kinematic Viscosity	cSt		0.357651	0.206695	
Thermal Conductivity	Btu/(h*ft*°F)		0.0135512	0.0505021	
Surface Tension	lbf/ft			0.000442258 ?	
Net Ideal Gas Heating Value	Btu/ft ³	2899.51	2588.18	3054.35	
Net Liquid Heating Value	Btu/lb	19519.9	19629.1	19474.2	
Gross Ideal Gas Heating Value	Btu/ft ³	3143.05	2809.18	3309.1	
Gross Liquid Heating Value	Btu/lb	21172.8	21318.9	21111.8	

Remarks

Refrigeration Loop Plant Schematic

Client Name:	PTSDK	Job: J877
Location:		
Flowsheet:	Refrigeration Loop	



* User Specified Values
? Extrapolated or Approximate Values

Process Streams Report
All Streams
 Tabulated by Total Phase

Client Name:	PTSDK	Job: J877
Location:		
Flowsheet:	Refrigeration Loop	

Connections

	1	2	3	4	5
From Block	XFS3	CMPR-100	MIX-100	CMPR-101	C3 Condenser
To Block	CMPR-100	MIX-100	CMPR-101	C3 Condenser	TRM-1

Stream Composition

Mole Fraction	1 %	2 %	3 %	4 %	5 %
Nitrogen	0	0	0	0	0
Oxygen	0	0	0	0	0
Carbon Dioxide	0	0	0	0	0
Methane	0	0	0	0	0
Ethane	6.1224	6.1224	6.1224	6.1224	6.1224
Propane	93.8776	93.8776	93.8776	93.8776	93.8776
i-Butane	0	0	0	0	0
n-Butane	0	0	0	0	0
i-Pentane	0	0	0	0	0
n-Pentane	0	0	0	0	0
n-Hexane	0	0	0	0	0
n-Heptane	0	0	0	0	0
Water	0	0	0	0	0
Ethylene Glycol	0	0	0	0	0
Therminol 55	0	0	0	0	0

Stream Properties

Property	Units	1	2	3	4	5
Temperature	°F	-30	33.0125	29.9526	168.578	120 *
Pressure	psia	17.6626	46	46	282.863	277.863
Mole Fraction Vapor	%	100	100	100	100	0 *
Mole Fraction Light Liquid	%	0	0	0	0	100
Mole Fraction Heavy Liquid	%	0	0	0	0	0
Molecular Weight	lb/lbmol	43.2369	43.2369	43.2369	43.2369	43.2369
Mass Density	lb/ft^3	0.171496	0.401394	0.40441	2.30135	27.6655
Molar Flow	lbmol/h	117.417	117.417	192.487	192.487	192.487
Mass Flow	lb/h	5076.74	5076.74	8322.52	8322.52	8322.52
Vapor Volumetric Flow	ft^3/h	29602.6	12647.8	20579.4	3616.37	300.827
Liquid Volumetric Flow	gpm	3690.71	1576.87	2565.74	450.872	37.5056
Std Vapor Volumetric Flow	MMSCFD	1.06939	1.06939	1.7531	1.7531	1.7531
Std Liquid Volumetric Flow	sgpm	20.3708	20.3708	33.3948	33.3948	33.3948
Compressibility		0.96573	0.937153	0.935976	0.788231	0.0698075
Specific Gravity		1.49285	1.49285	1.49285	1.49285	0.443578
API Gravity						149.081
Enthalpy	Btu/h	-5.4298E+06	-5.32691E+06	-8.74249E+06	-8.39424E+06	-9.60467E+06
Mass Enthalpy	Btu/lb	-1069.55	-1049.28	-1050.46	-1008.62	-1154.06
Mass Cp	Btu/(lb*°F)	0.345083	0.387201	0.385675	0.534829	0.843033
Ideal Gas CpCv Ratio		1.15687	1.14008	1.14084	1.11242	1.12109
Dynamic Viscosity	cP	0.00669935	0.00775892	0.00771326	0.0106216	0.0720236
Kinematic Viscosity	cSt	2.43869	1.20673	1.19068	0.288128	0.162523
Thermal Conductivity	Btu/(h*ft*°F)	0.00677415	0.0088431	0.00874341	0.0150666	0.0477438
Surface Tension	lbf/ft					0.0002462
Net Ideal Gas Heating Value	Btu/ft^3	2272.39	2272.39	2272.39	2272.39	2272.39
Net Liquid Heating Value	Btu/lb	19782.6	19782.6	19782.6	19782.6	19782.6
Gross Ideal Gas Heating Value	Btu/ft^3	2470.4	2470.4	2470.4	2470.4	2470.4
Gross Liquid Heating Value	Btu/lb	21520.5	21520.5	21520.5	21520.5	21520.5

Remarks

Process Streams Report
All Streams
 Tabulated by Total Phase

Client Name:	PTSDK	Job: J877
Location:		
Flowsheet:	Refrigeration Loop	

Connections

	6	7	8	9	10
From Block	TRM-1	SPLT-100	SPLT-100	VLVE-101	Economizer
To Block	SPLT-100	Economizer	VLVE-101	Economizer	MIX-100

Stream Composition

Mole Fraction	6 %	7 %	8 %	9 %	10 %
Nitrogen	0	0	0	0	0
Oxygen	0	0	0	0	0
Carbon Dioxide	0	0	0	0	0
Methane	0	0	0	0	0
Ethane	6.1224	6.1224	6.1224	6.1224	6.1224
Propane	93.8776	93.8776	93.8776	93.8776	93.8776
i-Butane	0	0	0	0	0
n-Butane	0	0	0	0	0
i-Pentane	0	0	0	0	0
n-Pentane	0	0	0	0	0
n-Hexane	0	0	0	0	0
n-Heptane	0	0	0	0	0
Water	0	0	0	0	0
Ethylene Glycol	0	0	0	0	0
Therminol 55	0	0	0	0	0

Stream Properties

Property	Units	6	7	8	9	10
Temperature	°F	120	120	120	15.9703	27.1307
Pressure	psia	277.863	277.863	277.863	57	54
Mole Fraction Vapor	%	0	0	0	43.2267	100
Mole Fraction Light Liquid	%	100	100	100	56.7733	0
Mole Fraction Heavy Liquid	%	0	0	0	0	0
Molecular Weight	lb/lbmol	43.2369	43.2369	43.2369	43.2369	43.2369
Mass Density	lb/ft ³	27.6655	27.6655	27.6655	1.19608	0.484362
Molar Flow	lbmol/h	192.487	117.417	75.0698	75.0698	75.0698
Mass Flow	lb/h	8322.52	5076.74	3245.78	3245.78	3245.78
Vapor Volumetric Flow	ft ³ /h	300.826	183.504	117.322	2713.69	6701.14
Liquid Volumetric Flow	gpm	37.5056	22.8784	14.6272	338.33	835.467
Std Vapor Volumetric Flow	MMSCFD	1.7531	1.06939	0.683708	0.683708	0.683708
Std Liquid Volumetric Flow	sgpm	33.3948	20.3708	13.024	13.024	13.024
Compressibility		0.0698075	0.0698075	0.0698075	0.403671	0.922703
Specific Gravity		0.443578	0.443578	0.443578		1.49285
API Gravity		149.081	149.081	149.081		
Enthalpy	Btu/h	-9.60467E+06	-5.85885E+06	-3.74582E+06	-3.74582E+06	-3.41557E+06
Mass Enthalpy	Btu/lb	-1154.06	-1154.06	-1154.06	-1154.06	-1052.31
Mass Cp	Btu/(lb*°F)	0.843033	0.843032	0.843033	0.508498	0.387311
Ideal Gas CpCv Ratio		1.12109	1.12109	1.12109	1.14437	1.14154
Dynamic Viscosity	cP	0.0720237	0.0720237	0.0720236		0.00770035
Kinematic Viscosity	cSt	0.162523	0.162523	0.162523		0.992474
Thermal Conductivity	Btu/(h*ft*°F)	0.0477438	0.0477439	0.0477438		0.00869463
Surface Tension	lbf/ft	0.0002462	0.000246201	0.0002462		
Net Ideal Gas Heating Value	Btu/ft ³	2272.39	2272.39	2272.39	2272.39	2272.39
Net Liquid Heating Value	Btu/lb	19782.6	19782.6	19782.6	19782.6	19782.6
Gross Ideal Gas Heating Value	Btu/ft ³	2470.4	2470.4	2470.4	2470.4	2470.4
Gross Liquid Heating Value	Btu/lb	21520.5	21520.5	21520.5	21520.5	21520.5

Remarks

Process Streams Report
All Streams
 Tabulated by Total Phase

Client Name:	PTSDK	Job: J877
Location:		
Flowsheet:	Refrigeration Loop	

Connections

	11	12	13	14
From Block	Economizer	VLVE-100	--	XCHG-100
To Block	VLVE-100	XFS2	XCHG-100	--

Stream Composition

Mole Fraction	11 %	12 %	13 %	14 %
Nitrogen	0	0	79	79
Oxygen	0	0	21	21
Carbon Dioxide	0	0	0	0
Methane	0	0	0	0
Ethane	6.1224	6.1224	0	0
Propane	93.8776	93.8776	0	0
i-Butane	0	0	0	0
n-Butane	0	0	0	0
i-Pentane	0	0	0	0
n-Pentane	0	0	0	0
n-Hexane	0	0	0	0
n-Heptane	0	0	0	0
Water	0	0	0	0
Ethylene Glycol	0	0	0	0
Therminol 55	0	0	0	0

Stream Properties

Property	Units	11	12	13	14
Temperature	°F	27	-40	95	114.558
Pressure	psia	274.863	18.6626	14.696	14.696
Mole Fraction Vapor	%	0	21.8912	100	100
Mole Fraction Light Liquid	%	100	78.1088	0	0
Mole Fraction Heavy Liquid	%	0	0	0	0
Molecular Weight	lb/lbmol	43.2369	43.2369	28.8503	28.8503
Mass Density	lb/ft ³	33.1003	0.833602	0.0712416	0.0688101
Molar Flow	lbmol/h	117.417	117.417	8857.91	8857.91
Mass Flow	lb/h	5076.74	5076.74	255554	255554
Vapor Volumetric Flow	ft ³ /h	153.375	6090.12	3.58714E+06	3.7139E+06
Liquid Volumetric Flow	gpm	19.122	759.288	447228	463031
Std Vapor Volumetric Flow	MMSCFD	1.06939	1.06939	80.6746	80.6746 *
Std Liquid Volumetric Flow	sgpm	20.3708	20.3708	589.839	589.839
Compressibility		0.068745	0.21493	0.99981	0.999884
Specific Gravity		0.530716		0.996124	0.996124
API Gravity		149.113			
Enthalpy	Btu/h	-6.18909E+06	-6.18909E+06	1.0895E+06	2.29992E+06
Mass Enthalpy	Btu/lb	-1219.11	-1219.11	4.26328	8.99977
Mass Cp	Btu/(lb*°F)	0.611458	0.501121	0.242111	0.242257
Ideal Gas CpCv Ratio		1.14157	1.15977	1.39813	1.39772
Dynamic Viscosity	cP	0.129358		0.0186645	0.019137
Kinematic Viscosity	cSt	0.243972		16.3554	17.362
Thermal Conductivity	Btu/(h*ft*°F)	0.0619691		0.015306	0.0157388
Surface Tension	lbf/ft	0.000674581			
Net Ideal Gas Heating Value	Btu/ft ³	2272.39	2272.39	0	0
Net Liquid Heating Value	Btu/lb	19782.6	19782.6	0	0
Gross Ideal Gas Heating Value	Btu/ft ³	2470.4	2470.4	0	0
Gross Liquid Heating Value	Btu/lb	21520.5	21520.5	0	0

Remarks

Process Streams Report
Stream: 1
Phases Grouped by Columns

Client Name:	PTSDK	Job: J877
Location:		Modified: 3:15 PM, 2/17/2009
Flowsheet:	Refrigeration Loop	Status: Solved 9:00 AM, 4/28/2011

Connections

From: XFS3 To: CMPR-100

Composition

Mole Fraction	Total %	Vapor %		
Nitrogen	0	0		
Oxygen	0	0		
Carbon Dioxide	0	0		
Methane	0	0		
Ethane	6.1224	6.1224		
Propane	93.8776	93.8776		
i-Butane	0	0		
n-Butane	0	0		
i-Pentane	0	0		
n-Pentane	0	0		
n-Hexane	0	0		
n-Heptane	0	0		
Water	0	0		
Ethylene Glycol	0	0		
Therminol 55	0	0		

Properties

Property	Units	Total	Vapor	
Temperature	°F	-30	-30	
Pressure	psia	17.6626	17.6626	
Mole Fraction Vapor	%	100	100	
Mole Fraction Light Liquid	%	0	0	
Mole Fraction Heavy Liquid	%	0	0	
Molecular Weight	lb/lbmol	43.2369	43.2369	
Mass Density	lb/ft ³	0.171496	0.171496	
Molar Flow	lbmol/h	117.417	117.417	
Mass Flow	lb/h	5076.74	5076.74	
Vapor Volumetric Flow	ft ³ /h	29602.6	29602.6	
Liquid Volumetric Flow	gpm	3690.71	3690.71	
Std Vapor Volumetric Flow	MMSCFD	1.06939	1.06939	
Std Liquid Volumetric Flow	sgpm	20.3708	20.3708	
Compressibility		0.96573	0.96573	
Specific Gravity		1.49285	1.49285	
API Gravity				
Enthalpy	Btu/h	-5.4298E+06	-5.4298E+06	
Mass Enthalpy	Btu/lb	-1069.55	-1069.55	
Mass Cp	Btu/(lb*°F)	0.345083	0.345083	
Ideal Gas Cp/Cv Ratio		1.15687	1.15687	
Dynamic Viscosity	cP	0.00669935	0.00669935	
Kinematic Viscosity	cSt	2.43869	2.43869	
Thermal Conductivity	Btu/(h*ft*°F)	0.00677415	0.00677415	
Surface Tension	lbf/ft			
Net Ideal Gas Heating Value	Btu/ft ³	2272.39	2272.39	
Net Liquid Heating Value	Btu/lb	19782.6	19782.6	
Gross Ideal Gas Heating Value	Btu/ft ³	2470.4	2470.4	
Gross Liquid Heating Value	Btu/lb	21520.5	21520.5	

Remarks

Process Streams Report
Stream: 2
 Phases Grouped by Columns

Client Name:	PTSDK	Job: J877
Location:		Modified: 2:43 PM, 2/17/2009
Flowsheet:	Refrigeration Loop	Status: Solved 9:00 AM, 4/28/2011

Connections

From: CMPR-100 To: MIX-100

Composition

Mole Fraction	Total %	Vapor %		
Nitrogen	0	0		
Oxygen	0	0		
Carbon Dioxide	0	0		
Methane	0	0		
Ethane	6.1224	6.1224		
Propane	93.8776	93.8776		
i-Butane	0	0		
n-Butane	0	0		
i-Pentane	0	0		
n-Pentane	0	0		
n-Hexane	0	0		
n-Heptane	0	0		
Water	0	0		
Ethylene Glycol	0	0		
Therminol 55	0	0		

Properties

Property	Units	Total	Vapor	
Temperature	°F	33.0125	33.0125	
Pressure	psia	46	46	
Mole Fraction Vapor	%	100	100	
Mole Fraction Light Liquid	%	0	0	
Mole Fraction Heavy Liquid	%	0	0	
Molecular Weight	lb/lbmol	43.2369	43.2369	
Mass Density	lb/ft ³	0.401394	0.401394	
Molar Flow	lbmol/h	117.417	117.417	
Mass Flow	lb/h	5076.74	5076.74	
Vapor Volumetric Flow	ft ³ /h	12647.8	12647.8	
Liquid Volumetric Flow	gpm	1576.87	1576.87	
Std Vapor Volumetric Flow	MMSCFD	1.06939	1.06939	
Std Liquid Volumetric Flow	sgpm	20.3708	20.3708	
Compressibility		0.937153	0.937153	
Specific Gravity		1.49285	1.49285	
API Gravity				
Enthalpy	Btu/h	-5.32691E+06	-5.32691E+06	
Mass Enthalpy	Btu/lb	-1049.28	-1049.28	
Mass Cp	Btu/(lb*°F)	0.387201	0.387201	
Ideal Gas Cp/Cv Ratio		1.14008	1.14008	
Dynamic Viscosity	cP	0.00775892	0.00775892	
Kinematic Viscosity	cSt	1.20673	1.20673	
Thermal Conductivity	Btu/(h*ft*°F)	0.0088431	0.0088431	
Surface Tension	lbf/ft			
Net Ideal Gas Heating Value	Btu/ft ³	2272.39	2272.39	
Net Liquid Heating Value	Btu/lb	19782.6	19782.6	
Gross Ideal Gas Heating Value	Btu/ft ³	2470.4	2470.4	
Gross Liquid Heating Value	Btu/lb	21520.5	21520.5	

Remarks

Process Streams Report
Stream: 3
 Phases Grouped by Columns

Client Name:	PTSDK	Job: J877
Location:		Modified: 2:43 PM, 2/17/2009
Flowsheet:	Refrigeration Loop	Status: Solved 9:00 AM, 4/28/2011

Connections

From: MIX-100 To: CMPR-101

Composition

Mole Fraction	Total %	Vapor %		
Nitrogen	0	0		
Oxygen	0	0		
Carbon Dioxide	0	0		
Methane	0	0		
Ethane	6.1224	6.1224		
Propane	93.8776	93.8776		
i-Butane	0	0		
n-Butane	0	0		
i-Pentane	0	0		
n-Pentane	0	0		
n-Hexane	0	0		
n-Heptane	0	0		
Water	0	0		
Ethylene Glycol	0	0		
Therminol 55	0	0		

Properties

Property	Units	Total	Vapor	
Temperature	°F	29.9526	29.9526	
Pressure	psia	46	46	
Mole Fraction Vapor	%	100	100	
Mole Fraction Light Liquid	%	0	0	
Mole Fraction Heavy Liquid	%	0	0	
Molecular Weight	lb/lbmol	43.2369	43.2369	
Mass Density	lb/ft ³	0.40441	0.40441	
Molar Flow	lbmol/h	192.487	192.487	
Mass Flow	lb/h	8322.52	8322.52	
Vapor Volumetric Flow	ft ³ /h	20579.4	20579.4	
Liquid Volumetric Flow	gpm	2565.74	2565.74	
Std Vapor Volumetric Flow	MMSCFD	1.7531	1.7531	
Std Liquid Volumetric Flow	sgpm	33.3948	33.3948	
Compressibility		0.935976	0.935976	
Specific Gravity		1.49285	1.49285	
API Gravity				
Enthalpy	Btu/h	-8.74249E+06	-8.74249E+06	
Mass Enthalpy	Btu/lb	-1050.46	-1050.46	
Mass Cp	Btu/(lb*°F)	0.385675	0.385675	
Ideal Gas CpCv Ratio		1.14084	1.14084	
Dynamic Viscosity	cP	0.00771326	0.00771326	
Kinematic Viscosity	cSt	1.19068	1.19068	
Thermal Conductivity	Btu/(h*ft*°F)	0.00874341	0.00874341	
Surface Tension	lbf/ft			
Net Ideal Gas Heating Value	Btu/ft ³	2272.39	2272.39	
Net Liquid Heating Value	Btu/lb	19782.6	19782.6	
Gross Ideal Gas Heating Value	Btu/ft ³	2470.4	2470.4	
Gross Liquid Heating Value	Btu/lb	21520.5	21520.5	

Remarks

Process Streams Report
Stream: 4
 Phases Grouped by Columns

Client Name:	PTSDK	Job: J877
Location:		Modified: 2:43 PM, 2/17/2009
Flowsheet:	Refrigeration Loop	Status: Solved 9:00 AM, 4/28/2011

Connections

From: CMPR-101 To: C3 Condenser

Composition

Mole Fraction	Total %	Vapor %		
Nitrogen	0	0		
Oxygen	0	0		
Carbon Dioxide	0	0		
Methane	0	0		
Ethane	6.1224	6.1224		
Propane	93.8776	93.8776		
i-Butane	0	0		
n-Butane	0	0		
i-Pentane	0	0		
n-Pentane	0	0		
n-Hexane	0	0		
n-Heptane	0	0		
Water	0	0		
Ethylene Glycol	0	0		
Therminol 55	0	0		

Properties

Property	Units	Total	Vapor	
Temperature	°F	168.578	168.578	
Pressure	psia	282.863	282.863	
Mole Fraction Vapor	%	100	100	
Mole Fraction Light Liquid	%	0	0	
Mole Fraction Heavy Liquid	%	0	0	
Molecular Weight	lb/lbmol	43.2369	43.2369	
Mass Density	lb/ft ³	2.30135	2.30135	
Molar Flow	lbmol/h	192.487	192.487	
Mass Flow	lb/h	8322.52	8322.52	
Vapor Volumetric Flow	ft ³ /h	3616.37	3616.37	
Liquid Volumetric Flow	gpm	450.872	450.872	
Std Vapor Volumetric Flow	MMSCFD	1.7531	1.7531	
Std Liquid Volumetric Flow	sgpm	33.3948	33.3948	
Compressibility		0.788231	0.788231	
Specific Gravity		1.49285	1.49285	
API Gravity				
Enthalpy	Btu/h	-8.39424E+06	-8.39424E+06	
Mass Enthalpy	Btu/lb	-1008.62	-1008.62	
Mass Cp	Btu/(lb*°F)	0.534829	0.534829	
Ideal Gas Cp/Cv Ratio		1.11242	1.11242	
Dynamic Viscosity	cP	0.0106216	0.0106216	
Kinematic Viscosity	cSt	0.288128	0.288128	
Thermal Conductivity	Btu/(h*ft*°F)	0.0150666	0.0150666	
Surface Tension	lbf/ft			
Net Ideal Gas Heating Value	Btu/ft ³	2272.39	2272.39	
Net Liquid Heating Value	Btu/lb	19782.6	19782.6	
Gross Ideal Gas Heating Value	Btu/ft ³	2470.4	2470.4	
Gross Liquid Heating Value	Btu/lb	21520.5	21520.5	

Remarks

Process Streams Report
Stream: 5
 Phases Grouped by Columns

Client Name:	PTSDK	Job: J877
Location:		Modified: 1:45 PM, 4/21/2010
Flowsheet:	Refrigeration Loop	Status: Solved 9:00 AM, 4/28/2011

Connections

From: C3 Condenser To: TRM-1

Composition

Mole Fraction	Total %	Light Liquid %		
Nitrogen	0	0		
Oxygen	0	0		
Carbon Dioxide	0	0		
Methane	0	0		
Ethane	6.1224	6.1224		
Propane	93.8776	93.8776		
i-Butane	0	0		
n-Butane	0	0		
i-Pentane	0	0		
n-Pentane	0	0		
n-Hexane	0	0		
n-Heptane	0	0		
Water	0	0		
Ethylene Glycol	0	0		
Therminol 55	0	0		

Properties

Property	Units	Total	Light Liquid	
Temperature	°F	120 *	120	
Pressure	psia	277.863	277.863	
Mole Fraction Vapor	%	0 *	0	
Mole Fraction Light Liquid	%	100	100	
Mole Fraction Heavy Liquid	%	0	0	
Molecular Weight	lb/lbmol	43.2369	43.2369	
Mass Density	lb/ft^3	27.6655	27.6655	
Molar Flow	lbmol/h	192.487	192.487	
Mass Flow	lb/h	8322.52	8322.52	
Vapor Volumetric Flow	ft^3/h	300.827	300.827	
Liquid Volumetric Flow	gpm	37.5056	37.5056	
Std Vapor Volumetric Flow	MMSCFD	1.7531	1.7531	
Std Liquid Volumetric Flow	sgpm	33.3948	33.3948	
Compressibility		0.0698075	0.0698075	
Specific Gravity		0.443578	0.443578	
API Gravity		149.081	149.081	
Enthalpy	Btu/h	-9.60467E+06	-9.60467E+06	
Mass Enthalpy	Btu/lb	-1154.06	-1154.06	
Mass Cp	Btu/(lb*°F)	0.843033	0.843033	
Ideal Gas Cp/Cv Ratio		1.12109	1.12109	
Dynamic Viscosity	cP	0.0720236	0.0720236	
Kinematic Viscosity	cSt	0.162523	0.162523	
Thermal Conductivity	Btu/(h*ft*°F)	0.0477438	0.0477438	
Surface Tension	lbf/ft	0.0002462	0.0002462	
Net Ideal Gas Heating Value	Btu/ft^3	2272.39	2272.39	
Net Liquid Heating Value	Btu/lb	19782.6	19782.6	
Gross Ideal Gas Heating Value	Btu/ft^3	2470.4	2470.4	
Gross Liquid Heating Value	Btu/lb	21520.5	21520.5	

Remarks

Process Streams Report
Stream: 6
 Phases Grouped by Columns

Client Name:	PTSDK	Job: J877
Location:		Modified: 2:44 PM, 2/17/2009
Flowsheet:	Refrigeration Loop	Status: Solved 9:00 AM, 4/28/2011

Connections

From: TRM-1 To: SPLT-100

Composition

Mole Fraction	Total %	Light Liquid %		
Nitrogen	0	0		
Oxygen	0	0		
Carbon Dioxide	0	0		
Methane	0	0		
Ethane	6.1224	6.1224		
Propane	93.8776	93.8776		
i-Butane	0	0		
n-Butane	0	0		
i-Pentane	0	0		
n-Pentane	0	0		
n-Hexane	0	0		
n-Heptane	0	0		
Water	0	0		
Ethylene Glycol	0	0		
Therminol 55	0	0		

Properties

Property	Units	Total	Light Liquid	
Temperature	°F	120	120	
Pressure	psia	277.863	277.863	
Mole Fraction Vapor	%	0	0	
Mole Fraction Light Liquid	%	100	100	
Mole Fraction Heavy Liquid	%	0	0	
Molecular Weight	lb/lbmol	43.2369	43.2369	
Mass Density	lb/ft ³	27.6655	27.6655	
Molar Flow	lbmol/h	192.487	192.487	
Mass Flow	lb/h	8322.52	8322.52	
Vapor Volumetric Flow	ft ³ /h	300.826	300.826	
Liquid Volumetric Flow	gpm	37.5056	37.5056	
Std Vapor Volumetric Flow	MMSCFD	1.7531	1.7531	
Std Liquid Volumetric Flow	sgpm	33.3948	33.3948	
Compressibility		0.0698075	0.0698075	
Specific Gravity		0.443578	0.443578	
API Gravity		149.081	149.081	
Enthalpy	Btu/h	-9.60467E+06	-9.60467E+06	
Mass Enthalpy	Btu/lb	-1154.06	-1154.06	
Mass Cp	Btu/(lb*°F)	0.843033	0.843033	
Ideal Gas CpCv Ratio		1.12109	1.12109	
Dynamic Viscosity	cP	0.0720237	0.0720237	
Kinematic Viscosity	cSt	0.162523	0.162523	
Thermal Conductivity	Btu/(h*ft*°F)	0.0477438	0.0477438	
Surface Tension	lbf/ft	0.0002462	0.0002462	
Net Ideal Gas Heating Value	Btu/ft ³	2272.39	2272.39	
Net Liquid Heating Value	Btu/lb	19782.6	19782.6	
Gross Ideal Gas Heating Value	Btu/ft ³	2470.4	2470.4	
Gross Liquid Heating Value	Btu/lb	21520.5	21520.5	

Remarks

Process Streams Report
Stream: 7
 Phases Grouped by Columns

Client Name:	PTSDK	Job: J877
Location:		Modified: 2:44 PM, 2/17/2009
Flowsheet:	Refrigeration Loop	Status: Solved 9:00 AM, 4/28/2011

Connections

From: SPLT-100 To: Economizer

Composition

Mole Fraction	Total %	Light Liquid %		
Nitrogen	0	0		
Oxygen	0	0		
Carbon Dioxide	0	0		
Methane	0	0		
Ethane	6.1224	6.1224		
Propane	93.8776	93.8776		
i-Butane	0	0		
n-Butane	0	0		
i-Pentane	0	0		
n-Pentane	0	0		
n-Hexane	0	0		
n-Heptane	0	0		
Water	0	0		
Ethylene Glycol	0	0		
Therminol 55	0	0		

Properties

Property	Units	Total	Light Liquid	
Temperature	°F	120	120	
Pressure	psia	277.863	277.863	
Mole Fraction Vapor	%	0	0	
Mole Fraction Light Liquid	%	100	100	
Mole Fraction Heavy Liquid	%	0	0	
Molecular Weight	lb/lbmol	43.2369	43.2369	
Mass Density	lb/ft ³	27.6655	27.6655	
Molar Flow	lbmol/h	117.417	117.417	
Mass Flow	lb/h	5076.74	5076.74	
Vapor Volumetric Flow	ft ³ /h	183.504	183.504	
Liquid Volumetric Flow	gpm	22.8784	22.8784	
Std Vapor Volumetric Flow	MMSCFD	1.06939	1.06939	
Std Liquid Volumetric Flow	sgpm	20.3708	20.3708	
Compressibility		0.0698075	0.0698075	
Specific Gravity		0.443578	0.443578	
API Gravity		149.081	149.081	
Enthalpy	Btu/h	-5.85885E+06	-5.85885E+06	
Mass Enthalpy	Btu/lb	-1154.06	-1154.06	
Mass Cp	Btu/(lb*°F)	0.843032	0.843032	
Ideal Gas CpCv Ratio		1.12109	1.12109	
Dynamic Viscosity	cP	0.0720237	0.0720237	
Kinematic Viscosity	cSt	0.162523	0.162523	
Thermal Conductivity	Btu/(h*ft*°F)	0.0477439	0.0477439	
Surface Tension	lbf/ft	0.000246201	0.000246201	
Net Ideal Gas Heating Value	Btu/ft ³	2272.39	2272.39	
Net Liquid Heating Value	Btu/lb	19782.6	19782.6	
Gross Ideal Gas Heating Value	Btu/ft ³	2470.4	2470.4	
Gross Liquid Heating Value	Btu/lb	21520.5	21520.5	

Remarks

Process Streams Report
Stream: 8
 Phases Grouped by Columns

Client Name:	PTSDK	Job: J877
Location:		Modified: 2:44 PM, 2/17/2009
Flowsheet:	Refrigeration Loop	Status: Solved 9:00 AM, 4/28/2011

Connections

From: SPLT-100 To: VLVE-101

Composition

Mole Fraction	Total %	Light Liquid %		
Nitrogen	0	0		
Oxygen	0	0		
Carbon Dioxide	0	0		
Methane	0	0		
Ethane	6.1224	6.1224		
Propane	93.8776	93.8776		
i-Butane	0	0		
n-Butane	0	0		
i-Pentane	0	0		
n-Pentane	0	0		
n-Hexane	0	0		
n-Heptane	0	0		
Water	0	0		
Ethylene Glycol	0	0		
Therminol 55	0	0		

Properties

Property	Units	Total	Light Liquid	
Temperature	°F	120	120	
Pressure	psia	277.863	277.863	
Mole Fraction Vapor	%	0	0	
Mole Fraction Light Liquid	%	100	100	
Mole Fraction Heavy Liquid	%	0	0	
Molecular Weight	lb/lbmol	43.2369	43.2369	
Mass Density	lb/ft^3	27.6655	27.6655	
Molar Flow	lbmol/h	75.0698	75.0698	
Mass Flow	lb/h	3245.78	3245.78	
Vapor Volumetric Flow	ft^3/h	117.322	117.322	
Liquid Volumetric Flow	gpm	14.6272	14.6272	
Std Vapor Volumetric Flow	MMSCFD	0.683708	0.683708	
Std Liquid Volumetric Flow	sgpm	13.024	13.024	
Compressibility		0.0698075	0.0698075	
Specific Gravity		0.443578	0.443578	
API Gravity		149.081	149.081	
Enthalpy	Btu/h	-3.74582E+06	-3.74582E+06	
Mass Enthalpy	Btu/lb	-1154.06	-1154.06	
Mass Cp	Btu/(lb*°F)	0.843033	0.843033	
Ideal Gas CpCv Ratio		1.12109	1.12109	
Dynamic Viscosity	cP	0.0720236	0.0720236	
Kinematic Viscosity	cSt	0.162523	0.162523	
Thermal Conductivity	Btu/(h*ft*°F)	0.0477438	0.0477438	
Surface Tension	lbf/ft	0.0002462	0.0002462	
Net Ideal Gas Heating Value	Btu/ft^3	2272.39	2272.39	
Net Liquid Heating Value	Btu/lb	19782.6	19782.6	
Gross Ideal Gas Heating Value	Btu/ft^3	2470.4	2470.4	
Gross Liquid Heating Value	Btu/lb	21520.5	21520.5	

Remarks

Process Streams Report
Stream: 9
 Phases Grouped by Columns

Client Name:	PTSDK	Job: J877
Location:		Modified: 2:44 PM, 2/17/2009
Flowsheet:	Refrigeration Loop	Status: Solved 9:00 AM, 4/28/2011

Connections

From: VLVE-101 To: Economizer

Composition

Mole Fraction	Total %	Vapor %	Light Liquid %		
Nitrogen	0	0	0		
Oxygen	0	0	0		
Carbon Dioxide	0	0	0		
Methane	0	0	0		
Ethane	6.1224	10.7603	2.59115		
Propane	93.8776	89.2397	97.4089		
i-Butane	0	0	0		
n-Butane	0	0	0		
i-Pentane	0	0	0		
n-Pentane	0	0	0		
n-Hexane	0	0	0		
n-Heptane	0	0	0		
Water	0	0	0		
Ethylene Glycol	0	0	0		
Therminol 55	0	0	0		

Properties

Property	Units	Total	Vapor	Light Liquid	
Temperature	°F	15.9703	15.9703	15.9703	
Pressure	psia	57	57	57	
Mole Fraction Vapor	%	43.2267	100	0	
Mole Fraction Light Liquid	%	56.7733	0	100	
Mole Fraction Heavy Liquid	%	0	0	0	
Molecular Weight	lb/lbmol	43.2369	42.5863	43.7322	
Mass Density	lb/ft^3	1.19608	0.51986	33.6372	
Molar Flow	lbmol/h	75.0698	32.4502	42.6196	
Mass Flow	lb/h	3245.78	1381.93	1863.85	
Vapor Volumetric Flow	ft^3/h	2713.69	2658.28	55.4103	
Liquid Volumetric Flow	gpm	338.33	331.422	6.90829	
Std Vapor Volumetric Flow	MMSCFD	0.683708	0.295544	0.388163	
Std Liquid Volumetric Flow	sgpm	13.024	5.62218	7.4018	
Compressibility		0.403671	0.914778	0.0145182	
Specific Gravity			1.47039	0.539326	
API Gravity				148.667	
Enthalpy	Btu/h	-3.74582E+06	-1.46886E+06	-2.27696E+06	
Mass Enthalpy	Btu/lb	-1154.06	-1062.9	-1221.65	
Mass Cp	Btu/(lb*°F)	0.508498	0.383819	0.600941	
Ideal Gas CpCv Ratio		1.14437	1.14656	1.14274	
Dynamic Viscosity	cP		0.00758681	0.137323	
Kinematic Viscosity	cSt		0.911071	0.25486	
Thermal Conductivity	Btu/(h*ft*°F)		0.00843479	0.0641281	
Surface Tension	lbf/ft			0.000744162	
Net Ideal Gas Heating Value	Btu/ft^3	2272.39	2240.11	2296.97	
Net Liquid Heating Value	Btu/lb	19782.6	19800.1	19769.7	
Gross Ideal Gas Heating Value	Btu/ft^3	2470.4	2435.79	2496.76	
Gross Liquid Heating Value	Btu/lb	21520.5	21543.7	21503.4	

Remarks

Process Streams Report
Stream: 10
 Phases Grouped by Columns

Client Name:	PTSDK	Job: J877
Location:		Modified: 2:44 PM, 2/17/2009
Flowsheet:	Refrigeration Loop	Status: Solved 9:00 AM, 4/28/2011

Connections

From: Economizer To: MIX-100

Composition

Mole Fraction	Total %	Vapor %		
Nitrogen	0	0		
Oxygen	0	0		
Carbon Dioxide	0	0		
Methane	0	0		
Ethane	6.1224	6.1224		
Propane	93.8776	93.8776		
i-Butane	0	0		
n-Butane	0	0		
i-Pentane	0	0		
n-Pentane	0	0		
n-Hexane	0	0		
n-Heptane	0	0		
Water	0	0		
Ethylene Glycol	0	0		
Therminol 55	0	0		

Properties

Property	Units	Total	Vapor	
Temperature	°F	27.1307	27.1307	
Pressure	psia	54	54	
Mole Fraction Vapor	%	100	100	
Mole Fraction Light Liquid	%	0	0	
Mole Fraction Heavy Liquid	%	0	0	
Molecular Weight	lb/lbmol	43.2369	43.2369	
Mass Density	lb/ft ³	0.484362	0.484362	
Molar Flow	lbmol/h	75.0698	75.0698	
Mass Flow	lb/h	3245.78	3245.78	
Vapor Volumetric Flow	ft ³ /h	6701.14	6701.14	
Liquid Volumetric Flow	gpm	835.467	835.467	
Std Vapor Volumetric Flow	MMSCFD	0.683708	0.683708	
Std Liquid Volumetric Flow	sgpm	13.024	13.024	
Compressibility		0.922703	0.922703	
Specific Gravity		1.49285	1.49285	
API Gravity				
Enthalpy	Btu/h	-3.41557E+06	-3.41557E+06	
Mass Enthalpy	Btu/lb	-1052.31	-1052.31	
Mass Cp	Btu/(lb*°F)	0.387311	0.387311	
Ideal Gas Cp/Cv Ratio		1.14154	1.14154	
Dynamic Viscosity	cP	0.00770035	0.00770035	
Kinematic Viscosity	cSt	0.992474	0.992474	
Thermal Conductivity	Btu/(h*ft*°F)	0.00869463	0.00869463	
Surface Tension	lbf/ft			
Net Ideal Gas Heating Value	Btu/ft ³	2272.39	2272.39	
Net Liquid Heating Value	Btu/lb	19782.6	19782.6	
Gross Ideal Gas Heating Value	Btu/ft ³	2470.4	2470.4	
Gross Liquid Heating Value	Btu/lb	21520.5	21520.5	

Remarks

Process Streams Report
Stream: 11
 Phases Grouped by Columns

Client Name:	PTSDK	Job: J877
Location:		Modified: 2:44 PM, 2/17/2009
Flowsheet:	Refrigeration Loop	Status: Solved 9:00 AM, 4/28/2011

Connections

From: Economizer To: VLVE-100

Composition

Mole Fraction	Total %	Light Liquid %		
Nitrogen	0	0		
Oxygen	0	0		
Carbon Dioxide	0	0		
Methane	0	0		
Ethane	6.1224	6.1224		
Propane	93.8776	93.8776		
i-Butane	0	0		
n-Butane	0	0		
i-Pentane	0	0		
n-Pentane	0	0		
n-Hexane	0	0		
n-Heptane	0	0		
Water	0	0		
Ethylene Glycol	0	0		
Therminol 55	0	0		

Properties

Property	Units	Total	Light Liquid	
Temperature	°F	27	27	
Pressure	psia	274.863	274.863	
Mole Fraction Vapor	%	0	0	
Mole Fraction Light Liquid	%	100	100	
Mole Fraction Heavy Liquid	%	0	0	
Molecular Weight	lb/lbmol	43.2369	43.2369	
Mass Density	lb/ft ³	33.1003	33.1003	
Molar Flow	lbmol/h	117.417	117.417	
Mass Flow	lb/h	5076.74	5076.74	
Vapor Volumetric Flow	ft ³ /h	153.375	153.375	
Liquid Volumetric Flow	gpm	19.122	19.122	
Std Vapor Volumetric Flow	MMSCFD	1.06939	1.06939	
Std Liquid Volumetric Flow	sgpm	20.3708	20.3708	
Compressibility		0.068745	0.068745	
Specific Gravity		0.530716	0.530716	
API Gravity		149.113	149.113	
Enthalpy	Btu/h	-6.18909E+06	-6.18909E+06	
Mass Enthalpy	Btu/lb	-1219.11	-1219.11	
Mass Cp	Btu/(lb*°F)	0.611458	0.611458	
Ideal Gas Cp/Cv Ratio		1.14157	1.14157	
Dynamic Viscosity	cP	0.129358	0.129358	
Kinematic Viscosity	cSt	0.243972	0.243972	
Thermal Conductivity	Btu/(h*ft*°F)	0.0619691	0.0619691	
Surface Tension	lbf/ft	0.000674581	0.000674581	
Net Ideal Gas Heating Value	Btu/ft ³	2272.39	2272.39	
Net Liquid Heating Value	Btu/lb	19782.6	19782.6	
Gross Ideal Gas Heating Value	Btu/ft ³	2470.4	2470.4	
Gross Liquid Heating Value	Btu/lb	21520.5	21520.5	

Remarks

Process Streams Report
Stream: 12
 Phases Grouped by Columns

Client Name:	PTSDK	Job: J877
Location:		Modified: 3:06 PM, 2/17/2009
Flowsheet:	Refrigeration Loop	Status: Solved 9:00 AM, 4/28/2011

Connections

From: VLVE-100 To: XFS2

Composition

Mole Fraction	Total %	Vapor %	Light Liquid %
Nitrogen	0	0	0
Oxygen	0	0	0
Carbon Dioxide	0	0	0
Methane	0	0	0
Ethane	6.1224	17.2045	3.01647
Propane	93.8776	82.7955	96.9835
i-Butane	0	0	0
n-Butane	0	0	0
i-Pentane	0	0	0
n-Pentane	0	0	0
n-Hexane	0	0	0
n-Heptane	0	0	0
Water	0	0	0
Ethylene Glycol	0	0	0
Therminol 55	0	0	0

Properties

Property	Units	Total	Vapor	Light Liquid
Temperature	°F	-40	-40	-40
Pressure	psia	18.6626	18.6626	18.6626
Mole Fraction Vapor	%	21.8912	100	0
Mole Fraction Light Liquid	%	78.1088	0	100
Mole Fraction Heavy Liquid	%	0	0	0
Molecular Weight	lb/lbmol	43.2369	41.6824	43.6725
Mass Density	lb/ft ³	0.833602	0.179196	36.0269
Molar Flow	lbmol/h	117.417	25.704	91.7128
Mass Flow	lb/h	5076.74	1071.4	4005.33
Vapor Volumetric Flow	ft ³ /h	6090.12	5978.94	111.176
Liquid Volumetric Flow	gpm	759.288	745.427	13.8609
Std Vapor Volumetric Flow	MMSCFD	1.06939	0.234102	0.835287
Std Liquid Volumetric Flow	sgpm	20.3708	4.44494	15.9259
Compressibility		0.21493	0.963884	0.00502323
Specific Gravity			1.43918	0.577641
API Gravity				148.918
Enthalpy	Btu/h	-6.18909E+06	-1.16562E+06	-5.02347E+06
Mass Enthalpy	Btu/lb	-1219.11	-1087.94	-1254.2
Mass Cp	Btu/(lb*°F)	0.501121	0.342482	0.543555
Ideal Gas Cp/Cv Ratio		1.15977	1.16548	1.15824
Dynamic Viscosity	cP		0.00664084	0.19019
Kinematic Viscosity	cSt		2.31352	0.329564
Thermal Conductivity	Btu/(h*ft*°F)		0.00667148	0.0737216
Surface Tension	lbf/ft			0.00102381
Net Ideal Gas Heating Value	Btu/ft ³	2272.39	2195.26	2294.01
Net Liquid Heating Value	Btu/lb	19782.6	19825.2	19771.2
Gross Ideal Gas Heating Value	Btu/ft ³	2470.4	2387.69	2493.59
Gross Liquid Heating Value	Btu/lb	21520.5	21577.1	21505.4

Remarks

Process Streams Report
Stream: 13
 Phases Grouped by Columns

Client Name:	PTSDK	Job: J877
Location:		Modified: 2:43 PM, 2/17/2009
Flowsheet:	Refrigeration Loop	Status: Solved 9:00 AM, 4/28/2011

Connections

From: -- To: XCHG-100

Composition

Mole Fraction	Total %	Vapor %		
Nitrogen	79	79		
Oxygen	21	21		
Carbon Dioxide	0	0		
Methane	0	0		
Ethane	0	0		
Propane	0	0		
i-Butane	0	0		
n-Butane	0	0		
i-Pentane	0	0		
n-Pentane	0	0		
n-Hexane	0	0		
n-Heptane	0	0		
Water	0	0		
Ethylene Glycol	0	0		
Therminol 55	0	0		

Properties

Property	Units	Total	Vapor	
Temperature	°F	95	95	
Pressure	psia	14.696	14.696	
Mole Fraction Vapor	%	100	100	
Mole Fraction Light Liquid	%	0	0	
Mole Fraction Heavy Liquid	%	0	0	
Molecular Weight	lb/lbmol	28.8503	28.8503	
Mass Density	lb/ft ³	0.0712416	0.0712416	
Molar Flow	lbmol/h	8857.91	8857.91	
Mass Flow	lb/h	255554	255554	
Vapor Volumetric Flow	ft ³ /h	3.58714E+06	3.58714E+06	
Liquid Volumetric Flow	gpm	447228	447228	
Std Vapor Volumetric Flow	MMSCFD	80.6746	80.6746	
Std Liquid Volumetric Flow	sgpm	589.839	589.839	
Compressibility		0.99981	0.99981	
Specific Gravity		0.996124	0.996124	
API Gravity				
Enthalpy	Btu/h	1.0895E+06	1.0895E+06	
Mass Enthalpy	Btu/lb	4.26328	4.26328	
Mass Cp	Btu/(lb*°F)	0.242111	0.242111	
Ideal Gas Cp/Cv Ratio		1.39813	1.39813	
Dynamic Viscosity	cP	0.0186645	0.0186645	
Kinematic Viscosity	cSt	16.3554	16.3554	
Thermal Conductivity	Btu/(h*ft*°F)	0.015306	0.015306	
Surface Tension	lbf/ft			
Net Ideal Gas Heating Value	Btu/ft ³	0	0	
Net Liquid Heating Value	Btu/lb	0	0	
Gross Ideal Gas Heating Value	Btu/ft ³	0	0	
Gross Liquid Heating Value	Btu/lb	0	0	

Remarks

Process Streams Report
Stream: 14
 Phases Grouped by Columns

Client Name:	PTSDK	Job: J877
Location:		Modified: 3:46 PM, 2/17/2009
Flowsheet:	Refrigeration Loop	Status: Solved 9:00 AM, 4/28/2011

Connections

From: XCHG-100	To: --
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Composition

Mole Fraction	Total %	Vapor %			
Nitrogen	79	79			
Oxygen	21	21			
Carbon Dioxide	0	0			
Methane	0	0			
Ethane	0	0			
Propane	0	0			
i-Butane	0	0			
n-Butane	0	0			
i-Pentane	0	0			
n-Pentane	0	0			
n-Hexane	0	0			
n-Heptane	0	0			
Water	0	0			
Ethylene Glycol	0	0			
Therminol 55	0	0			

Properties

Property	Units	Total	Vapor		
Temperature	°F	114.558	114.558		
Pressure	psia	14.696	14.696		
Mole Fraction Vapor	%	100	100		
Mole Fraction Light Liquid	%	0	0		
Mole Fraction Heavy Liquid	%	0	0		
Molecular Weight	lb/lbmol	28.8503	28.8503		
Mass Density	lb/ft ³	0.0688101	0.0688101		
Molar Flow	lbmol/h	8857.91	8857.91		
Mass Flow	lb/h	255554	255554		
Vapor Volumetric Flow	ft ³ /h	3.7139E+06	3.7139E+06		
Liquid Volumetric Flow	gpm	463031	463031		
Std Vapor Volumetric Flow	MMSCFD	80.6746 *	80.6746		
Std Liquid Volumetric Flow	sgpm	589.839	589.839		
Compressibility		0.999884	0.999884		
Specific Gravity		0.996124	0.996124		
API Gravity					
Enthalpy	Btu/h	2.29992E+06	2.29992E+06		
Mass Enthalpy	Btu/lb	8.99977	8.99977		
Mass Cp	Btu/(lb*°F)	0.242257	0.242257		
Ideal Gas CpCv Ratio		1.39772	1.39772		
Dynamic Viscosity	cP	0.019137	0.019137		
Kinematic Viscosity	cSt	17.362	17.362		
Thermal Conductivity	Btu/(h*ft*°F)	0.0157388	0.0157388		
Surface Tension	lbf/ft				
Net Ideal Gas Heating Value	Btu/ft ³	0	0		
Net Liquid Heating Value	Btu/lb	0	0		
Gross Ideal Gas Heating Value	Btu/ft ³	0	0		
Gross Liquid Heating Value	Btu/lb	0	0		

Remarks