初期

---------- NET FLOW RATES ----------- HEATER

TRAY TEMP PRESSURE LIQUID VAPOR FEED PRODUCT DUTIES

DEG C MPAG KG-MOL/HR M\*WATT

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1/ 33 210.9 0.10 267.7 249.4L 74.5V

2/ 34 215.3 0.10 276.4 92.8

3/ 35 218.9 0.11 281.8 101.5

4/ 36 223.3 0.11 284.8 106.9

5/ 37 231.1 0.11 109.9 347.3P 347.3P 1.4207

174.9L

TRAY NET VAPOR RATES AND DENSITIES

--------------- RATES ---------------

TRAY MW ACTUAL DENS Z FROM NORMAL ACTUAL

KG/M3 DENSITY K\*KG/HR K\*M3/HR K\*M3/HR

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1 137.663 7.40159 0.93030 10.262 1.671 1.386

2 142.739 7.73666 0.92596 13.250 2.081 1.713

3 145.915 7.96895 0.92342 14.811 2.275 1.859

4 149.188 8.19331 0.92121 15.951 2.397 1.947

5 154.304 8.46284 0.91898 16.955 2.463 2.003

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TRAY NET LIQUID RATES AND DENSITIES

--------------- RATES ---------------

TRAY MW ACTUAL DENS Z FROM DRY STD LIQ ACTUAL

KG/M3 DENSITY K\*KG/HR M3/HR M3/HR

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1 158.810 623.821 0.01273 42.515 54.703 68.153

2 159.472 620.400 0.01290 44.076 56.676 71.045

3 160.453 618.148 0.01309 45.216 58.086 73.148

4 162.310 616.272 0.01332 46.220 59.265 74.999

5 167.340 614.724 0.01372 29.265 37.353 47.607

TRAY TRANSPORT PROPERTIES

TRAY - THERMAL CONDUCTIVITY - ------ VISCOSITY ------- -- SURFACE --

KCAL/HR-M-C CP TENSION

LIQUID VAPOR LIQUID VAPOR DYNE/CM

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1 6.9433E-02 2.3557E-02 1.9514E-01 9.0832E-03 1.0497E+01

2 6.8679E-02 2.3510E-02 1.9104E-01 9.0387E-03 1.0233E+01

3 6.8079E-02 2.3557E-02 1.8840E-01 9.0312E-03 1.0051E+01

4 6.7378E-02 2.3694E-02 1.8619E-01 9.0404E-03 9.8780E+00

5 6.6174E-02 2.4043E-02 1.8430E-01 9.0790E-03 9.6707E+00

末期

---------- NET FLOW RATES ----------- HEATER

TRAY TEMP PRESSURE LIQUID VAPOR FEED PRODUCT DUTIES

DEG C MPAG KG-MOL/HR M\*WATT

------ ------- -------- -------- -------- --------- --------- ------------

1/ 33 213.6 0.10 266.5 247.8L 73.3V

2/ 34 218.1 0.10 275.4 92.0

3/ 35 221.7 0.11 281.0 101.0

4/ 36 226.0 0.11 284.3 106.5

5/ 37 233.4 0.11 109.8 351.7P 351.7P 1.4154

174.5L

TRAY NET VAPOR RATES AND DENSITIES

--------------- RATES ---------------

TRAY MW ACTUAL DENS Z FROM NORMAL ACTUAL

KG/M3 DENSITY K\*KG/HR K\*M3/HR K\*M3/HR

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1 139.372 7.45643 0.92984 10.217 1.643 1.370

2 144.678 7.80289 0.92535 13.316 2.063 1.707

3 147.949 8.04045 0.92273 14.939 2.263 1.858

4 151.256 8.26783 0.92048 16.112 2.388 1.949

5 156.273 8.53975 0.91814 17.161 2.461 2.010

TRAY NET LIQUID RATES AND DENSITIES

--------------- RATES ---------------

TRAY MW ACTUAL DENS Z FROM DRY STD LIQ ACTUAL

KG/M3 DENSITY K\*KG/HR M3/HR M3/HR

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1 159.938 623.553 0.01276 42.626 54.732 68.359

2 160.642 620.066 0.01293 44.249 56.778 71.361

3 161.645 617.805 0.01312 45.422 58.226 73.521

4 163.462 615.927 0.01335 46.471 59.464 75.449

5 167.987 614.257 0.01372 29.310 37.348 47.716

TRAY TRANSPORT PROPERTIES

TRAY - THERMAL CONDUCTIVITY - ------ VISCOSITY ------- -- SURFACE --

KCAL/HR-M-C CP TENSION

LIQUID VAPOR LIQUID VAPOR DYNE/CM

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1 6.9060E-02 2.3679E-02 1.9430E-01 9.0974E-03 1.0429E+01

2 6.8289E-02 2.3618E-02 1.9016E-01 9.0501E-03 1.0161E+01

3 6.7687E-02 2.3660E-02 1.8752E-01 9.0417E-03 9.9782E+00

4 6.6998E-02 2.3788E-02 1.8531E-01 9.0499E-03 9.8067E+00

5 6.5869E-02 2.4101E-02 1.8328E-01 9.0834E-03 9.6004E+00