
Scheme-2 Reactor-2

Part-1, Case-1

*tend = 6 sec
k1 = 100, k2 = 10*

NBt/NAt = 1.12995

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

*WA = 200
WB = 56.4973
NBt = 3.01319
Vt = 2.12825
Tot.Solv. = 2
SolA/(SolR+SolA) = 0.5*

*CA0 = 1.25299
CB0 = 1.41581*

*Total input = 256.497 kg
Total output = 256.498 kg*

Chemical Balance Error = 0.000373046 kg (% 1.45439e-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) = 0.0124662
CB (final) = 2.71227e-06
CR (final) = 1.06524
CS (final) = 0.175283*

*CA @ 3.0s = 0.0125902
CB @ 3.0s = 0.000134781
CR @ 3.0s = 1.06512
CS @ 3.0s = 0.175275*

Final Concentrations with Step Size limited to 0.01

*CA (final) = 0.0124808
CB (final) = 2.6928e-06
CR (final) = 1.06521
CS (final) = 0.175298*

