

1	 NORWEGIAN UNIVERSITY OF Bedford, MA USA			Case Name: Oving4-v2.hsc		
2				Unit Set: NewUser		
3				Date/Time: Mon Feb 7 21:47:02 2022		
4						
5						
6	Workbook: Case (Main)					
7						
8						
9						
10	Material Streams				Fluid Pkg: All	
11	Name	1	20	2	3	5
12	Vapour Fraction	0.0000	1.0000	0.9295	0.9939	1.0000
13	Temperature (C)	37.78 *	37.78 *	46.82	110.2	223.9
14	Pressure (kPa)	3824 *	3824 *	3824	3756	3618 *
15	Molar Flow (kgmole/h)	169.4	665.3 *	2387	2387	1879 *
16	Mass Flow (kg/h)	1.323e+004	1598	2.166e+004	2.166e+004	2.166e+004
17	Liquid Volume Flow (m3/h)	15.00 *	19.65	84.72	84.72	73.30
18	Heat Flow (kJ/h)	8.798e+006	-1.129e+006	-4.615e+006	5.352e+006	-2.051e+007
19	Name	6	4	5V	5L	5A
20	Vapour Fraction	0.9824	1.0000	1.0000	0.0000	1.0000
21	Temperature (C)	115.0	148.9 *	223.9 *	223.9	223.9
22	Pressure (kPa)	3583	3721	3618	3618	3618
23	Molar Flow (kgmole/h)	1879	2387	1879	0.0000	1879
24	Mass Flow (kg/h)	2.166e+004	2.166e+004	2.166e+004	0.0000	2.166e+004
25	Liquid Volume Flow (m3/h)	73.30	84.72	73.30	0.0000	73.30
26	Heat Flow (kJ/h)	-3.048e+007	9.166e+006	-2.051e+007	-0.0000	-2.051e+007
27	Name	7	9	8	11	10
28	Vapour Fraction	0.9085	0.0000	1.0000	1.0000	1.0000
29	Temperature (C)	48.89 *	48.89	48.89	48.89	48.89
30	Pressure (kPa)	3549	3549	3549	3549	3549
31	Molar Flow (kgmole/h)	1879	172.0	1707	1552 *	155.0
32	Mass Flow (kg/h)	2.166e+004	1.413e+004	7533	6849	683.8
33	Liquid Volume Flow (m3/h)	73.30	18.20	55.10	50.09	5.002
34	Heat Flow (kJ/h)	-3.954e+007	-2.547e+007	-1.407e+007	-1.279e+007	-1.277e+006
35	Name	12	13			
36	Vapour Fraction	1.0000	1.0000			
37	Temperature (C)	57.79	57.80 *			
38	Pressure (kPa)	3824 *	3824 *			
39	Molar Flow (kgmole/h)	1552	1552 *			
40	Mass Flow (kg/h)	6849	6833			
41	Liquid Volume Flow (m3/h)	50.09	50.07			
42	Heat Flow (kJ/h)	-1.237e+007	-1.228e+007			
43						
44	Compositions				Fluid Pkg: All	
45	Name	1	20	2	3	5
46	Comp Mole Frac (Cyclohexane)	0.0000 *	0.0000 *	0.0079	0.0079	0.1002 *
47	Comp Mole Frac (Hydrogen)	0.0000 *	0.9725 *	0.8493	0.8493	0.8086 *
48	Comp Mole Frac (Benzene)	1.0000 *	0.0000 *	0.0710	0.0710	0.0001 *
49	Comp Mole Frac (Methane)	0.0000 *	0.0275 *	0.0717	0.0717	0.0911 *
50	Name	6	4	5V	5L	5A
51	Comp Mole Frac (Cyclohexane)	0.1002	0.0079	0.1002	0.1002	0.1002
52	Comp Mole Frac (Hydrogen)	0.8086	0.8493	0.8086	0.8086	0.8086
53	Comp Mole Frac (Benzene)	0.0001	0.0710	0.0001	0.0001	0.0001
54	Comp Mole Frac (Methane)	0.0911	0.0717	0.0911	0.0911	0.0911
55	Name	7	9	8	11	10
56	Comp Mole Frac (Cyclohexane)	0.1002	0.9733	0.0122	0.0122	0.0122
57	Comp Mole Frac (Hydrogen)	0.8086	0.0152	0.8885	0.8885	0.8885
58	Comp Mole Frac (Benzene)	0.0001	0.0009	0.0000	0.0000	0.0000
59	Comp Mole Frac (Methane)	0.0911	0.0106	0.0992	0.0992	0.0992
60	Name	12	13			
61	Comp Mole Frac (Cyclohexane)	0.0122	0.0122 *			
62	Comp Mole Frac (Hydrogen)	0.8885	0.8893 *			
63	Comp Mole Frac (Benzene)	0.0000	0.0000 *			
64	Comp Mole Frac (Methane)	0.0992	0.0985 *			
65						
66	Energy Streams				Fluid Pkg: All	
67	Name	Q-E-101	Q-CRV-100	Q-E-102	W-K-100	
68	Heat Flow (kJ/h)	3.814e+006	-2.968e+007	9.056e+006	4.234e+005	
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3			Date/Time: Mon Feb 7 21:47:02 2022			
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6	Workbook: Case (Main) (continued)					
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8						
9	Unit Ops					
10						
11	Operation Name	Operation Type	Feeds	Products	Ignored	Calc Level
12	MIX-100	Mixer	1	2	No	500.0 *
13			20			
14			13			
15	MIX-101	Mixer	5V	5A	No	500.0 *
16			5L			
17	E-100	Heat Exchanger	2	3	No	500.0 *
18			5	6		
19	E-101	Heater	3	4	No	500.0 *
20			Q-E-101			
21	CRV-100	Conversion Reactor	4	5L	No	500.0 *
22			Q-CRV-100	5V		
23				Q-CRV-100		
24	RCY-1	Recycle	5A	5	No	400.0 *
25	RCY-2	Recycle	12	13	No	400.0 *
26	E-102	Cooler	6	7	No	500.0 *
27				Q-E-102		
28	V-100	Separator	7	9	No	500.0 *
29				8		
30	TEE-100	Tee	8	11	No	500.0 *
31				10		
32	K-100	Compressor	11	12	No	500.0 *
33			W-K-100			
34	SPRDSHT-1	Spreadsheet			No	500.0 *
35	ADJ-2	Adjust			No	3500 *
36	ADJ-1	Adjust			No	3500 *
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