

rpm=1750
pin=3,1416
g=9,81
r1=0,06
r2=0,12

alfa1=90
beta2=25
beta1=12

b1=0,030
b2=0,016

u1=r1*2*pin*rpm/60
u2=r2*2*pin*rpm/60

v1*cos(alfa1)+w1*cos(beta1)=u1
v1*sin(alfa1)=w1*sin(beta1)
w1*sin(beta1)=Q/(2*pin*r1*b1)

v2*cos(alfa2)+w2*cos(beta2)=u2
v2*sin(alfa2)=w2*sin(beta2)
w2*sin(beta2)=Q/(2*pin*r2*b2)

Htinf=(2*pin*rpm/60)*(r2*v2*cos(alfa2) - r1*v1*cos(alfa1))/g

Resultados

alfa1=90 [degrees]
alfa2=7,221 [degrees]
b1=0,03 [m]
b2=0,016 [m]
beta1=12 [degrees]
beta2=25 [degrees]
g=9,81 [m/s^2]
Htinf=38,76 [m]
pin=3,142 [dimensionless]
Q=0,02643 [m^3/s]
r1=0,06 [m]
r2=0,12 [m]
rpm=1750 [1/s]
u1=11 [m/s]
u2=21,99 [m/s]
v1=2,337 [m/s]
v2=17,43 [m/s]
w1=11,24 [m/s]
w2=5,185 [m/s]