```
This run of the CFX Release 19.0 Solver started at 19:06:17 on 05 Jun
2018 by user ltval on DESKTOP-JCG0747 (intel_xeon64.sse2_winnt) using
the command:

 "C:\Program Files\ANSYS Inc\v190\CFX\bin\perllib\cfx5solve.pl" -batch
   -ccl runInput.ccl -fullname "Fluid Flow CFX_002"

Release 19.0

 Point Releases and Patches installed:
 ANSYS, Inc. Products Release 19.0
 SpaceClaim Release 19.0
 AIM Release 19.0
 Autodyn Release 19.0
 LS-DYNA Release 19.0
 CFD-Post only Release 19.0
 CFX (includes CFD-Post) Release 19.0
 Chemkin Release 19.0
 EnSight Release 19.0
 FENSAP-ICE Release 19.0
 Fluent (includes CFD-Post) Release 19.0
 Forte Release 19.0
 Polyflow (includes CFD-Post) Release 19.0
 TurboGrid Release 19.0
 ICEM CFD Release 19.0
 Aqwa Release 19.0
 Customization Files for User Programmable Features Release 19.0
 Mechanical Products Release 19.0
 Icepak (includes CFD-Post) Release 19.0
 Remote Solve Manager Standalone Services Release 19.0
 Viewer Release 19.0
 ACIS Geometry Interface Release 19.0
 AutoCAD Geometry Interface Release 19.0
 Catia, Version 6 Geometry Interface Release 19.0
 Creo Elements/Direct Modeling Geometry Interface Release 19.0
 Creo Parametric Geometry Interface Release 19.0
 Inventor Geometry Interface Release 19.0
 JTOpen Geometry Interface Release 19.0
 NX Geometry Interface Release 19.0
 Parasolid Geometry Interface  Release 19.0
 Solid Edge Geometry Interface Release 19.0
 SOLIDWORKS Geometry Interface Release 19.0
 ANSYS, Inc. License Manager Release 19.0

Setting up CFX Solver run ...


+--------------------------------------------------------------------+
|                                                                    |
|                    CFX Command Language for Run                    |
|                                                                    |
+--------------------------------------------------------------------+

LIBRARY:
```

```
MATERIAL: Aluminium
  Material Group = CHT Solids, Particle Solids
  Option = Pure Substance
  Thermodynamic State = Solid
  PROPERTIES:
    Option = General Material
    EQUATION OF STATE:
      Density = 2702 [kg m^-3]
      Molar Mass = 26.98 [kg kmol^-1]
      Option = Value
    END
    SPECIFIC HEAT CAPACITY:
      Option = Value
      Specific Heat Capacity = 9.03E+02 [J kg^-1 K^-1]
    END
    REFERENCE STATE:
      Option = Specified Point
      Reference Specific Enthalpy = 0 [J/kg]
      Reference Specific Entropy = 0 [J/kg/K]
      Reference Temperature = 25 [C]
    END
    THERMAL CONDUCTIVITY:
      Option = Value
      Thermal Conductivity = 237 [W m^-1 K^-1]
    END
  END
END
MATERIAL: Water
  Material Description = Water (liquid)
  Material Group = Water Data, Constant Property Liquids
  Option = Pure Substance
  Thermodynamic State = Liquid
  PROPERTIES:
    Option = General Material
    EQUATION OF STATE:
      Density = 997.0 [kg m^-3]
      Molar Mass = 18.02 [kg kmol^-1]
      Option = Value
    END
    SPECIFIC HEAT CAPACITY:
      Option = Value
      Specific Heat Capacity = 4181.7 [J kg^-1 K^-1]
      Specific Heat Type = Constant Pressure
    END
    REFERENCE STATE:
      Option = Specified Point
      Reference Pressure = 1 [atm]
      Reference Specific Enthalpy = 0.0 [J/kg]
      Reference Specific Entropy = 0.0 [J/kg/K]
      Reference Temperature = 25 [C]
    END
    DYNAMIC VISCOSITY:
      Dynamic Viscosity = 8.899E-4 [kg m^-1 s^-1]
      Option = Value
```

```
      END
      THERMAL CONDUCTIVITY:
        Option = Value
        Thermal Conductivity = 0.6069 [W m^-1 K^-1]
      END
      ABSORPTION COEFFICIENT:
        Absorption Coefficient = 1.0 [m^-1]
        Option = Value
      END
      SCATTERING COEFFICIENT:
        Option = Value
        Scattering Coefficient = 0.0 [m^-1]
      END
      REFRACTIVE INDEX:
        Option = Value
        Refractive Index = 1.0 [m m^-1]
      END
      THERMAL EXPANSIVITY:
        Option = Value
        Thermal Expansivity = 2.57E-04 [K^-1]
      END
    END
  END
END
FLOW: Flow Analysis 1
  SOLUTION UNITS:
    Angle Units = [rad]
    Length Units = [m]
    Mass Units = [kg]
    Solid Angle Units = [sr]
    Temperature Units = [K]
    Time Units = [s]
  END
  ANALYSIS TYPE:
    Option = Steady State
    EXTERNAL SOLVER COUPLING:
      Option = None
    END
  END
  DOMAIN: fluid
    Coord Frame = Coord 0
    Domain Type = Fluid
    Location = B440
    BOUNDARY: Default Fluid Solid Interface Side 1
      Boundary Type = INTERFACE
      Location = \

F444.440,F445.440,F446.440,F447.440,F448.440,F449.440,F450.440,F451.4\

40,F452.440,F453.440,F454.440,F455.440,F456.440,F457.440,F458.440,F45\

9.440,F460.440,F461.440,F462.440,F463.440,F464.440,F465.440,F466.440,\

F467.440,F468.440,F469.440,F470.440,F471.440,F472.440,F473.440,F474.4\
```

```
40,F475.440,F476.440,F477.440,F478.440,F479.440,F480.440,F481.440,F48\

2.440,F483.440,F484.440,F485.440,F486.440,F487.440,F488.440,F489.440,\

F490.440,F491.440,F492.440,F493.440,F494.440,F495.440,F496.440,F497.4\
         40,F498.440,F499.440,F500.440
       BOUNDARY CONDITIONS:
         MASS AND MOMENTUM:
           Option = No Slip Wall
         END
         WALL ROUGHNESS:
           Option = Smooth Wall
         END
       END
     END
     BOUNDARY: fluid Default
       Boundary Type = WALL
       Location = F441.440
       BOUNDARY CONDITIONS:
         MASS AND MOMENTUM:
           Option = No Slip Wall
         END
         WALL ROUGHNESS:
           Option = Smooth Wall
         END
       END
     END
     BOUNDARY: intlet
       Boundary Type = INLET
       Location = F443.440
       BOUNDARY CONDITIONS:
         FLOW REGIME:
           Option = Subsonic
         END
         MASS AND MOMENTUM:
           Normal Speed = 50 [m s^-1]
           Option = Normal Speed
         END
         TURBULENCE:
           Option = Medium Intensity and Eddy Viscosity Ratio
         END
       END
     END
     BOUNDARY: outlet
       Boundary Type = OUTLET
       Location = F442.440
       BOUNDARY CONDITIONS:
         FLOW REGIME:
           Option = Subsonic
         END
         MASS AND MOMENTUM:
           Normal Speed = 40 [m s^-1]
           Option = Normal Speed
```

```
        END
      END
    END
    DOMAIN MODELS:
      BUOYANCY MODEL:
        Option = Non Buoyant
      END
      DOMAIN MOTION:
        Option = Stationary
      END
      MESH DEFORMATION:
        Option = None
      END
      REFERENCE PRESSURE:
        Reference Pressure = 1 [atm]
      END
    END
    FLUID DEFINITION: Fluid 1
      Material = Water
      Option = Material Library
      MORPHOLOGY:
        Option = Continuous Fluid
      END
    END
    FLUID MODELS:
      COMBUSTION MODEL:
        Option = None
      END
      HEAT TRANSFER MODEL:
        Fluid Temperature = 25 [C]
        Option = Isothermal
      END
      THERMAL RADIATION MODEL:
        Option = None
      END
      TURBULENCE MODEL:
        Option = k epsilon
      END
      TURBULENT WALL FUNCTIONS:
        Option = Scalable
      END
    END
  END
  DOMAIN: turbine
    Coord Frame = Coord 0
    Domain Type = Solid
    Location = B156
    BOUNDARY: Default Fluid Solid Interface Side 2
      Boundary Type = INTERFACE
      Location = \

F147.156,F148.156,F149.156,F150.156,F151.156,F152.156,F153.156,F154.1\

56,F155.156,F157.156,F158.156,F159.156,F160.156,F161.156,F162.156,F16\
```

```
3.156,F164.156,F165.156,F166.156,F167.156,F168.156,F169.156,F170.156,\

F171.156,F172.156,F173.156,F174.156,F175.156,F176.156,F177.156,F178.1\

56,F179.156,F180.156,F181.156,F182.156,F183.156,F184.156,F185.156,F18\

6.156,F187.156,F188.156,F189.156,F190.156,F191.156,F192.156,F193.156,\

F194.156,F195.156,F196.156,F197.156,F198.156,F199.156,F200.156,F201.1\
         56,F202.156,F203.156,F204.156
       BOUNDARY CONDITIONS:
         HEAT TRANSFER:
           Option = Adiabatic
         END
       END
     END
     DOMAIN MODELS:
       DOMAIN MOTION:
         Angular Velocity = 150 [rev min^-1]
         Option = Rotating
         AXIS DEFINITION:
           Option = Coordinate Axis
           Rotation Axis = Coord 0.2
         END
       END
       MESH DEFORMATION:
         Option = None
       END
     END
     SOLID DEFINITION: Solid 1
       Material = Aluminium
       Option = Material Library
       MORPHOLOGY:
         Option = Continuous Solid
       END
     END
     SOLID MODELS:
       HEAT TRANSFER MODEL:
         Option = Thermal Energy
       END
       THERMAL RADIATION MODEL:
         Option = None
       END
     END
   END
   DOMAIN INTERFACE: Default Fluid Solid Interface
     Boundary List1 = Default Fluid Solid Interface Side 1
     Boundary List2 = Default Fluid Solid Interface Side 2
     Interface Type = Fluid Solid
     INTERFACE MODELS:
       Option = General Connection
       FRAME CHANGE:
         Option = None
```

```
      END
      PITCH CHANGE:
        Option = None
      END
    END
    MESH CONNECTION:
      Option = Automatic
    END
  END
  OUTPUT CONTROL:
    RESULTS:
      File Compression Level = Default
      Option = Standard
    END
  END
  SOLVER CONTROL:
    Turbulence Numerics = First Order
    ADVECTION SCHEME:
      Option = High Resolution
    END
    CONVERGENCE CONTROL:
      Length Scale Option = Conservative
      Maximum Number of Iterations = 100
      Minimum Number of Iterations = 1
      Solid Timescale Control = Auto Timescale
      Timescale Control = Auto Timescale
      Timescale Factor = 1.0
    END
    CONVERGENCE CRITERIA:
      Residual Target = 1.E-4
      Residual Type = RMS
    END
    DYNAMIC MODEL CONTROL:
      Global Dynamic Model Control = On
    END
  END
END
COMMAND FILE:
  Version = 19.0
  Results Version = 19.0
END
SIMULATION CONTROL:
  EXECUTION CONTROL:
    EXECUTABLE SELECTION:
      Double Precision = No
      Large Problem = No
    END
    INTERPOLATOR STEP CONTROL:
      Runtime Priority = Standard
      MEMORY CONTROL:
        Memory Allocation Factor = 1.0
      END
    END
    PARALLEL HOST LIBRARY:
```

```
      HOST DEFINITION: desktopjcg0747
        Remote Host Name = DESKTOP-JCG0747
        Host Architecture String = winnt-amd64
        Installation Root = C:\Program Files\ANSYS Inc\v%v\CFX
      END
    END
    PARTITIONER STEP CONTROL:
      Multidomain Option = Automatic
      Runtime Priority = Standard
      MEMORY CONTROL:
        Memory Allocation Factor = 1.0
      END
      PARTITION SMOOTHING:
        Maximum Partition Smoothing Sweeps = 100
        Option = Smooth
      END
      PARTITIONING TYPE:
        MeTiS Type = k-way
        Option = MeTiS
        Partition Size Rule = Automatic
      END
    END
    RUN DEFINITION:
      Run Mode = Full
      Solver Input File = Fluid Flow CFX_001.res
      Solver Results File = \

C:/Users/ltval/Documents/simulacion_ok_pending/dp0_CFX_Solution/Flui\
        d Flow CFX_002.res
    END
    SOLVER STEP CONTROL:
      Runtime Priority = Standard
      MEMORY CONTROL:
        Memory Allocation Factor = 1.0
      END
      PARALLEL ENVIRONMENT:
        Number of Processes = 1
        Start Method = Serial
      END
    END
  END
END


 +--------------------------------------------------------------------+
 |                                                                    |
 |                              Solver                                |
 |                                                                    |
 +--------------------------------------------------------------------+



 +--------------------------------------------------------------------+
```

```
|                                                                      |
|                       ANSYS(R) CFX(R) Solver                         |
|                                                                      |
| Release 19.0                                                         |
| Build 19.0 2017-12-04T23:36:28.623000                                |
| Mon Dec  4 23:54:46 GMTST 2017                                       |
|                                                                      |
|                         Executable Attributes                        |
|                                                                      |
|           single-64bit-int32-archfort-optimised-std-lcomp            |
|                                                                      |
| (C) 1996-2017 ANSYS, Inc.                                            |
|                                                                      |
| All rights reserved. Unauthorized use, distribution or duplication   |
| is prohibited. This product is subject to U.S. laws governing        |
| export and re-export. For full Legal Notice, see documentation.      |
+----------------------------------------------------------------------+



+----------------------------------------------------------------------+
|                   Job Information at Start of Run                    |
+----------------------------------------------------------------------+

Run mode:       serial run

Host computer:  DESKTOP-JCG0747 (PID:12704)

Job started:    Tue Jun 05 19:06:40 2018

+----------------------------------------------------------------------+
|                         License Information                          |
+----------------------------------------------------------------------+

License Cap:    ANSYS CFX Solver (Max 512K Nodes)
License ID:     DESKTOP-JCG0747-SYSTEM-2620-023876

INFO: Your license enables 4-way parallel execution.
      For faster simulations, please start the application with the
      appropriate parallel options.


+----------------------------------------------------------------------+
|        Memory Allocated for Run  (Actual usage may be less)          |
+----------------------------------------------------------------------+

          | Real       | Integer    | Character | Logical  | Double
----------+------------+------------+-----------+----------+----------
Mwords    |     105.47 |      71.79 |      7.35 |     0.12 |     0.61
Mbytes    |     402.35 |     273.87 |      7.01 |     0.46 |     4.64
----------+------------+------------+-----------+----------+----------
```

Host Memory Information (Mbytes)			
Host	System	Allocated	%
DESKTOP-JCG0747	3950.11	688.33	17.43

Topology Simplification

****** Warning ******

Topology simplification is activated with the following restrictions:

- Mesh regions referenced only within User Fortran and NOT in the command file will cause the solver to stop.
- The solver will stop during any "Edit Run in Progress" step if new 2D regions are referenced.

Mesh Statistics

Domain Name	Orthog. Angle	Exp. Factor	Aspect Ratio
	Minimum [deg]	Maximum	Maximum
fluid	45.6 ok	32 !	7 OK
turbine	9.1 !	192 !	24 OK
Global	9.1 !	192 !	24 OK

	%!	%ok	%OK	%!	%ok	%OK	%!	%ok	%OK
fluid	0	<1	100	<1	4	96	0	0	100
turbine	<1	1	99	<1	3	97	0	0	100
Global	<1	<1	100	<1	4	96	0	0	100

Domain Name : fluid

Total Number of Nodes = 193981

Total Number of Elements = 1079714
Total Number of Tetrahedrons = 1079714

Total Number of Faces = 53554

Domain Name : turbine

Total Number of Nodes = 64273

```
    Total Number of Elements                                =      306068
        Total Number of Tetrahedrons                        =      306068

    Total Number of Faces                                   =       49770

Global Statistics :

    Global Number of Nodes                                  =      258254

    Global Number of Elements                               =     1385782
        Total Number of Tetrahedrons                        =     1385782

    Global Number of Faces                                  =      103324

Domain Interface Name : Default Fluid Solid Interface

    Discretization type                                     =         GGI
    Intersection type                                       =   Restarted
    Non-overlap area fraction on side 1                     =    1.01E-03
    Non-overlap area fraction on side 2                     =    1.09E-03

+--------------------------------------------------------------------+
|                  Reference Pressure Information                    |
+--------------------------------------------------------------------+

Domain Group: fluid

  Pressure has not been set at any boundary conditions.
  The pressure will be set to  0.00000E+00 at the following location:
  Domain      : fluid
  Node        :        1 (equation         1)
  Coordinates : ( 5.68763E-02,-2.40940E-02,-5.04364E-02).

+--------------------------------------------------------------------+
|      Initial Conditions Supplied by Fields in the Input Files      |
+--------------------------------------------------------------------+

Domain Name : fluid
    Absolute Pressure
    Courant Number
    Eddy Viscosity
    Pressure
    Pressure.Gradient
    Rotation Velocity
    Shear Strain Rate
    Specific Heat Capacity at Constant Pressure
    Specific Volume
    Static Enthalpy
    Static Entropy
    Total Pressure
    Turbulence Eddy Dissipation
    Turbulence Eddy Frequency
    Turbulence Kinetic Energy
```

```
    Velocity
    Velocity.Beta
    Velocity.Gradient
    Volume Porosity

Domain Name : turbine
    Specific Heat Capacity at Constant Pressure
    Specific Volume
    Static Enthalpy
    Static Entropy
    Temperature

+--------------------------------------------------------------------+
|                     Average Scale Information                      |
+--------------------------------------------------------------------+

Domain Name : fluid
    Global Length                                        = 2.4905E-01
    Minimum Extent                                       = 2.5665E-01
    Maximum Extent                                       = 3.0926E-01
    Density                                              = 9.9700E+02
    Dynamic Viscosity                                    = 8.8990E-04
    Velocity                                             = 5.6148E+01
    Advection Time                                       = 4.4356E-03
    Reynolds Number                                      = 1.5667E+07

Domain Name : turbine
    Global Length                                        = 7.9921E-02
    Minimum Extent                                       = 1.8397E-01
    Maximum Extent                                       = 2.4926E-01
    Density                                              = 2.7020E+03
    Thermal Conductivity                                 = 2.3700E+02
    Specific Heat Capacity at Constant Pressure          = 9.0300E+02
    Thermal Diffusivity                                  = 9.7135E-05
    Average Diffusion Timescale                          = 6.5758E+01
    Minimum Diffusion Timescale                          = 3.4844E+02
    Maximum Diffusion Timescale                          = 6.3961E+02
    Temperature Range                                    = 8.5449E-04

+--------------------------------------------------------------------+
|                Checking for Isolated Fluid Regions                 |
+--------------------------------------------------------------------+

No isolated fluid regions were found.

+--------------------------------------------------------------------+
|              The Equations Solved in This Calculation              |
+--------------------------------------------------------------------+

Equations are given two labels: the individual name and a combined
name used for combining residuals together.  Residuals for multidomain
problems are combined provided the domains are connected together and
have the same domain type (solid or fluid/porous).  If there are
multiple groups of the same domain type, then the group residual is
```

identified by the name of the first domain in the connected group.

The individual and combined equation names are given below.

Subsystem : Momentum and Mass

```
  U-Mom-fluid                                --> U-Mom
  V-Mom-fluid                                --> V-Mom
  W-Mom-fluid                                --> W-Mom
  P-Mass-fluid                               --> P-Mass
```

Subsystem : Heat Transfer

```
  T-Energy-turbine                           --> T-Energy
```

Subsystem : TurbKE and Diss.K

```
  K-TurbKE-fluid                             --> K-TurbKE
  E-Diss.K-fluid                             --> E-Diss.K
```

CFD Solver started: Tue Jun 05 19:07:22 2018

+--+
| Convergence History |
+--+

Timescale Information

Equation	Type	Timescale
U-Mom-fluid	Auto Timescale	1.41839E-03
V-Mom-fluid	Auto Timescale	1.41839E-03
W-Mom-fluid	Auto Timescale	1.41839E-03
T-Energy-turbine	Auto Timescale	6.57581E+01
K-TurbKE-fluid	Auto Timescale	1.41839E-03
E-Diss.K-fluid	Auto Timescale	1.41839E-03

OUTER LOOP ITERATION = 101 (1) CPU SECONDS = 4.251E+03 (4.392E+01)

Equation	Rate	RMS Res	Max Res		Linear Solution	
U-Mom	0.98	1.4E-04	5.6E-03		9.8E-01	ok
V-Mom	0.97	1.8E-04	8.4E-03		9.7E-01	ok
W-Mom	0.99	1.4E-04	6.8E-03		9.9E-01	ok
P-Mass	1.00	9.3E-05	4.7E-04	16.0	1.0E+00	ok
T-Energy	1.00	1.4E-06	1.0E-05	5.3	9.5E-03	OK

```
| K-TurbKE              | 0.94 | 3.6E-04 | 2.7E-02 |  5.5  5.4E-03  OK|
| E-Diss.K              | 0.96 | 3.3E-05 | 1.8E-03 |  7.4  2.7E-03  OK|
+-----------------------+------+---------+---------+------------------+

=======================================================================
OUTER LOOP ITERATION =  102 (    2) CPU SECONDS = 4.302E+03 (9.473E+01)
-----------------------------------------------------------------------
|       Equation        | Rate | RMS Res | Max Res |  Linear Solution |
+-----------------------+------+---------+---------+------------------+
| U-Mom                 | 0.98 | 1.4E-04 | 5.6E-03 |       9.8E-01  ok|
| V-Mom                 | 0.98 | 1.7E-04 | 1.1E-02 |       9.7E-01  ok|
| W-Mom                 | 0.98 | 1.4E-04 | 7.3E-03 |       9.9E-01  ok|
| P-Mass                | 1.00 | 9.3E-05 | 4.6E-04 | 16.0  1.0E+00  ok|
+-----------------------+------+---------+---------+------------------+
| T-Energy              | 1.00 | 1.4E-06 | 1.2E-05 |  5.3  9.2E-03  OK|
+-----------------------+------+---------+---------+------------------+
| K-TurbKE              | 0.93 | 3.3E-04 | 2.4E-02 |  5.5  5.6E-03  OK|
| E-Diss.K              | 0.96 | 3.2E-05 | 1.8E-03 |  7.4  2.4E-03  OK|
+-----------------------+------+---------+---------+------------------+

=======================================================================
OUTER LOOP ITERATION =  103 (    3) CPU SECONDS = 4.347E+03 (1.399E+02)
-----------------------------------------------------------------------
|       Equation        | Rate | RMS Res | Max Res |  Linear Solution |
+-----------------------+------+---------+---------+------------------+
| U-Mom                 | 0.98 | 1.4E-04 | 7.8E-03 |       9.9E-01  ok|
| V-Mom                 | 0.97 | 1.7E-04 | 1.0E-02 |       9.8E-01  ok|
| W-Mom                 | 0.98 | 1.4E-04 | 6.4E-03 |       9.9E-01  ok|
| P-Mass                | 1.00 | 9.3E-05 | 4.3E-04 | 16.0  1.0E+00  ok|
+-----------------------+------+---------+---------+------------------+
| T-Energy              | 1.00 | 1.4E-06 | 9.2E-06 |  5.3  9.4E-03  OK|
+-----------------------+------+---------+---------+------------------+
| K-TurbKE              | 0.92 | 3.1E-04 | 2.2E-02 |  5.5  5.5E-03  OK|
| E-Diss.K              | 0.95 | 3.0E-05 | 1.7E-03 |  7.4  2.4E-03  OK|
+-----------------------+------+---------+---------+------------------+

=======================================================================
OUTER LOOP ITERATION =  104 (    4) CPU SECONDS = 4.393E+03 (1.859E+02)
-----------------------------------------------------------------------
|       Equation        | Rate | RMS Res | Max Res |  Linear Solution |
+-----------------------+------+---------+---------+------------------+
| U-Mom                 | 0.98 | 1.4E-04 | 9.0E-03 |       9.9E-01  ok|
| V-Mom                 | 0.96 | 1.6E-04 | 7.8E-03 |       9.8E-01  ok|
| W-Mom                 | 0.98 | 1.3E-04 | 5.1E-03 |       9.9E-01  ok|
| P-Mass                | 1.00 | 9.3E-05 | 4.2E-04 | 16.0  1.0E+00  ok|
+-----------------------+------+---------+---------+------------------+
| T-Energy              | 1.00 | 1.4E-06 | 1.2E-05 |  5.3  9.1E-03  OK|
+-----------------------+------+---------+---------+------------------+
| K-TurbKE              | 0.91 | 2.8E-04 | 1.8E-02 |  5.5  5.5E-03  OK|
| E-Diss.K              | 0.92 | 2.8E-05 | 1.6E-03 |  7.4  2.6E-03  OK|
+-----------------------+------+---------+---------+------------------+

=======================================================================
OUTER LOOP ITERATION =  105 (    5) CPU SECONDS = 4.433E+03 (2.251E+02)
```

```
------------------------------------------------------------------------
|       Equation       | Rate | RMS Res | Max Res |  Linear Solution |
+----------------------+------+---------+---------+------------------+
| U-Mom                | 0.97 | 1.3E-04 | 5.2E-03 |       9.9E-01  ok|
| V-Mom                | 0.97 | 1.6E-04 | 8.3E-03 |       9.8E-01  ok|
| W-Mom                | 0.98 | 1.3E-04 | 4.2E-03 |       9.9E-01  ok|
| P-Mass               | 1.00 | 9.3E-05 | 4.1E-04 | 16.0  1.0E+00  ok|
+----------------------+------+---------+---------+------------------+
| T-Energy             | 1.00 | 1.4E-06 | 1.0E-05 |  5.3  9.3E-03  OK|
+----------------------+------+---------+---------+------------------+
| K-TurbKE             | 0.92 | 2.5E-04 | 1.5E-02 |  5.5  5.5E-03  OK|
| E-Diss.K             | 0.90 | 2.5E-05 | 1.4E-03 |  7.4  2.7E-03  OK|
+----------------------+------+---------+---------+------------------+

========================================================================
|                        Timescale Information                         |
------------------------------------------------------------------------
|       Equation       |         Type          |      Timescale       |
+----------------------+-----------------------+----------------------+
| U-Mom-fluid          | Auto Timescale        |     1.41830E-03      |
| V-Mom-fluid          | Auto Timescale        |     1.41830E-03      |
| W-Mom-fluid          | Auto Timescale        |     1.41830E-03      |
+----------------------+-----------------------+----------------------+
| T-Energy-turbine     | Auto Timescale        |     6.57581E+01      |
+----------------------+-----------------------+----------------------+
| K-TurbKE-fluid       | Auto Timescale        |     1.41830E-03      |
| E-Diss.K-fluid       | Auto Timescale        |     1.41830E-03      |
+----------------------+-----------------------+----------------------+

========================================================================
OUTER LOOP ITERATION =  106 (    6) CPU SECONDS = 4.471E+03 (2.634E+02)
------------------------------------------------------------------------
|       Equation       | Rate | RMS Res | Max Res |  Linear Solution |
+----------------------+------+---------+---------+------------------+
| U-Mom                | 0.98 | 1.3E-04 | 4.4E-03 |       9.9E-01  ok|
| V-Mom                | 0.98 | 1.5E-04 | 9.2E-03 |       9.8E-01  ok|
| W-Mom                | 0.98 | 1.3E-04 | 4.0E-03 |       9.9E-01  ok|
| P-Mass               | 1.00 | 9.3E-05 | 4.0E-04 | 16.0  1.0E+00  ok|
+----------------------+------+---------+---------+------------------+
| T-Energy             | 1.00 | 1.4E-06 | 1.2E-05 |  5.3  9.1E-03  OK|
+----------------------+------+---------+---------+------------------+
| K-TurbKE             | 0.93 | 2.4E-04 | 1.5E-02 |  5.5  5.2E-03  OK|
| E-Diss.K             | 0.87 | 2.2E-05 | 1.2E-03 |  7.4  2.8E-03  OK|
+----------------------+------+---------+---------+------------------+

========================================================================
OUTER LOOP ITERATION =  107 (    7) CPU SECONDS = 4.513E+03 (3.059E+02)
------------------------------------------------------------------------
|       Equation       | Rate | RMS Res | Max Res |  Linear Solution |
+----------------------+------+---------+---------+------------------+
| U-Mom                | 0.99 | 1.3E-04 | 4.3E-03 |       9.9E-01  ok|
| V-Mom                | 0.98 | 1.5E-04 | 8.1E-03 |       9.9E-01  ok|
| W-Mom                | 0.99 | 1.3E-04 | 3.9E-03 |       9.9E-01  ok|
| P-Mass               | 1.00 | 9.3E-05 | 3.9E-04 | 16.0  1.0E+00  ok|
```

```
+----------------------+------+---------+---------+------------------+
| T-Energy             | 1.00 | 1.4E-06 | 1.9E-05 |  5.3  9.4E-03  OK|
+----------------------+------+---------+---------+------------------+
| K-TurbKE             | 0.96 | 2.3E-04 | 1.5E-02 |  5.5  5.0E-03  OK|
| E-Diss.K             | 0.86 | 1.8E-05 | 1.1E-03 |  7.4  2.7E-03  OK|
+----------------------+------+---------+---------+------------------+

================================================================================
OUTER LOOP ITERATION =  108 (    8) CPU SECONDS = 4.571E+03 (3.634E+02)
--------------------------------------------------------------------------------
|       Equation       | Rate | RMS Res | Max Res |  Linear Solution |
+----------------------+------+---------+---------+------------------+
| U-Mom                | 0.99 | 1.3E-04 | 4.2E-03 |       9.9E-01  ok|
| V-Mom                | 0.99 | 1.5E-04 | 7.4E-03 |       9.9E-01  ok|
| W-Mom                | 0.99 | 1.3E-04 | 4.8E-03 |       9.9E-01  ok|
| P-Mass               | 1.00 | 9.3E-05 | 3.8E-04 | 16.0  1.0E+00  ok|
+----------------------+------+---------+---------+------------------+
| T-Energy             | 1.00 | 1.4E-06 | 1.2E-05 |  5.3  9.0E-03  OK|
+----------------------+------+---------+---------+------------------+
| K-TurbKE             | 0.98 | 2.2E-04 | 1.7E-02 |  5.5  4.2E-03  OK|
| E-Diss.K             | 0.86 | 1.6E-05 | 1.1E-03 |  7.4  2.6E-03  OK|
+----------------------+------+---------+---------+------------------+

================================================================================
OUTER LOOP ITERATION =  109 (    9) CPU SECONDS = 4.614E+03 (4.064E+02)
--------------------------------------------------------------------------------
|       Equation       | Rate | RMS Res | Max Res |  Linear Solution |
+----------------------+------+---------+---------+------------------+
| U-Mom                | 0.99 | 1.3E-04 | 3.9E-03 |       9.9E-01  ok|
| V-Mom                | 0.99 | 1.5E-04 | 1.0E-02 |       9.9E-01  ok|
| W-Mom                | 0.99 | 1.3E-04 | 5.6E-03 |       9.9E-01  ok|
| P-Mass               | 1.00 | 9.3E-05 | 3.7E-04 | 16.0  1.0E+00  ok|
+----------------------+------+---------+---------+------------------+
| T-Energy             | 1.00 | 1.4E-06 | 9.2E-06 |  5.3  9.5E-03  OK|
+----------------------+------+---------+---------+------------------+
| K-TurbKE             | 1.00 | 2.2E-04 | 1.9E-02 |  5.5  4.0E-03  OK|
| E-Diss.K             | 0.90 | 1.4E-05 | 1.1E-03 |  7.4  2.3E-03  OK|
+----------------------+------+---------+---------+------------------+

================================================================================
OUTER LOOP ITERATION =  110 (   10) CPU SECONDS = 4.652E+03 (4.447E+02)
--------------------------------------------------------------------------------
|       Equation       | Rate | RMS Res | Max Res |  Linear Solution |
+----------------------+------+---------+---------+------------------+
| U-Mom                | 0.99 | 1.2E-04 | 3.6E-03 |       9.9E-01  ok|
| V-Mom                | 0.99 | 1.5E-04 | 1.1E-02 |       9.9E-01  ok|
| W-Mom                | 0.99 | 1.2E-04 | 6.1E-03 |       9.9E-01  ok|
| P-Mass               | 1.00 | 9.3E-05 | 3.6E-04 | 16.0  1.0E+00  ok|
+----------------------+------+---------+---------+------------------+
| T-Energy             | 1.00 | 1.4E-06 | 1.2E-05 |  5.3  9.2E-03  OK|
+----------------------+------+---------+---------+------------------+
| K-TurbKE             | 1.01 | 2.3E-04 | 2.1E-02 |  5.5  3.7E-03  OK|
| E-Diss.K             | 0.96 | 1.4E-05 | 1.0E-03 |  7.4  2.0E-03  OK|
+----------------------+------+---------+---------+------------------+
```

```
================================================================================
|                          Timescale Information                               |
--------------------------------------------------------------------------------
|       Equation       |         Type          |      Timescale      |
+----------------------+-----------------------+---------------------+
| U-Mom-fluid          | Auto Timescale        |     1.41824E-03     |
| V-Mom-fluid          | Auto Timescale        |     1.41824E-03     |
| W-Mom-fluid          | Auto Timescale        |     1.41824E-03     |
+----------------------+-----------------------+---------------------+
| T-Energy-turbine     | Auto Timescale        |     6.57581E+01     |
+----------------------+-----------------------+---------------------+
| K-TurbKE-fluid       | Auto Timescale        |     1.41824E-03     |
| E-Diss.K-fluid       | Auto Timescale        |     1.41824E-03     |
+----------------------+-----------------------+---------------------+

================================================================================
OUTER LOOP ITERATION =  111 (   11) CPU SECONDS = 4.689E+03 (4.821E+02)
--------------------------------------------------------------------------------
|       Equation       | Rate | RMS Res | Max Res |  Linear Solution |
+----------------------+------+---------+---------+------------------+
| U-Mom                | 0.99 | 1.2E-04 | 3.4E-03 |       9.9E-01  ok|
| V-Mom                | 0.99 | 1.4E-04 | 8.2E-03 |       9.9E-01  ok|
| W-Mom                | 0.99 | 1.2E-04 | 6.4E-03 |       9.9E-01  ok|
| P-Mass               | 1.00 | 9.3E-05 | 3.5E-04 | 16.0  1.0E+00  ok|
+----------------------+------+---------+---------+------------------+
| T-Energy             | 1.00 | 1.4E-06 | 1.0E-05 |  5.3  9.5E-03  OK|
+----------------------+------+---------+---------+------------------+
| K-TurbKE             | 1.01 | 2.3E-04 | 2.3E-02 |  5.5  3.9E-03  OK|
| E-Diss.K             | 1.00 | 1.4E-05 | 1.0E-03 |  7.4  1.9E-03  OK|
+----------------------+------+---------+---------+------------------+

================================================================================
OUTER LOOP ITERATION =  112 (   12) CPU SECONDS = 4.730E+03 (5.222E+02)
--------------------------------------------------------------------------------
|       Equation       | Rate | RMS Res | Max Res |  Linear Solution |
+----------------------+------+---------+---------+------------------+
| U-Mom                | 1.00 | 1.2E-04 | 3.5E-03 |       9.9E-01  ok|
| V-Mom                | 0.99 | 1.4E-04 | 5.8E-03 |       9.9E-01  ok|
| W-Mom                | 0.99 | 1.2E-04 | 6.0E-03 |       9.9E-01  ok|
| P-Mass               | 1.00 | 9.3E-05 | 3.4E-04 | 16.0  1.0E+00  ok|
+----------------------+------+---------+---------+------------------+
| T-Energy             | 1.00 | 1.4E-06 | 1.2E-05 |  5.3  9.2E-03  OK|
+----------------------+------+---------+---------+------------------+
| K-TurbKE             | 1.01 | 2.3E-04 | 2.4E-02 |  5.5  4.0E-03  OK|
| E-Diss.K             | 1.03 | 1.4E-05 | 9.8E-04 |  7.4  1.9E-03  OK|
+----------------------+------+---------+---------+------------------+

================================================================================
OUTER LOOP ITERATION =  113 (   13) CPU SECONDS = 4.774E+03 (5.666E+02)
--------------------------------------------------------------------------------
|       Equation       | Rate | RMS Res | Max Res |  Linear Solution |
+----------------------+------+---------+---------+------------------+
| U-Mom                | 1.00 | 1.2E-04 | 3.5E-03 |       9.9E-01  ok|
```

```
| V-Mom                | 0.99 | 1.4E-04 | 6.5E-03 |       9.9E-01  ok|
| W-Mom                | 0.99 | 1.2E-04 | 5.2E-03 |       9.9E-01  ok|
| P-Mass               | 1.00 | 9.3E-05 | 3.2E-04 | 16.0  1.0E+00  ok|
+----------------------+------+---------+---------+------------------+
| T-Energy             | 1.00 | 1.4E-06 | 9.2E-06 |  5.3  9.4E-03  OK|
+----------------------+------+---------+---------+------------------+
| K-TurbKE             | 1.00 | 2.3E-04 | 2.4E-02 |  5.5  4.3E-03  OK|
| E-Diss.K             | 1.04 | 1.5E-05 | 9.6E-04 |  7.4  2.0E-03  OK|
+----------------------+------+---------+---------+------------------+

================================================================================
OUTER LOOP ITERATION =  114 (   14) CPU SECONDS = 4.823E+03 (6.153E+02)
--------------------------------------------------------------------------------
|       Equation       | Rate | RMS Res | Max Res |  Linear Solution |
+----------------------+------+---------+---------+------------------+
| U-Mom                | 1.00 | 1.2E-04 | 3.7E-03 |       9.9E-01  ok|
| V-Mom                | 1.00 | 1.4E-04 | 7.2E-03 |       9.9E-01  ok|
| W-Mom                | 1.00 | 1.2E-04 | 4.3E-03 |       1.0E+00  ok|
| P-Mass               | 1.00 | 9.3E-05 | 3.2E-04 | 16.0  1.0E+00  ok|
+----------------------+------+---------+---------+------------------+
| T-Energy             | 1.00 | 1.4E-06 | 1.2E-05 |  5.3  9.1E-03  OK|
+----------------------+------+---------+---------+------------------+
| K-TurbKE             | 0.98 | 2.3E-04 | 2.3E-02 |  5.5  4.4E-03  OK|
| E-Diss.K             | 1.04 | 1.5E-05 | 9.5E-04 |  7.4  2.1E-03  OK|
+----------------------+------+---------+---------+------------------+

================================================================================
OUTER LOOP ITERATION =  115 (   15) CPU SECONDS = 4.860E+03 (6.526E+02)
--------------------------------------------------------------------------------
|       Equation       | Rate | RMS Res | Max Res |  Linear Solution |
+----------------------+------+---------+---------+------------------+
| U-Mom                | 1.00 | 1.2E-04 | 4.1E-03 |       9.9E-01  ok|
| V-Mom                | 1.00 | 1.4E-04 | 6.7E-03 |       9.9E-01  ok|
| W-Mom                | 1.00 | 1.2E-04 | 4.0E-03 |       1.0E+00  ok|
| P-Mass               | 1.00 | 9.3E-05 | 3.2E-04 | 16.0  1.0E+00  ok|
+----------------------+------+---------+---------+------------------+
| T-Energy             | 1.00 | 1.4E-06 | 1.0E-05 |  5.3  9.3E-03  OK|
+----------------------+------+---------+---------+------------------+
| K-TurbKE             | 0.98 | 2.2E-04 | 2.1E-02 |  5.5  4.7E-03  OK|
| E-Diss.K             | 1.03 | 1.6E-05 | 9.4E-04 |  7.4  2.2E-03  OK|
+----------------------+------+---------+---------+------------------+

================================================================================
|                        Timescale Information                                 |
--------------------------------------------------------------------------------
|       Equation       |         Type          |      Timescale      |
+----------------------+-----------------------+---------------------+
| U-Mom-fluid          | Auto Timescale        |     1.41825E-03     |
| V-Mom-fluid          | Auto Timescale        |     1.41825E-03     |
| W-Mom-fluid          | Auto Timescale        |     1.41825E-03     |
+----------------------+-----------------------+---------------------+
| T-Energy-turbine     | Auto Timescale        |     6.57581E+01     |
+----------------------+-----------------------+---------------------+
| K-TurbKE-fluid       | Auto Timescale        |     1.41825E-03     |
```

```
| E-Diss.K-fluid       | Auto Timescale        |     1.41825E-03     |
+----------------------+-----------------------+---------------------+

=========================================================================
OUTER LOOP ITERATION =  116 (   16) CPU SECONDS = 4.904E+03 (6.963E+02)
-------------------------------------------------------------------------
|       Equation       | Rate | RMS Res | Max Res |  Linear Solution |
+----------------------+------+---------+---------+------------------+
| U-Mom                | 1.00 | 1.2E-04 | 4.8E-03 |       9.9E-01  ok|
| V-Mom                | 1.00 | 1.4E-04 | 5.5E-03 |       9.9E-01  ok|
| W-Mom                | 1.00 | 1.2E-04 | 4.6E-03 |       1.0E+00  ok|
| P-Mass               | 1.00 | 9.3E-05 | 3.2E-04 | 16.0  1.0E+00  ok|
+----------------------+------+---------+---------+------------------+
| T-Energy             | 1.00 | 1.4E-06 | 1.2E-05 |  5.3  9.1E-03  OK|
+----------------------+------+---------+---------+------------------+
| K-TurbKE             | 1.00 | 2.2E-04 | 2.0E-02 |  5.5  5.0E-03  OK|
| E-Diss.K             | 1.02 | 1.6E-05 | 9.3E-04 |  7.4  2.3E-03  OK|
+----------------------+------+---------+---------+------------------+

=========================================================================
OUTER LOOP ITERATION =  117 (   17) CPU SECONDS = 4.947E+03 (7.400E+02)
-------------------------------------------------------------------------
|       Equation       | Rate | RMS Res | Max Res |  Linear Solution |
+----------------------+------+---------+---------+------------------+
| U-Mom                | 1.01 | 1.2E-04 | 6.0E-03 |       9.9E-01  ok|
| V-Mom                | 1.00 | 1.4E-04 | 4.6E-03 |       9.9E-01  ok|
| W-Mom                | 1.00 | 1.2E-04 | 5.7E-03 |       1.0E+00  ok|
| P-Mass               | 1.00 | 9.3E-05 | 3.2E-04 | 16.0  1.0E+00  ok|
+----------------------+------+---------+---------+------------------+
| T-Energy             | 1.00 | 1.4E-06 | 1.9E-05 |  5.3  9.4E-03  OK|
+----------------------+------+---------+---------+------------------+
| K-TurbKE             | 1.00 | 2.2E-04 | 2.6E-02 |  5.5  5.5E-03  OK|
| E-Diss.K             | 1.01 | 1.6E-05 | 9.3E-04 |  7.4  2.4E-03  OK|
+----------------------+------+---------+---------+------------------+

=========================================================================
OUTER LOOP ITERATION =  118 (   18) CPU SECONDS = 4.992E+03 (7.848E+02)
-------------------------------------------------------------------------
|       Equation       | Rate | RMS Res | Max Res |  Linear Solution |
+----------------------+------+---------+---------+------------------+
| U-Mom                | 1.01 | 1.3E-04 | 7.5E-03 |       9.9E-01  ok|
| V-Mom                | 1.00 | 1.4E-04 | 4.7E-03 |       9.9E-01  ok|
| W-Mom                | 1.01 | 1.2E-04 | 6.8E-03 |       1.0E+00  ok|
| P-Mass               | 1.00 | 9.3E-05 | 3.2E-04 | 16.0  1.0E+00  ok|
+----------------------+------+---------+---------+------------------+
| T-Energy             | 1.00 | 1.4E-06 | 1.2E-05 |  5.3  9.0E-03  OK|
+----------------------+------+---------+---------+------------------+
| K-TurbKE             | 1.00 | 2.2E-04 | 2.7E-02 |  5.5  5.5E-03  OK|
| E-Diss.K             | 1.00 | 1.7E-05 | 9.3E-04 |  7.4  2.5E-03  OK|
+----------------------+------+---------+---------+------------------+

=========================================================================
OUTER LOOP ITERATION =  119 (   19) CPU SECONDS = 5.035E+03 (8.275E+02)
-------------------------------------------------------------------------
```

Equation	Rate	RMS Res	Max Res		Linear Solution	
U-Mom	1.01	1.3E-04	9.2E-03		9.9E-01	ok
V-Mom	1.00	1.4E-04	5.1E-03		9.9E-01	ok
W-Mom	1.01	1.2E-04	8.1E-03		1.0E+00	ok
P-Mass	1.00	9.3E-05	3.2E-04	16.0	1.0E+00	ok
T-Energy	1.00	1.4E-06	9.2E-06	5.3	9.5E-03	OK
K-TurbKE	1.00	2.2E-04	2.2E-02	5.5	5.5E-03	OK
E-Diss.K	0.99	1.6E-05	9.2E-04	7.4	2.5E-03	OK

OUTER LOOP ITERATION = 120 (20) CPU SECONDS = 5.072E+03 (8.648E+02)

Equation	Rate	RMS Res	Max Res		Linear Solution	
U-Mom	1.02	1.3E-04	1.1E-02		9.9E-01	ok
V-Mom	1.01	1.4E-04	5.8E-03		9.9E-01	ok
W-Mom	1.01	1.3E-04	9.1E-03		1.0E+00	ok
P-Mass	1.00	9.3E-05	3.3E-04	16.0	1.0E+00	ok
T-Energy	1.00	1.4E-06	1.2E-05	5.3	9.3E-03	OK
K-TurbKE	1.01	2.2E-04	1.6E-02	5.5	5.4E-03	OK
E-Diss.K	0.97	1.6E-05	9.2E-04	7.4	2.5E-03	OK

Timescale Information

Equation	Type	Timescale
U-Mom-fluid	Auto Timescale	1.41838E-03
V-Mom-fluid	Auto Timescale	1.41838E-03
W-Mom-fluid	Auto Timescale	1.41838E-03
T-Energy-turbine	Auto Timescale	6.57581E+01
K-TurbKE-fluid	Auto Timescale	1.41838E-03
E-Diss.K-fluid	Auto Timescale	1.41838E-03

OUTER LOOP ITERATION = 121 (21) CPU SECONDS = 5.110E+03 (9.027E+02)

Equation	Rate	RMS Res	Max Res		Linear Solution	
U-Mom	1.02	1.3E-04	1.2E-02		9.9E-01	ok
V-Mom	1.01	1.4E-04	6.6E-03		9.9E-01	ok
W-Mom	1.02	1.3E-04	9.8E-03		1.0E+00	ok
P-Mass	1.00	9.3E-05	3.3E-04	16.0	1.0E+00	ok

```
| T-Energy             | 1.00 | 1.4E-06 | 1.0E-05 |  5.3  9.5E-03  OK|
+----------------------+------+---------+---------+------------------+
| K-TurbKE             | 1.04 | 2.3E-04 | 1.4E-02 |  5.5  5.4E-03  OK|
| E-Diss.K             | 0.97 | 1.5E-05 | 9.3E-04 |  7.4  2.5E-03  OK|
+----------------------+------+---------+---------+------------------+

================================================================================
OUTER LOOP ITERATION =  122 (   22) CPU SECONDS = 5.149E+03 (9.412E+02)
--------------------------------------------------------------------------------
|       Equation       | Rate | RMS Res | Max Res |  Linear Solution |
+----------------------+------+---------+---------+------------------+
| U-Mom                | 1.02 | 1.4E-04 | 1.2E-02 |       9.9E-01  ok|
| V-Mom                | 1.01 | 1.5E-04 | 7.5E-03 |       9.9E-01  ok|
| W-Mom                | 1.02 | 1.3E-04 | 1.0E-02 |       9.9E-01  ok|
| P-Mass               | 1.00 | 9.3E-05 | 3.3E-04 | 16.0  1.0E+00  ok|
+----------------------+------+---------+---------+------------------+
| T-Energy             | 1.00 | 1.4E-06 | 1.2E-05 |  5.3  9.2E-03  OK|
+----------------------+------+---------+---------+------------------+
| K-TurbKE             | 1.06 | 2.4E-04 | 1.7E-02 |  5.5  5.3E-03  OK|
| E-Diss.K             | 0.97 | 1.5E-05 | 9.4E-04 |  7.4  2.4E-03  OK|
+----------------------+------+---------+---------+------------------+

================================================================================
OUTER LOOP ITERATION =  123 (   23) CPU SECONDS = 5.186E+03 (9.785E+02)
--------------------------------------------------------------------------------
|       Equation       | Rate | RMS Res | Max Res |  Linear Solution |
+----------------------+------+---------+---------+------------------+
| U-Mom                | 1.03 | 1.4E-04 | 1.2E-02 |       9.9E-01  ok|
| V-Mom                | 1.02 | 1.5E-04 | 7.4E-03 |       9.9E-01  ok|
| W-Mom                | 1.02 | 1.3E-04 | 9.3E-03 |       9.9E-01  ok|
| P-Mass               | 1.00 | 9.3E-05 | 3.4E-04 | 16.0  1.0E+00  ok|
+----------------------+------+---------+---------+------------------+
| T-Energy             | 1.00 | 1.4E-06 | 9.2E-06 |  5.3  9.4E-03  OK|
+----------------------+------+---------+---------+------------------+
| K-TurbKE             | 1.07 | 2.6E-04 | 2.0E-02 |  5.5  5.0E-03  OK|
| E-Diss.K             | 0.98 | 1.5E-05 | 9.3E-04 |  7.4  2.3E-03  OK|
+----------------------+------+---------+---------+------------------+

================================================================================
OUTER LOOP ITERATION =  124 (   24) CPU SECONDS = 5.223E+03 (1.015E+03)
--------------------------------------------------------------------------------
|       Equation       | Rate | RMS Res | Max Res |  Linear Solution |
+----------------------+------+---------+---------+------------------+
| U-Mom                | 1.04 | 1.5E-04 | 1.6E-02 |       9.9E-01  ok|
| V-Mom                | 1.02 | 1.5E-04 | 6.8E-03 |       9.8E-01  ok|
| W-Mom                | 1.03 | 1.4E-04 | 1.2E-02 |       9.9E-01  ok|
| P-Mass               | 1.00 | 9.3E-05 | 3.4E-04 | 16.0  1.0E+00  ok|
+----------------------+------+---------+---------+------------------+
| T-Energy             | 1.00 | 1.4E-06 | 1.2E-05 |  5.3  9.1E-03  OK|
+----------------------+------+---------+---------+------------------+
| K-TurbKE             | 1.08 | 2.8E-04 | 2.2E-02 |  5.5  4.9E-03  OK|
| E-Diss.K             | 0.99 | 1.4E-05 | 9.2E-04 |  7.4  2.2E-03  OK|
+----------------------+------+---------+---------+------------------+
```

```
================================================================================
OUTER LOOP ITERATION =  125 (   25) CPU SECONDS = 5.260E+03 (1.052E+03)
--------------------------------------------------------------------------------
|       Equation       | Rate | RMS Res | Max Res |  Linear Solution |
+----------------------+------+---------+---------+------------------+
| U-Mom                | 1.05 | 1.5E-04 | 1.8E-02 |       9.9E-01  ok|
| V-Mom                | 1.02 | 1.5E-04 | 6.6E-03 |       9.8E-01  ok|
| W-Mom                | 1.04 | 1.4E-04 | 1.3E-02 |       9.9E-01  ok|
| P-Mass               | 1.00 | 9.3E-05 | 3.4E-04 | 16.0  1.0E+00  ok|
+----------------------+------+---------+---------+------------------+
| T-Energy             | 1.00 | 1.4E-06 | 1.0E-05 |  5.3  9.3E-03  OK|
+----------------------+------+---------+---------+------------------+
| K-TurbKE             | 1.10 | 3.1E-04 | 2.5E-02 |  5.5  4.6E-03  OK|
| E-Diss.K             | 1.02 | 1.5E-05 | 8.9E-04 |  7.4  2.0E-03  OK|
+----------------------+------+---------+---------+------------------+

================================================================================
|                         Timescale Information                                |
--------------------------------------------------------------------------------
|       Equation       |         Type          |      Timescale      |
+----------------------+-----------------------+---------------------+
| U-Mom-fluid          | Auto Timescale        |     1.41858E-03     |
| V-Mom-fluid          | Auto Timescale        |     1.41858E-03     |
| W-Mom-fluid          | Auto Timescale        |     1.41858E-03     |
+----------------------+-----------------------+---------------------+
| T-Energy-turbine     | Auto Timescale        |     6.57581E+01     |
+----------------------+-----------------------+---------------------+
| K-TurbKE-fluid       | Auto Timescale        |     1.41858E-03     |
| E-Diss.K-fluid       | Auto Timescale        |     1.41858E-03     |
+----------------------+-----------------------+---------------------+

================================================================================
OUTER LOOP ITERATION =  126 (   26) CPU SECONDS = 5.298E+03 (1.090E+03)
--------------------------------------------------------------------------------
|       Equation       | Rate | RMS Res | Max Res |  Linear Solution |
+----------------------+------+---------+---------+------------------+
| U-Mom                | 1.05 | 1.6E-04 | 2.0E-02 |       9.9E-01  ok|
| V-Mom                | 1.03 | 1.6E-04 | 8.0E-03 |       9.8E-01  ok|
| W-Mom                | 1.04 | 1.5E-04 | 1.1E-02 |       9.9E-01  ok|
| P-Mass               | 1.00 | 9.3E-05 | 3.4E-04 | 16.0  1.0E+00  ok|
+----------------------+------+---------+---------+------------------+
| T-Energy             | 1.00 | 1.4E-06 | 1.2E-05 |  5.3  9.1E-03  OK|
+----------------------+------+---------+---------+------------------+
| K-TurbKE             | 1.14 | 3.5E-04 | 3.3E-02 |  5.5  4.8E-03  OK|
| E-Diss.K             | 1.05 | 1.5E-05 | 8.6E-04 |  7.4  2.0E-03  OK|
+----------------------+------+---------+---------+------------------+

================================================================================
OUTER LOOP ITERATION =  127 (   27) CPU SECONDS = 5.336E+03 (1.128E+03)
--------------------------------------------------------------------------------
|       Equation       | Rate | RMS Res | Max Res |  Linear Solution |
+----------------------+------+---------+---------+------------------+
| U-Mom                | 1.04 | 1.7E-04 | 1.9E-02 |       9.9E-01  ok|
| V-Mom                | 1.03 | 1.6E-04 | 8.5E-03 |       9.8E-01  ok|
```

```
| W-Mom                | 1.05 | 1.6E-04 | 1.2E-02 |       9.9E-01  ok|
| P-Mass               | 1.00 | 9.3E-05 | 3.5E-04 | 16.0  1.0E+00  ok|
+----------------------+------+---------+---------+------------------+
| T-Energy             | 1.00 | 1.4E-06 | 1.9E-05 |  5.3  9.4E-03  OK|
+----------------------+------+---------+---------+------------------+
| K-TurbKE             | 1.14 | 4.0E-04 | 4.3E-02 |  5.5  4.9E-03  OK|
| E-Diss.K             | 1.07 | 1.6E-05 | 8.2E-04 |  7.4  1.9E-03  OK|
+----------------------+------+---------+---------+------------------+

=======================================================================
OUTER LOOP ITERATION =  128 (   28) CPU SECONDS = 5.378E+03 (1.171E+03)
-----------------------------------------------------------------------
|       Equation       | Rate | RMS Res | Max Res |  Linear Solution |
+----------------------+------+---------+---------+------------------+
| U-Mom                | 1.00 | 1.7E-04 | 1.6E-02 |       9.9E-01  ok|
| V-Mom                | 1.03 | 1.7E-04 | 1.0E-02 |       9.8E-01  ok|
| W-Mom                | 1.05 | 1.6E-04 | 1.4E-02 |       9.9E-01  ok|
| P-Mass               | 1.00 | 9.3E-05 | 3.5E-04 | 16.0  1.0E+00  ok|
+----------------------+------+---------+---------+------------------+
| T-Energy             | 1.00 | 1.4E-06 | 1.2E-05 |  5.3  9.0E-03  OK|
+----------------------+------+---------+---------+------------------+
| K-TurbKE             | 1.15 | 4.6E-04 | 5.1E-02 |  5.5  4.7E-03  OK|
| E-Diss.K             | 1.09 | 1.8E-05 | 7.8E-04 |  7.4  2.1E-03  OK|
+----------------------+------+---------+---------+------------------+

=======================================================================
OUTER LOOP ITERATION =  129 (   29) CPU SECONDS = 5.416E+03 (1.209E+03)
-----------------------------------------------------------------------
|       Equation       | Rate | RMS Res | Max Res |  Linear Solution |
+----------------------+------+---------+---------+------------------+
| U-Mom                | 1.01 | 1.7E-04 | 1.5E-02 |       9.9E-01  ok|
| V-Mom                | 1.02 | 1.7E-04 | 9.5E-03 |       9.8E-01  ok|
| W-Mom                | 1.03 | 1.7E-04 | 1.5E-02 |       9.9E-01  ok|
| P-Mass               | 1.00 | 9.3E-05 | 3.5E-04 | 16.0  1.0E+00  ok|
+----------------------+------+---------+---------+------------------+
| T-Energy             | 1.00 | 1.4E-06 | 9.2E-06 |  5.3  9.5E-03  OK|
+----------------------+------+---------+---------+------------------+
| K-TurbKE             | 1.06 | 4.9E-04 | 5.1E-02 |  5.5  4.6E-03  OK|
| E-Diss.K             | 1.09 | 1.9E-05 | 8.1E-04 |  7.4  2.0E-03  OK|
+----------------------+------+---------+---------+------------------+

=======================================================================
OUTER LOOP ITERATION =  130 (   30) CPU SECONDS = 5.454E+03 (1.247E+03)
-----------------------------------------------------------------------
|       Equation       | Rate | RMS Res | Max Res |  Linear Solution |
+----------------------+------+---------+---------+------------------+
| U-Mom                | 1.00 | 1.7E-04 | 1.5E-02 |       9.9E-01  ok|
| V-Mom                | 1.01 | 1.7E-04 | 8.3E-03 |       9.8E-01  ok|
| W-Mom                | 1.00 | 1.7E-04 | 1.5E-02 |       9.9E-01  ok|
| P-Mass               | 1.00 | 9.3E-05 | 4.0E-04 | 16.0  1.0E+00  ok|
+----------------------+------+---------+---------+------------------+
| T-Energy             | 1.00 | 1.4E-06 | 1.2E-05 |  5.3  9.2E-03  OK|
+----------------------+------+---------+---------+------------------+
| K-TurbKE             | 0.96 | 4.7E-04 | 4.5E-02 |  5.5  5.0E-03  OK|
```

```
| E-Diss.K              | 1.07 | 2.1E-05 | 8.3E-04 |  7.4  2.2E-03  OK|
+-----------------------+------+---------+---------+------------------+

=============================================================================
|                          Timescale Information                            |
-----------------------------------------------------------------------------
|       Equation        |         Type          |      Timescale       |
+-----------------------+-----------------------+----------------------+
| U-Mom-fluid           | Auto Timescale        |     1.41880E-03      |
| V-Mom-fluid           | Auto Timescale        |     1.41880E-03      |
| W-Mom-fluid           | Auto Timescale        |     1.41880E-03      |
+-----------------------+-----------------------+----------------------+
| T-Energy-turbine      | Auto Timescale        |     6.57581E+01      |
+-----------------------+-----------------------+----------------------+
| K-TurbKE-fluid        | Auto Timescale        |     1.41880E-03      |
| E-Diss.K-fluid        | Auto Timescale        |     1.41880E-03      |
+-----------------------+-----------------------+----------------------+

=============================================================================
OUTER LOOP ITERATION =  131 (   31) CPU SECONDS = 5.494E+03 (1.287E+03)
-----------------------------------------------------------------------------
|       Equation        | Rate | RMS Res | Max Res |  Linear Solution |
+-----------------------+------+---------+---------+------------------+
| U-Mom                 | 0.97 | 1.6E-04 | 1.4E-02 |       9.9E-01  ok|
| V-Mom                 | 1.01 | 1.7E-04 | 8.6E-03 |       9.8E-01  ok|
| W-Mom                 | 0.97 | 1.6E-04 | 1.3E-02 |       9.9E-01  ok|
| P-Mass                | 1.00 | 9.3E-05 | 4.4E-04 | 16.0  1.0E+00  ok|
+-----------------------+------+---------+---------+------------------+
| T-Energy              | 1.00 | 1.4E-06 | 1.0E-05 |  5.3  9.5E-03  OK|
+-----------------------+------+---------+---------+------------------+
| K-TurbKE              | 0.98 | 4.6E-04 | 4.0E-02 |  5.5  4.7E-03  OK|
| E-Diss.K              | 1.05 | 2.2E-05 | 8.5E-04 |  7.4  2.3E-03  OK|
+-----------------------+------+---------+---------+------------------+

=============================================================================
OUTER LOOP ITERATION =  132 (   32) CPU SECONDS = 5.537E+03 (1.330E+03)
-----------------------------------------------------------------------------
|       Equation        | Rate | RMS Res | Max Res |  Linear Solution |
+-----------------------+------+---------+---------+------------------+
| U-Mom                 | 0.94 | 1.5E-04 | 1.0E-02 |       9.9E-01  ok|
| V-Mom                 | 0.99 | 1.7E-04 | 6.9E-03 |       9.8E-01  ok|
| W-Mom                 | 0.95 | 1.6E-04 | 1.0E-02 |       9.9E-01  ok|
| P-Mass                | 1.00 | 9.3E-05 | 4.1E-04 | 16.0  1.0E+00  ok|
+-----------------------+------+---------+---------+------------------+
| T-Energy              | 1.00 | 1.4E-06 | 1.2E-05 |  5.3  9.2E-03  OK|
+-----------------------+------+---------+---------+------------------+
| K-TurbKE              | 0.98 | 4.6E-04 | 3.9E-02 |  5.5  5.1E-03  OK|
| E-Diss.K              | 1.03 | 2.2E-05 | 8.6E-04 |  7.4  2.6E-03  OK|
+-----------------------+------+---------+---------+------------------+

=============================================================================
OUTER LOOP ITERATION =  133 (   33) CPU SECONDS = 5.579E+03 (1.371E+03)
-----------------------------------------------------------------------------
|       Equation        | Rate | RMS Res | Max Res |  Linear Solution |
```

```
+----------------------+------+---------+---------+------------------+
| U-Mom                | 0.95 | 1.5E-04 | 7.3E-03 |       9.9E-01  ok|
| V-Mom                | 0.99 | 1.7E-04 | 8.4E-03 |       9.8E-01  ok|
| W-Mom                | 0.95 | 1.5E-04 | 8.4E-03 |       9.9E-01  ok|
| P-Mass               | 1.00 | 9.3E-05 | 4.1E-04 | 16.0  1.0E+00  ok|
+----------------------+------+---------+---------+------------------+
| T-Energy             | 1.00 | 1.4E-06 | 9.2E-06 |  5.3  9.4E-03  OK|
+----------------------+------+---------+---------+------------------+
| K-TurbKE             | 0.97 | 4.4E-04 | 4.1E-02 |  5.5  5.8E-03  OK|
| E-Diss.K             | 1.00 | 2.2E-05 | 8.7E-04 |  7.4  2.7E-03  OK|
+----------------------+------+---------+---------+------------------+

================================================================================
OUTER LOOP ITERATION =  134 (   34) CPU SECONDS = 5.618E+03 (1.410E+03)
--------------------------------------------------------------------------------
|       Equation       | Rate | RMS Res | Max Res |  Linear Solution |
+----------------------+------+---------+---------+------------------+
| U-Mom                | 0.96 | 1.4E-04 | 7.2E-03 |       9.9E-01  ok|
| V-Mom                | 0.98 | 1.7E-04 | 7.5E-03 |       9.8E-01  ok|
| W-Mom                | 0.95 | 1.4E-04 | 7.4E-03 |       9.9E-01  ok|
| P-Mass               | 1.00 | 9.3E-05 | 3.8E-04 | 16.0  1.0E+00  ok|
+----------------------+------+---------+---------+------------------+
| T-Energy             | 1.00 | 1.4E-06 | 1.2E-05 |  5.3  9.1E-03  OK|
+----------------------+------+---------+---------+------------------+
| K-TurbKE             | 0.96 | 4.3E-04 | 3.5E-02 |  5.5  6.1E-03  OK|
| E-Diss.K             | 0.99 | 2.2E-05 | 8.7E-04 |  7.4  2.8E-03  OK|
+----------------------+------+---------+---------+------------------+

================================================================================
OUTER LOOP ITERATION =  135 (   35) CPU SECONDS = 5.656E+03 (1.448E+03)
--------------------------------------------------------------------------------
|       Equation       | Rate | RMS Res | Max Res |  Linear Solution |
+----------------------+------+---------+---------+------------------+
| U-Mom                | 0.98 | 1.4E-04 | 7.4E-03 |       9.9E-01  ok|
| V-Mom                | 0.97 | 1.6E-04 | 7.0E-03 |       9.8E-01  ok|
| W-Mom                | 0.96 | 1.3E-04 | 8.1E-03 |       9.9E-01  ok|
| P-Mass               | 1.00 | 9.3E-05 | 3.4E-04 | 16.0  1.0E+00  ok|
+----------------------+------+---------+---------+------------------+
| T-Energy             | 1.00 | 1.4E-06 | 1.0E-05 |  5.3  9.3E-03  OK|
+----------------------+------+---------+---------+------------------+
| K-TurbKE             | 0.96 | 4.1E-04 | 2.5E-02 |  5.5  6.4E-03  OK|
| E-Diss.K             | 0.97 | 2.2E-05 | 8.6E-04 |  7.4  3.0E-03  OK|
+----------------------+------+---------+---------+------------------+

================================================================================
|                        Timescale Information                                 |
--------------------------------------------------------------------------------
|       Equation       |         Type          |      Timescale      |
+----------------------+-----------------------+---------------------+
| U-Mom-fluid          | Auto Timescale        |     1.41883E-03     |
| V-Mom-fluid          | Auto Timescale        |     1.41883E-03     |
| W-Mom-fluid          | Auto Timescale        |     1.41883E-03     |
+----------------------+-----------------------+---------------------+
| T-Energy-turbine     | Auto Timescale        |     6.57581E+01     |
```

K-TurbKE-fluid	Auto Timescale	1.41883E-03
E-Diss.K-fluid	Auto Timescale	1.41883E-03

OUTER LOOP ITERATION = 136 (36) CPU SECONDS = 5.694E+03 (1.486E+03)

Equation	Rate	RMS Res	Max Res		Linear Solution	
U-Mom	0.99	1.4E-04	6.8E-03		9.9E-01	ok
V-Mom	0.97	1.6E-04	6.8E-03		9.8E-01	ok
W-Mom	0.97	1.3E-04	8.2E-03		9.9E-01	ok
P-Mass	1.00	9.3E-05	3.4E-04	16.0	1.0E+00	ok
T-Energy	1.00	1.4E-06	1.2E-05	5.3	9.1E-03	OK
K-TurbKE	0.96	4.0E-04	2.6E-02	5.5	6.7E-03	OK
E-Diss.K	0.97	2.1E-05	8.5E-04	7.4	3.2E-03	OK

OUTER LOOP ITERATION = 137 (37) CPU SECONDS = 5.743E+03 (1.536E+03)

Equation	Rate	RMS Res	Max Res		Linear Solution	
U-Mom	1.01	1.4E-04	9.2E-03		9.9E-01	ok
V-Mom	0.98	1.5E-04	6.2E-03		9.9E-01	ok
W-Mom	0.98	1.3E-04	7.8E-03		1.0E+00	ok
P-Mass	1.00	9.3E-05	3.3E-04	16.0	1.0E+00	ok
T-Energy	1.00	1.4E-06	1.9E-05	5.3	9.4E-03	OK
K-TurbKE	0.96	3.8E-04	2.9E-02	5.5	7.3E-03	OK
E-Diss.K	0.99	2.1E-05	8.4E-04	7.4	3.3E-03	OK

OUTER LOOP ITERATION = 138 (38) CPU SECONDS = 5.782E+03 (1.575E+03)

Equation	Rate	RMS Res	Max Res		Linear Solution	
U-Mom	1.02	1.4E-04	1.2E-02		9.9E-01	ok
V-Mom	0.98	1.5E-04	5.4E-03		9.9E-01	ok
W-Mom	0.99	1.3E-04	7.0E-03		9.9E-01	ok
P-Mass	1.00	9.3E-05	3.3E-04	16.0	1.0E+00	ok
T-Energy	1.00	1.4E-06	1.2E-05	5.3	9.0E-03	OK
K-TurbKE	0.95	3.6E-04	3.2E-02	5.5	8.0E-03	OK
E-Diss.K	1.01	2.1E-05	8.4E-04	7.4	3.4E-03	OK

```
OUTER LOOP ITERATION =  139 (   39) CPU SECONDS = 5.818E+03 (1.611E+03)
-------------------------------------------------------------------------
|       Equation       | Rate | RMS Res | Max Res |  Linear Solution |
+----------------------+------+---------+---------+------------------+
| U-Mom                | 1.02 | 1.4E-04 | 1.4E-02 |       9.9E-01  ok|
| V-Mom                | 0.98 | 1.5E-04 | 5.8E-03 |       9.9E-01  ok|
| W-Mom                | 1.00 | 1.3E-04 | 6.4E-03 |       9.9E-01  ok|
| P-Mass               | 1.00 | 9.3E-05 | 3.2E-04 | 16.0  1.0E+00  ok|
+----------------------+------+---------+---------+------------------+
| T-Energy             | 1.00 | 1.4E-06 | 9.2E-06 |  5.3  9.5E-03  OK|
+----------------------+------+---------+---------+------------------+
| K-TurbKE             | 0.93 | 3.4E-04 | 3.0E-02 |  5.5  8.4E-03  OK|
| E-Diss.K             | 1.01 | 2.1E-05 | 8.5E-04 |  7.4  3.1E-03  OK|
+----------------------+------+---------+---------+------------------+

=========================================================================
OUTER LOOP ITERATION =  140 (   40) CPU SECONDS = 5.854E+03 (1.647E+03)
-------------------------------------------------------------------------
|       Equation       | Rate | RMS Res | Max Res |  Linear Solution |
+----------------------+------+---------+---------+------------------+
| U-Mom                | 1.01 | 1.4E-04 | 1.3E-02 |       9.9E-01  ok|
| V-Mom                | 0.99 | 1.4E-04 | 5.5E-03 |       9.9E-01  ok|
| W-Mom                | 1.01 | 1.3E-04 | 8.2E-03 |       9.9E-01  ok|
| P-Mass               | 1.00 | 9.3E-05 | 3.2E-04 | 16.0  1.0E+00  ok|
+----------------------+------+---------+---------+------------------+
| T-Energy             | 1.00 | 1.4E-06 | 1.2E-05 |  5.3  9.3E-03  OK|
+----------------------+------+---------+---------+------------------+
| K-TurbKE             | 0.92 | 3.1E-04 | 2.7E-02 |  5.5  7.9E-03  OK|
| E-Diss.K             | 1.02 | 2.1E-05 | 8.5E-04 |  7.4  3.1E-03  OK|
+----------------------+------+---------+---------+------------------+

=========================================================================
|                        Timescale Information                          |
-------------------------------------------------------------------------
|       Equation       |         Type          |      Timescale       |
+----------------------+-----------------------+----------------------+
| U-Mom-fluid          | Auto Timescale        |     1.41882E-03      |
| V-Mom-fluid          | Auto Timescale        |     1.41882E-03      |
| W-Mom-fluid          | Auto Timescale        |     1.41882E-03      |
+----------------------+-----------------------+----------------------+
| T-Energy-turbine     | Auto Timescale        |     6.57581E+01      |
+----------------------+-----------------------+----------------------+
| K-TurbKE-fluid       | Auto Timescale        |     1.41882E-03      |
| E-Diss.K-fluid       | Auto Timescale        |     1.41882E-03      |
+----------------------+-----------------------+----------------------+

=========================================================================
OUTER LOOP ITERATION =  141 (   41) CPU SECONDS = 5.890E+03 (1.683E+03)
-------------------------------------------------------------------------
|       Equation       | Rate | RMS Res | Max Res |  Linear Solution |
+----------------------+------+---------+---------+------------------+
| U-Mom                | 1.01 | 1.5E-04 | 1.2E-02 |       9.9E-01  ok|
| V-Mom                | 0.99 | 1.4E-04 | 4.8E-03 |       9.8E-01  ok|
| W-Mom                | 1.01 | 1.3E-04 | 1.1E-02 |       9.9E-01  ok|
```

```
| P-Mass                | 1.00 | 9.3E-05 | 3.1E-04 | 16.0  1.0E+00  ok|
+-----------------------+------+---------+---------+------------------+
| T-Energy              | 1.00 | 1.4E-06 | 1.0E-05 |  5.3  9.5E-03  OK|
+-----------------------+------+---------+---------+------------------+
| K-TurbKE              | 0.93 | 2.9E-04 | 2.7E-02 |  5.5  6.9E-03  OK|
| E-Diss.K              | 1.01 | 2.1E-05 | 8.4E-04 |  7.4  3.1E-03  OK|
+-----------------------+------+---------+---------+------------------+

================================================================================
OUTER LOOP ITERATION =  142 (   42) CPU SECONDS = 5.926E+03 (1.719E+03)
--------------------------------------------------------------------------------
|       Equation        | Rate | RMS Res | Max Res |  Linear Solution |
+-----------------------+------+---------+---------+------------------+
| U-Mom                 | 1.00 | 1.5E-04 | 1.4E-02 |       9.9E-01  ok|
| V-Mom                 | 0.99 | 1.4E-04 | 4.1E-03 |       9.8E-01  ok|
| W-Mom                 | 1.00 | 1.3E-04 | 1.1E-02 |       9.9E-01  ok|
| P-Mass                | 1.00 | 9.3E-05 | 3.1E-04 | 16.0  1.0E+00  ok|
+-----------------------+------+---------+---------+------------------+
| T-Energy              | 1.00 | 1.4E-06 | 1.2E-05 |  5.3  9.2E-03  OK|
+-----------------------+------+---------+---------+------------------+
| K-TurbKE              | 0.96 | 2.8E-04 | 2.5E-02 |  5.5  6.4E-03  OK|
| E-Diss.K              | 0.99 | 2.1E-05 | 8.2E-04 |  7.4  2.8E-03  OK|
+-----------------------+------+---------+---------+------------------+

================================================================================
OUTER LOOP ITERATION =  143 (   43) CPU SECONDS = 5.962E+03 (1.754E+03)
--------------------------------------------------------------------------------
|       Equation        | Rate | RMS Res | Max Res |  Linear Solution |
+-----------------------+------+---------+---------+------------------+
| U-Mom                 | 0.99 | 1.4E-04 | 1.3E-02 |       9.9E-01  ok|
| V-Mom                 | 0.99 | 1.4E-04 | 3.7E-03 |       9.8E-01  ok|
| W-Mom                 | 1.00 | 1.3E-04 | 1.0E-02 |       9.9E-01  ok|
| P-Mass                | 1.00 | 9.3E-05 | 3.1E-04 | 16.0  1.0E+00  ok|
+-----------------------+------+---------+---------+------------------+
| T-Energy              | 1.00 | 1.4E-06 | 9.2E-06 |  5.3  9.4E-03  OK|
+-----------------------+------+---------+---------+------------------+
| K-TurbKE              | 0.98 | 2.7E-04 | 2.2E-02 |  5.5  5.7E-03  OK|
| E-Diss.K              | 1.00 | 2.1E-05 | 8.0E-04 |  7.4  3.0E-03  OK|
+-----------------------+------+---------+---------+------------------+

================================================================================
OUTER LOOP ITERATION =  144 (   44) CPU SECONDS = 5.998E+03 (1.790E+03)
--------------------------------------------------------------------------------
|       Equation        | Rate | RMS Res | Max Res |  Linear Solution |
+-----------------------+------+---------+---------+------------------+
| U-Mom                 | 0.98 | 1.4E-04 | 1.1E-02 |       9.9E-01  ok|
| V-Mom                 | 0.99 | 1.4E-04 | 3.5E-03 |       9.8E-01  ok|
| W-Mom                 | 1.00 | 1.3E-04 | 9.3E-03 |       9.9E-01  ok|
| P-Mass                | 1.00 | 9.3E-05 | 3.1E-04 | 16.0  1.0E+00  ok|
+-----------------------+------+---------+---------+------------------+
| T-Energy              | 1.00 | 1.4E-06 | 1.2E-05 |  5.3  9.1E-03  OK|
+-----------------------+------+---------+---------+------------------+
| K-TurbKE              | 0.99 | 2.7E-04 | 1.9E-02 |  5.5  4.9E-03  OK|
| E-Diss.K              | 1.02 | 2.2E-05 | 7.8E-04 |  7.4  2.7E-03  OK|
```

```
+----------------------+------+---------+---------+------------------+

================================================================================
OUTER LOOP ITERATION =  145 (   45) CPU SECONDS = 6.034E+03 (1.827E+03)
--------------------------------------------------------------------------------
|       Equation       | Rate | RMS Res | Max Res |  Linear Solution |
+----------------------+------+---------+---------+------------------+
| U-Mom                | 0.99 | 1.4E-04 | 8.5E-03 |       9.9E-01  ok|
| V-Mom                | 1.00 | 1.4E-04 | 3.3E-03 |       9.8E-01  ok|
| W-Mom                | 0.99 | 1.3E-04 | 9.5E-03 |       9.9E-01  ok|
| P-Mass               | 1.00 | 9.3E-05 | 3.3E-04 | 16.0  1.0E+00  ok|
+----------------------+------+---------+---------+------------------+
| T-Energy             | 1.00 | 1.4E-06 | 1.0E-05 |  5.3  9.3E-03  OK|
+----------------------+------+---------+---------+------------------+
| K-TurbKE             | 1.00 | 2.7E-04 | 1.8E-02 |  5.5  4.5E-03  OK|
| E-Diss.K             | 1.05 | 2.3E-05 | 7.5E-04 |  7.4  2.5E-03  OK|
+----------------------+------+---------+---------+------------------+

================================================================================
|                          Timescale Information                               |
--------------------------------------------------------------------------------
|       Equation       |         Type          |      Timescale      |
+----------------------+-----------------------+---------------------+
| U-Mom-fluid          | Auto Timescale        |     1.41901E-03     |
| V-Mom-fluid          | Auto Timescale        |     1.41901E-03     |
| W-Mom-fluid          | Auto Timescale        |     1.41901E-03     |
+----------------------+-----------------------+---------------------+
| T-Energy-turbine     | Auto Timescale        |     6.57581E+01     |
+----------------------+-----------------------+---------------------+
| K-TurbKE-fluid       | Auto Timescale        |     1.41901E-03     |
| E-Diss.K-fluid       | Auto Timescale        |     1.41901E-03     |
+----------------------+-----------------------+---------------------+

================================================================================
OUTER LOOP ITERATION =  146 (   46) CPU SECONDS = 6.077E+03 (1.869E+03)
--------------------------------------------------------------------------------
|       Equation       | Rate | RMS Res | Max Res |  Linear Solution |
+----------------------+------+---------+---------+------------------+
| U-Mom                | 0.99 | 1.4E-04 | 8.9E-03 |       9.9E-01  ok|
| V-Mom                | 1.00 | 1.4E-04 | 3.3E-03 |       9.8E-01  ok|
| W-Mom                | 0.99 | 1.3E-04 | 9.1E-03 |       9.9E-01  ok|
| P-Mass               | 1.00 | 9.3E-05 | 3.4E-04 | 16.0  1.0E+00  ok|
+----------------------+------+---------+---------+------------------+
| T-Energy             | 1.00 | 1.4E-06 | 1.2E-05 |  5.3  9.1E-03  OK|
+----------------------+------+---------+---------+------------------+
| K-TurbKE             | 0.99 | 2.7E-04 | 1.7E-02 |  5.5  5.0E-03  OK|
| E-Diss.K             | 1.07 | 2.4E-05 | 8.3E-04 |  7.4  2.6E-03  OK|
+----------------------+------+---------+---------+------------------+

================================================================================
OUTER LOOP ITERATION =  147 (   47) CPU SECONDS = 6.113E+03 (1.905E+03)
--------------------------------------------------------------------------------
|       Equation       | Rate | RMS Res | Max Res |  Linear Solution |
+----------------------+------+---------+---------+------------------+
```

```
| U-Mom                | 0.99 | 1.4E-04 | 8.7E-03 |       9.9E-01  ok|
| V-Mom                | 1.00 | 1.4E-04 | 3.5E-03 |       9.8E-01  ok|
| W-Mom                | 0.99 | 1.2E-04 | 7.8E-03 |       9.9E-01  ok|
| P-Mass               | 1.00 | 9.3E-05 | 3.4E-04 | 16.0  1.0E+00  ok|
+----------------------+------+---------+---------+------------------+
| T-Energy             | 1.00 | 1.4E-06 | 1.9E-05 |  5.3  9.4E-03  OK|
+----------------------+------+---------+---------+------------------+
| K-TurbKE             | 0.99 | 2.7E-04 | 1.6E-02 |  5.5  5.1E-03  OK|
| E-Diss.K             | 1.06 | 2.6E-05 | 8.9E-04 |  7.4  2.6E-03  OK|
+----------------------+------+---------+---------+------------------+

================================================================================
OUTER LOOP ITERATION =  148 (   48) CPU SECONDS = 6.149E+03 (1.941E+03)
--------------------------------------------------------------------------------
|       Equation       | Rate | RMS Res | Max Res |  Linear Solution |
+----------------------+------+---------+---------+------------------+
| U-Mom                | 0.99 | 1.4E-04 | 7.8E-03 |       9.9E-01  ok|
| V-Mom                | 1.00 | 1.4E-04 | 3.7E-03 |       9.8E-01  ok|
| W-Mom                | 0.99 | 1.2E-04 | 5.6E-03 |       9.9E-01  ok|
| P-Mass               | 1.00 | 9.3E-05 | 3.5E-04 | 16.0  1.0E+00  ok|
+----------------------+------+---------+---------+------------------+
| T-Energy             | 1.00 | 1.4E-06 | 1.2E-05 |  5.3  9.0E-03  OK|
+----------------------+------+---------+---------+------------------+
| K-TurbKE             | 0.98 | 2.6E-04 | 1.6E-02 |  5.5  5.1E-03  OK|
| E-Diss.K             | 1.03 | 2.7E-05 | 9.4E-04 |  7.4  2.7E-03  OK|
+----------------------+------+---------+---------+------------------+

================================================================================
OUTER LOOP ITERATION =  149 (   49) CPU SECONDS = 6.190E+03 (1.983E+03)
--------------------------------------------------------------------------------
|       Equation       | Rate | RMS Res | Max Res |  Linear Solution |
+----------------------+------+---------+---------+------------------+
| U-Mom                | 0.99 | 1.3E-04 | 7.6E-03 |       9.9E-01  ok|
| V-Mom                | 1.00 | 1.4E-04 | 3.9E-03 |       9.8E-01  ok|
| W-Mom                | 0.99 | 1.2E-04 | 3.9E-03 |       9.9E-01  ok|
| P-Mass               | 1.00 | 9.3E-05 | 3.5E-04 | 16.0  1.0E+00  ok|
+----------------------+------+---------+---------+------------------+
| T-Energy             | 1.00 | 1.4E-06 | 9.2E-06 |  5.3  9.5E-03  OK|
+----------------------+------+---------+---------+------------------+
| K-TurbKE             | 0.97 | 2.5E-04 | 1.6E-02 |  5.5  5.3E-03  OK|
| E-Diss.K             | 0.99 | 2.7E-05 | 9.3E-04 |  7.4  2.9E-03  OK|
+----------------------+------+---------+---------+------------------+

================================================================================
OUTER LOOP ITERATION =  150 (   50) CPU SECONDS = 6.236E+03 (2.029E+03)
--------------------------------------------------------------------------------
|       Equation       | Rate | RMS Res | Max Res |  Linear Solution |
+----------------------+------+---------+---------+------------------+
| U-Mom                | 0.99 | 1.3E-04 | 7.6E-03 |       9.9E-01  ok|
| V-Mom                | 1.00 | 1.4E-04 | 4.1E-03 |       9.8E-01  ok|
| W-Mom                | 0.99 | 1.2E-04 | 3.1E-03 |       9.9E-01  ok|
| P-Mass               | 1.00 | 9.3E-05 | 3.4E-04 | 16.0  1.0E+00  ok|
+----------------------+------+---------+---------+------------------+
| T-Energy             | 1.00 | 1.4E-06 | 1.2E-05 |  5.3  9.2E-03  OK|
```

```
+----------------------+------+---------+---------+------------------+
| K-TurbKE             | 0.97 | 2.4E-04 | 1.7E-02 |  5.5  5.6E-03  OK|
| E-Diss.K             | 0.96 | 2.6E-05 | 8.9E-04 |  7.4  2.9E-03  OK|
+----------------------+------+---------+---------+------------------+

========================================================================
|                        Timescale Information                         |
------------------------------------------------------------------------
|       Equation       |         Type          |      Timescale       |
+----------------------+-----------------------+----------------------+
| U-Mom-fluid          | Auto Timescale        |     1.41928E-03      |
| V-Mom-fluid          | Auto Timescale        |     1.41928E-03      |
| W-Mom-fluid          | Auto Timescale        |     1.41928E-03      |
+----------------------+-----------------------+----------------------+
| T-Energy-turbine     | Auto Timescale        |     6.57581E+01      |
+----------------------+-----------------------+----------------------+
| K-TurbKE-fluid       | Auto Timescale        |     1.41928E-03      |
| E-Diss.K-fluid       | Auto Timescale        |     1.41928E-03      |
+----------------------+-----------------------+----------------------+

========================================================================
OUTER LOOP ITERATION =  151 (   51) CPU SECONDS = 6.280E+03 (2.073E+03)
------------------------------------------------------------------------
|       Equation       | Rate | RMS Res | Max Res |  Linear Solution |
+----------------------+------+---------+---------+------------------+
| U-Mom                | 0.99 | 1.3E-04 | 7.2E-03 |       9.9E-01  ok|
| V-Mom                | 1.00 | 1.4E-04 | 4.3E-03 |       9.8E-01  ok|
| W-Mom                | 0.99 | 1.2E-04 | 2.9E-03 |       9.9E-01  ok|
| P-Mass               | 1.00 | 9.3E-05 | 3.3E-04 | 16.0  1.0E+00  ok|
+----------------------+------+---------+---------+------------------+
| T-Energy             | 1.00 | 1.4E-06 | 1.0E-05 |  5.3  9.5E-03  OK|
+----------------------+------+---------+---------+------------------+
| K-TurbKE             | 0.97 | 2.4E-04 | 1.8E-02 |  5.5  5.6E-03  OK|
| E-Diss.K             | 0.93 | 2.4E-05 | 8.1E-04 |  7.4  2.9E-03  OK|
+----------------------+------+---------+---------+------------------+

========================================================================
OUTER LOOP ITERATION =  152 (   52) CPU SECONDS = 6.322E+03 (2.114E+03)
------------------------------------------------------------------------
|       Equation       | Rate | RMS Res | Max Res |  Linear Solution |
+----------------------+------+---------+---------+------------------+
| U-Mom                | 0.99 | 1.3E-04 | 6.5E-03 |       9.9E-01  ok|
| V-Mom                | 1.00 | 1.4E-04 | 4.3E-03 |       9.8E-01  ok|
| W-Mom                | 0.99 | 1.2E-04 | 2.8E-03 |       9.9E-01  ok|
| P-Mass               | 1.00 | 9.3E-05 | 3.2E-04 | 16.0  1.0E+00  ok|
+----------------------+------+---------+---------+------------------+
| T-Energy             | 1.00 | 1.4E-06 | 1.2E-05 |  5.3  9.2E-03  OK|
+----------------------+------+---------+---------+------------------+
| K-TurbKE             | 0.96 | 2.3E-04 | 1.8E-02 |  5.5  5.8E-03  OK|
| E-Diss.K             | 0.91 | 2.2E-05 | 7.1E-04 |  7.4  2.8E-03  OK|
+----------------------+------+---------+---------+------------------+

========================================================================
OUTER LOOP ITERATION =  153 (   53) CPU SECONDS = 6.359E+03 (2.152E+03)
```

```
------------------------------------------------------------------------
|       Equation       | Rate | RMS Res | Max Res |  Linear Solution |
+----------------------+------+---------+---------+------------------+
| U-Mom                | 0.99 | 1.3E-04 | 5.6E-03 |       9.9E-01  ok|
| V-Mom                | 1.00 | 1.4E-04 | 4.2E-03 |       9.9E-01  ok|
| W-Mom                | 1.00 | 1.2E-04 | 2.5E-03 |       9.9E-01  ok|
| P-Mass               | 1.00 | 9.3E-05 | 3.1E-04 | 16.0  1.0E+00  ok|
+----------------------+------+---------+---------+------------------+
| T-Energy             | 1.00 | 1.4E-06 | 9.2E-06 |  5.3  9.4E-03  OK|
+----------------------+------+---------+---------+------------------+
| K-TurbKE             | 0.96 | 2.2E-04 | 1.8E-02 |  5.5  5.6E-03  OK|
| E-Diss.K             | 0.89 | 1.9E-05 | 6.2E-04 |  7.4  2.7E-03  OK|
+----------------------+------+---------+---------+------------------+

========================================================================
OUTER LOOP ITERATION =  154 (   54) CPU SECONDS = 6.395E+03 (2.187E+03)
------------------------------------------------------------------------
|       Equation       | Rate | RMS Res | Max Res |  Linear Solution |
+----------------------+------+---------+---------+------------------+
| U-Mom                | 1.00 | 1.3E-04 | 6.8E-03 |       9.9E-01  ok|
| V-Mom                | 0.99 | 1.4E-04 | 3.6E-03 |       9.9E-01  ok|
| W-Mom                | 1.00 | 1.2E-04 | 2.3E-03 |       9.9E-01  ok|
| P-Mass               | 1.00 | 9.3E-05 | 3.1E-04 | 16.0  1.0E+00  ok|
+----------------------+------+---------+---------+------------------+
| T-Energy             | 1.00 | 1.4E-06 | 1.2E-05 |  5.3  9.1E-03  OK|
+----------------------+------+---------+---------+------------------+
| K-TurbKE             | 0.95 | 2.1E-04 | 1.8E-02 |  5.5  5.1E-03  OK|
| E-Diss.K             | 0.88 | 1.7E-05 | 5.6E-04 |  7.4  2.6E-03  OK|
+----------------------+------+---------+---------+------------------+

========================================================================
OUTER LOOP ITERATION =  155 (   55) CPU SECONDS = 6.430E+03 (2.223E+03)
------------------------------------------------------------------------
|       Equation       | Rate | RMS Res | Max Res |  Linear Solution |
+----------------------+------+---------+---------+------------------+
| U-Mom                | 1.00 | 1.3E-04 | 1.0E-02 |       9.9E-01  ok|
| V-Mom                | 0.99 | 1.4E-04 | 3.1E-03 |       9.9E-01  ok|
| W-Mom                | 1.00 | 1.2E-04 | 2.6E-03 |       9.9E-01  ok|
| P-Mass               | 1.00 | 9.3E-05 | 3.0E-04 | 16.0  1.0E+00  ok|
+----------------------+------+---------+---------+------------------+
| T-Energy             | 1.00 | 1.4E-06 | 1.0E-05 |  5.3  9.3E-03  OK|
+----------------------+------+---------+---------+------------------+
| K-TurbKE             | 0.94 | 2.0E-04 | 1.7E-02 |  5.5  4.6E-03  OK|
| E-Diss.K             | 0.84 | 1.4E-05 | 5.4E-04 |  7.4  2.4E-03  OK|
+----------------------+------+---------+---------+------------------+

========================================================================
|                        Timescale Information                         |
------------------------------------------------------------------------
|       Equation       |         Type          |      Timescale       |
+----------------------+-----------------------+----------------------+
| U-Mom-fluid          | Auto Timescale        |     1.41952E-03      |
| V-Mom-fluid          | Auto Timescale        |     1.41952E-03      |
| W-Mom-fluid          | Auto Timescale        |     1.41952E-03      |
```

T-Energy-turbine	Auto Timescale	6.57581E+01
K-TurbKE-fluid	Auto Timescale	1.41952E-03
E-Diss.K-fluid	Auto Timescale	1.41952E-03

OUTER LOOP ITERATION = 156 (56) CPU SECONDS = 6.466E+03 (2.258E+03)

Equation	Rate	RMS Res	Max Res		Linear Solution	
U-Mom	1.01	1.3E-04	1.5E-02		9.9E-01	ok
V-Mom	0.99	1.3E-04	3.2E-03		9.9E-01	ok
W-Mom	1.00	1.2E-04	3.9E-03		9.9E-01	ok
P-Mass	1.00	9.3E-05	3.0E-04	16.0	1.0E+00	ok
T-Energy	1.00	1.4E-06	1.2E-05	5.3	9.1E-03	OK
K-TurbKE	0.94	1.8E-04	1.5E-02	5.5	4.0E-03	OK
E-Diss.K	0.81	1.2E-05	5.2E-04	7.4	2.1E-03	OK

OUTER LOOP ITERATION = 157 (57) CPU SECONDS = 6.501E+03 (2.294E+03)

Equation	Rate	RMS Res	Max Res		Linear Solution	
U-Mom	1.03	1.3E-04	2.2E-02		9.9E-01	ok
V-Mom	0.99	1.3E-04	3.1E-03		9.9E-01	ok
W-Mom	1.00	1.2E-04	5.7E-03		9.9E-01	ok
P-Mass	1.00	9.3E-05	2.9E-04	16.0	1.0E+00	ok
T-Energy	1.00	1.4E-06	1.9E-05	5.3	9.4E-03	OK
K-TurbKE	0.95	1.8E-04	1.3E-02	5.5	3.6E-03	OK
E-Diss.K	0.80	9.3E-06	4.9E-04	7.4	1.9E-03	OK

OUTER LOOP ITERATION = 158 (58) CPU SECONDS = 6.537E+03 (2.329E+03)

Equation	Rate	RMS Res	Max Res		Linear Solution	
U-Mom	1.02	1.4E-04	2.6E-02		9.9E-01	ok
V-Mom	1.00	1.3E-04	2.9E-03		9.9E-01	ok
W-Mom	1.00	1.2E-04	7.0E-03		9.9E-01	ok
P-Mass	1.00	9.3E-05	2.8E-04	16.0	1.0E+00	ok
T-Energy	1.00	1.4E-06	1.2E-05	5.3	9.0E-03	OK
K-TurbKE	0.97	1.7E-04	1.2E-02	5.5	3.4E-03	OK
E-Diss.K	0.89	8.2E-06	4.7E-04	7.4	1.8E-03	OK

```
================================================================================
OUTER LOOP ITERATION =  159 (   59) CPU SECONDS = 6.572E+03 (2.365E+03)
--------------------------------------------------------------------------------
|       Equation       | Rate | RMS Res | Max Res |  Linear Solution |
+----------------------+------+---------+---------+------------------+
| U-Mom                | 0.95 | 1.3E-04 | 1.9E-02 |       9.9E-01  ok|
| V-Mom                | 1.00 | 1.3E-04 | 2.9E-03 |       9.9E-01  ok|
| W-Mom                | 1.00 | 1.2E-04 | 5.7E-03 |       9.9E-01  ok|
| P-Mass               | 1.00 | 9.3E-05 | 2.7E-04 | 16.0  1.0E+00  ok|
+----------------------+------+---------+---------+------------------+
| T-Energy             | 1.00 | 1.4E-06 | 9.2E-06 |  5.3  9.5E-03  OK|
+----------------------+------+---------+---------+------------------+
| K-TurbKE             | 1.00 | 1.7E-04 | 1.3E-02 |  5.5  3.7E-03  OK|
| E-Diss.K             | 1.12 | 9.2E-06 | 4.4E-04 |  7.4  1.8E-03  OK|
+----------------------+------+---------+---------+------------------+

================================================================================
OUTER LOOP ITERATION =  160 (   60) CPU SECONDS = 6.612E+03 (2.405E+03)
--------------------------------------------------------------------------------
|       Equation       | Rate | RMS Res | Max Res |  Linear Solution |
+----------------------+------+---------+---------+------------------+
| U-Mom                | 0.94 | 1.2E-04 | 5.7E-03 |       9.9E-01  ok|
| V-Mom                | 1.00 | 1.3E-04 | 2.9E-03 |       9.9E-01  ok|
| W-Mom                | 0.99 | 1.2E-04 | 2.9E-03 |       9.9E-01  ok|
| P-Mass               | 1.00 | 9.3E-05 | 2.5E-04 | 16.0  1.0E+00  ok|
+----------------------+------+---------+---------+------------------+
| T-Energy             | 1.00 | 1.4E-06 | 1.2E-05 |  5.3  9.3E-03  OK|
+----------------------+------+---------+---------+------------------+
| K-TurbKE             | 1.03 | 1.7E-04 | 1.4E-02 |  5.5  4.4E-03  OK|
| E-Diss.K             | 1.26 | 1.2E-05 | 4.1E-04 |  7.4  2.0E-03  OK|
+----------------------+------+---------+---------+------------------+

================================================================================
|                          Timescale Information                               |
--------------------------------------------------------------------------------
|       Equation       |         Type          |      Timescale      |
+----------------------+-----------------------+---------------------+
| U-Mom-fluid          | Auto Timescale        |     1.41963E-03     |
| V-Mom-fluid          | Auto Timescale        |     1.41963E-03     |
| W-Mom-fluid          | Auto Timescale        |     1.41963E-03     |
+----------------------+-----------------------+---------------------+
| T-Energy-turbine     | Auto Timescale        |     6.57581E+01     |
+----------------------+-----------------------+---------------------+
| K-TurbKE-fluid       | Auto Timescale        |     1.41963E-03     |
| E-Diss.K-fluid       | Auto Timescale        |     1.41963E-03     |
+----------------------+-----------------------+---------------------+

================================================================================
OUTER LOOP ITERATION =  161 (   61) CPU SECONDS = 6.648E+03 (2.440E+03)
--------------------------------------------------------------------------------
|       Equation       | Rate | RMS Res | Max Res |  Linear Solution |
+----------------------+------+---------+---------+------------------+
| U-Mom                | 1.00 | 1.2E-04 | 5.8E-03 |       9.9E-01  ok|
```

```
| V-Mom                | 1.00 | 1.3E-04 | 2.9E-03 |       9.9E-01  ok|
| W-Mom                | 1.00 | 1.2E-04 | 3.1E-03 |       1.0E+00  ok|
| P-Mass               | 1.00 | 9.3E-05 | 2.4E-04 | 16.0  1.0E+00  ok|
+----------------------+------+---------+---------+------------------+
| T-Energy             | 1.00 | 1.4E-06 | 1.0E-05 |  5.3  9.5E-03  OK|
+----------------------+------+---------+---------+------------------+
| K-TurbKE             | 1.05 | 1.8E-04 | 1.5E-02 |  5.5  5.0E-03  OK|
| E-Diss.K             | 1.25 | 1.5E-05 | 3.8E-04 |  7.4  2.2E-03  OK|
+----------------------+------+---------+---------+------------------+

================================================================================
OUTER LOOP ITERATION =  162 (   62) CPU SECONDS = 6.683E+03 (2.476E+03)
--------------------------------------------------------------------------------
|       Equation       | Rate | RMS Res | Max Res |  Linear Solution |
+----------------------+------+---------+---------+------------------+
| U-Mom                | 1.00 | 1.2E-04 | 5.7E-03 |       9.9E-01  ok|
| V-Mom                | 1.00 | 1.3E-04 | 2.8E-03 |       9.9E-01  ok|
| W-Mom                | 1.00 | 1.2E-04 | 3.2E-03 |       1.0E+00  ok|
| P-Mass               | 1.00 | 9.3E-05 | 2.4E-04 | 16.0  1.0E+00  ok|
+----------------------+------+---------+---------+------------------+
| T-Energy             | 1.00 | 1.4E-06 | 1.2E-05 |  5.3  9.2E-03  OK|
+----------------------+------+---------+---------+------------------+
| K-TurbKE             | 1.06 | 1.9E-04 | 1.5E-02 |  5.5  5.5E-03  OK|
| E-Diss.K             | 1.19 | 1.7E-05 | 4.6E-04 |  7.4  2.3E-03  OK|
+----------------------+------+---------+---------+------------------+

================================================================================
OUTER LOOP ITERATION =  163 (   63) CPU SECONDS = 6.719E+03 (2.512E+03)
--------------------------------------------------------------------------------
|       Equation       | Rate | RMS Res | Max Res |  Linear Solution |
+----------------------+------+---------+---------+------------------+
| U-Mom                | 0.99 | 1.2E-04 | 5.7E-03 |       1.0E+00  ok|
| V-Mom                | 1.00 | 1.3E-04 | 2.8E-03 |       9.9E-01  ok|
| W-Mom                | 1.00 | 1.2E-04 | 3.3E-03 |       1.0E+00  ok|
| P-Mass               | 1.00 | 9.3E-05 | 2.4E-04 | 16.0  1.0E+00  ok|
+----------------------+------+---------+---------+------------------+
| T-Energy             | 1.00 | 1.4E-06 | 9.2E-06 |  5.3  9.4E-03  OK|
+----------------------+------+---------+---------+------------------+
| K-TurbKE             | 1.06 | 2.1E-04 | 1.6E-02 |  5.5  5.9E-03  OK|
| E-Diss.K             | 1.15 | 2.0E-05 | 5.3E-04 |  7.4  2.5E-03  OK|
+----------------------+------+---------+---------+------------------+

================================================================================
OUTER LOOP ITERATION =  164 (   64) CPU SECONDS = 6.755E+03 (2.548E+03)
--------------------------------------------------------------------------------
|       Equation       | Rate | RMS Res | Max Res |  Linear Solution |
+----------------------+------+---------+---------+------------------+
| U-Mom                | 0.99 | 1.2E-04 | 5.6E-03 |       1.0E+00  ok|
| V-Mom                | 1.00 | 1.3E-04 | 2.7E-03 |       9.9E-01  ok|
| W-Mom                | 1.00 | 1.2E-04 | 3.3E-03 |       1.0E+00  ok|
| P-Mass               | 1.00 | 9.3E-05 | 2.3E-04 | 16.0  1.0E+00  ok|
+----------------------+------+---------+---------+------------------+
| T-Energy             | 1.00 | 1.4E-06 | 1.2E-05 |  5.3  9.1E-03  OK|
+----------------------+------+---------+---------+------------------+
```

```
| K-TurbKE              | 1.06 | 2.2E-04 | 1.6E-02 |  5.5  6.3E-03  OK|
| E-Diss.K              | 1.12 | 2.2E-05 | 6.0E-04 |  7.4  2.6E-03  OK|
+-----------------------+------+---------+---------+------------------+

=============================================================================
OUTER LOOP ITERATION =  165 (   65) CPU SECONDS = 6.790E+03 (2.583E+03)
-----------------------------------------------------------------------------
|       Equation        | Rate | RMS Res | Max Res |  Linear Solution |
+-----------------------+------+---------+---------+------------------+
| U-Mom                 | 0.99 | 1.2E-04 | 5.4E-03 |       1.0E+00  ok|
| V-Mom                 | 1.00 | 1.3E-04 | 2.7E-03 |       9.9E-01  ok|
| W-Mom                 | 1.00 | 1.2E-04 | 3.2E-03 |       1.0E+00  ok|
| P-Mass                | 1.00 | 9.3E-05 | 2.3E-04 | 16.0  1.0E+00  ok|
+-----------------------+------+---------+---------+------------------+
| T-Energy              | 1.00 | 1.4E-06 | 1.0E-05 |  5.3  9.3E-03  OK|
+-----------------------+------+---------+---------+------------------+
| K-TurbKE              | 1.05 | 2.3E-04 | 1.7E-02 |  5.5  6.5E-03  OK|
| E-Diss.K              | 1.09 | 2.4E-05 | 6.4E-04 |  7.4  2.7E-03  OK|
+-----------------------+------+---------+---------+------------------+

=============================================================================
|                         Timescale Information                             |
-----------------------------------------------------------------------------
|       Equation        |          Type          |       Timescale       |
+-----------------------+------------------------+-----------------------+
| U-Mom-fluid           | Auto Timescale         |     1.41961E-03       |
| V-Mom-fluid           | Auto Timescale         |     1.41961E-03       |
| W-Mom-fluid           | Auto Timescale         |     1.41961E-03       |
+-----------------------+------------------------+-----------------------+
| T-Energy-turbine      | Auto Timescale         |     6.57581E+01       |
+-----------------------+------------------------+-----------------------+
| K-TurbKE-fluid        | Auto Timescale         |     1.41961E-03       |
| E-Diss.K-fluid        | Auto Timescale         |     1.41961E-03       |
+-----------------------+------------------------+-----------------------+

=============================================================================
OUTER LOOP ITERATION =  166 (   66) CPU SECONDS = 6.826E+03 (2.618E+03)
-----------------------------------------------------------------------------
|       Equation        | Rate | RMS Res | Max Res |  Linear Solution |
+-----------------------+------+---------+---------+------------------+
| U-Mom                 | 0.99 | 1.2E-04 | 5.2E-03 |       1.0E+00  ok|
| V-Mom                 | 1.00 | 1.3E-04 | 2.6E-03 |       9.9E-01  ok|
| W-Mom                 | 1.00 | 1.2E-04 | 3.0E-03 |       1.0E+00  ok|
| P-Mass                | 1.00 | 9.3E-05 | 2.4E-04 | 16.0  1.0E+00  ok|
+-----------------------+------+---------+---------+------------------+
| T-Energy              | 1.00 | 1.4E-06 | 1.2E-05 |  5.3  9.1E-03  OK|
+-----------------------+------+---------+---------+------------------+
| K-TurbKE              | 1.04 | 2.4E-04 | 1.8E-02 |  5.5  6.5E-03  OK|
| E-Diss.K              | 1.07 | 2.6E-05 | 6.8E-04 |  7.4  2.8E-03  OK|
+-----------------------+------+---------+---------+------------------+

=============================================================================
OUTER LOOP ITERATION =  167 (   67) CPU SECONDS = 6.861E+03 (2.654E+03)
-----------------------------------------------------------------------------
```

```
|       Equation       | Rate | RMS Res | Max Res |  Linear Solution |
+----------------------+------+---------+---------+------------------+
| U-Mom                | 0.99 | 1.2E-04 | 4.8E-03 |       1.0E+00  ok|
| V-Mom                | 1.00 | 1.3E-04 | 2.8E-03 |       9.9E-01  ok|
| W-Mom                | 1.00 | 1.2E-04 | 2.8E-03 |       1.0E+00  ok|
| P-Mass               | 1.00 | 9.2E-05 | 2.4E-04 | 16.0  1.0E+00  ok|
+----------------------+------+---------+---------+------------------+
| T-Energy             | 1.00 | 1.4E-06 | 1.9E-05 |  5.3  9.4E-03  OK|
+----------------------+------+---------+---------+------------------+
| K-TurbKE             | 1.03 | 2.5E-04 | 1.8E-02 |  5.5  6.6E-03  OK|
| E-Diss.K             | 1.04 | 2.7E-05 | 7.0E-04 |  7.4  2.9E-03  OK|
+----------------------+------+---------+---------+------------------+

================================================================================
OUTER LOOP ITERATION =  168 (   68) CPU SECONDS = 6.897E+03 (2.689E+03)
--------------------------------------------------------------------------------
|       Equation       | Rate | RMS Res | Max Res |  Linear Solution |
+----------------------+------+---------+---------+------------------+
| U-Mom                | 1.00 | 1.2E-04 | 4.4E-03 |       1.0E+00  ok|
| V-Mom                | 1.00 | 1.3E-04 | 2.9E-03 |       9.9E-01  ok|
| W-Mom                | 1.00 | 1.2E-04 | 2.6E-03 |       1.0E+00  ok|
| P-Mass               | 1.00 | 9.2E-05 | 2.4E-04 | 16.0  1.0E+00  ok|
+----------------------+------+---------+---------+------------------+
| T-Energy             | 1.00 | 1.4E-06 | 1.2E-05 |  5.3  9.0E-03  OK|
+----------------------+------+---------+---------+------------------+
| K-TurbKE             | 1.02 | 2.5E-04 | 1.8E-02 |  5.5  6.6E-03  OK|
| E-Diss.K             | 1.03 | 2.8E-05 | 7.1E-04 |  7.4  2.9E-03  OK|
+----------------------+------+---------+---------+------------------+

================================================================================
OUTER LOOP ITERATION =  169 (   69) CPU SECONDS = 6.932E+03 (2.725E+03)
--------------------------------------------------------------------------------
|       Equation       | Rate | RMS Res | Max Res |  Linear Solution |
+----------------------+------+---------+---------+------------------+
| U-Mom                | 1.00 | 1.2E-04 | 4.0E-03 |       1.0E+00  ok|
| V-Mom                | 1.00 | 1.3E-04 | 3.5E-03 |       9.9E-01  ok|
| W-Mom                | 1.00 | 1.2E-04 | 2.4E-03 |       1.0E+00  ok|
| P-Mass               | 1.00 | 9.2E-05 | 2.3E-04 | 16.0  1.0E+00  ok|
+----------------------+------+---------+---------+------------------+
| T-Energy             | 1.00 | 1.4E-06 | 9.2E-06 |  5.3  9.5E-03  OK|
+----------------------+------+---------+---------+------------------+
| K-TurbKE             | 1.01 | 2.5E-04 | 1.8E-02 |  5.5  6.7E-03  OK|
| E-Diss.K             | 1.01 | 2.8E-05 | 7.1E-04 |  7.4  2.9E-03  OK|
+----------------------+------+---------+---------+------------------+

================================================================================
OUTER LOOP ITERATION =  170 (   70) CPU SECONDS = 6.968E+03 (2.760E+03)
--------------------------------------------------------------------------------
|       Equation       | Rate | RMS Res | Max Res |  Linear Solution |
+----------------------+------+---------+---------+------------------+
| U-Mom                | 1.00 | 1.2E-04 | 3.9E-03 |       1.0E+00  ok|
| V-Mom                | 1.00 | 1.3E-04 | 3.9E-03 |       9.9E-01  ok|
| W-Mom                | 1.00 | 1.2E-04 | 2.4E-03 |       1.0E+00  ok|
| P-Mass               | 1.00 | 9.2E-05 | 2.3E-04 | 16.0  1.0E+00  ok|
```

```
+----------------------+------+---------+---------+------------------+
| T-Energy             | 1.00 | 1.4E-06 | 1.2E-05 |  5.3  9.2E-03  OK|
+----------------------+------+---------+---------+------------------+
| K-TurbKE             | 0.99 | 2.5E-04 | 1.7E-02 |  5.5  6.4E-03  OK|
| E-Diss.K             | 0.99 | 2.8E-05 | 7.0E-04 |  7.4  2.9E-03  OK|
+----------------------+------+---------+---------+------------------+

=========================================================================
|                        Timescale Information                          |
-------------------------------------------------------------------------
|       Equation       |         Type          |      Timescale       |
+----------------------+-----------------------+----------------------+
| U-Mom-fluid          | Auto Timescale        |     1.41948E-03      |
| V-Mom-fluid          | Auto Timescale        |     1.41948E-03      |
| W-Mom-fluid          | Auto Timescale        |     1.41948E-03      |
+----------------------+-----------------------+----------------------+
| T-Energy-turbine     | Auto Timescale        |     6.57581E+01      |
+----------------------+-----------------------+----------------------+
| K-TurbKE-fluid       | Auto Timescale        |     1.41948E-03      |
| E-Diss.K-fluid       | Auto Timescale        |     1.41948E-03      |
+----------------------+-----------------------+----------------------+

=========================================================================
OUTER LOOP ITERATION =  171 (   71) CPU SECONDS = 7.003E+03 (2.796E+03)
-------------------------------------------------------------------------
|       Equation       | Rate | RMS Res | Max Res |  Linear Solution |
+----------------------+------+---------+---------+------------------+
| U-Mom                | 1.00 | 1.2E-04 | 3.9E-03 |       1.0E+00  ok|
| V-Mom                | 1.00 | 1.3E-04 | 4.1E-03 |       9.9E-01  ok|
| W-Mom                | 1.00 | 1.2E-04 | 2.4E-03 |       1.0E+00  ok|
| P-Mass               | 1.00 | 9.2E-05 | 2.3E-04 | 16.0  1.0E+00  ok|
+----------------------+------+---------+---------+------------------+
| T-Energy             | 1.00 | 1.4E-06 | 1.0E-05 |  5.3  9.5E-03  OK|
+----------------------+------+---------+---------+------------------+
| K-TurbKE             | 0.99 | 2.5E-04 | 1.6E-02 |  5.5  6.5E-03  OK|
| E-Diss.K             | 0.98 | 2.7E-05 | 6.8E-04 |  7.4  2.8E-03  OK|
+----------------------+------+---------+---------+------------------+

=========================================================================
OUTER LOOP ITERATION =  172 (   72) CPU SECONDS = 7.039E+03 (2.831E+03)
-------------------------------------------------------------------------
|       Equation       | Rate | RMS Res | Max Res |  Linear Solution |
+----------------------+------+---------+---------+------------------+
| U-Mom                | 1.00 | 1.2E-04 | 3.7E-03 |       1.0E+00  ok|
| V-Mom                | 1.00 | 1.3E-04 | 4.0E-03 |       9.9E-01  ok|
| W-Mom                | 1.00 | 1.2E-04 | 2.4E-03 |       1.0E+00  ok|
| P-Mass               | 1.00 | 9.2E-05 | 2.2E-04 | 16.0  1.0E+00  ok|
+----------------------+------+---------+---------+------------------+
| T-Energy             | 1.00 | 1.4E-06 | 1.2E-05 |  5.3  9.2E-03  OK|
+----------------------+------+---------+---------+------------------+
| K-TurbKE             | 0.97 | 2.4E-04 | 1.5E-02 |  5.5  6.6E-03  OK|
| E-Diss.K             | 0.96 | 2.6E-05 | 6.5E-04 |  7.4  2.8E-03  OK|
+----------------------+------+---------+---------+------------------+
```

```
================================================================================
OUTER LOOP ITERATION =  173 (   73) CPU SECONDS = 7.074E+03 (2.867E+03)
--------------------------------------------------------------------------------
|       Equation       | Rate | RMS Res | Max Res |  Linear Solution |
+----------------------+------+---------+---------+------------------+
| U-Mom                | 1.00 | 1.2E-04 | 3.4E-03 |       1.0E+00  ok|
| V-Mom                | 1.00 | 1.3E-04 | 3.7E-03 |       9.9E-01  ok|
| W-Mom                | 1.00 | 1.2E-04 | 2.4E-03 |       1.0E+00  ok|
| P-Mass               | 1.00 | 9.2E-05 | 2.2E-04 | 16.0  1.0E+00  ok|
+----------------------+------+---------+---------+------------------+
| T-Energy             | 1.00 | 1.4E-06 | 9.2E-06 |  5.3  9.4E-03  OK|
+----------------------+------+---------+---------+------------------+
| K-TurbKE             | 0.97 | 2.3E-04 | 1.6E-02 |  5.5  6.5E-03  OK|
| E-Diss.K             | 0.95 | 2.5E-05 | 6.2E-04 |  7.4  2.7E-03  OK|
+----------------------+------+---------+---------+------------------+

================================================================================
OUTER LOOP ITERATION =  174 (   74) CPU SECONDS = 7.110E+03 (2.903E+03)
--------------------------------------------------------------------------------
|       Equation       | Rate | RMS Res | Max Res |  Linear Solution |
+----------------------+------+---------+---------+------------------+
| U-Mom                | 1.00 | 1.2E-04 | 3.0E-03 |       1.0E+00  ok|
| V-Mom                | 1.00 | 1.3E-04 | 3.4E-03 |       9.9E-01  ok|
| W-Mom                | 1.00 | 1.2E-04 | 2.4E-03 |       1.0E+00  ok|
| P-Mass               | 1.00 | 9.2E-05 | 2.1E-04 | 16.0  1.0E+00  ok|
+----------------------+------+---------+---------+------------------+
| T-Energy             | 1.00 | 1.4E-06 | 1.2E-05 |  5.3  9.1E-03  OK|
+----------------------+------+---------+---------+------------------+
| K-TurbKE             | 0.97 | 2.2E-04 | 1.7E-02 |  5.5  6.4E-03  OK|
| E-Diss.K             | 0.94 | 2.3E-05 | 5.8E-04 |  7.4  2.7E-03  OK|
+----------------------+------+---------+---------+------------------+

================================================================================
OUTER LOOP ITERATION =  175 (   75) CPU SECONDS = 7.146E+03 (2.939E+03)
--------------------------------------------------------------------------------
|       Equation       | Rate | RMS Res | Max Res |  Linear Solution |
+----------------------+------+---------+---------+------------------+
| U-Mom                | 1.00 | 1.1E-04 | 2.4E-03 |       1.0E+00  ok|
| V-Mom                | 1.00 | 1.3E-04 | 3.4E-03 |       9.9E-01  ok|
| W-Mom                | 1.00 | 1.1E-04 | 2.4E-03 |       1.0E+00  ok|
| P-Mass               | 1.00 | 9.2E-05 | 2.1E-04 | 16.0  1.0E+00  ok|
+----------------------+------+---------+---------+------------------+
| T-Energy             | 1.00 | 1.4E-06 | 1.0E-05 |  5.3  9.3E-03  OK|
+----------------------+------+---------+---------+------------------+
| K-TurbKE             | 0.97 | 2.2E-04 | 1.7E-02 |  5.5  6.2E-03  OK|
| E-Diss.K             | 0.93 | 2.2E-05 | 5.4E-04 |  7.4  2.8E-03  OK|
+----------------------+------+---------+---------+------------------+

================================================================================
|                        Timescale Information                                 |
--------------------------------------------------------------------------------
|       Equation       |         Type          |      Timescale      |
+----------------------+-----------------------+---------------------+
| U-Mom-fluid          | Auto Timescale        |     1.41930E-03     |
```

V-Mom-fluid	Auto Timescale	1.41930E-03
W-Mom-fluid	Auto Timescale	1.41930E-03
T-Energy-turbine	Auto Timescale	6.57581E+01
K-TurbKE-fluid	Auto Timescale	1.41930E-03
E-Diss.K-fluid	Auto Timescale	1.41930E-03

OUTER LOOP ITERATION = 176 (76) CPU SECONDS = 7.183E+03 (2.975E+03)

Equation	Rate	RMS Res	Max Res		Linear Solution	
U-Mom	1.00	1.1E-04	2.5E-03		1.0E+00	ok
V-Mom	1.00	1.3E-04	3.4E-03		9.9E-01	ok
W-Mom	1.00	1.1E-04	2.4E-03		1.0E+00	ok
P-Mass	1.00	9.2E-05	2.1E-04	16.0	1.0E+00	ok
T-Energy	1.00	1.4E-06	1.2E-05	5.3	9.1E-03	OK
K-TurbKE	0.97	2.1E-04	1.8E-02	5.5	6.1E-03	OK
E-Diss.K	0.93	2.0E-05	5.0E-04	7.4	2.7E-03	OK

OUTER LOOP ITERATION = 177 (77) CPU SECONDS = 7.219E+03 (3.011E+03)

Equation	Rate	RMS Res	Max Res		Linear Solution	
U-Mom	1.00	1.1E-04	2.6E-03		1.0E+00	ok
V-Mom	1.00	1.3E-04	3.3E-03		9.9E-01	ok
W-Mom	1.00	1.1E-04	2.4E-03		1.0E+00	ok
P-Mass	1.00	9.2E-05	2.1E-04	16.0	1.0E+00	ok
T-Energy	1.00	1.4E-06	1.9E-05	5.3	9.4E-03	OK
K-TurbKE	0.97	2.0E-04	1.8E-02	5.5	5.9E-03	OK
E-Diss.K	0.93	1.9E-05	4.7E-04	7.4	2.5E-03	OK

OUTER LOOP ITERATION = 178 (78) CPU SECONDS = 7.256E+03 (3.048E+03)

Equation	Rate	RMS Res	Max Res		Linear Solution	
U-Mom	1.00	1.1E-04	2.7E-03		1.0E+00	ok
V-Mom	1.00	1.3E-04	3.2E-03		9.9E-01	ok
W-Mom	1.00	1.1E-04	2.4E-03		1.0E+00	ok
P-Mass	1.00	9.2E-05	2.1E-04	16.0	1.0E+00	ok
T-Energy	1.00	1.4E-06	1.2E-05	5.3	9.0E-03	OK
K-TurbKE	0.98	2.0E-04	1.9E-02	5.5	5.5E-03	OK

```
| E-Diss.K              | 0.94 | 1.8E-05 | 4.5E-04 |  7.4  2.5E-03  OK|
+-----------------------+------+---------+---------+------------------+

=============================================================================
OUTER LOOP ITERATION =  179 (   79) CPU SECONDS = 7.298E+03 (3.091E+03)
-----------------------------------------------------------------------------
|       Equation        | Rate | RMS Res | Max Res |  Linear Solution |
+-----------------------+------+---------+---------+------------------+
| U-Mom                 | 1.00 | 1.1E-04 | 2.8E-03 |       1.0E+00  ok|
| V-Mom                 | 1.00 | 1.3E-04 | 3.1E-03 |       9.9E-01  ok|
| W-Mom                 | 1.00 | 1.1E-04 | 2.4E-03 |       1.0E+00  ok|
| P-Mass                | 1.00 | 9.2E-05 | 2.1E-04 | 16.0  1.0E+00  ok|
+-----------------------+------+---------+---------+------------------+
| T-Energy              | 1.00 | 1.4E-06 | 9.2E-06 |  5.3  9.5E-03  OK|
+-----------------------+------+---------+---------+------------------+
| K-TurbKE              | 0.98 | 2.0E-04 | 1.8E-02 |  5.5  5.4E-03  OK|
| E-Diss.K              | 0.95 | 1.7E-05 | 4.3E-04 |  7.4  2.4E-03  OK|
+-----------------------+------+---------+---------+------------------+

=============================================================================
OUTER LOOP ITERATION =  180 (   80) CPU SECONDS = 7.340E+03 (3.133E+03)
-----------------------------------------------------------------------------
|       Equation        | Rate | RMS Res | Max Res |  Linear Solution |
+-----------------------+------+---------+---------+------------------+
| U-Mom                 | 1.00 | 1.1E-04 | 2.9E-03 |       1.0E+00  ok|
| V-Mom                 | 1.00 | 1.3E-04 | 3.1E-03 |       9.9E-01  ok|
| W-Mom                 | 1.00 | 1.1E-04 | 2.4E-03 |       1.0E+00  ok|
| P-Mass                | 1.00 | 9.2E-05 | 2.1E-04 | 16.0  1.0E+00  ok|
+-----------------------+------+---------+---------+------------------+
| T-Energy              | 1.00 | 1.4E-06 | 1.2E-05 |  5.3  9.3E-03  OK|
+-----------------------+------+---------+---------+------------------+
| K-TurbKE              | 0.99 | 1.9E-04 | 1.8E-02 |  5.5  5.1E-03  OK|
| E-Diss.K              | 0.97 | 1.6E-05 | 4.2E-04 |  7.4  2.2E-03  OK|
+-----------------------+------+---------+---------+------------------+

=============================================================================
|                        Timescale Information                              |
-----------------------------------------------------------------------------
|       Equation        |         Type          |      Timescale       |
+-----------------------+-----------------------+----------------------+
| U-Mom-fluid           | Auto Timescale        |     1.41914E-03      |
| V-Mom-fluid           | Auto Timescale        |     1.41914E-03      |
| W-Mom-fluid           | Auto Timescale        |     1.41914E-03      |
+-----------------------+-----------------------+----------------------+
| T-Energy-turbine      | Auto Timescale        |     6.57581E+01      |
+-----------------------+-----------------------+----------------------+
| K-TurbKE-fluid        | Auto Timescale        |     1.41914E-03      |
| E-Diss.K-fluid        | Auto Timescale        |     1.41914E-03      |
+-----------------------+-----------------------+----------------------+

=============================================================================
OUTER LOOP ITERATION =  181 (   81) CPU SECONDS = 7.405E+03 (3.198E+03)
-----------------------------------------------------------------------------
|       Equation        | Rate | RMS Res | Max Res |  Linear Solution |
```

```
+----------------------+------+---------+---------+------------------+
| U-Mom                | 1.00 | 1.1E-04 | 3.0E-03 |       1.0E+00  ok|
| V-Mom                | 1.00 | 1.3E-04 | 3.1E-03 |       9.9E-01  ok|
| W-Mom                | 1.00 | 1.1E-04 | 2.4E-03 |       1.0E+00  ok|
| P-Mass               | 1.00 | 9.2E-05 | 2.1E-04 | 16.0  1.0E+00  ok|
+----------------------+------+---------+---------+------------------+
| T-Energy             | 1.00 | 1.4E-06 | 1.0E-05 |  5.3  9.5E-03  OK|
+----------------------+------+---------+---------+------------------+
| K-TurbKE             | 1.00 | 2.0E-04 | 1.7E-02 |  5.5  4.9E-03  OK|
| E-Diss.K             | 0.99 | 1.6E-05 | 4.2E-04 |  7.4  2.1E-03  OK|
+----------------------+------+---------+---------+------------------+

======================================================================
OUTER LOOP ITERATION =  182 (   82) CPU SECONDS = 7.450E+03 (3.242E+03)
----------------------------------------------------------------------
|       Equation       | Rate | RMS Res | Max Res |  Linear Solution |
+----------------------+------+---------+---------+------------------+
| U-Mom                | 1.00 | 1.1E-04 | 3.2E-03 |       1.0E+00  ok|
| V-Mom                | 1.00 | 1.3E-04 | 3.0E-03 |       9.9E-01  ok|
| W-Mom                | 1.00 | 1.1E-04 | 2.4E-03 |       1.0E+00  ok|
| P-Mass               | 1.00 | 9.2E-05 | 2.1E-04 | 16.0  1.0E+00  ok|
+----------------------+------+---------+---------+------------------+
| T-Energy             | 1.00 | 1.4E-06 | 1.2E-05 |  5.3  9.2E-03  OK|
+----------------------+------+---------+---------+------------------+
| K-TurbKE             | 1.01 | 2.0E-04 | 1.7E-02 |  5.5  4.7E-03  OK|
| E-Diss.K             | 1.01 | 1.6E-05 | 4.2E-04 |  7.4  2.0E-03  OK|
+----------------------+------+---------+---------+------------------+

======================================================================
OUTER LOOP ITERATION =  183 (   83) CPU SECONDS = 7.494E+03 (3.286E+03)
----------------------------------------------------------------------
|       Equation       | Rate | RMS Res | Max Res |  Linear Solution |
+----------------------+------+---------+---------+------------------+
| U-Mom                | 1.00 | 1.1E-04 | 3.3E-03 |       1.0E+00  ok|
| V-Mom                | 1.00 | 1.3E-04 | 3.0E-03 |       9.9E-01  ok|
| W-Mom                | 1.00 | 1.1E-04 | 2.4E-03 |       1.0E+00  ok|
| P-Mass               | 1.00 | 9.2E-05 | 2.1E-04 | 16.0  1.0E+00  ok|
+----------------------+------+---------+---------+------------------+
| T-Energy             | 1.00 | 1.4E-06 | 9.2E-06 |  5.3  9.4E-03  OK|
+----------------------+------+---------+---------+------------------+
| K-TurbKE             | 1.01 | 2.0E-04 | 1.8E-02 |  5.5  4.6E-03  OK|
| E-Diss.K             | 1.03 | 1.6E-05 | 4.3E-04 |  7.4  2.0E-03  OK|
+----------------------+------+---------+---------+------------------+

======================================================================
OUTER LOOP ITERATION =  184 (   84) CPU SECONDS = 7.537E+03 (3.329E+03)
----------------------------------------------------------------------
|       Equation       | Rate | RMS Res | Max Res |  Linear Solution |
+----------------------+------+---------+---------+------------------+
| U-Mom                | 1.00 | 1.1E-04 | 3.3E-03 |       1.0E+00  ok|
| V-Mom                | 1.00 | 1.3E-04 | 2.9E-03 |       9.9E-01  ok|
| W-Mom                | 1.00 | 1.1E-04 | 2.5E-03 |       1.0E+00  ok|
| P-Mass               | 1.00 | 9.2E-05 | 2.1E-04 | 16.0  1.0E+00  ok|
+----------------------+------+---------+---------+------------------+
```

```
| T-Energy              | 1.00 | 1.4E-06 | 1.2E-05 |  5.3  9.1E-03  OK|
+-----------------------+------+---------+---------+-------------------+
| K-TurbKE              | 1.02 | 2.0E-04 | 1.9E-02 |  5.5  4.4E-03  OK|
| E-Diss.K              | 1.04 | 1.7E-05 | 4.5E-04 |  7.4  2.0E-03  OK|
+-----------------------+------+---------+---------+-------------------+

================================================================================
OUTER LOOP ITERATION =  185 (   85) CPU SECONDS = 7.574E+03 (3.366E+03)
--------------------------------------------------------------------------------
|       Equation        | Rate | RMS Res | Max Res |  Linear Solution |
+-----------------------+------+---------+---------+-------------------+
| U-Mom                 | 1.00 | 1.1E-04 | 3.4E-03 |       1.0E+00  ok|
| V-Mom                 | 1.00 | 1.3E-04 | 2.9E-03 |       9.9E-01  ok|
| W-Mom                 | 1.00 | 1.1E-04 | 2.5E-03 |       1.0E+00  ok|
| P-Mass                | 1.00 | 9.2E-05 | 2.2E-04 | 16.0  1.0E+00  ok|
+-----------------------+------+---------+---------+-------------------+
| T-Energy              | 1.00 | 1.4E-06 | 1.0E-05 |  5.3  9.3E-03  OK|
+-----------------------+------+---------+---------+-------------------+
| K-TurbKE              | 1.02 | 2.1E-04 | 2.0E-02 |  5.5  4.5E-03  OK|
| E-Diss.K              | 1.05 | 1.8E-05 | 4.8E-04 |  7.4  2.0E-03  OK|
+-----------------------+------+---------+---------+-------------------+

================================================================================
|                         Timescale Information                                |
--------------------------------------------------------------------------------
|       Equation        |         Type          |      Timescale      |
+-----------------------+-----------------------+---------------------+
| U-Mom-fluid           | Auto Timescale        |     1.41899E-03     |
| V-Mom-fluid           | Auto Timescale        |     1.41899E-03     |
| W-Mom-fluid           | Auto Timescale        |     1.41899E-03     |
+-----------------------+-----------------------+---------------------+
| T-Energy-turbine      | Auto Timescale        |     6.57581E+01     |
+-----------------------+-----------------------+---------------------+
| K-TurbKE-fluid        | Auto Timescale        |     1.41899E-03     |
| E-Diss.K-fluid        | Auto Timescale        |     1.41899E-03     |
+-----------------------+-----------------------+---------------------+

================================================================================
OUTER LOOP ITERATION =  186 (   86) CPU SECONDS = 7.623E+03 (3.415E+03)
--------------------------------------------------------------------------------
|       Equation        | Rate | RMS Res | Max Res |  Linear Solution |
+-----------------------+------+---------+---------+-------------------+
| U-Mom                 | 1.00 | 1.1E-04 | 3.4E-03 |       1.0E+00  ok|
| V-Mom                 | 1.00 | 1.3E-04 | 2.8E-03 |       9.9E-01  ok|
| W-Mom                 | 1.00 | 1.1E-04 | 2.5E-03 |       1.0E+00  ok|
| P-Mass                | 1.00 | 9.2E-05 | 2.2E-04 | 16.0  1.0E+00  ok|
+-----------------------+------+---------+---------+-------------------+
| T-Energy              | 1.00 | 1.4E-06 | 1.2E-05 |  5.3  9.1E-03  OK|
+-----------------------+------+---------+---------+-------------------+
| K-TurbKE              | 1.02 | 2.1E-04 | 2.0E-02 |  5.5  4.4E-03  OK|
| E-Diss.K              | 1.06 | 1.9E-05 | 5.0E-04 |  7.4  2.1E-03  OK|
+-----------------------+------+---------+---------+-------------------+

================================================================================
```

```
OUTER LOOP ITERATION =  187 (   87) CPU SECONDS = 7.670E+03 (3.463E+03)
-------------------------------------------------------------------------
|       Equation       | Rate | RMS Res | Max Res |  Linear Solution |
+----------------------+------+---------+---------+------------------+
| U-Mom                | 1.00 | 1.1E-04 | 3.4E-03 |       1.0E+00  ok|
| V-Mom                | 1.00 | 1.3E-04 | 2.8E-03 |       9.9E-01  ok|
| W-Mom                | 1.00 | 1.1E-04 | 2.5E-03 |       1.0E+00  ok|
| P-Mass               | 1.00 | 9.2E-05 | 2.2E-04 | 16.0  1.0E+00  ok|
+----------------------+------+---------+---------+------------------+
| T-Energy             | 1.00 | 1.4E-06 | 1.9E-05 |  5.3  9.4E-03  OK|
+----------------------+------+---------+---------+------------------+
| K-TurbKE             | 1.02 | 2.2E-04 | 2.0E-02 |  5.5  4.6E-03  OK|
| E-Diss.K             | 1.05 | 2.0E-05 | 5.2E-04 |  7.4  2.1E-03  OK|
+----------------------+------+---------+---------+------------------+

=========================================================================
OUTER LOOP ITERATION =  188 (   88) CPU SECONDS = 7.711E+03 (3.504E+03)
-------------------------------------------------------------------------
|       Equation       | Rate | RMS Res | Max Res |  Linear Solution |
+----------------------+------+---------+---------+------------------+
| U-Mom                | 1.00 | 1.1E-04 | 3.3E-03 |       1.0E+00  ok|
| V-Mom                | 1.00 | 1.3E-04 | 2.8E-03 |       9.9E-01  ok|
| W-Mom                | 1.00 | 1.1E-04 | 2.5E-03 |       1.0E+00  ok|
| P-Mass               | 1.00 | 9.2E-05 | 2.3E-04 | 16.0  1.0E+00  ok|
+----------------------+------+---------+---------+------------------+
| T-Energy             | 1.00 | 1.4E-06 | 1.2E-05 |  5.3  9.0E-03  OK|
+----------------------+------+---------+---------+------------------+
| K-TurbKE             | 1.01 | 2.2E-04 | 2.0E-02 |  5.5  4.6E-03  OK|
| E-Diss.K             | 1.04 | 2.1E-05 | 5.5E-04 |  7.4  2.1E-03  OK|
+----------------------+------+---------+---------+------------------+

=========================================================================
OUTER LOOP ITERATION =  189 (   89) CPU SECONDS = 7.762E+03 (3.555E+03)
-------------------------------------------------------------------------
|       Equation       | Rate | RMS Res | Max Res |  Linear Solution |
+----------------------+------+---------+---------+------------------+
| U-Mom                | 1.00 | 1.1E-04 | 3.2E-03 |       1.0E+00  ok|
| V-Mom                | 1.00 | 1.3E-04 | 2.8E-03 |       9.9E-01  ok|
| W-Mom                | 1.00 | 1.1E-04 | 2.6E-03 |       1.0E+00  ok|
| P-Mass               | 1.00 | 9.2E-05 | 2.3E-04 | 16.0  1.0E+00  ok|
+----------------------+------+---------+---------+------------------+
| T-Energy             | 1.00 | 1.4E-06 | 9.2E-06 |  5.3  9.5E-03  OK|
+----------------------+------+---------+---------+------------------+
| K-TurbKE             | 1.01 | 2.2E-04 | 2.0E-02 |  5.5  4.9E-03  OK|
| E-Diss.K             | 1.04 | 2.2E-05 | 5.7E-04 |  7.4  2.2E-03  OK|
+----------------------+------+---------+---------+------------------+

=========================================================================
OUTER LOOP ITERATION =  190 (   90) CPU SECONDS = 7.808E+03 (3.601E+03)
-------------------------------------------------------------------------
|       Equation       | Rate | RMS Res | Max Res |  Linear Solution |
+----------------------+------+---------+---------+------------------+
| U-Mom                | 1.00 | 1.1E-04 | 3.2E-03 |       1.0E+00  ok|
| V-Mom                | 1.00 | 1.3E-04 | 2.8E-03 |       9.9E-01  ok|
```

```
| W-Mom                | 1.00 | 1.1E-04 | 2.6E-03 |       1.0E+00  ok|
| P-Mass               | 1.00 | 9.2E-05 | 2.4E-04 | 16.0  1.0E+00  ok|
+----------------------+------+---------+---------+------------------+
| T-Energy             | 1.00 | 1.4E-06 | 1.2E-05 |  5.3  9.2E-03  OK|
+----------------------+------+---------+---------+------------------+
| K-TurbKE             | 1.00 | 2.2E-04 | 1.9E-02 |  5.5  4.9E-03  OK|
| E-Diss.K             | 1.03 | 2.2E-05 | 5.9E-04 |  7.4  2.2E-03  OK|
+----------------------+------+---------+---------+------------------+

================================================================
|                        Timescale Information                 |
----------------------------------------------------------------
|       Equation       |         Type          |      Timescale      |
+----------------------+-----------------------+---------------------+
| U-Mom-fluid          | Auto Timescale        |     1.41885E-03     |
| V-Mom-fluid          | Auto Timescale        |     1.41885E-03     |
| W-Mom-fluid          | Auto Timescale        |     1.41885E-03     |
+----------------------+-----------------------+---------------------+
| T-Energy-turbine     | Auto Timescale        |     6.57581E+01     |
+----------------------+-----------------------+---------------------+
| K-TurbKE-fluid       | Auto Timescale        |     1.41885E-03     |
| E-Diss.K-fluid       | Auto Timescale        |     1.41885E-03     |
+----------------------+-----------------------+---------------------+

================================================================
OUTER LOOP ITERATION =  191 (   91) CPU SECONDS = 7.852E+03 (3.645E+03)
----------------------------------------------------------------
|       Equation       | Rate | RMS Res | Max Res |  Linear Solution |
+----------------------+------+---------+---------+------------------+
| U-Mom                | 1.00 | 1.1E-04 | 3.1E-03 |       1.0E+00  ok|
| V-Mom                | 1.00 | 1.3E-04 | 2.8E-03 |       9.9E-01  ok|
| W-Mom                | 1.00 | 1.1E-04 | 2.6E-03 |       1.0E+00  ok|
| P-Mass               | 1.00 | 9.2E-05 | 2.4E-04 | 16.0  1.0E+00  ok|
+----------------------+------+---------+---------+------------------+
| T-Energy             | 1.00 | 1.4E-06 | 1.0E-05 |  5.3  9.5E-03  OK|
+----------------------+------+---------+---------+------------------+
| K-TurbKE             | 1.00 | 2.2E-04 | 1.8E-02 |  5.5  5.3E-03  OK|
| E-Diss.K             | 1.02 | 2.3E-05 | 6.0E-04 |  7.4  2.3E-03  OK|
+----------------------+------+---------+---------+------------------+

================================================================
OUTER LOOP ITERATION =  192 (   92) CPU SECONDS = 7.894E+03 (3.687E+03)
----------------------------------------------------------------
|       Equation       | Rate | RMS Res | Max Res |  Linear Solution |
+----------------------+------+---------+---------+------------------+
| U-Mom                | 1.00 | 1.1E-04 | 3.0E-03 |       1.0E+00  ok|
| V-Mom                | 1.00 | 1.3E-04 | 2.8E-03 |       9.9E-01  ok|
| W-Mom                | 1.00 | 1.2E-04 | 2.6E-03 |       1.0E+00  ok|
| P-Mass               | 1.00 | 9.2E-05 | 2.5E-04 | 16.0  1.0E+00  ok|
+----------------------+------+---------+---------+------------------+
| T-Energy             | 1.00 | 1.4E-06 | 1.2E-05 |  5.3  9.2E-03  OK|
+----------------------+------+---------+---------+------------------+
| K-TurbKE             | 0.99 | 2.2E-04 | 1.7E-02 |  5.5  5.5E-03  OK|
| E-Diss.K             | 1.01 | 2.3E-05 | 6.1E-04 |  7.4  2.4E-03  OK|
```

```
+----------------------+------+---------+---------+------------------+

================================================================================
OUTER LOOP ITERATION =  193 (   93) CPU SECONDS = 7.932E+03 (3.725E+03)
--------------------------------------------------------------------------------
|       Equation       | Rate | RMS Res | Max Res |  Linear Solution |
+----------------------+------+---------+---------+------------------+
| U-Mom                | 1.00 | 1.1E-04 | 3.0E-03 |       1.0E+00  ok|
| V-Mom                | 1.00 | 1.3E-04 | 2.8E-03 |       9.9E-01  ok|
| W-Mom                | 1.00 | 1.2E-04 | 2.7E-03 |       1.0E+00  ok|
| P-Mass               | 1.00 | 9.2E-05 | 2.5E-04 | 16.0  1.0E+00  ok|
+----------------------+------+---------+---------+------------------+
| T-Energy             | 1.00 | 1.4E-06 | 9.2E-06 |  5.3  9.4E-03  OK|
+----------------------+------+---------+---------+------------------+
| K-TurbKE             | 0.99 | 2.2E-04 | 1.6E-02 |  5.5  5.8E-03  OK|
| E-Diss.K             | 1.01 | 2.3E-05 | 6.1E-04 |  7.4  2.4E-03  OK|
+----------------------+------+---------+---------+------------------+

================================================================================
OUTER LOOP ITERATION =  194 (   94) CPU SECONDS = 7.968E+03 (3.760E+03)
--------------------------------------------------------------------------------
|       Equation       | Rate | RMS Res | Max Res |  Linear Solution |
+----------------------+------+---------+---------+------------------+
| U-Mom                | 1.00 | 1.1E-04 | 2.9E-03 |       1.0E+00  ok|
| V-Mom                | 1.00 | 1.3E-04 | 2.8E-03 |       9.9E-01  ok|
| W-Mom                | 1.00 | 1.2E-04 | 2.7E-03 |       1.0E+00  ok|
| P-Mass               | 1.00 | 9.2E-05 | 2.6E-04 | 16.0  1.0E+00  ok|
+----------------------+------+---------+---------+------------------+
| T-Energy             | 1.00 | 1.4E-06 | 1.2E-05 |  5.3  9.1E-03  OK|
+----------------------+------+---------+---------+------------------+
| K-TurbKE             | 0.98 | 2.1E-04 | 1.4E-02 |  5.5  5.9E-03  OK|
| E-Diss.K             | 1.01 | 2.3E-05 | 6.1E-04 |  7.4  2.6E-03  OK|
+----------------------+------+---------+---------+------------------+

================================================================================
OUTER LOOP ITERATION =  195 (   95) CPU SECONDS = 8.003E+03 (3.795E+03)
--------------------------------------------------------------------------------
|       Equation       | Rate | RMS Res | Max Res |  Linear Solution |
+----------------------+------+---------+---------+------------------+
| U-Mom                | 1.00 | 1.1E-04 | 2.8E-03 |       1.0E+00  ok|
| V-Mom                | 1.00 | 1.3E-04 | 3.1E-03 |       9.9E-01  ok|
| W-Mom                | 1.00 | 1.2E-04 | 2.7E-03 |       1.0E+00  ok|
| P-Mass               | 1.00 | 9.2E-05 | 2.6E-04 | 16.0  1.0E+00  ok|
+----------------------+------+---------+---------+------------------+
| T-Energy             | 1.00 | 1.4E-06 | 1.0E-05 |  5.3  9.3E-03  OK|
+----------------------+------+---------+---------+------------------+
| K-TurbKE             | 0.98 | 2.1E-04 | 1.3E-02 |  5.5  6.2E-03  OK|
| E-Diss.K             | 0.99 | 2.3E-05 | 6.0E-04 |  7.4  2.6E-03  OK|
+----------------------+------+---------+---------+------------------+

================================================================================
|                        Timescale Information                                 |
--------------------------------------------------------------------------------
|       Equation       |         Type          |      Timescale      |
```

```
+----------------------+----------------------+---------------------+
| U-Mom-fluid          | Auto Timescale       |     1.41871E-03     |
| V-Mom-fluid          | Auto Timescale       |     1.41871E-03     |
| W-Mom-fluid          | Auto Timescale       |     1.41871E-03     |
+----------------------+----------------------+---------------------+
| T-Energy-turbine     | Auto Timescale       |     6.57581E+01     |
+----------------------+----------------------+---------------------+
| K-TurbKE-fluid       | Auto Timescale       |     1.41871E-03     |
| E-Diss.K-fluid       | Auto Timescale       |     1.41871E-03     |
+----------------------+----------------------+---------------------+

================================================================================
OUTER LOOP ITERATION =  196 (   96) CPU SECONDS = 8.038E+03 (3.830E+03)
--------------------------------------------------------------------------------
|       Equation       | Rate | RMS Res | Max Res |  Linear Solution |
+----------------------+------+---------+---------+------------------+
| U-Mom                | 1.00 | 1.1E-04 | 2.7E-03 |       1.0E+00  ok|
| V-Mom                | 1.00 | 1.3E-04 | 3.7E-03 |       9.9E-01  ok|
| W-Mom                | 1.00 | 1.2E-04 | 2.7E-03 |       1.0E+00  ok|
| P-Mass               | 1.00 | 9.2E-05 | 2.6E-04 | 16.0  1.0E+00  ok|
+----------------------+------+---------+---------+------------------+
| T-Energy             | 1.00 | 1.4E-06 | 1.2E-05 |  5.3  9.1E-03  OK|
+----------------------+------+---------+---------+------------------+
| K-TurbKE             | 0.98 | 2.0E-04 | 1.1E-02 |  5.5  6.4E-03  OK|
| E-Diss.K             | 0.98 | 2.3E-05 | 5.9E-04 |  7.4  2.7E-03  OK|
+----------------------+------+---------+---------+------------------+

================================================================================
OUTER LOOP ITERATION =  197 (   97) CPU SECONDS = 8.073E+03 (3.866E+03)
--------------------------------------------------------------------------------
|       Equation       | Rate | RMS Res | Max Res |  Linear Solution |
+----------------------+------+---------+---------+------------------+
| U-Mom                | 1.00 | 1.2E-04 | 2.6E-03 |       1.0E+00  ok|
| V-Mom                | 1.00 | 1.3E-04 | 4.1E-03 |       9.9E-01  ok|
| W-Mom                | 1.00 | 1.2E-04 | 2.7E-03 |       1.0E+00  ok|
| P-Mass               | 1.00 | 9.2E-05 | 2.7E-04 | 16.0  1.0E+00  ok|
+----------------------+------+---------+---------+------------------+
| T-Energy             | 1.00 | 1.4E-06 | 1.9E-05 |  5.3  9.4E-03  OK|
+----------------------+------+---------+---------+------------------+
| K-TurbKE             | 0.97 | 2.0E-04 | 1.1E-02 |  5.5  6.8E-03  OK|
| E-Diss.K             | 0.97 | 2.2E-05 | 5.9E-04 |  7.4  2.8E-03  OK|
+----------------------+------+---------+---------+------------------+

================================================================================
OUTER LOOP ITERATION =  198 (   98) CPU SECONDS = 8.108E+03 (3.901E+03)
--------------------------------------------------------------------------------
|       Equation       | Rate | RMS Res | Max Res |  Linear Solution |
+----------------------+------+---------+---------+------------------+
| U-Mom                | 1.00 | 1.2E-04 | 2.6E-03 |       1.0E+00  ok|
| V-Mom                | 1.00 | 1.3E-04 | 4.6E-03 |       9.9E-01  ok|
| W-Mom                | 1.00 | 1.2E-04 | 2.8E-03 |       1.0E+00  ok|
| P-Mass               | 1.00 | 9.2E-05 | 2.7E-04 | 16.0  1.0E+00  ok|
+----------------------+------+---------+---------+------------------+
| T-Energy             | 1.00 | 1.4E-06 | 1.2E-05 |  5.3  9.0E-03  OK|
```

```
+----------------------+------+---------+---------+------------------+
| K-TurbKE             | 0.97 | 1.9E-04 | 1.0E-02 |  5.5  7.1E-03  OK|
| E-Diss.K             | 0.97 | 2.1E-05 | 5.9E-04 |  7.4  2.9E-03  OK|
+----------------------+------+---------+---------+------------------+

================================================================================
OUTER LOOP ITERATION =  199 (   99) CPU SECONDS = 8.144E+03 (3.936E+03)
--------------------------------------------------------------------------------
|       Equation       | Rate | RMS Res | Max Res |  Linear Solution |
+----------------------+------+---------+---------+------------------+
| U-Mom                | 1.00 | 1.2E-04 | 2.5E-03 |       1.0E+00  ok|
| V-Mom                | 1.00 | 1.3E-04 | 5.1E-03 |       9.9E-01  ok|
| W-Mom                | 1.00 | 1.2E-04 | 2.8E-03 |       1.0E+00  ok|
| P-Mass               | 1.00 | 9.2E-05 | 2.7E-04 | 16.0  1.0E+00  ok|
+----------------------+------+---------+---------+------------------+
| T-Energy             | 1.00 | 1.4E-06 | 9.2E-06 |  5.3  9.5E-03  OK|
+----------------------+------+---------+---------+------------------+
| K-TurbKE             | 0.97 | 1.8E-04 | 9.8E-03 |  5.5  7.4E-03  OK|
| E-Diss.K             | 0.97 | 2.1E-05 | 5.9E-04 |  7.4  3.0E-03  OK|
+----------------------+------+---------+---------+------------------+

================================================================================
OUTER LOOP ITERATION =  200 (  100) CPU SECONDS = 8.179E+03 (3.971E+03)
--------------------------------------------------------------------------------
|       Equation       | Rate | RMS Res | Max Res |  Linear Solution |
+----------------------+------+---------+---------+------------------+
| U-Mom                | 1.00 | 1.2E-04 | 2.4E-03 |       1.0E+00  ok|
| V-Mom                | 1.00 | 1.3E-04 | 5.5E-03 |       9.9E-01  ok|
| W-Mom                | 1.00 | 1.2E-04 | 2.8E-03 |       1.0E+00  ok|
| P-Mass               | 1.00 | 9.2E-05 | 2.7E-04 | 16.0  1.0E+00  ok|
+----------------------+------+---------+---------+------------------+
| T-Energy             | 1.00 | 1.4E-06 | 1.2E-05 |  5.3  9.3E-03  OK|
+----------------------+------+---------+---------+------------------+
| K-TurbKE             | 0.96 | 1.8E-04 | 9.5E-03 |  5.5  8.0E-03  OK|
| E-Diss.K             | 0.96 | 2.0E-05 | 5.8E-04 |  7.4  3.0E-03  OK|
+----------------------+------+---------+---------+------------------+

CFD Solver finished: Tue Jun 05 20:13:25 2018
CFD Solver wall clock seconds: 3.9626E+03

================================================================================
             Termination and Interrupt Condition Summary
================================================================================

CFD Solver: Run duration reached
  (Maximum number of outer iterations)

================================================================================
             Boundary Flow and Total Source Term Summary
================================================================================

+------------------------------------------------------------------------+
|                             U-Mom-fluid                                |
+------------------------------------------------------------------------+
```

```
Boundary         : Default Fluid Solid Interface Side 1    5.0358E+02
Boundary         : fluid Default                          -1.7997E+02
Boundary         : intlet                                 -2.0808E-05
Boundary         : outlet                                 -3.1499E+02
                                                          -----------
Domain Imbalance :                                         8.6158E+00

+-------------------------------------------------------------------+
|                           V-Mom-fluid                             |
+-------------------------------------------------------------------+
Boundary         : Default Fluid Solid Interface Side 1    6.8998E+04
Boundary         : fluid Default                           7.2452E+02
Boundary         : intlet                                 -1.3822E+05
Boundary         : outlet                                  4.6763E+04
                                                          -----------
Domain Imbalance :                                        -2.1731E+04

+-------------------------------------------------------------------+
|                           W-Mom-fluid                             |
+-------------------------------------------------------------------+
Boundary         : Default Fluid Solid Interface Side 1    9.4024E+02
Boundary         : fluid Default                          -1.5516E+03
Boundary         : intlet                                  6.9463E-05
Boundary         : outlet                                  8.5113E+02
                                                          -----------
Domain Imbalance :                                         2.3976E+02

+-------------------------------------------------------------------+
|                           P-Mass-fluid                            |
+-------------------------------------------------------------------+
Boundary         : intlet                                  2.5643E+03
Boundary         : outlet                                 -2.0533E+03
                                                          -----------
Domain Imbalance :                                         5.1105E+02

+-------------------------------------------------------------------+
|                        T-Energy-turbine                           |
+-------------------------------------------------------------------+


+-------------------------------------------------------------------+
|                    Normalised Imbalance Summary                   |
+-------------------------------------------------------------------+
|       Equation       |      Maximum Flow     |     Imbalance (%)  |
+-------------------------------------------------------------------+
| U-Mom-fluid          |       1.3822E+05      |        0.0062      |
| V-Mom-fluid          |       1.3822E+05      |      -15.7227      |
| W-Mom-fluid          |       1.3822E+05      |        0.1735      |
| P-Mass-fluid         |       2.5643E+03      |       19.9294      |
+----------------------+-----------------------+--------------------+
| T-Energy-turbine     |       0.0000E+00      |        0.0000      |
+----------------------+-----------------------+--------------------+

===================================================================
```

Wall Force and Moment Summary
==========

Notes:
1. Pressure integrals exclude the reference pressure. To include it, set the expert parameter 'include pref in forces = t'.
2. These quantities are evaluated in a reference frame fixed to the initial domain orientation and are not rotated if the orientation changes (e.g. transient run or specified rotational offset).

Pressure Force On Walls

	X-Comp.	Y-Comp.	Z-Comp.
Domain Group: fluid			
Default Fluid Solid Interface Si	-4.9999E+02	-6.8813E+04	-9.4280E+02
fluid Default	1.8026E+02	-3.7956E+01	1.5531E+03
Domain Group Totals :	-3.1973E+02	-6.8851E+04	6.1028E+02

Viscous Force On Walls

	X-Comp.	Y-Comp.	Z-Comp.
Domain Group: fluid			
Default Fluid Solid Interface Si	-3.5984E+00	-1.8492E+02	2.5333E+00
fluid Default	-2.9261E-01	-6.8656E+02	-1.4589E+00
Domain Group Totals :	-3.8910E+00	-8.7148E+02	1.0744E+00

Pressure Moment On Walls

	X-Comp.	Y-Comp.	Z-Comp.
Domain Group: fluid			
Default Fluid Solid Interface Si	-5.7873E+01	2.3773E+03	-2.2036E+01
fluid Default	-4.2559E+01	1.4627E+00	4.9363E+00
Domain Group Totals :	-1.0043E+02	2.3787E+03	-1.7099E+01

Viscous Moment On Walls

	X-Comp.	Y-Comp.	Z-Comp.

Domain Group: fluid

Default Fluid Solid Interface Si	6.1512E-01	-8.9099E+00	9.3361E-02
fluid Default	1.7158E+00	8.8252E-02	1.4267E-01
Domain Group Totals :	2.3309E+00	-8.8217E+00	2.3603E-01

Locations of Maximum Residuals

Equation	Domain Name	Node Number
U-Mom	fluid	169306
V-Mom	fluid	171837
W-Mom	fluid	170258
P-Mass	fluid	172978
T-Energy	turbine	63250
K-TurbKE	fluid	95028
E-Diss.K	fluid	173410

False Transient Information

Equation	Type	Elapsed Pseudo-Time
U-Mom-fluid	Auto Timescale	2.83350E-01
V-Mom-fluid	Auto Timescale	2.83350E-01
W-Mom-fluid	Auto Timescale	2.83350E-01
T-Energy-turbine	Auto Timescale	1.31516E+04
K-TurbKE-fluid	Auto Timescale	2.83350E-01
E-Diss.K-fluid	Auto Timescale	2.83350E-01

Average Scale Information

Domain Name : fluid

Global Length	= 2.4905E-01
Minimum Extent	= 2.5665E-01
Maximum Extent	= 3.0926E-01
Density	= 9.9700E+02
Dynamic Viscosity	= 8.8990E-04
Velocity	= 5.6111E+01
Advection Time	= 4.4385E-03
Reynolds Number	= 1.5656E+07

Domain Name : turbine

Global Length	= 7.9921E-02
Minimum Extent	= 1.8397E-01
Maximum Extent	= 2.4926E-01
Density	= 2.7020E+03
Thermal Conductivity	= 2.3700E+02
Specific Heat Capacity at Constant Pressure	= 9.0300E+02
Thermal Diffusivity	= 9.7135E-05
Average Diffusion Timescale	= 6.5758E+01
Minimum Diffusion Timescale	= 3.4844E+02
Maximum Diffusion Timescale	= 6.3961E+02
Temperature Range	= 8.5449E-04

Variable Range Information

Domain Name : fluid

Variable Name	min	max
Density	9.97E+02	9.97E+02
Specific Heat Capacity at Constant Pressure	4.18E+03	4.18E+03
Dynamic Viscosity	8.90E-04	8.90E-04
Thermal Conductivity	6.07E-01	6.07E-01
Static Entropy	0.00E+00	0.00E+00
Velocity u	-1.30E+02	1.33E+02
Velocity v	-1.10E+02	4.37E+01
Velocity w	-1.34E+02	1.34E+02
Pressure	-2.33E+07	2.06E+06
Turbulence Kinetic Energy	2.44E-03	1.00E+02
Turbulence Eddy Dissipation	1.35E+00	3.74E+07
Eddy Viscosity	4.71E-05	8.48E+00
Temperature	2.98E+02	2.98E+02

Domain Name : turbine

Variable Name	min	max
Density	2.70E+03	2.70E+03
Specific Heat Capacity at Constant Pressure	9.03E+02	9.03E+02
Thermal Conductivity	2.37E+02	2.37E+02
Static Entropy	-9.77E-04	1.95E-03
Temperature	2.98E+02	2.98E+02
Static Enthalpy	-3.12E-01	4.38E-01

CPU Requirements of Numerical Solution

Subsystem Name	Discretization (secs.	%total)	Linear Solution (secs.	%total)

```
 ------------------------------------------------------------------------
 Momentum and Mass              1.73E+03  43.0 %     4.84E+02  12.0 %
 Heat Transfer                  1.78E+02   4.4 %     3.22E+01   0.8 %
 TurbKE and Diss.K              8.75E+02  21.8 %     3.10E+02   7.7 %
                                -------- -------     --------  ------
 Subsystem Summary              2.78E+03  69.2 %     8.27E+02  20.6 %

 GGI Intersection               6.51E-01    0.0 %
 File Reading                   9.72E+00    0.2 %
 Search Calculations            9.77E-04    0.0 %
 Variable Updates               3.47E+02    8.6 %
 File Writing                   6.75E+00    0.2 %
 Miscellaneous                  4.76E+01    1.2 %
                                --------
 Total                          4.02E+03

 +--------------------------------------------------------------------+
 |                   Job Information at End of Run                    |
 +--------------------------------------------------------------------+

 Host computer:  DESKTOP-JCG0747 (PID:12704)

 Job finished:   Tue Jun 05 20:13:40 2018

 Total wall clock time: 4.021E+03 seconds
             or: (          0:         1:         7:     1.337 )
                 (       Days:     Hours:   Minutes:   Seconds )

End of solution stage.

 +--------------------------------------------------------------------+
 | The results from this run of the ANSYS CFX Solver have been        |
 | written to                                                         |
 | C:/Users/ltval/Documents/simulacion_ok_pending/dp0_CFX_Solution/F- |
 | luid Flow CFX_002.res                                              |
 +--------------------------------------------------------------------+


 +--------------------------------------------------------------------+
 | For CFX runs launched from Workbench, the final locations of       |
 | directories and files generated may differ from those shown.       |
 +--------------------------------------------------------------------+


This run of the ANSYS CFX Solver has finished.
```