
Scheme-1 Reactor-2

Part-3, Case-2

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

NBt/NAt = 1.11666

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

*WA = 200
WB = 55.8332
NBt = 2.97777
Vt = 2.12792
Tot.Solv. = 2
SolA/(SolR+SolA) = 0.5*

*CA0 = 1.25318
CB0 = 1.39938*

*Total input = 255.833 kg
Total output = 255.833 kg*

Chemical Balance Error = 0.000185582 kg (% 7.25401e-07)

*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) = 0.0125234
CB (final) = 0.0715129
CR (final) = 1.15345
CS (final) = 0.0872129*

*CA @ 120.0s = 0.0380135
CB @ 120.0s = 0.122671
CR @ 120.0s = 1.15362
CS @ 120.0s = 0.0615452*

Final Concentrations with Step Size limited to 0.1

*CA (final) = 0.0125234
CB (final) = 0.0715129
CR (final) = 1.15345
CS (final) = 0.0872129*

