
Scheme-2 Reactor-2

Part-3, Case-2

*tend = 240 sec
k1 = 0.1, k2 = 0.002*

NBt/NAt = 1.09437

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

*WA = 200
WB = 54.7186
NBt = 2.91833
Vt = 2.12736
Tot.Solv. = 2
SolA/(SolR+SolA) = 0.5*

*CA0 = 1.25351
CB0 = 1.37181*

*Total input = 254.719 kg
Total output = 254.719 kg*

Chemical Balance Error = 9.49911e-05 kg (% 3.72926e-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) = 0.0125272
CB (final) = 0.086172
CR (final) = 1.19633
CS (final) = 0.0446521*

*CA @ 120.0s = 0.0421008
CB @ 120.0s = 0.12418
CR @ 120.0s = 1.17519
CS @ 120.0s = 0.0362182*

Final Concentrations with Step Size limited to 0.01

*CA (final) = 0.0125272
CB (final) = 0.086172
CR (final) = 1.19633
CS (final) = 0.0446521*

