
Scheme-2 Reactor-2

Part-2, Case-1

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

NBt/NA_t = 1.17971

*Exponent a = 1
Exponent b = 1
Exponent c = 1.5
Exponent d = 0.5*

*WA = 200
WB = 58.9855
NBt = 3.14589
Vt = 2.12949
Tot.Solv. = 2
SolA/(SolR+SolA) = 0.5*

*CA0 = 1.25225
CB0 = 1.4773*

*Total input = 258.985 kg
Total output = 258.986 kg*

Chemical Balance Error = 0.000437655 kg (% 1.68988e-06)

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

Final Concentrations with Step Size limited to 0.001

*CA (final) = 0.0125147
CB (final) = 0.032036
CR (final) = 1.03422
CS (final) = 0.205521*

*CA @ 180.0s = 0.0283017
CB @ 180.0s = 0.0657935
CR @ 180.0s = 1.0364
CS @ 180.0s = 0.18755*

Final Concentrations with Step Size limited to 0.01

*CA (final) = 0.0125147
CB (final) = 0.032036
CR (final) = 1.03422
CS (final) = 0.205521*

