
Scheme-2 Reactor-2

Part-3, Case-1

*tend = 360 sec
k1 = 0.1, k2 = 0.002*

NBt/NAt = 1.05828

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

*WA = 200
WB = 52.9139
NBt = 2.82207
Vt = 2.12646
Tot.Solv. = 2
SolA/(SolR+SolA) = 0.5*

*CA0 = 1.25404
CB0 = 1.32713*

*Total input = 252.914 kg
Total output = 252.914 kg*

Chemical Balance Error = 8.50838e-05 kg (% 3.36414e-07)

*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) = 0.0125368
CB (final) = 0.045608
CR (final) = 1.20149
CS (final) = 0.040012*

*CA @ 180.0s = 0.0345283
CB @ 180.0s = 0.0728894
CR @ 180.0s = 1.18479
CS @ 180.0s = 0.0347221*

Final Concentrations with Step Size limited to 0.01

*CA (final) = 0.0125368
CB (final) = 0.045608
CR (final) = 1.20149
CS (final) = 0.040012*

