EES Ver. 10.444: #0301: for use by Mechanical and Aerospace Engineering, Ohio State University - Columbus, OH

```
"Turbo"
"HW2 P2"
"Zhaoyi Jiang(.1364)"
```

## "Inlet"

p0=3.5[bar] t0=600[k] s0=entropy(*Air*,*P*=p0,*T*=t0) h0=enthalpy(*Air*,*T*=t0)

## "Exit"

p1=2[bar] h01=h0 s0=s1 t1=temperature(*Air*,*s*=s1,*P*=p1) h1=enthalpy(*Air*,*T*=t1) h01-h1=0.5\*v1^2\*convert(m,km)

## **SOLUTION**

## Unit Settings: SI K bar kJ mass deg

h0 = 607.3 [kj/kg] p0 = 3.5 [bar] s1 = 6.053 [kj/kg-k] v1 = 422.8 [m/s] h01 = 607.3 [kj/kg] p1 = 2 [bar] t0 = 600 [K] h1 = 518 [kj/kg] s0 = 6.053 [kj/kg-k] t1 = 514.2 [k]

No unit problems were detected.