
Scheme-1 Reactor-2

Part-1, Case-2

*tend = 60 sec
k1 = 100, k2 = 10*

NBt/NA_t = 1.29113

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

*WA = 200
WB = 64.5564
NBt = 3.44301
Vt = 2.13228
Tot.Solv. = 2
SolA/(SolR+SolA) = 0.5*

*CA0 = 1.25062
CB0 = 1.61471*

*Total input = 264.556 kg
Total output = 264.557 kg*

Chemical Balance Error = 0.000802686 kg (% 3.03408e-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) = 0.0123553
CB (final) = 4.27775e-258
CR (final) = 0.861818
CS (final) = 0.376445*

*CA @ 30.0s = 0.0123553
CB @ 30.0s = 1.27339e-129
CR @ 30.0s = 0.861818
CS @ 30.0s = 0.376445*

Final Concentrations with Step Size limited to 0.1

*CA (final) = 0.0125
CB (final) = 4.19779e-258
CR (final) = 0.861528
CS (final) = 0.37659*

