

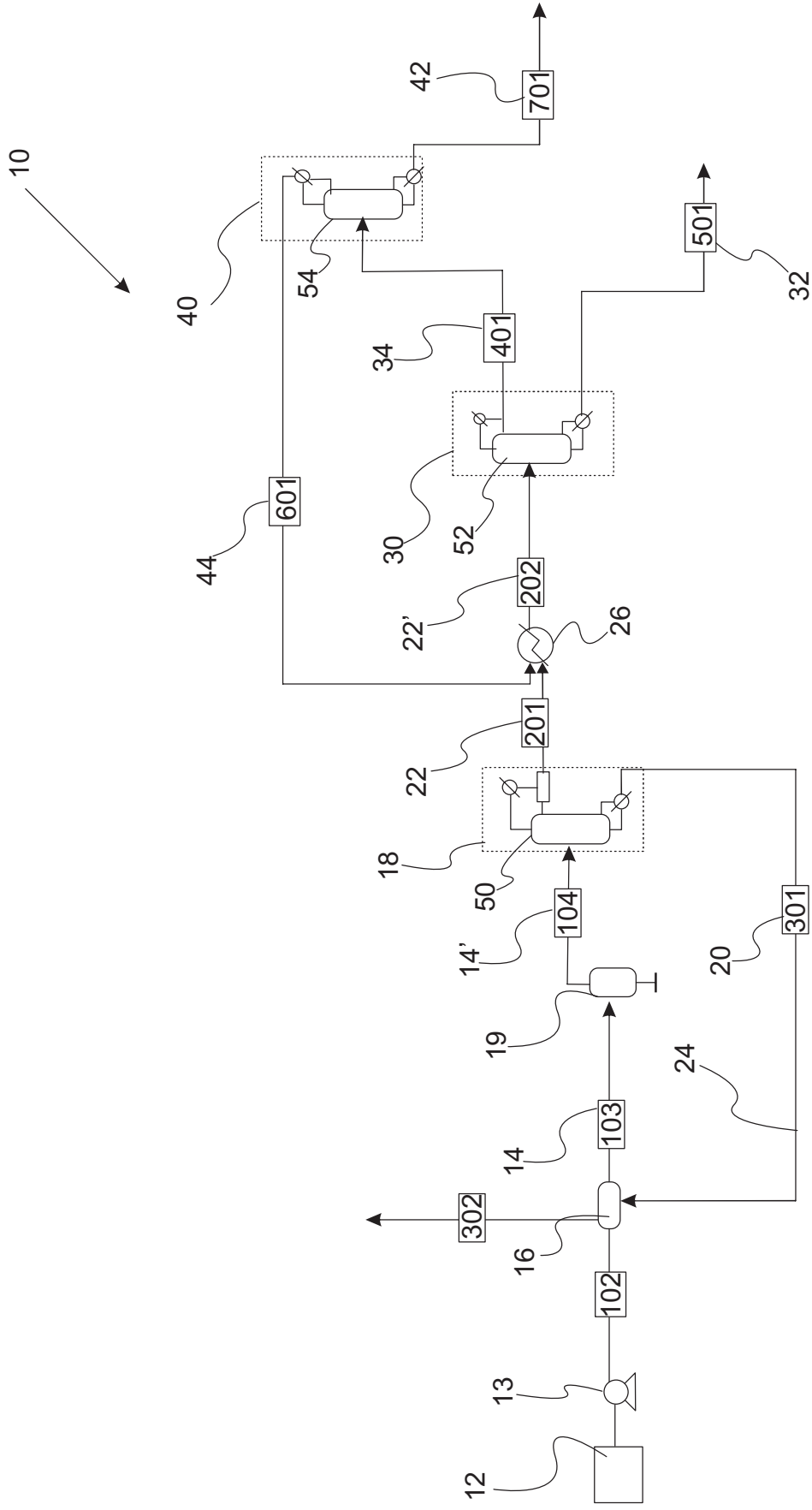


FIG. 1

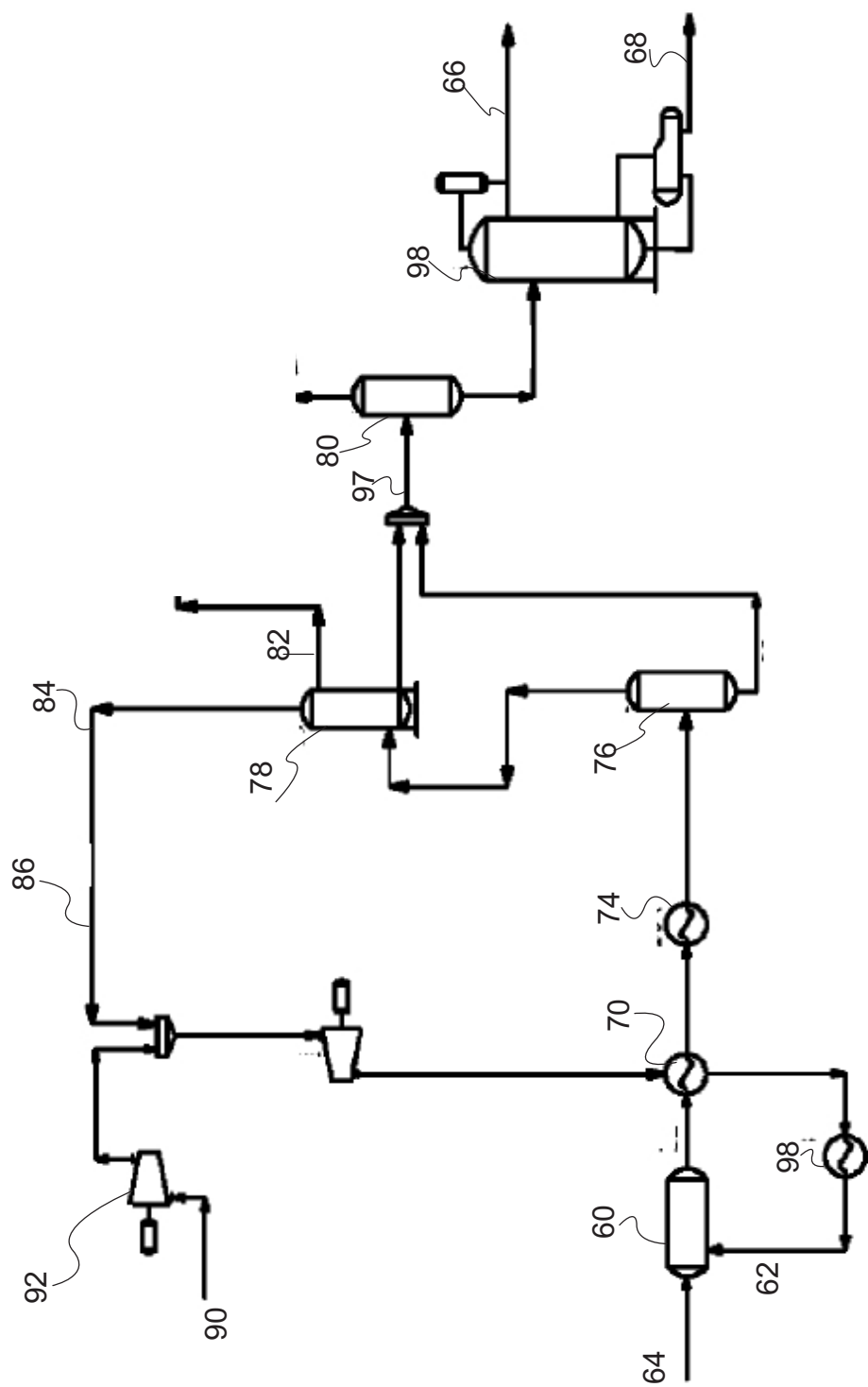


FIG. 2

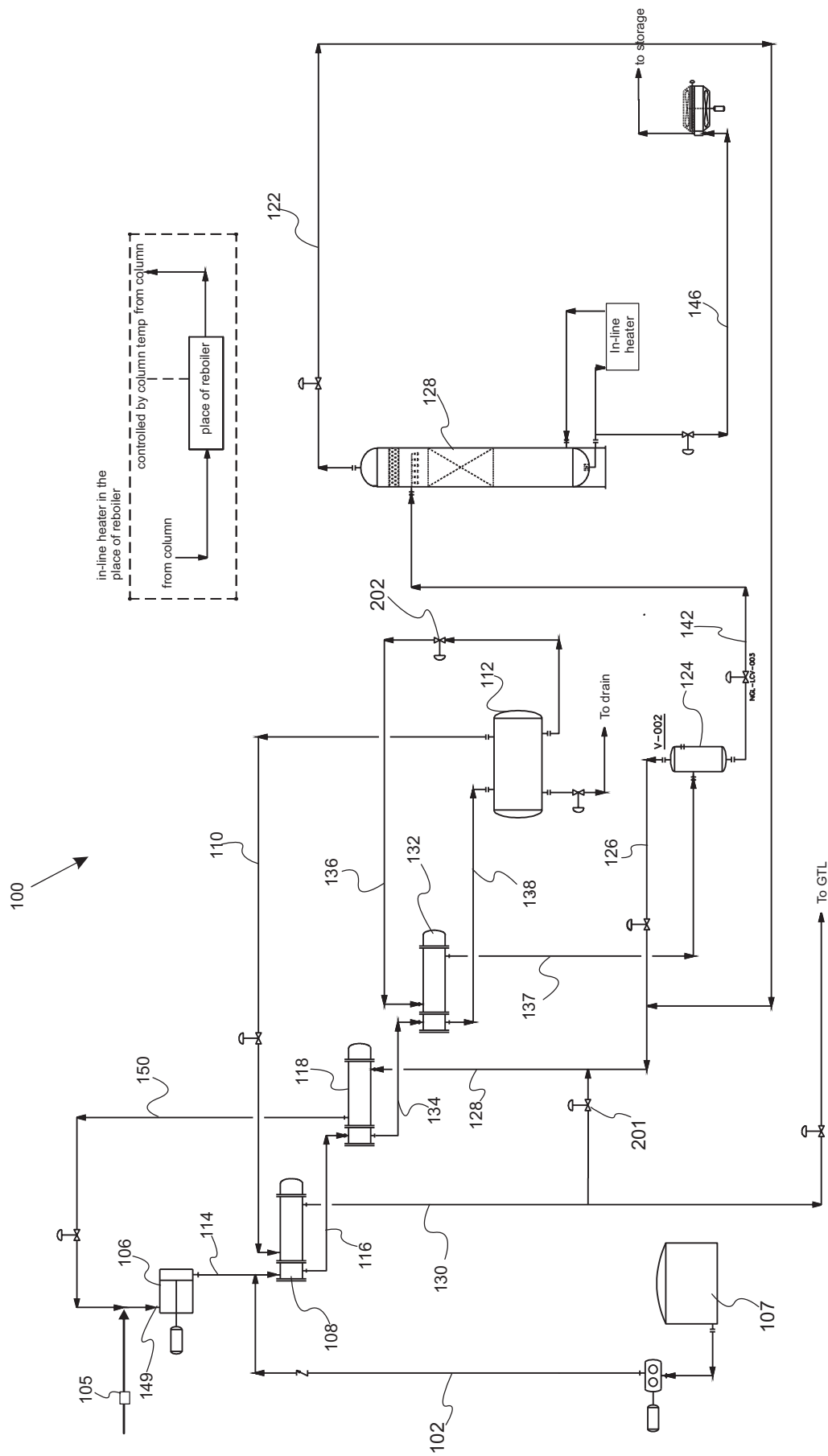


FIG. 3

Table 1.

Mole Fraction	100	101	102	103	104	201	202	301	302	401	501	601	701
ETHANOL	0.0340891	0.0340891	0.0340891	0.0340849	0.0305795	0.0637011	0.0326807	0.0103107	0.0103152	0.0332971	0.0136518	2.90E-10	0.0665943
H2O	0.4065984	0.4066009	0.4069308	0.4250591	0.4069922	0.1017076	0.0522326	0.9587153	0.9580937	1.00E-30	1.63E-13	0	0
FORMALD	5.13E-05	5.13E-05	5.23E-05	1.75E-04	0.1029993	2.60E-05	1.98E-03	4.73E-04	4.12E-05	1.00E-30	8.57E-14	0	0
METHANOL	0.4340015	0.4339993	0.4335896	0.4117019	0.44011	0.5464097	0.2826034	0.01694	0.0175065	0.3996802	1.13E-04	7.48E-04	0.7986125
CH4O2	0.0390817	0.0390792	0.0388358	0.0250754	7.35E-04	1.12E-04	4.12E-06	8.55E-03	9.62E-03	1.00E-30	1.93E-23	0	0
C2H6O3	8.04E-03	8.04E-03	7.96E-03	3.98E-03	1.88E-18	4.49E-07	1.44E-21	2.68E-04	2.41E-04	0	0	0	0
C3H8O4	7.28E-04	7.28E-04	7.20E-04	3.20E-04	8.61E-20	1.13E-09	3.00E-24	8.04E-06	5.67E-06	0	0	0	0
C4H10O5	6.58E-05	6.58E-05	6.50E-05	2.57E-05	4.05E-21	2.86E-12	6.44E-27	2.40E-07	1.33E-07	0	0	0	0
C5H12O6	5.95E-06	5.95E-06	5.87E-06	2.06E-06	1.92E-22	7.19E-15	1.40E-29	7.16E-09	3.12E-09	0	0	0	0
C2H6O2	0.0760462	0.0760485	0.0764416	0.0971938	0.0185835	4.93E-03	6.16E-04	1.78E-03	1.23E-03	1.00E-30	1.29E-09	0	0
C3H8O3	1.25E-03	1.25E-03	1.27E-03	2.29E-03	1.90E-18	4.71E-06	1.32E-20	2.00E-05	8.82E-06	0	0	0	0
C4H10O4	3.46E-05	3.46E-05	3.53E-05	8.99E-05	4.93E-20	7.52E-09	2.19E-23	3.75E-07	1.06E-07	0	0	0	0
C5H12O5	9.49E-07	9.49E-07	9.75E-07	3.51E-06	1.21E-21	1.19E-11	3.45E-26	7.01E-09	1.26E-09	0	0	0	0
C6H14O6	2.60E-08	2.60E-08	2.69E-08	1.37E-07	2.96E-23	1.89E-14	5.23E-29	1.31E-10	1.49E-11	0	0	0	0
ME-ACETA	0	0	0	0	0	0	0	0	0	0	0	0	0
ME-FORMA	0	0	0	0	0	0	0	0	0	0	0	0	0
METHYLAL	0	0	0	0	0	0.2829908	0.6298175	2.92E-03	2.92E-03	0.5670226	3.14E-03	0.999252	0.1347932
POLDME-2	0	0	0	0	0	1.19E-04	6.09E-05	1.76E-05	1.76E-05	1.00E-30	6.47E-03	0	0
POLDME-3	0	0	0	0	0	0	0	0	0	1.00E-30	0.9766289	0	0
POLDME-4	0	0	0	0	0	0	0	0	0	0	0	0	0

Fig. 4

Table 2.

Mass Flow lb/hr	100	101	102	103	104	201	202	301	302	401	501	601	701
ETHANOL	51.93744	51.93744	51.93744	51.93744	51.93744	43.22041	43.22041	8.717023	8.717023	42.7146	0.5058095	1.86E-07	42.7146
H2O	242.2489	242.2503	242.4471	253.2788	270.3131	26.98527	27.01292	316.9556	316.6133	5.02E-28	2.36E-12	0	0
FORMALD	0.0509229	0.050923	0.0518966	0.1734408	114.0187	0.0115078	1.710656	0.2607222	0.0227173	8.36E-28	2.07E-12	0	0
METHANOL	459.905	459.9025	459.4689	436.3281	519.9038	257.8533	259.9486	9.961036	10.28968	356.6108	2.91E-03	0.3336869	356.2771
CH4O2	62.09151	62.08754	61.70085	39.84374	1.302444	0.0790915	5.68E-03	7.535383	8.474963	1.34E-27	7.47E-22	0	0
C2H6O3	20.76356	20.76381	20.56201	10.28574	5.41E-15	5.16E-04	3.22E-18	0.3844316	0.3445743	0	0	0	0
C3H8O4	2.603063	2.603072	2.574759	1.145822	3.43E-16	1.81E-06	9.30E-21	0.0159478	0.0112326	0	0	0	0
C4H10O5	0.3006498	0.3006482	0.2970262	0.1174931	2.06E-17	5.81E-09	2.55E-23	6.08E-04	3.37E-04	0	0	0	0
C5H12O6	0.0330918	0.0330914	0.0326539	0.011479	1.19E-18	1.78E-11	6.76E-26	2.21E-05	9.63E-06	0	0	0	0
C2H6O2	156.0766	156.0812	156.8882	199.5043	42.51803	4.505009	1.09745	2.025726	1.402236	1.73E-27	6.42E-08	0	0
C3H8O3	3.8193	3.81938	3.866195	6.960476	6.44E-15	6.38E-03	3.50E-17	0.0337519	0.0148926	0	0	0	0
C4H10O4	0.1398165	0.1398182	0.1425292	0.3632205	2.22E-16	1.35E-05	7.67E-20	8.42E-04	2.37E-04	0	0	0	0
C5H12O5	4.78E-03	4.78E-03	4.90E-03	0.0176823	6.81E-18	2.68E-08	1.51E-22	1.96E-05	3.51E-06	0	0	0	0
C6H14O6	1.57E-04	1.57E-04	1.62E-04	8.26E-04	1.99E-19	5.08E-11	2.74E-25	4.37E-07	4.99E-08	0	0	0	0
ME-ACETA	0	0	0	0	0	0	0	0	0	0	0	0	0
ME-FORMIA	0	0	0	0	0	0	0	0	0	0	0	0	0
METHYLAL	0	0	0	0	0	317.1486	1375.818	4.077531	4.077531	1201.485	0.1921015	1058.669	142.8091
POLDME-2	0	0	0	0	0	0.1856764	0.1856764	0.0343355	0.0343355	2.96E-27	0.551957	0	0
POLDME-3	0	0	0	0	0	0	0	0	0	3.79E-27	106.9364	0	0
POLDME-4	0	0	0	0	0	0	0	0	0	0	0	0	0

Fig. 5

Table 3.

Mass Fraction	100	101	102	103	104	201	202	301	302	401	501	601	701
ETHANOL	0.0519374	0.0519387	0.0519387	0.051939	0.0519377	0.0664933	0.0252898	0.0249055	0.0249055	0.0266831	4.68E-03	1.76E-10	0.0788382
H2O	0.2422489	0.2422564	0.2424532	0.2532868	0.2703149	0.041516	0.0158062	0.9055797	0.9046015	3.13E-31	2.18E-14	0	0
FORMALD	5.09E-05	5.09E-05	5.19E-05	1.73E-04	0.1140194	1.77E-05	1.00E-03	7.45E-04	6.49E-05	5.22E-31	1.91E-14	0	0
METHANOL	0.459905	0.4599142	0.4594805	0.4363418	0.5199072	0.3967	0.1521057	0.0284598	0.0293988	0.2227689	2.69E-05	3.15E-04	0.6575795
CH4O2	0.0620915	0.0620891	0.0617024	0.0398449	1.30E-03	1.22E-04	3.33E-06	0.0215294	0.0242139	8.36E-31	6.90E-24	0	0
C2H6O3	0.0207635	0.0207643	0.0205625	0.010286	5.41E-18	7.94E-07	1.89E-21	1.10E-03	9.84E-04	0	0	0	0
C3H8O4	2.60E-03	2.60E-03	2.57E-03	1.15E-03	3.43E-19	2.78E-09	5.44E-24	4.56E-05	3.21E-05	0	0	0	0
C4H10O5	3.01E-04	3.01E-04	2.97E-04	1.17E-04	2.06E-20	8.94E-12	1.49E-26	1.74E-06	9.63E-07	0	0	0	0
C5H12O6	3.31E-05	3.31E-05	3.27E-05	1.15E-05	1.19E-21	2.74E-14	3.96E-29	6.32E-08	2.75E-08	0	0	0	0
C2H6O2	0.1560766	0.1560852	0.1568922	0.1995105	0.0425183	6.93E-03	6.42E-04	5.79E-03	4.01E-03	1.08E-30	5.94E-10	0	0
C3H8O3	3.82E-03	3.82E-03	3.87E-03	6.96E-03	6.44E-18	9.82E-06	2.05E-20	9.64E-05	4.26E-05	0	0	0	0
C4H10O4	1.40E-04	1.40E-04	1.43E-04	3.63E-04	2.22E-19	2.08E-08	4.49E-23	2.40E-06	6.76E-07	0	0	0	0
C5H12O5	4.78E-06	4.78E-06	4.90E-06	1.77E-05	6.81E-21	4.12E-11	8.82E-26	5.59E-08	1.00E-08	0	0	0	0
C6H14O6	1.57E-07	1.57E-07	1.62E-07	8.26E-07	1.99E-22	7.81E-14	1.60E-28	1.25E-09	1.42E-10	0	0	0	0
ME-ACETA	0	0	0	0	0	0	0	0	0	0	0	0	0
ME-FORMA	0	0	0	0	0	0	0	0	0	0	0	0	0
METHYLAL	0	0	0	0	0	0.4879241	0.805043	0.0116499	0.0116499	0.750548	1.78E-03	0.9996849	0.2635823
POLDME-2	0	0	0	0	0	2.86E-04	1.09E-04	9.81E-05	9.81E-05	1.85E-30	5.10E-03	0	0
POLDME-3	0	0	0	0	0	0	0	0	0	2.37E-30	0.9884205	0	0
POLDME-4	0	0	0	0	0	0	0	0	0	0	0	0	0

Fig. 6

Table 4.

	100	101	102	103	104	201	202	301	302	401	501	601	701
Total Flow lbmol/hr	33.07159	33.07159	33.07162	33.07567	36.86719	14.72762	28.70703	18.35134	18.34341	27.84582	0.804239	13.92283	13.92291
Total Flow lb/hr	1000	999.9747	999.9747	999.9686	999.9935	649.9958	1708.999	350.003	350.0031	1600.81	108.1892	1059.003	541.8008
Total Flow cuft/hr	17.81496	17.81495	17.81961	18.22397	11892.78	13.68805	12285.54	6.296713	5.892457	32.12392	0.3044073	4879.519	11.54194
Temperature F	80	80	80.55747	121.701	300	171.3337	230	230.4313	126.7039	126.1301	442.5029	115.822	153.081
Pressure psia	15	15	70	70	25	25	17	26	62	20	20	17	17
Vapor Frac	0	0	0	0	1	0	1	0	0	0	0	1	0
Liquid Frac	1	1	1	1	0	1	0	1	1	1	1	0	1
Solid Frac	0	0	0	0	0	0	0	0	0	0	0	0	0
Enthalpy Btu/lbmol	-1.23E+05	-1.23E+05	-1.23E+05	-1.22E+05	-89478.75	-1.21E+05	-1.25E+05	-1.21E+05	-1.23E+05	-1.35E+05	-3.66E+05	-1.49E+05	-1.10E+05
Enthalpy Btu/lb	-4064.78	-4064.882	-4064.268	-4027.895	-3298.851	-2731.264	-2095.846	-6320.062	-6424.051	-2354.916	-2723.037	-1957.448	-2823.565
Enthalpy Btu/hr	-4.06E+06	-4.06E+06	-4.06E+06	-4.03E+06	-3.30E+06	-1.78E+06	-3.58E+06	-2.21E+06	-2.25E+06	-3.77E+06	-2.95E+05	-2.07E+06	-1.53E+06
Entropy Btu/lbmol-R	-54.33645	-54.33632	-54.29037	-51.19703	-16.34701	-68.42007	-66.23787	-35.59681	-38.73861	-89.71354	-208.8921	-96.43142	-62.93232
Entropy Btu/lb-R	-1.796993	-1.797034	-1.795516	-1.693429	-0.6026722	-1.550263	-1.112635	-1.86641	-2.030263	-1.560552	-1.552828	-1.267794	-1.617202
Density lbmol/cuft	1.856394	1.856395	1.855911	1.814954	3.10E-03	1.075947	2.34E-03	2.914432	3.113033	0.8668252	2.641984	2.85E-03	1.206289
Density lb/cuft	56.13259	56.13121	56.11653	54.87107	0.0840841	47.48635	0.1391066	55.58503	59.39849	49.83235	355.4094	0.2170302	46.94192
Average MW	30.23744	30.23667	30.23664	30.23276	27.12421	44.13448	59.53243	19.07234	19.08059	57.48835	134.5237	76.06237	38.91434
Liq Vol 60F cuft/hr	17.92294	17.92291	17.91968	17.73777	18.89509	12.52655	32.41673	5.72116	5.725146	30.59671	1.602796	19.86928	10.72731
*** ALL PHASES ***													
Temperature F	80	80	80.55747	121.701	300	171.3337	230	230.4313	126.7039	126.1301	442.5029	115.822	153.081
*** VAPOR PHASE ***													
MUMX lb/ft-hr					0.0351747		0.0276147					0.021596	
MASSRHOM lb/cuft					0.0840841		0.1391066					0.2170302	
KMX Btu/hr-ft-F					0.0164133		0.0125253					8.53E-03	
Average MW					27.12421		59.53243					76.06237	
Enthalpy Btu/lb					-3298.851		-2095.846					-1957.448	
*** LIQUID_1 PHASE *													

Fig. 7