steady state 1 steady state 2 initial OA FB(+DDF)OA FB(+DDF) 738279.6 objective 336157.3 339387.5 345112.66 345452.5 plant air flowrate 12431.2 12459.9 12234.5 12433.7 12459.9 CAC reflux location 6 16 16 15 16 CAC diameter 3.5 1.407 1.383 1.172 1.142 CRCAC reflux ratio 32 47.112 33.847 31.735 49.395 CRmain reflux ratio 5 4.425 4.038 4^a 4^a **HPC** reflux location 6 15 19 20 13 HPC column diameter 4 2.915 2.900 3.017 2.929

1861.67

3.942

value

1961.75

3.908

911.67

4.154

1092.78

4.242

LPC split air feed location 28 26 25 23 23 LPX oxygeb rich feed location 20 23 22 21 21 CAC reflux feed location 38 38 38 28 28 LPC reflux location 6 15 16 16 17 LPC Watse draw location 8 22 21 20 20 CAC side draw location 38 38 38 36 36 Waste flowrate 7439.883 7413.6724 7581.9365 8257.699 7160 CAC feed flowrate 730 665.17664 624.61566 959.4886 915.698

2430

5.5

HPC GN2 draw flowrate

LPC column diameter

variable

avariable at bound