
Scheme-1 Reactor-2

Part-2, Case-1

*tend = 360 sec
k1 = 0.1, k2 = 0.01*

NBt/NAt = 1.29622

*Exponent a = 1
Exponent b = 1
Exponent c = 1
Exponent d = 1*

*WA = 200
WB = 64.8112
NBt = 3.4566
Vt = 2.13241
Tot.Solv. = 2
SolA/(SolR+SolA) = 0.5*

*CA0 = 1.25054
CB0 = 1.62098*

*Total input = 264.811 kg
Total output = 264.812 kg*

Chemical Balance Error = 0.000800245 kg (% 3.02195e-06)

*Solver: Explicit Runge-Kutta (4,5) Variable step (Dormand-Prince Pair)
Error tolerance: 0.1%*

Final Concentrations with Step Size limited to 0.01

*CA (final) = 0.0124973
CB (final) = 0.00765966
CR (final) = 0.862768
CS (final) = 0.375278*

*CA @ 180.0s = 0.0184542
CB @ 180.0s = 0.0477991
CR @ 180.0s = 0.890994
CS @ 180.0s = 0.341096*

Final Concentrations with Step Size limited to 0.1

*CA (final) = 0.0124973
CB (final) = 0.00765966
CR (final) = 0.862768
CS (final) = 0.375278*

