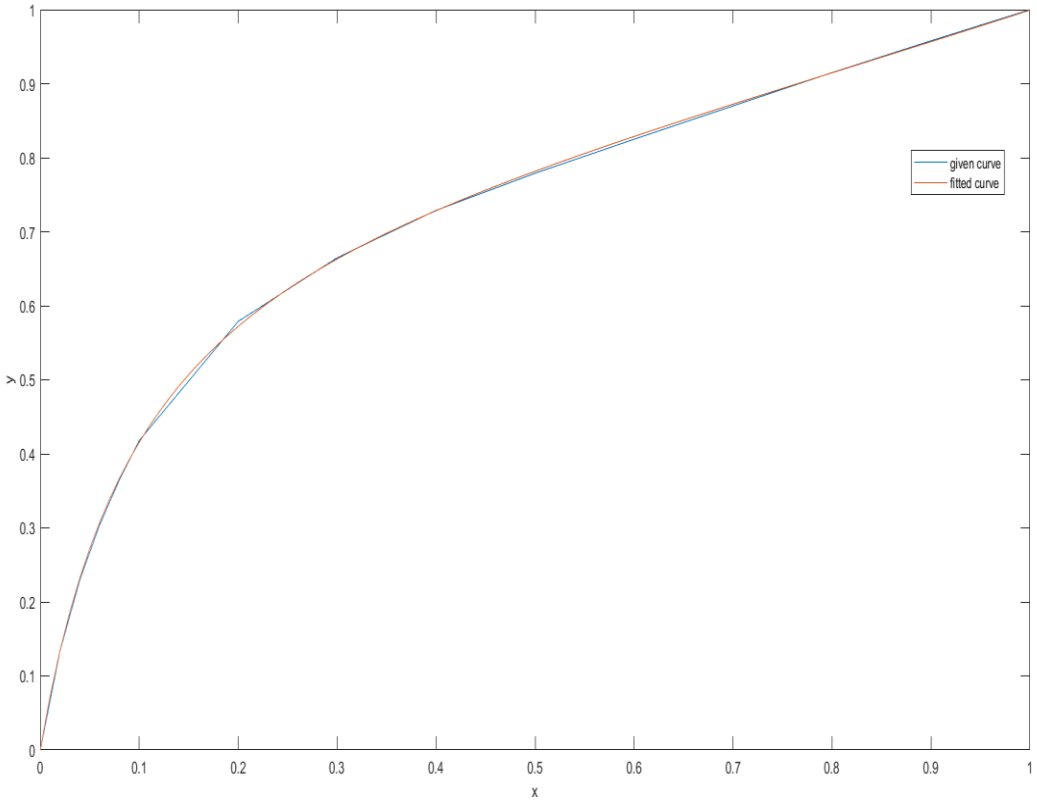
CHE213_SIMULATION LAB 4

210237

AVINASH YADAV

i) Fitted curve



ii) D=190.52 kmol/hr

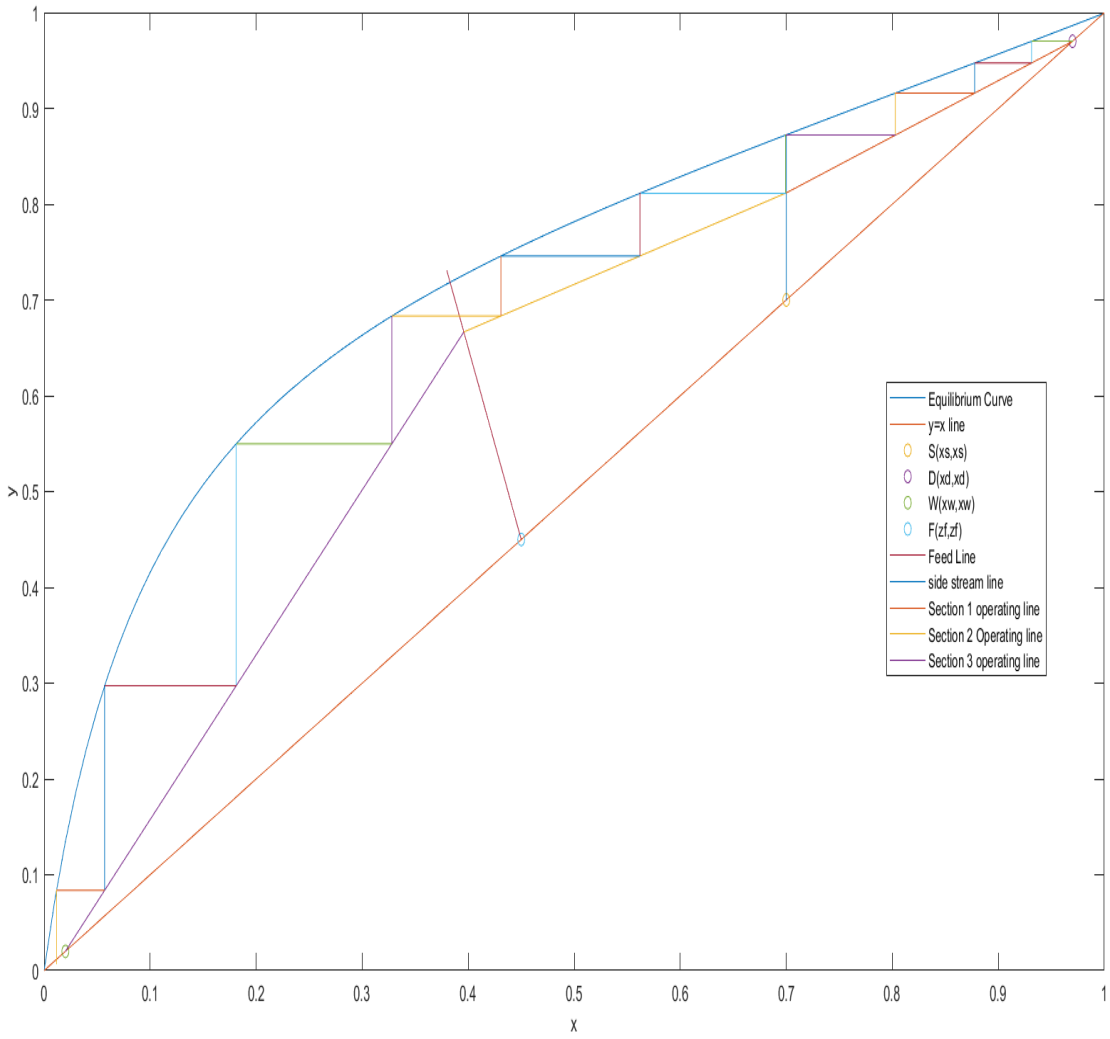
W=259.47 kmol/hr

vi) pinch point = (0.7,0.872)

minimum reflux ratio=0.556

actual reflux ratio=1.415

(ii, iii,iv,v,vii,viii)



(ii, iii,iv,v,vii,viii)

Equation of line and flow rate in different sections-

Section I – Condenser, reflux drum and all stages prior to the sidestream removal stage

V1=460.19 kmol/hr

L1=269.66 kmol/hr

y = 0.586x + 0.4

Section II – Sidestream stage and all stages prior to the feed stage

V2=460.19 kmol/hr

L2=219.66 kmol/hr

y = 0.477x + 0.48

Section III – Feed stage and all stages below along with the reboiler

V3=360.19 kmol/hr

L3=619.66 kmol/hr

y = 1.72x - 0.01

equation of feed line- y = -4x + 2.25

equation of stream line- x=0.7

ix) no. of ideal trays required=10

Feed tray=7

Tray from which sidestream withdrawn=4