
Scheme-8 Reactor-1

Part-2, Case-7

*ta = 100 sec, tm = 1200 sec
k1 = 0.1, k2 = 0.01*

NBt/NA_t = 1.24942

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

*WA = 200
WB = 62.4711
NB_t = 3.33179
V_t = 2.13124
V_{a_t} = 1.03124
Tot.Solv. = 2
SolA/(SolR+SolA) = 0.5*

*NA₀ = 2.66667
NB₀ = 0*

*Total input = 262.471 kg
Total output = 262.472 kg*

Chemical Balance Error = 0.000609903 kg (% 2.3237e-06)

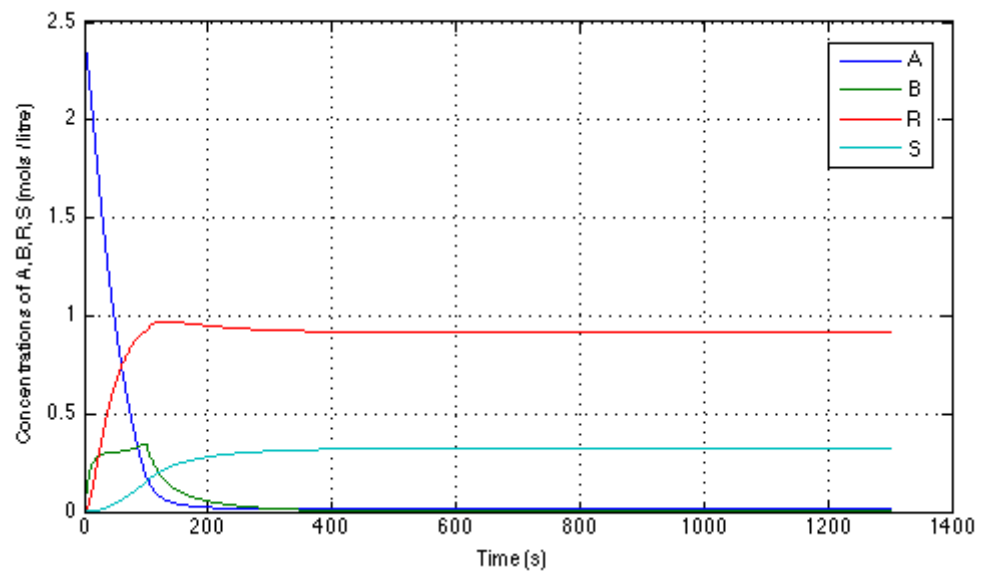
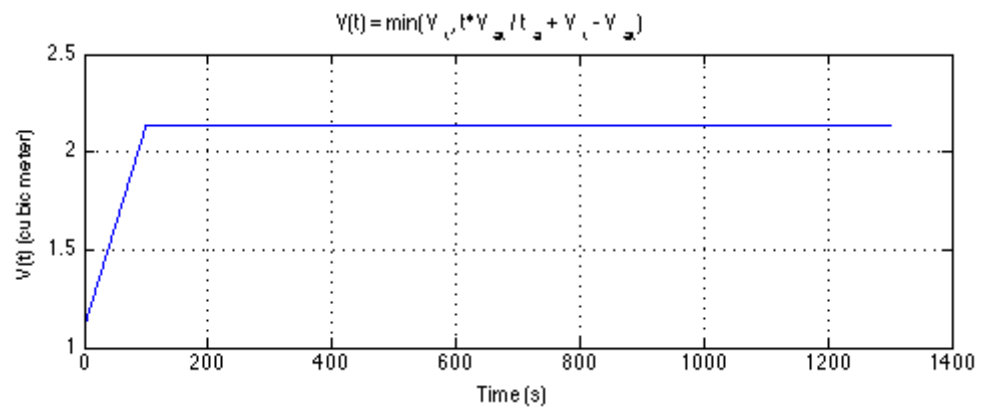
*Solver: Explicit Runge-Kutta (4,5) Variable step (Dormand-Prince Pair)
Error tolerance: 0.01%*

Final Concentrations with Step Size limited to 0.001

*NA (final) = 0.0265919
NB (final) = 2.85411e-06
NR (final) = 1.94836
NS (final) = 0.69171*

Final Concentrations with Step Size limited to 0.01

*NA (final) = 0.0266052
NB (final) = 2.85349e-06
NR (final) = 1.94838
NS (final) = 0.691684*



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