



NTNU  
Calgary, Alberta  
CANADA

Case Name: M:\5kl\Projekt\Hysys\1\_7 4P CO2 SC IC EXP\_LIQ.HSC

Unit Set: SI

Date/Time: Mon Dec 01 11:07:30 2003

## Workbook: Case (Main)

### Material Streams

Name	Dry feed gas	PCR	LCR	SCR	1
Vapour Fraction	1.0000	0.0000	1.0000	1.0000	0.0000
Temperature (C)	8.000	8.000 *	8.000	8.000	-7.000
Pressure (kPa)	7000 *	4830	1640 *	5300 *	4830
Molar Flow (kgmole/h)	4.628e+004	6.330e+004	2.083e+004	2.515e+004	4.729e+004
Mass Flow (kg/h)	8.000e+005 *	2.786e+006	6.200e+005 *	5.500e+005 *	2.081e+006
Liquid Volume Flow (m3/h)	2588	3375	1711	1579	2522
Heat Flow (kJ/h)	-3.619e+009	-2.572e+010	-1.815e+009	-1.881e+009	-1.931e+010
Name	2	4	5	6	7
Vapour Fraction	0.0000	0.1633	1.0000	1.0000	1.0000
Temperature (C)	8.000	-8.000 *	-7.000 *	-7.000	-7.000
Pressure (kPa)	4830	2759	7000	5300	1640
Molar Flow (kgmole/h)	4.729e+004	1.601e+004	4.628e+004	2.515e+004	2.083e+004
Mass Flow (kg/h)	2.081e+006	7.044e+005	8.000e+005	5.500e+005	6.200e+005
Liquid Volume Flow (m3/h)	2522	853.5	2588	1579	1711
Heat Flow (kJ/h)	-1.922e+010	-6.504e+009	-3.655e+009	-1.903e+009	-1.834e+009
Name	8	9	11	12	13
Vapour Fraction	0.0000	0.1127	1.0000	1.0000	1.0000
Temperature (C)	-22.00	-23.00 *	-10.03	4.943	8.000
Pressure (kPa)	4830	1750	1750	2759	2759
Molar Flow (kgmole/h)	2.349e+004	2.380e+004	2.380e+004	1.601e+004	4.729e+004
Mass Flow (kg/h)	1.034e+006	1.048e+006	1.048e+006	7.044e+005	2.081e+006
Liquid Volume Flow (m3/h)	1253	1269	1269	853.5	2522
Heat Flow (kJ/h)	-9.624e+009	-9.719e+009	-9.429e+009	-6.339e+009	-1.872e+010
Name	14	15	16	17	18
Vapour Fraction	1.0000	1.0000	1.0000	0.2461	1.0000
Temperature (C)	7.223	50.61	-22.00 *	-22.00	-22.00
Pressure (kPa)	2759	4830	7000	1640	5300
Molar Flow (kgmole/h)	6.330e+004	6.330e+004	4.628e+004	2.083e+004	2.515e+004
Mass Flow (kg/h)	2.786e+006	2.786e+006	8.000e+005	6.200e+005	5.500e+005
Liquid Volume Flow (m3/h)	3375	3375	2588	1711	1579
Heat Flow (kJ/h)	-2.506e+010	-2.499e+010	-3.694e+009	-2.024e+009	-1.928e+009
Name	19	3	10	20	21
Vapour Fraction	0.0000	0.0000	0.6633	1.0000	0.0000
Temperature (C)	8.000	-37.00	-37.00	-37.00 *	-7.000
Pressure (kPa)	4830	1640	5300	7000	4830
Molar Flow (kgmole/h)	1.601e+004 *	2.083e+004	2.515e+004	4.628e+004	2.380e+004 *
Mass Flow (kg/h)	7.044e+005	6.200e+005	5.500e+005	8.000e+005	1.048e+006
Liquid Volume Flow (m3/h)	853.5	1711	1579	2588	1269
Heat Flow (kJ/h)	-6.504e+009	-2.100e+009	-1.993e+009	-3.741e+009	-9.717e+009
Name	24	25	26	27	28
Vapour Fraction	0.0919	1.0000	1.0000	1.0000	1.0000
Temperature (C)	-38.00 *	-25.09	-1.136	8.000	14.59
Pressure (kPa)	1047	1047	1750	1750	1750
Molar Flow (kgmole/h)	1.465e+004	1.465e+004	4.729e+004	2.349e+004	2.349e+004
Mass Flow (kg/h)	6.449e+005	6.449e+005	2.081e+006	1.034e+006	1.034e+006
Liquid Volume Flow (m3/h)	781.4	781.4	2522	1253	1253
Heat Flow (kJ/h)	-6.006e+009	-5.807e+009	-1.871e+010	-9.286e+009	-9.279e+009
Name	29	30	22	23	31
Vapour Fraction	1.0000	0.0000	0.0000	0.0000	0.0000
Temperature (C)	31.39	-7.000	-23.79	-8.711	-22.00
Pressure (kPa)	2759	4830	1723 *	2749 *	4830
Molar Flow (kgmole/h)	4.729e+004	2.349e+004	1.465e+004	2.380e+004	1.465e+004 *
Mass Flow (kg/h)	2.081e+006	1.034e+006	6.449e+005	1.048e+006	6.449e+005
Liquid Volume Flow (m3/h)	2522	1253	781.4	1269	781.4
Heat Flow (kJ/h)	-1.867e+010	-9.589e+009	-6.006e+009	-9.719e+009	-6.004e+009



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## Workbook: Case (Main) (continued)

### Material Streams (continued)

	32	33	34	35	36
11 Name					
12 Vapour Fraction	0.0000	0.0000	1.0000	0.3986	0.0000
13 Temperature (C)	-37.00	-22.00	-50.00 *	-50.00	-50.00
14 Pressure (kPa)	4830	4830	7000	5300	1640
15 Molar Flow (kgmole/h)	8836 *	8836	4.628e+004	2.515e+004	2.083e+004
16 Mass Flow (kg/h)	3.889e+005	3.889e+005	8.000e+005	5.500e+005	6.200e+005
17 Liquid Volume Flow (m3/h)	471.2	471.2	2588	1579	1711
18 Heat Flow (kJ/h)	-3.632e+009	-3.620e+009	-3.797e+009	-2.042e+009	-2.123e+009
	37	38	39	41	42
19 Name					
20 Vapour Fraction	0.0700	1.0000	1.0000	1.0000	0.0000
21 Temperature (C)	-51.00 *	-40.05	-9.653	-19.29	-38.62
22 Pressure (kPa)	632.2	632.2	1047	1047	1031 *
23 Molar Flow (kgmole/h)	8836	8836	8836	2.349e+004	8836
24 Mass Flow (kg/h)	3.889e+005	3.889e+005	3.889e+005	1.034e+006	3.889e+005
25 Liquid Volume Flow (m3/h)	471.2	471.2	471.2	1253	471.2
26 Heat Flow (kJ/h)	-3.634e+009	-3.505e+009	-3.496e+009	-9.303e+009	-3.634e+009
	40				
27 Name					
28 Vapour Fraction	0.0000 *				
29 Temperature (C)	13.00				
30 Pressure (kPa)	4830				
31 Molar Flow (kgmole/h)	6.330e+004				
32 Mass Flow (kg/h)	2.786e+006				
33 Liquid Volume Flow (m3/h)	3375				
34 Heat Flow (kJ/h)	-2.567e+010				