
Scheme-9 Reactor-1

Part-2, Case-7

*ta = 2400 sec, tm = 1200 sec
k1 = 0.1, k2 = 0.01*

NBt/NA_t = 1.16876

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

*WA = 200
WB = 58.4382
NB_t = 3.1167
V_t = 2.12922
V_{at} = 1.02922
Tot.Solv. = 2
SolA/(SolR+SolA) = 0.5*

*NA₀ = 2.66667
NB₀ = 0*

*Total input = 258.438 kg
Total output = 258.439 kg*

Chemical Balance Error = 0.000473531 kg (% 1.83228e-06)

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

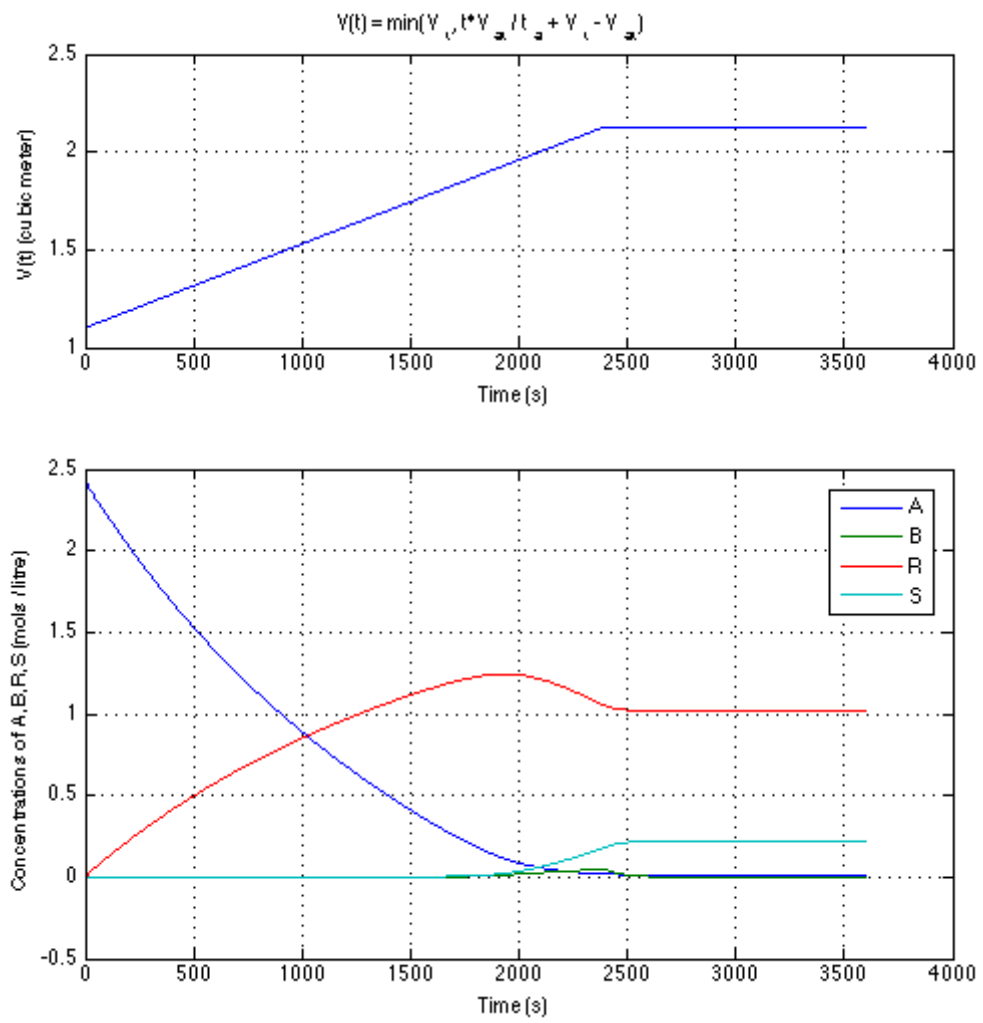
Final Concentrations with Step Size limited to 0.001

*NA (final) = 0.0266846
NB (final) = -3.93756e-15
NR (final) = 2.16326
NS (final) = 0.476719*

Final Concentrations with Step Size limited to 0.01

*NA (final) = 0.0266847
NB (final) = 3.94084e-13
NR (final) = 2.16326
NS (final) = 0.476718*

Time when NB (final) < 0: 2941.23s



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