```
#Raju-Newman 式による応力拡大係数評価 1
#case 1
k1 <- Raju_Newman()/1e6
k1
#case 2
K2 <- Raju_Newman(cc=0.01)/1e6
K2

#疲労き裂進展例題
k1 <- Raju_Newman()/1e6
k2 <- Raju_Newman(P=0.01e6)/1e6
dkA <- k1$KA-k2$KA
dkB <- k1$KB-k2$KB
dadN1(dK=dkA)*100
dadN1(dK=dkB)*100

#2 パラメータ法による健全性評価
a<-0.02; cc<-0.015;
res <- PlateR6(Su = 4.9e+08, Sy = 2.7e+08,a = a, cc = cc, t = 0.04, b = 0.1, P=2.7e6,M=0)
cat("Kr=",res[1],",Lr=",res[2])
cat("Safety Margin=",SafetyMargin(Kr=res[1],Lr=res[2]))
DrawR6(res[1],res[2],Su = 4.9e+08, Sy = 2.7e+08)

#次回検査時の健全性評価
a<-0.02; cc<-0.015;
for(i in 1:300000){
  Kmax<-Raju_Newman(a = a, cc = cc, t = 0.04, b = 0.1, P=8e5,M=0)
  da<-dadN1(R=0.0,dK=Kmax$KA/1e6)/1e3
  dc<-dadN1(R=0.0,dK=Kmax$KB/1e6)/1e3
  a<-a+da
  cc<-cc+dc
}
cat("a=",a,"2c=",cc*2)
#expected solution
#a= 0.03044039 2c= 0.07068406
res<-PlateR6(Su = 4.9e+08, Sy = 2.7e+08, a = a, cc = cc,  t = 0.04, b = 0.1, P=2.7e6, M = 0)
DrawR6(Kr=res[1],Lr=res[2],Su = 4.9e+08, Sy = 2.7e+08)
cat("Safety Margin=",SafetyMargin(Kr=res[1],Lr=res[2]))
```