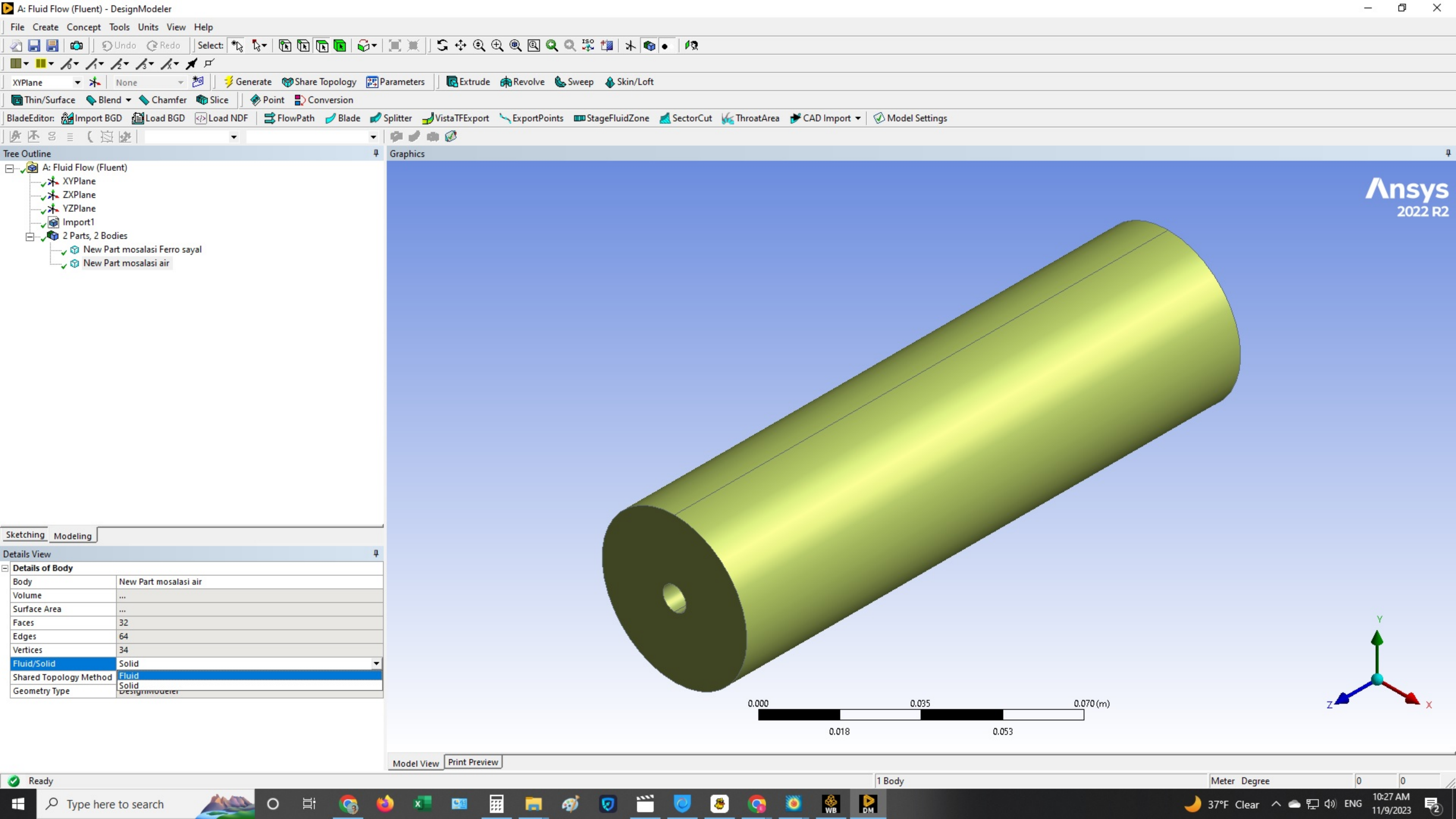
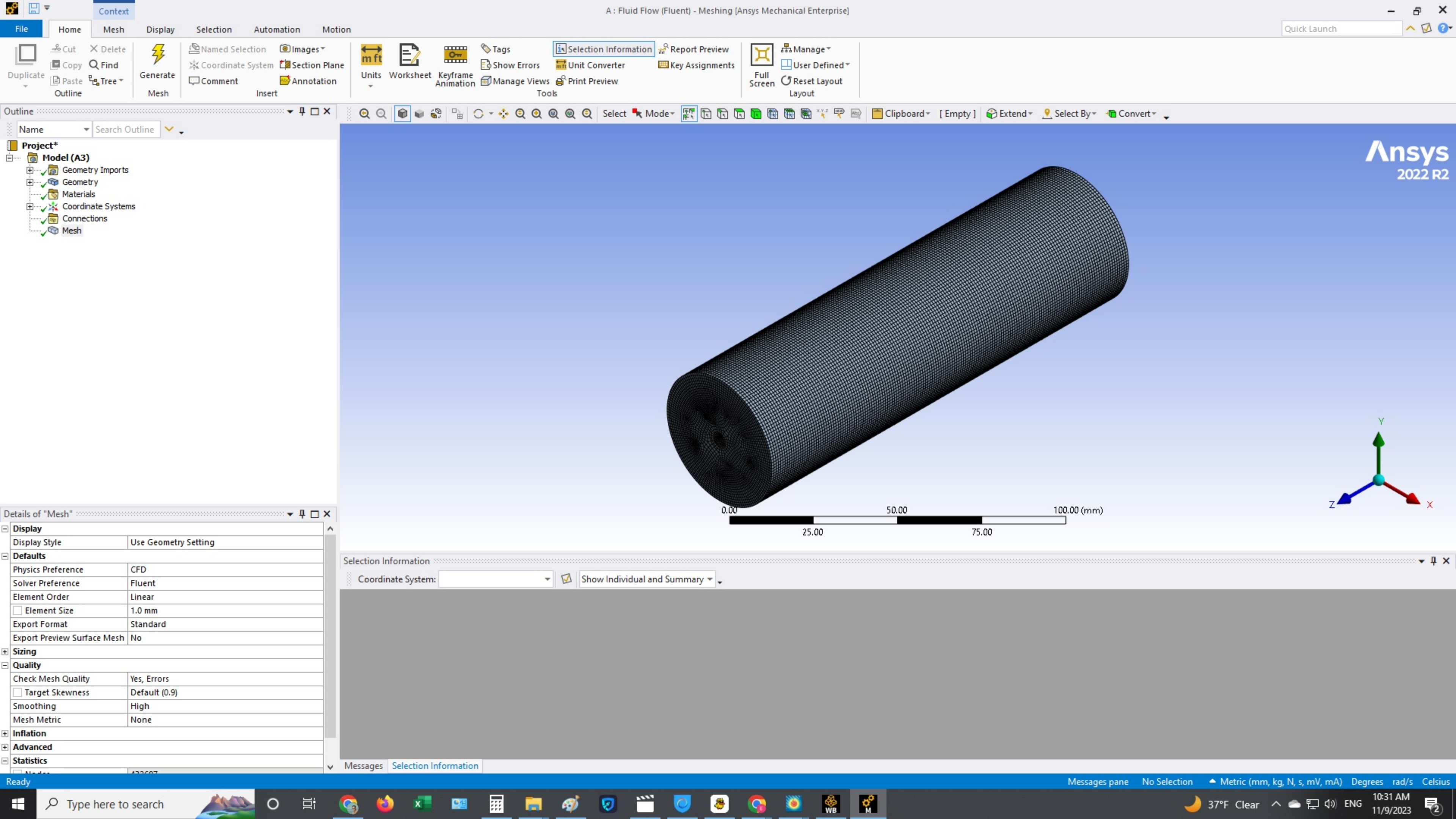


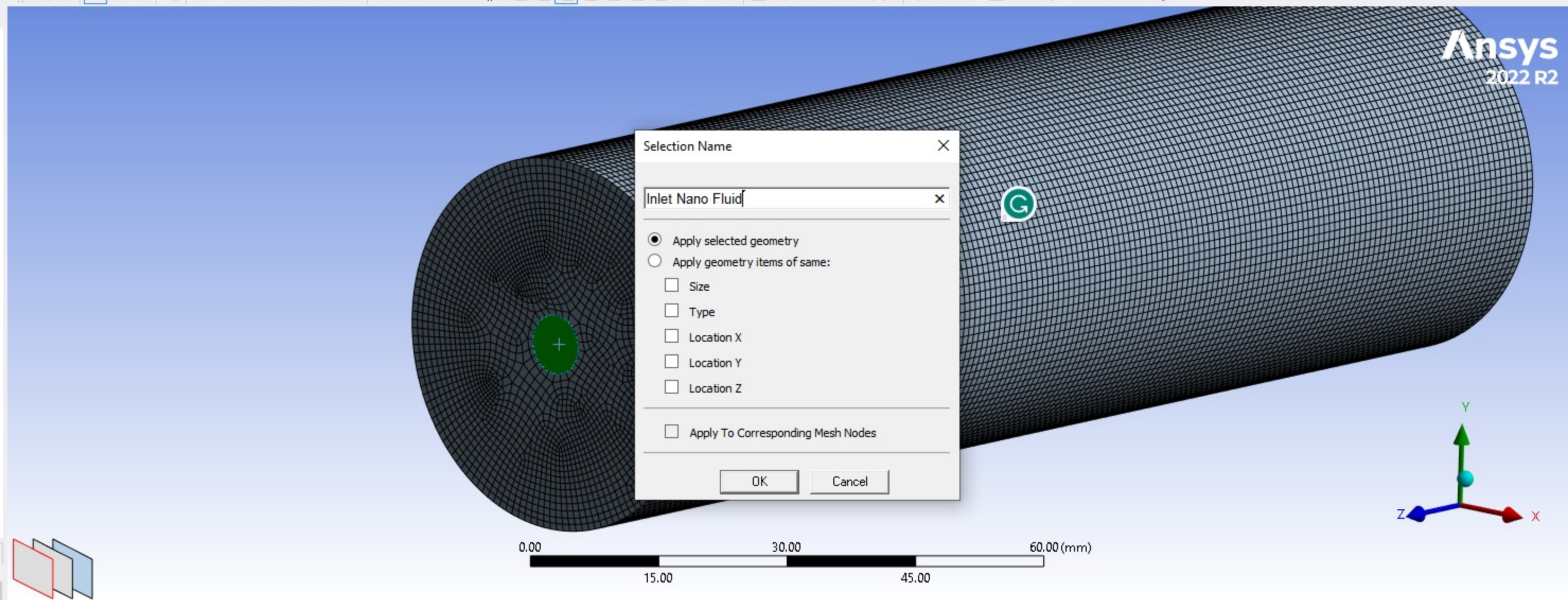




Name 

 **Project***

-  **Model (A3)**
 -    Geometry Imports
 -    Geometry
 -    Materials
 -    Coordinate Systems
 -    Connections
 -    Mesh



Details of "Mesh" ⌵ 📌 🗑 ✕

Display

Display Style	Use Geometry Setting
---------------	----------------------

Defaults

Physics Preference	CFD
Solver Preference	Fluent
Element Order	Linear
☐ Element Size	1.0 mm
Export Format	Standard
Export Preview Surface Mesh	No

Sizing

Quality

Check Mesh Quality	Yes, Errors
☐ Target Skewness	Default (0.9)
Smoothing	High
Mesh Metric	None

Inflation

Advanced

Statistics

Selection Information

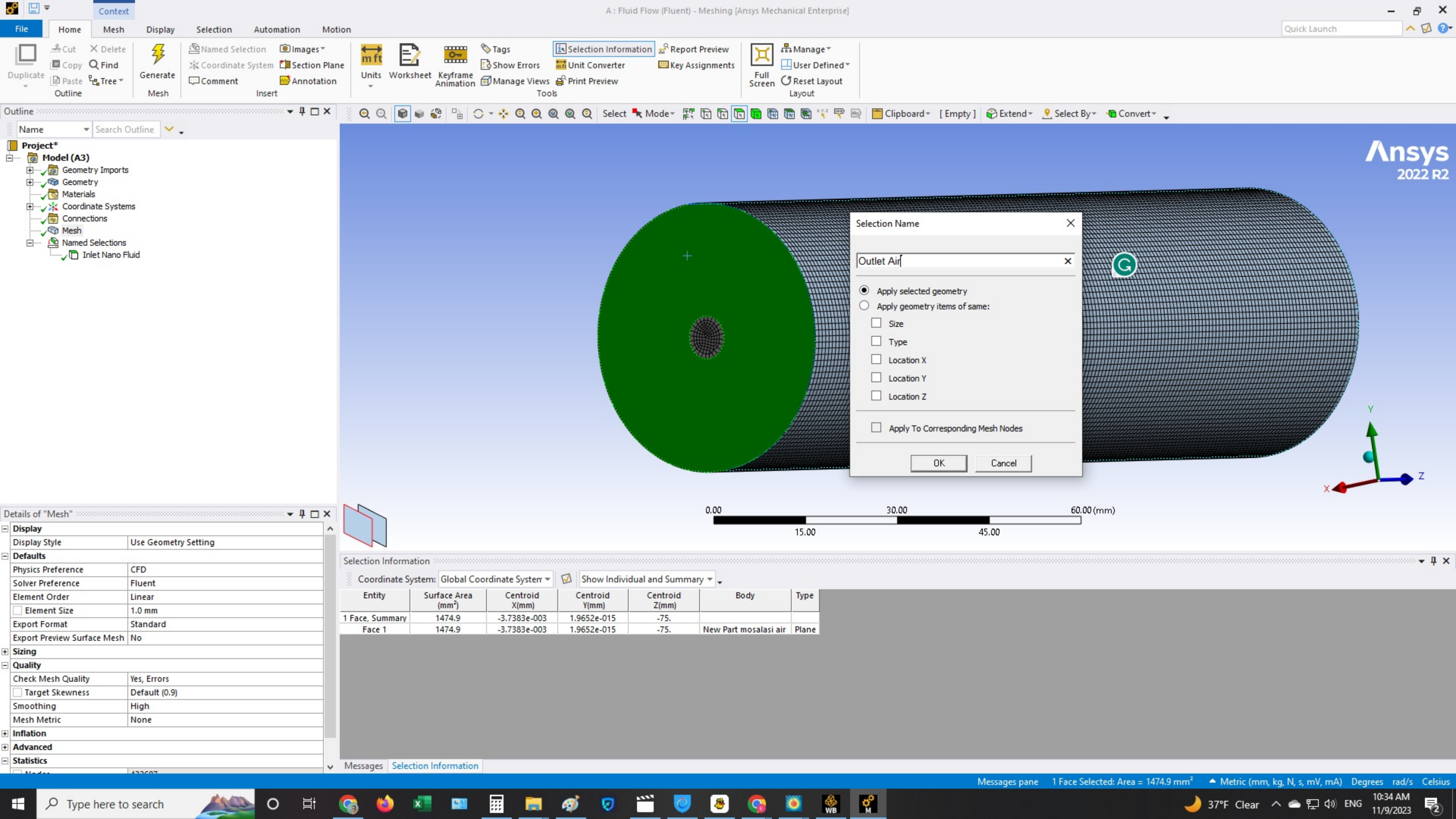
Coordinate System: Global Coordinate System

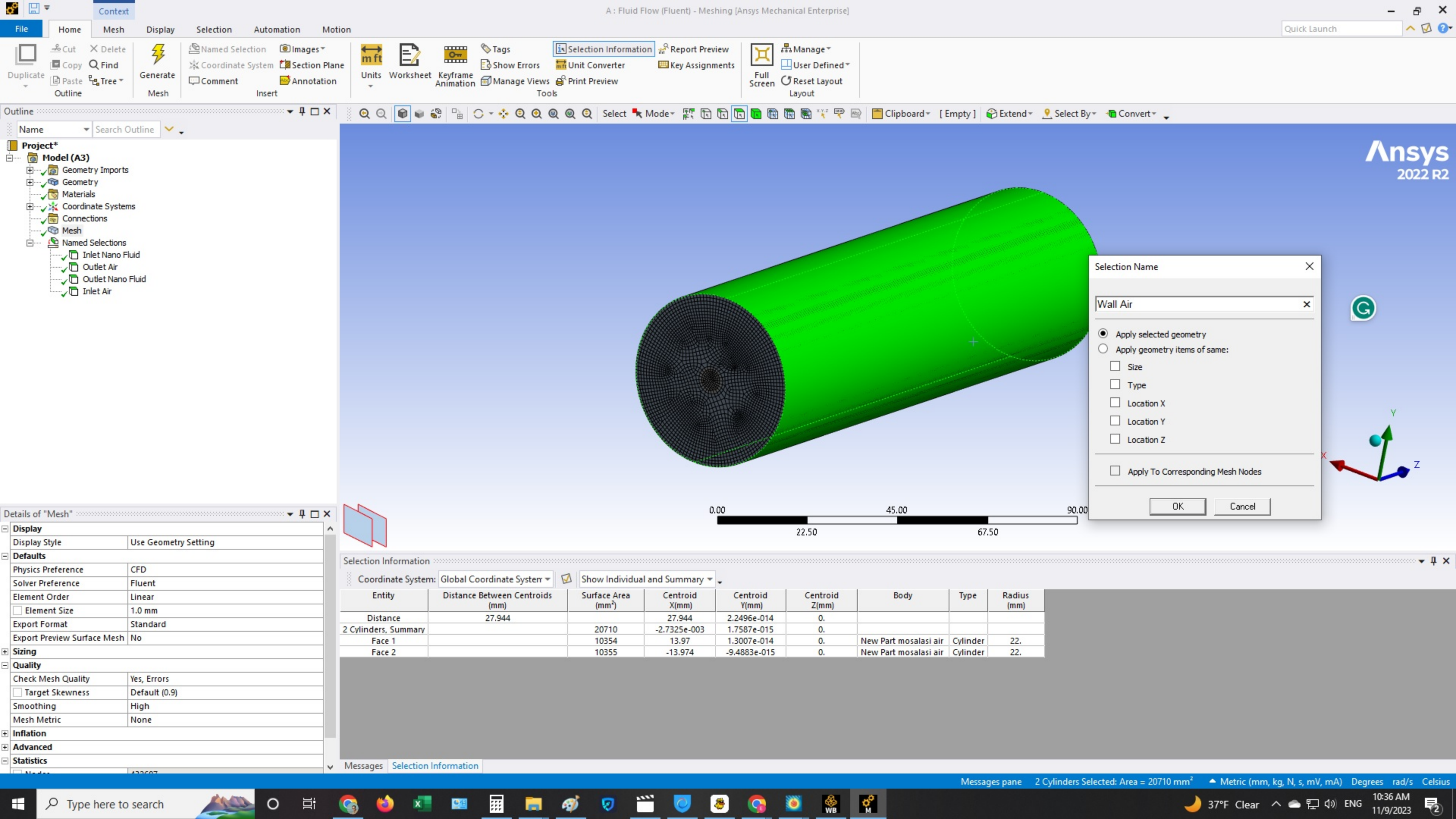
Show Individual and Summary

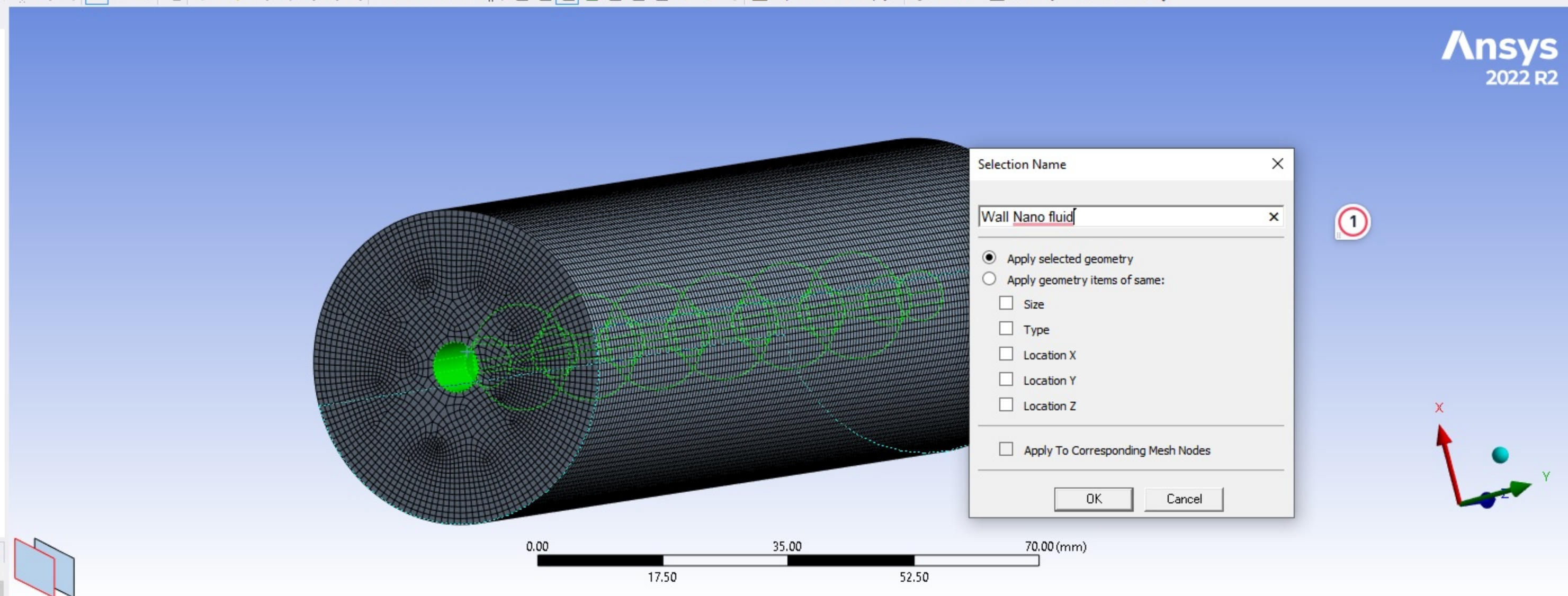
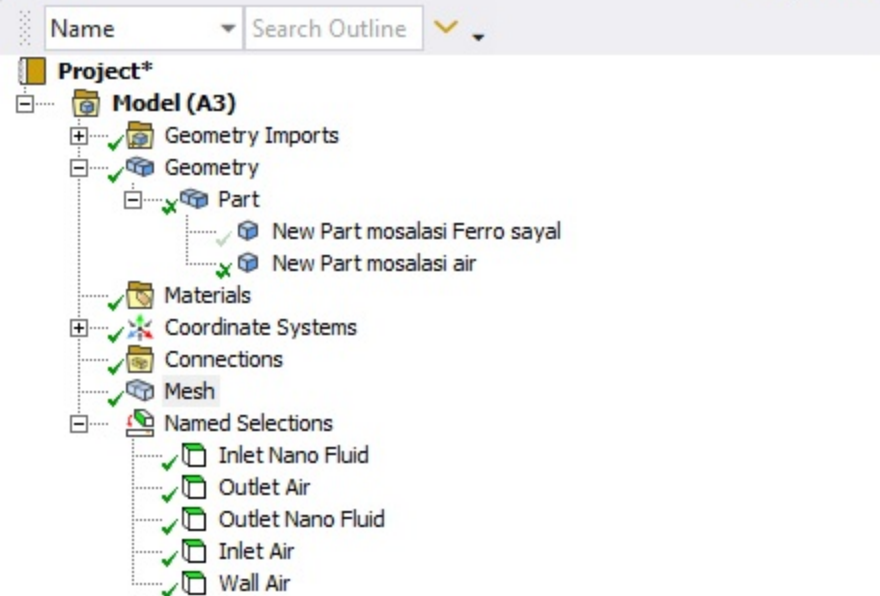
Entity	Surface Area (mm ²)	Centroid X(mm)	Centroid Y(mm)	Centroid Z(mm)	Body	Type
1 Face, Summary	38.309	0.	-4.0485e-017	75.		
Face 1	38.309	0.	-4.0485e-017	75.	New Part mosalasi Ferro sayal	Plane

Messages

Selection Information







Details of "Mesh" ⌵ 📌 🗑 ✕

Display

Display Style	Use Geometry Setting
---------------	----------------------

Defaults

Physics Preference	CFD
Solver Preference	Fluent
Element Order	Linear
☐ Element Size	1.0 mm
Export Format	Standard
Export Preview Surface Mesh	No

Sizing

Quality

Check Mesh Quality	Yes, Errors
☐ Target Skewness	Default (0.9)
Smoothing	High
Mesh Metric	None

Inflation

Advanced

Statistics

Selection Information

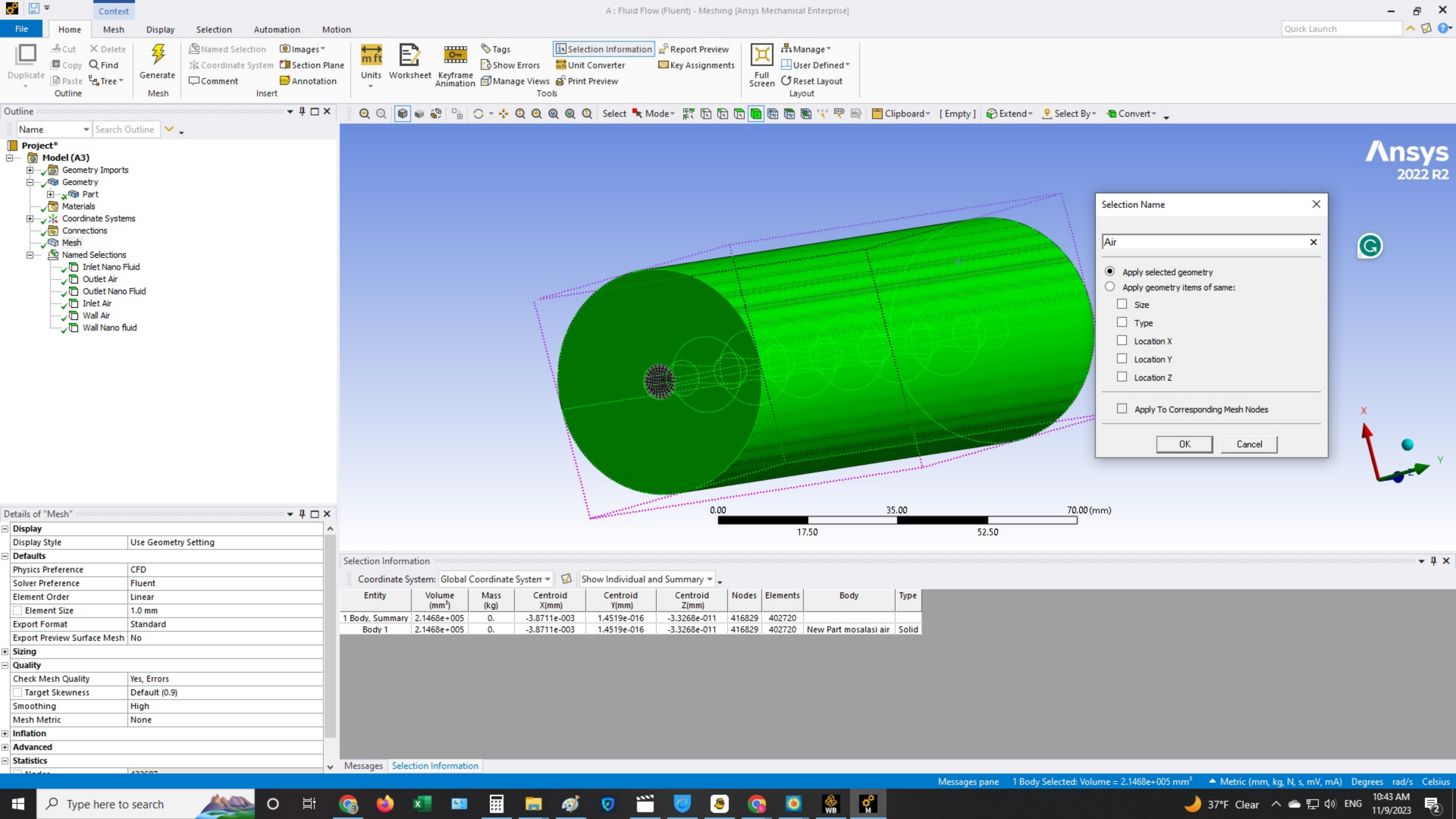
Coordinate System: Global Coordinate System

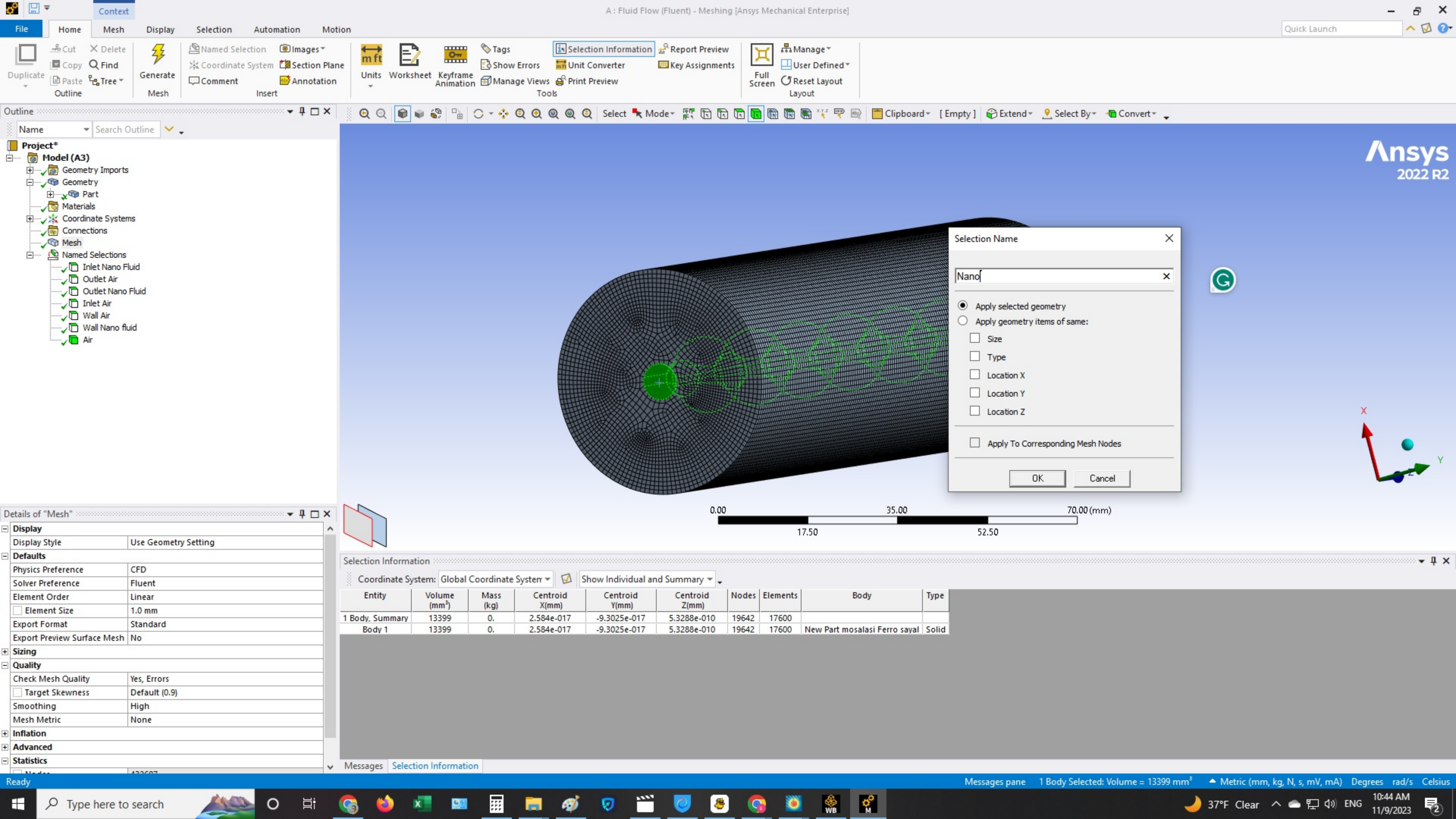
Show Individual and Summary

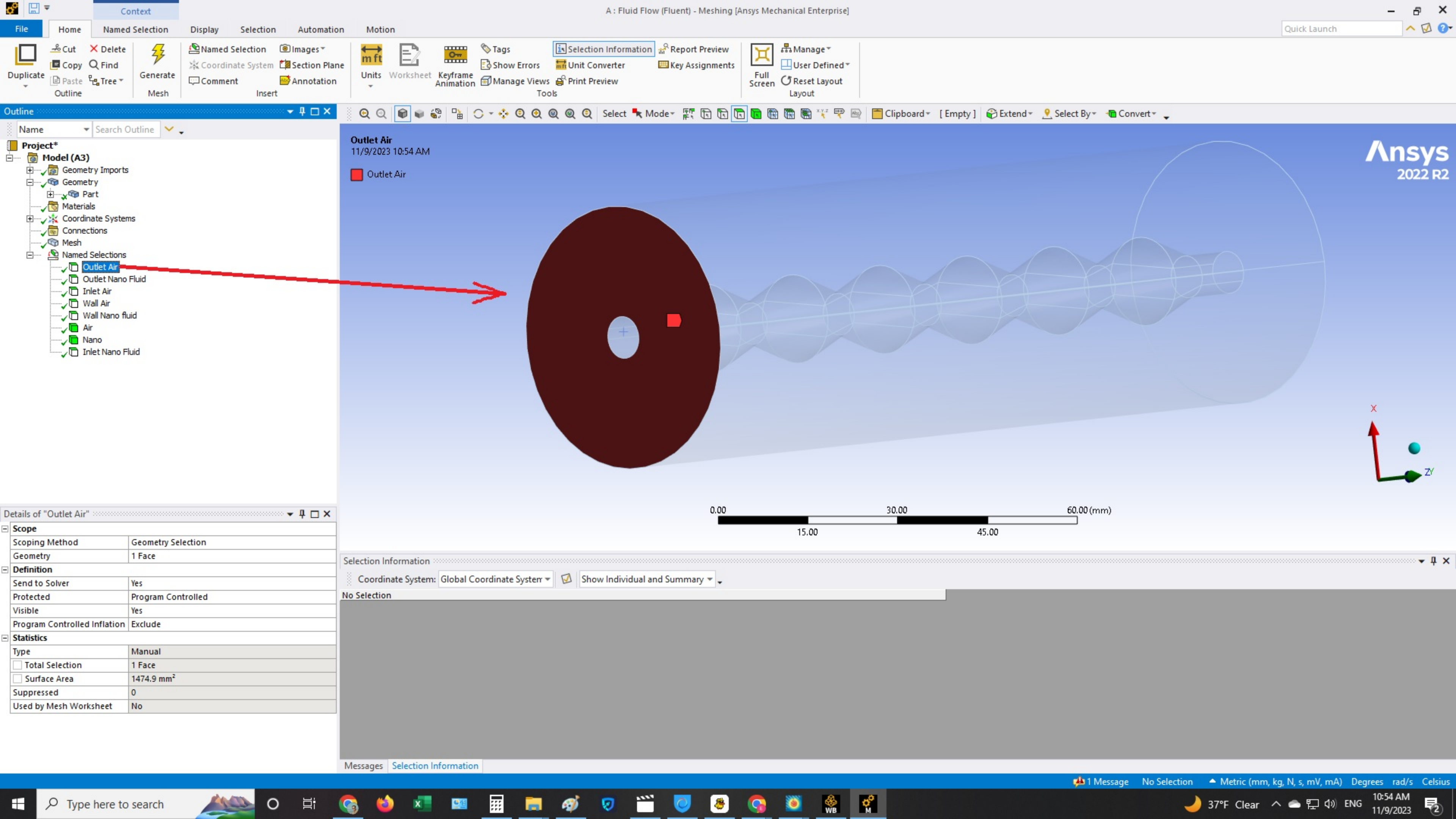
Entity	Surface Area (mm ²)	Centroid X(mm)	Centroid Y(mm)	Centroid Z(mm)	Body	Type	Radius (mm)
56 Faces, Summary	5160.8	-5.421e-017	-1.8296e-016	-8.6049e-008			
Face 1	94.78	-2.4821	-0.63378	-69.868	New Part mosalasi Ferro sayal, New Part mosalasi air	Cylinder	3.5
Face 2	17.94	0.85494	-3.3482	-69.868	New Part mosalasi Ferro sayal, New Part mosalasi air	Cylinder	3.5
Face 3	165.01	-4.0319	-1.0295	-49.197	New Part mosalasi Ferro sayal, New Part mosalasi air	Cone	
Face 4	165.01	-4.0319	-1.0295	-27.618	New Part mosalasi Ferro sayal, New Part mosalasi air	Cone	
Face 5	165.01	-4.0319	-1.0295	-6.0387	New Part mosalasi Ferro sayal, New Part mosalasi air	Cone	
Face 6	165.01	-4.0319	-1.0295	15.54	New Part mosalasi Ferro sayal, New Part mosalasi air	Cone	
Face 7	165.01	-4.0319	-1.0295	37.119	New Part mosalasi Ferro sayal, New Part mosalasi air	Cone	
Face 8	165.01	-4.0319	-1.0295	58.698	New Part mosalasi Ferro sayal, New Part mosalasi air	Cone	
Face 9	94.78	-2.4821	-0.63378	69.868	New Part mosalasi Ferro sayal, New Part mosalasi air	Cylinder	3.5
Face 10	17.94	0.85494	-3.3482	69.868	New Part mosalasi Ferro sayal, New Part mosalasi air	Cylinder	3.5
Face 11	31.233	1.3888	-5.4389	58.698	New Part mosalasi Ferro sayal, New Part mosalasi air	Cone	
Face 12	31.233	1.3888	-5.4389	37.119	New Part mosalasi Ferro sayal, New Part mosalasi air	Cone	

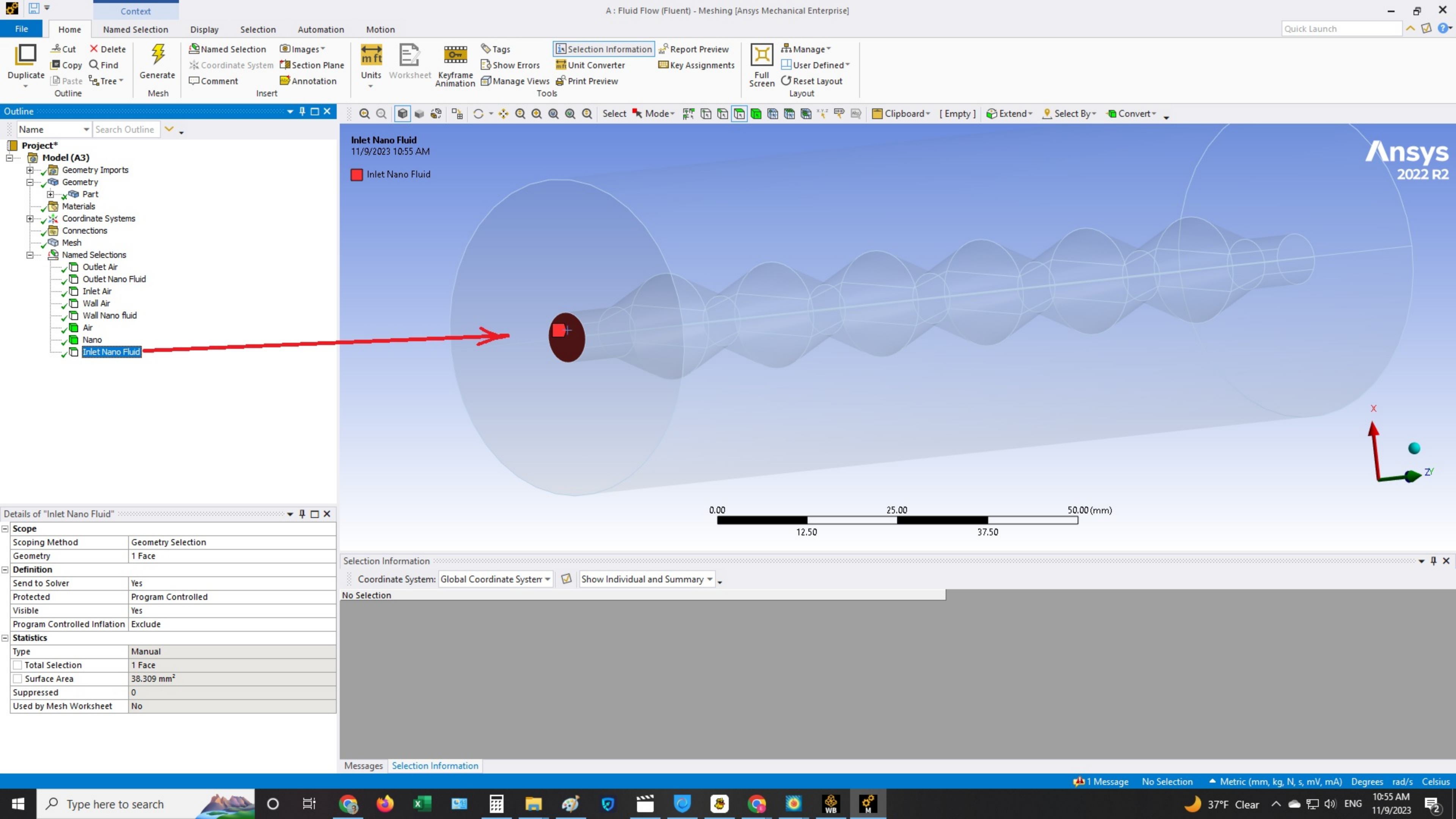
Messages

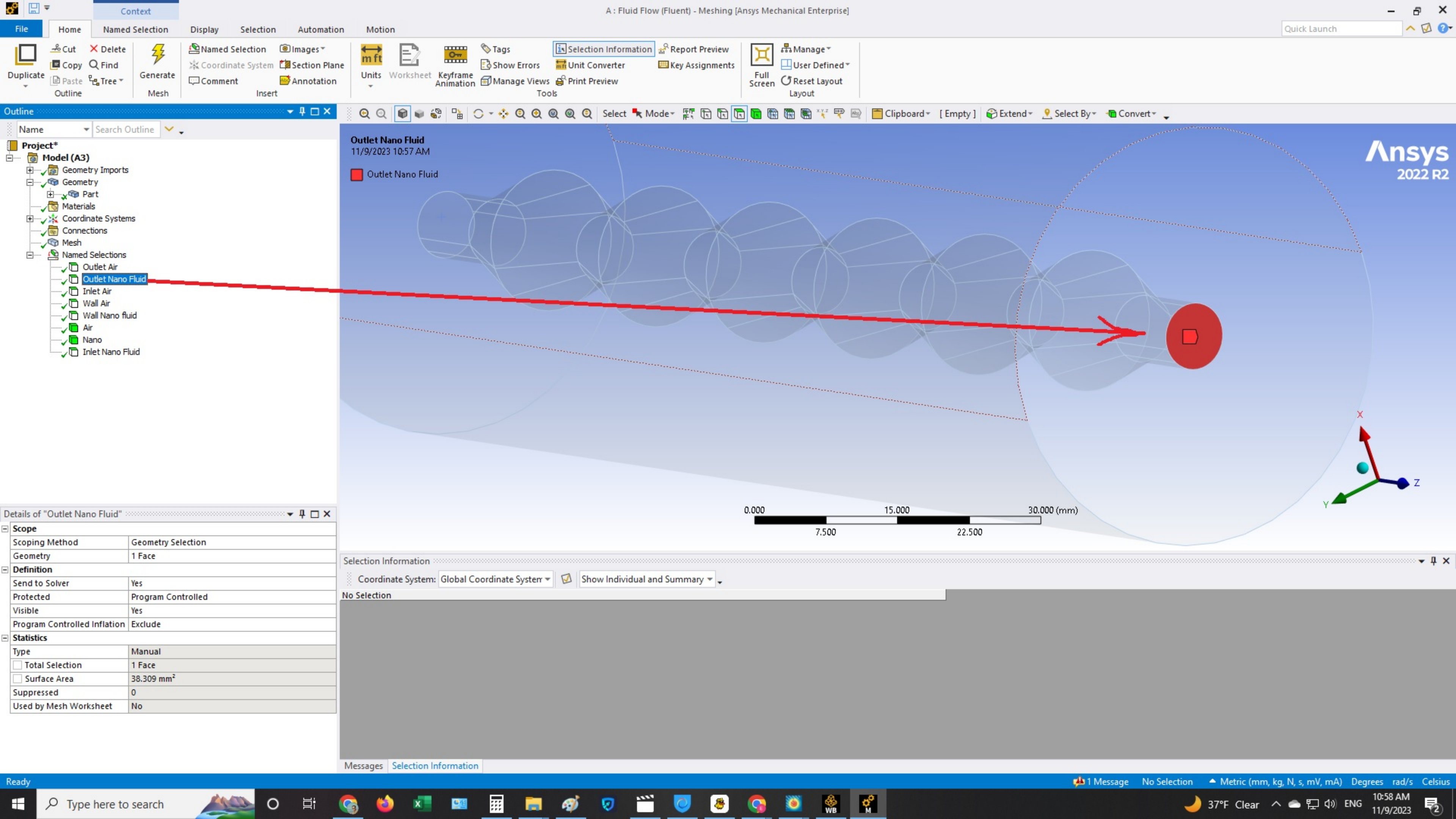
Selection Information











Outline

Name Search Outline

Project*

Model (A3)

- Geometry Imports
- Geometry
- Part
- Materials
- Coordinate Systems
- Connections
- Mesh
- Named Selections
 - Outlet Air
 - Outlet Nano Fluid
 - Inlet Air
 - Wall Air
 - Wall Nano fluid
 - Air
 - Nano
 - Inlet Nano Fluid

Details of "Outlet Nano Fluid"

Scope	
Scoping Method	Geometry Selection
Geometry	1 Face
Definition	
Send to Solver	Yes
Protected	Program Controlled
Visible	Yes
Program Controlled Inflation	Exclude
Statistics	
Type	Manual
Total Selection	1 Face
Surface Area	38.309 mm ²
Suppressed	0
Used by Mesh Worksheet	No

Outlet Nano Fluid

11/9/2023 10:57 AM

Outlet Nano Fluid

Ansys
2022 R20.000 15.000 30.000 (mm)
7.500 22.500

Selection Information

Coordinate System: Global Coordinate System Show Individual and Summary

No Selection

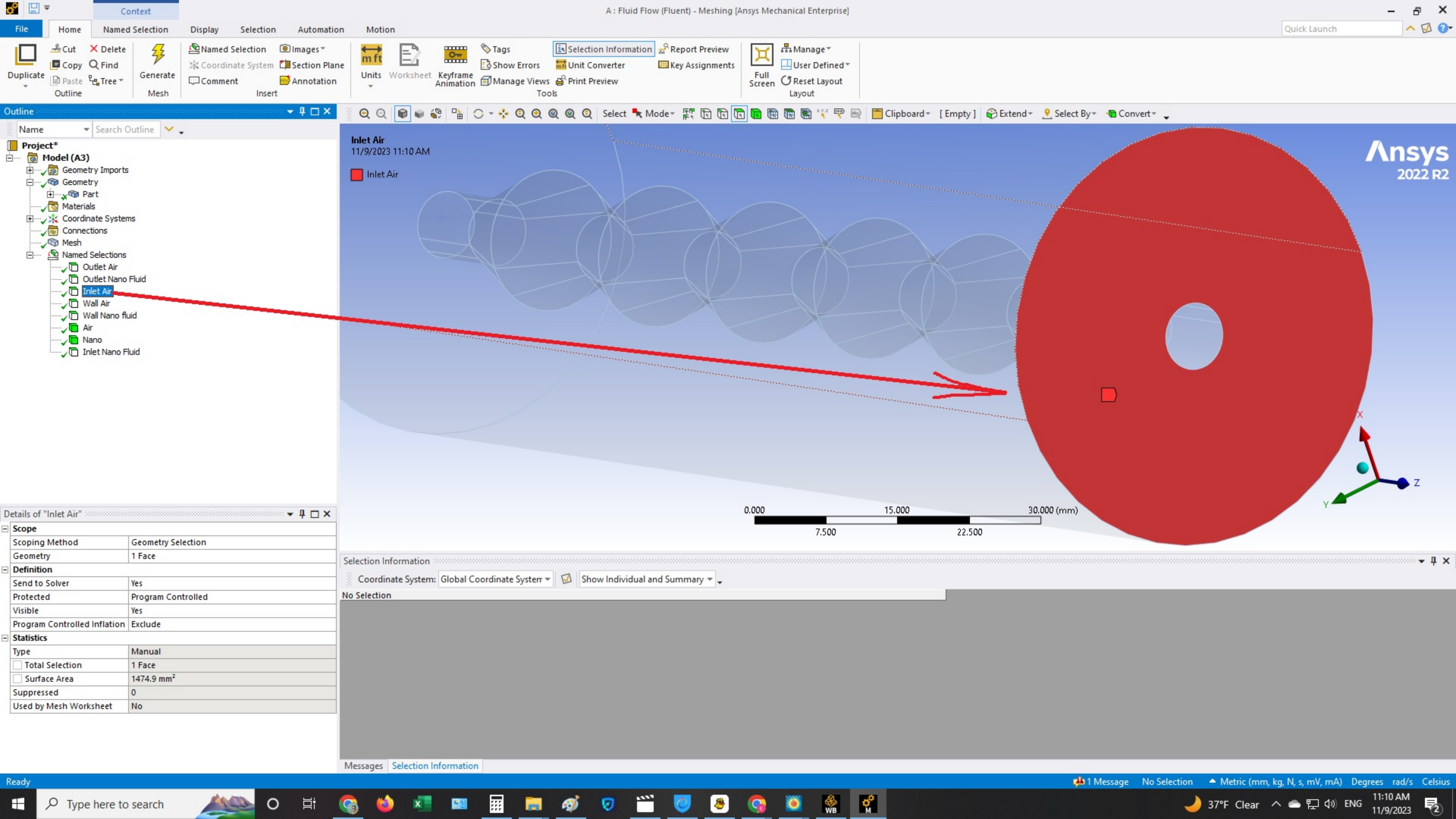
Messages Selection Information

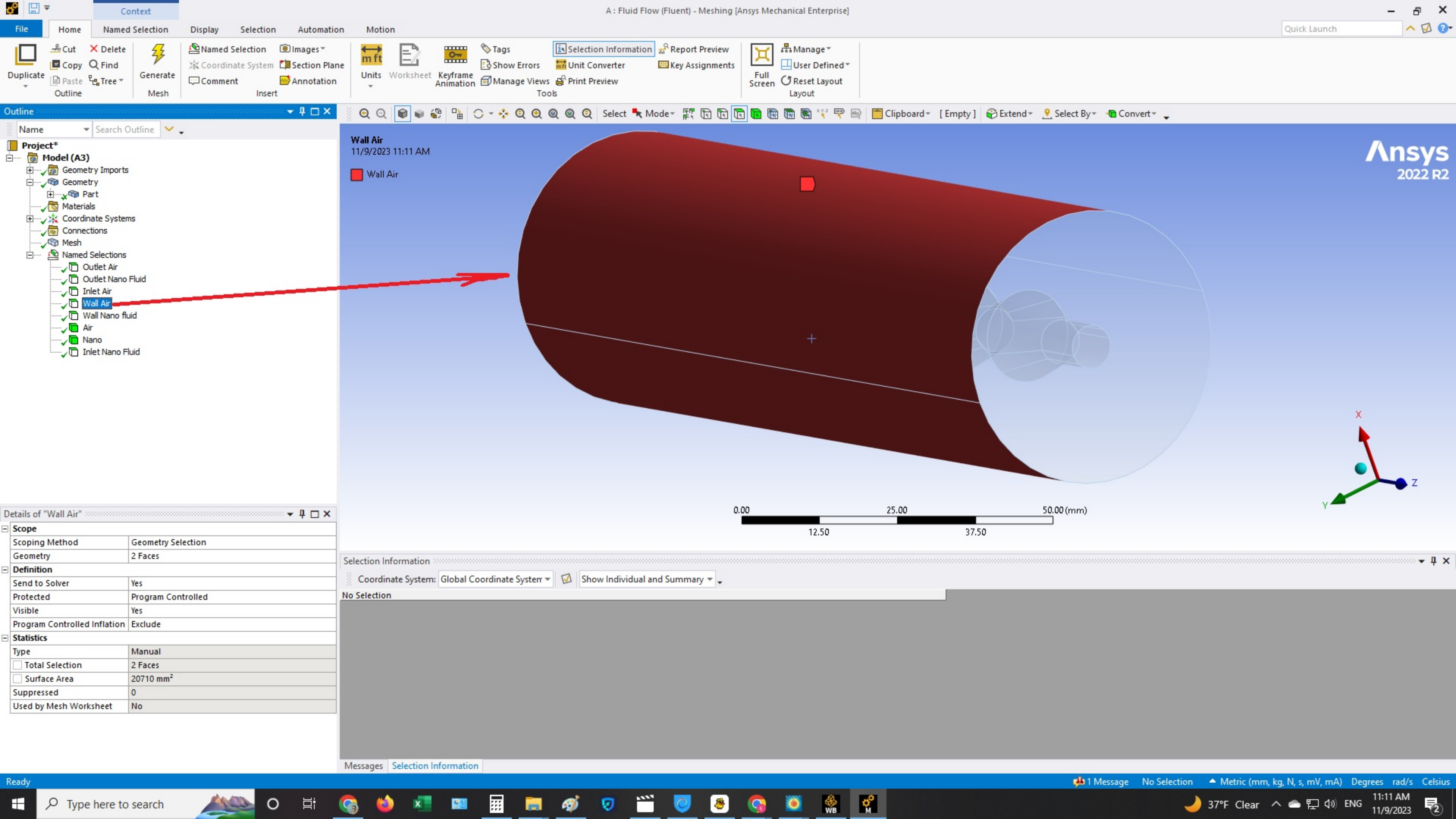
Ready

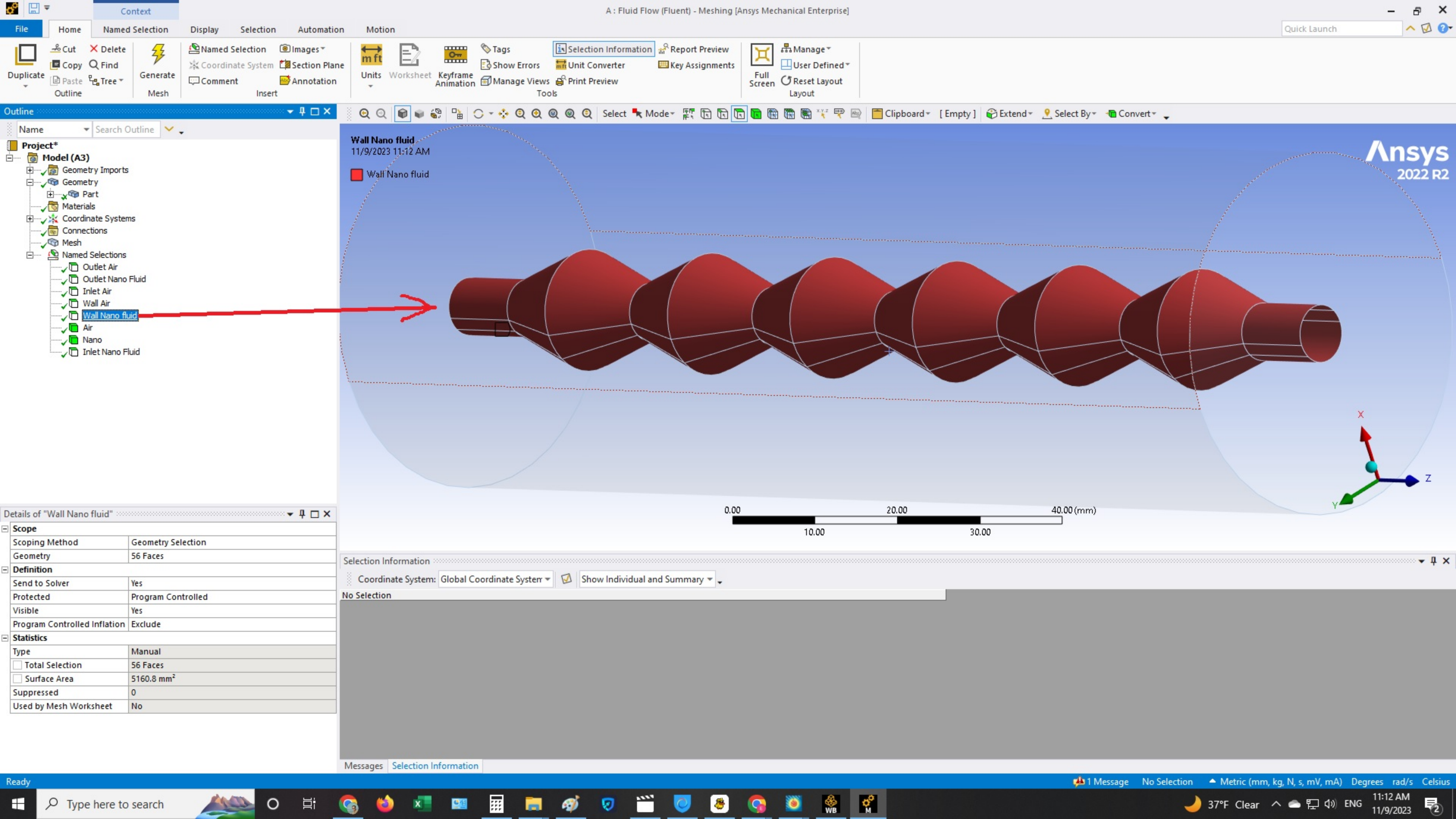
1 Message No Selection Metric (mm, kg, N, s, mV, mA) Degrees rad/s Celsius

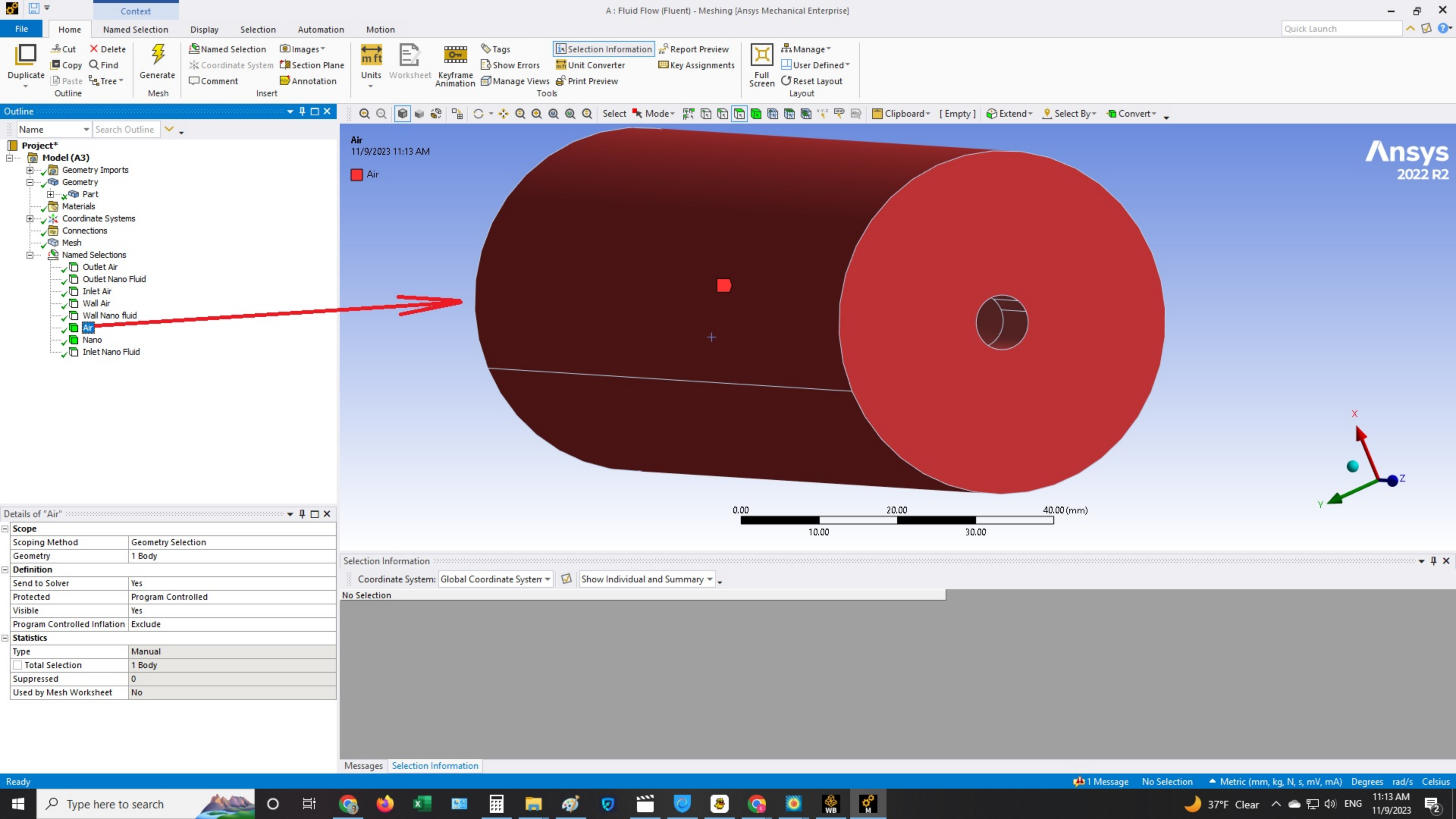
Type here to search

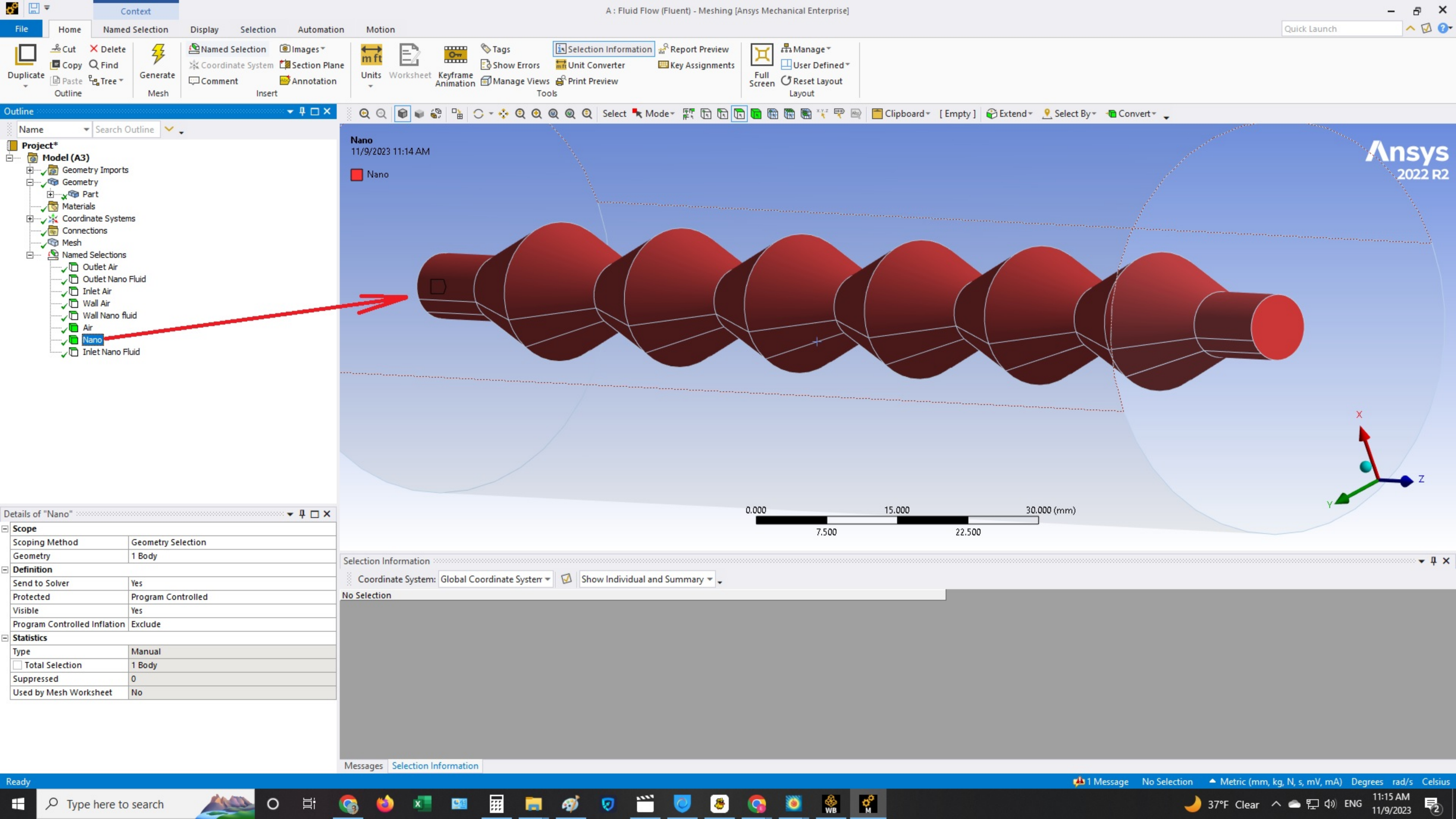
37°F Clear 10:58 AM 11/9/2023

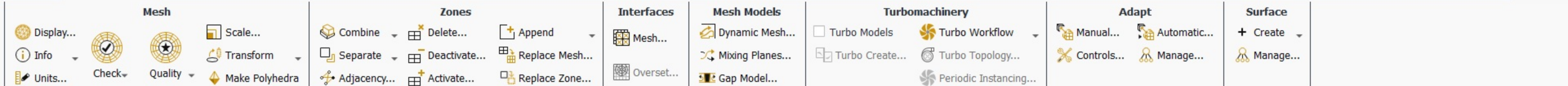












Outline View

Filter Text

Setup

- General
- Models
- Materials
- Cell Zone Conditions
- Boundary Conditions
- Mesh Interfaces
- Dynamic Mesh
- Reference Values
- Reference Frames
- Named Expressions
- Curvilinear Coordinate System

Solution

- Methods
- Controls
- Report Definitions
- Monitors
- Cell Registers
- Automatic Mesh Adaption
- Initialization
- Calculation Activities
- Run Calculation

Results

- Surfaces
- Graphics
- Plots
- Animations
- Reports
- Parameters & Customization
- Simulation Reports

Task Page

General

Mesh

Scale... Check Report Quality

Display... Units...

Solver

Type

- ☒ Pressure-Based
- ☐ Density-Based

Velocity Formulation

- ☒ Absolute
- ☐ Relative

Time

Scale Mesh

Domain Extents

Xmin [m] -0.02199437 Xmax [m] 0.02199437

Ymin [m] -0.022 Ymax [m] 0.022

Zmin [m] -0.075 Zmax [m] 0.075

View Length Unit In

m

Scaling

- ☒ Convert Units
- ☐ Specify Scaling Factors

Mesh Was Created In

m

Scaling Factors

X 1

Y 1

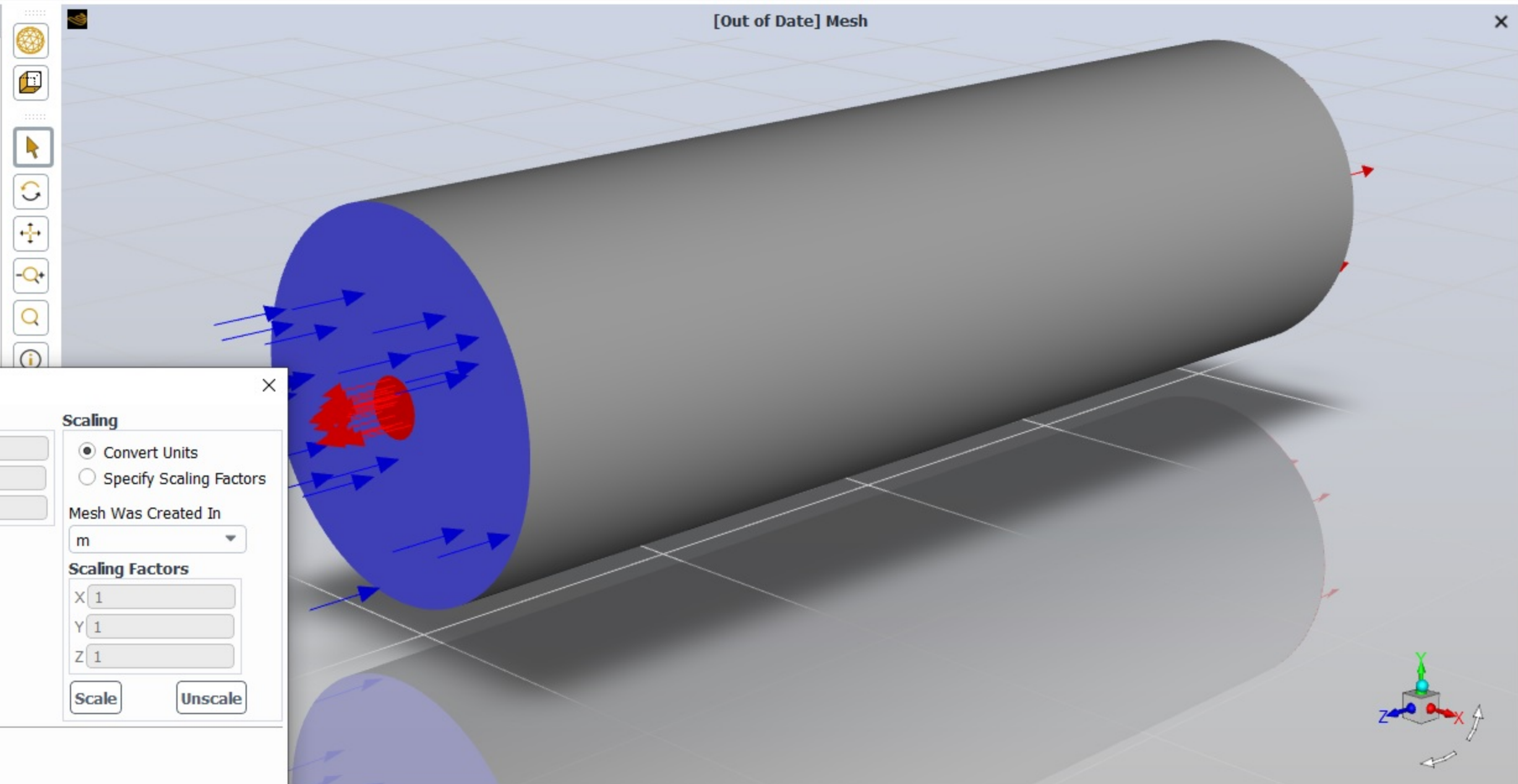
Z 1

Scale

Unscale

Close

Help



0 selected all

Console

Mesh Size

Level	Cells	Faces	Nodes	Partitions
0	420320	1276867	436519	1

2 cell zones, 9 face zones.

File Domain Physics User-Defined Solution Results View Parallel Design

Quick Search (Ct...)

Mesh

Display... Info Units... Check Quality Scale... Transform Make Polyhedra

Zones

Combine Separate Adjacency... Delete... Deactivate... Activate... Append Replace Mesh... Replace Zone...

Interfaces

Mesh... Overset...

Mesh Models

Dynamic Mesh... Mixing Planes... Gap Model...

Turbomachinery

Turbo Models Turbo Create... Turbo Workflow Turbo Topology... Periodic Instancing...

Adapt

Manual... Automatic... Controls... Manage...

Surface

Create... Manage...

Outline View

Filter Text

Setup

- General
- Models
 - Multiphase (Off)
 - Energy (Off)
 - Viscous (SST k-omega)
 - Radiation (Off)
 - Heat Exchanger (Off)
 - Species (Off)
 - Discrete Phase (Off)
 - Solidification & Melting (Off)
 - Acoustics (Off)
 - Optics (Off)
 - Structure (Off)
 - Eulerian Wall Film (Off)
 - Potential/Li-ion Battery (Off)
 - Battery Model (Off)
- Materials
- Cell Zone Conditions
- Boundary Conditions
- Mesh Interfaces
- Dynamic Mesh
- Reference Values
- Reference Frames
- Named Expressions
- Curvilinear Coordinate System

Solution

- Methods
- Controls
- Report Definitions
- Monitors
- Cell Registers
- Automatic Mesh Adaption
- Initialization
- Calculation Activities
- Run Calculation

Results

- Surfaces

Task Page

Models

Multiphase - Off

Energy - Off

Viscous - SST k-omega

Radiation - Off

Heat Exchanger - Off

Species - Off

Discrete Phase - Off

Solidification & Melting - Off

Acoustics - Off

Optics - Off

Structure - Off

Eulerian Wall Film - Off

Energy

Energy Equation

OK Cancel Help

[Out of Date] Mesh

0 selected all

Console

Mesh Size

Level	Cells	Faces	Nodes	Partitions
0	420320	1276867	436519	1

2 cell zones, 9 face zones.



File Domain Physics User-Defined Solution Results View Parallel Design

Quick Search (Ct...)

Mesh

Display... Info Units... Check Quality Scale... Transform Make Polyhedra

Zones

Combine Separate Adjacency... Delete... Deactivate... Activate... Append Rep...

Interfaces

Mesh...

Mesh Models

Dynamic Mesh... Model...

Turbomachinery

Turbo Models Turbo Create... Turbo Workflow Turbo Topology... Periodic Instancing...

Adapt

Manual... Automatic... Controls... Manage...

Surface

Create Manage...

Outline View

Filter Text

Setup

General

Models

Multiphase (Off)

Energy (On)

Viscous (SST k-omega)

Radiation (Off)

Heat Exchanger (Off)

Species (Off)

Discrete Phase (Off)

Solidification & Melting (Off)

Acoustics (Off)

Optics (Off)

Structure (Off)

Eulerian Wall Film (Off)

Potential/Li-ion Battery (Off)

Battery Model (Off)

Materials

Cell Zone Conditions

Boundary Conditions

Mesh Interfaces

Dynamic Mesh

Reference Values

Reference Frames

Named Expressions

Curvilinear Coordinate System

Solution

Methods

Controls

Report Definitions

Monitors

Cell Registers

Automatic Mesh Adaption

Initialization

Calculation Activities

Run Calculation

Results

Surfaces

Task Page

Models

Multiphase - Off

Energy - On

Viscous - SST k-omega

Radiation - Off

Heat Exchanger - Off

Species - Off

Discrete Phase - Off

Solidification & Melting - Off

Acoustics - Off

Optics - Off

Structure - Off

Eulerian Wall Film - Off

Potential/Li-ion Battery - Off

Battery Model - Off

Edit...

Model

☐ Inviscid

☒ Laminar

☐ Spalart-Allmaras (1 eqn)

☐ k-epsilon (2 eqn)

☐ k-omega (2 eqn)

☐ Transition k-kl-omega (3 eqn)

☐ Transition SST (4 eqn)

☐ Reynolds Stress (7 eqn)

☐ Scale-Adaptive Simulation (SAS)

☐ Detached Eddy Simulation (DES)

☐ Large Eddy Simulation (LES)

Options

☐ Viscous Heating

☐ Low-Pressure Boundary Slip

OK Cancel Help

[Out of Date] Mesh

0 selected all

Console

Mesh Size

Level	Cells	Faces	Nodes	Partitions
0	420320	1276867	436519	1

2 cell zones, 9 face zones.





File Domain Physics User-Defined Solution Results View Parallel Design

Quick Search (Ct...)

Mesh: Display... Info Units... Check Quality Scale... Transform Make Polyhedra

Zones: Combine Separate Adjacency... Delete... Deactivate... Activate... Append Replace Mesh... Replace Zone...

Interfaces: Mesh... Overset...

Mesh Models: Dynamic Mesh... Mixing Planes... Gap Model...

Turbomachinery: Turbo Models Turbo Create... Turbo Workflow Turbo Topology... Periodic Instancing...

Adapt: Manual... Automatic... Controls... Manage...

Surface: Create... Manage...

Outline View: Filter Text

- Setup
 - General
 - Models
 - Multiphase (Off)
 - Energy (On)
 - Viscous (Laminar)
 - Radiation (Off)
 - Heat Exchanger (Off)
 - Species (Off)
 - Discrete Phase (Off)
 - Solidification & Melting (Off)
 - Acoustics (Off)
 - Optics (Off)
 - Structure (Off)
 - Eulerian Wall Film (Off)
 - Potential/Li-ion Battery (Off)
 - Battery Model (Off)
 - Materials
 - Cell Zone Conditions
 - Fluid
 - Boundary Conditions
 - Mesh Interfaces
 - Dynamic Mesh
 - Reference Values
 - Reference Frames
 - Named Expressions
 - Curvilinear Coordinate System
- Solution
 - Methods
 - Controls
 - Report Definitions
 - Monitors
 - Cell Registers
 - Automatic Mesh Adaption
 - Initialization
 - Calculation Activities
 - Run Calculation
- Results

Task Page

Materials

Fluid

- nano-fluid
- air
- Solid
- aluminum

Create/Edit Materials

Name: nano-fluid

Material Type: fluid

Chemical Formula:

Fluent Fluid Materials: nano-fluid

Mixture: none

Order Materials by: Name

Fluent Database... GRANTA MDS Database... User-Defined Database...

Properties

Density [kg/m³]: constant 1166.27

Cp (Specific Heat) [J/(kg K)]: constant 4041.52

Thermal Conductivity [W/(m K)]: constant 0.655

Viscosity [kg/(m s)]: constant 0.0011

Change/Create Delete Close Help

0 selected all

Console

Mesh Size

Level	Cells	Faces	Nodes	Partitions
0	420320	1276867	436519	1

2 cell zones, 9 face zones.



File Domain Physics User-Defined Solution Results View Parallel Design

Quick Search (Ct...)

Mesh

Display... Info Units... Check Quality Scale... Transform Make Polyhedra

Zones

Combine Separate Adjacency... Delete... Deactivate... Activate... Append Replace Mesh... Replace Zone...

Interfaces

Mesh... Overset...

Mesh Models

Dynamic Mesh... Mixing Planes... Gap Model...

Turbomachinery

Turbo Models Turbo Create... Turbo Workflow Turbo Topology... Periodic Instancing...

Adapt

Manual... Controls... Automatic... Manage...

Surface

Create... Manage...

Outline View

Filter Text

Setup

- General
- Models
 - Multiphase (Off)
 - Energy (On)
 - Viscous (Laminar)
 - Radiation (Off)
 - Heat Exchanger (Off)
 - Species (Off)
 - Discrete Phase (Off)
 - Solidification & Melting (Off)
 - Acoustics (Off)
 - Optics (Off)
 - Structure (Off)
 - Eulerian Wall Film (Off)
 - Potential/Li-ion Battery (Off)
 - Battery Model (Off)
- Materials
- Cell Zone Conditions
- Fluid
- Boundary Conditions
- Mesh Interfaces
- Dynamic Mesh
- Reference Values
- Reference Frames
- Named Expressions
- Curvilinear Coordinate System

Solution

- Methods
- Controls
- Report Definitions
- Monitors
- Cell Registers
- Automatic Mesh Adaption
- Initialization
- Calculation Activities
- Run Calculation

Results

Task Page

Materials

Materials

- Fluid
 - nano-fluid
 - air
- Solid
 - aluminum

Create/Edit Materials

Name: air

Material Type: fluid

Chemical Formula:

Fluent Fluid Materials: air

Mixture: none

Order Materials by:

- Name
- Chemical Formula

Fluent Database... GRANTA MDS Database... User-Defined Database...

Properties

Density [kg/m³]: constant 1.225

Cp (Specific Heat) [J/(kg K)]: constant 1006.43

Thermal Conductivity [W/(m K)]: constant 0.0242

Viscosity [kg/(m s)]: constant 1.7894e-05

Change/Create Delete Close Help

0 selected all

Console

Mesh Size

Level	Cells	Faces	Nodes	Partitions
0	420320	1276867	436519	1

2 cell zones, 9 face zones.



Mesh: Display..., Info, Units..., Check, Quality, Scale..., Transform, Make Polyhedra

Zones: Combine, Separate, Adjacency..., Delete..., Deactivate..., Activate..., Append, Replace Mesh..., Replace Zone...

Interfaces: Mesh..., Overset...

Mesh Models: Dynamic Mesh..., Mixing Planes..., Gap Model...

Turbomachinery: Turbo Models, Turbo Create..., Turbo Workflow, Turbo Topology..., Periodic Instancing...

Adapt: Manual..., Controls..., Automatic..., Manage...

Surface: Create, Manage...

Outline View

Filter Text

Setup

- General
- Models
 - Multiphase (Off)
 - Energy (On)
 - Viscous (Laminar)
 - Radiation (Off)
 - Heat Exchanger (Off)
 - Species (Off)
 - Discrete Phase (Off)
 - Solidification & Melting (Off)
 - Acoustics (Off)
 - Optics (Off)
 - Structure (Off)
 - Eulerian Wall Film (Off)
 - Potential/Li-ion Battery (Off)
 - Battery Model (Off)
- Materials
- Cell Zone Conditions
- Boundary Conditions
- Mesh Interfaces
- Dynamic Mesh
- Reference Values
- Reference Frames
- Named Expressions
- Curvilinear Coordinate System

Solution

- Methods
- Controls
- Report Definitions
- Monitors
- Cell Registers
- Automatic Mesh Adaption
- Initialization
- Calculation Activities
- Run Calculation

Results

- Surfaces

Task Page

Cell Zone Conditions

Zone: Filter Text

air

nano

Phase: mixture, Type: fluid, ID: 6

Edit..., Copy..., Profiles..., Parameters..., Display Mesh..., Operating Conditions...

Porous Formulation

- Superficial Velocity
- Physical Velocity

[Out of Date] Mesh

Fluid

Zone Name: air

Material Name: air

Frame Motion, 3D Fan Zone, Source Terms, Mesh Motion, Fixed Values, Porous Zone

Reference Frame, Mesh Motion, Porous Zone, 3D Fan Zone, Embedded LES, Reaction, Source Terms, Fixed Values, Multiphase

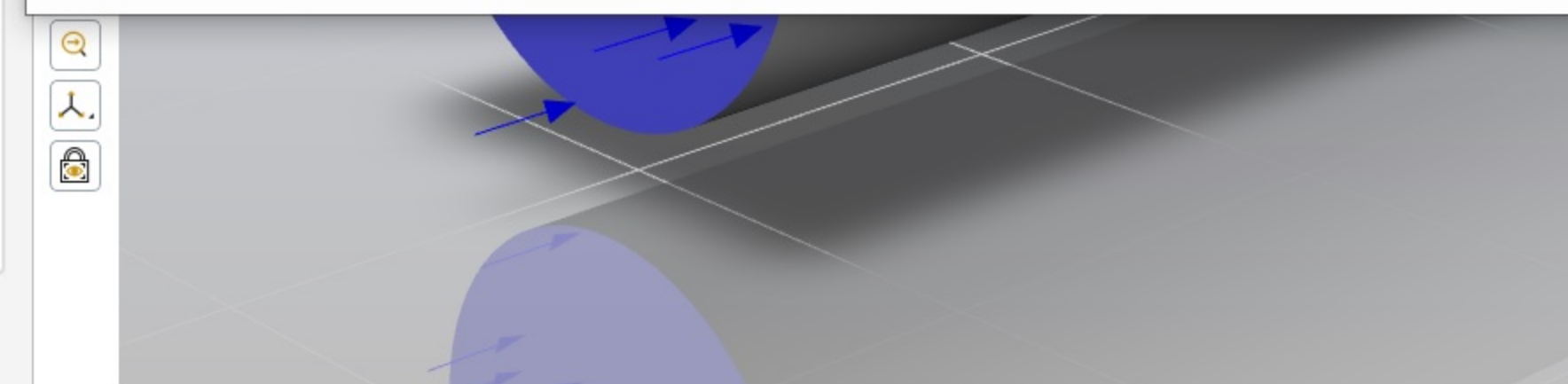
Rotation-Axis Origin

X [m]: 0, Y [m]: 0, Z [m]: 0

Rotation-Axis Direction

X: 0, Y: 0, Z: 1

Apply, Close, Help



Console

Mesh Size

Level	Cells	Faces	Nodes	Partitions
0	420320	1276867	436519	1

2 cell zones, 9 face zones.



File Domain Physics User-Defined Solution Results View Parallel Design

Quick Search (Ct...)

Mesh

- Display...
- Info
- Units...
- Check
- Quality
- Scale...
- Transform
- Make Polyhedra

Zones

- Combine
- Separate
- Adjacency...
- Delete...
- Deactivate...
- Activate...
- Append
- Replace Mesh...
- Replace Zone...

Interfaces

- Mesh...
- Overset...

Mesh Models

- Dynamic Mesh...
- Mixing Planes...
- Gap Model...

Turbomachinery

- Turbo Models
- Turbo Create...
- Turbo Workflow
- Turbo Topology...
- Periodic Instancing...

Adapt

- Manual...
- Controls...
- Automatic...
- Manage...

Surface

- Create
- Manage...

Outline View

Filter Text

Setup

- General
- Models
 - Multiphase (Off)
 - Energy (On)
 - Viscous (Laminar)
 - Radiation (Off)
 - Heat Exchanger (Off)
 - Species (Off)
 - Discrete Phase (Off)
 - Solidification & Melting (Off)
 - Acoustics (Off)
 - Optics (Off)
 - Structure (Off)
 - Eulerian Wall Film (Off)
 - Potential/Li-ion Battery (Off)
 - Battery Model (Off)
- Materials
- Cell Zone Conditions
- Boundary Conditions
- Mesh Interfaces
- Dynamic Mesh
- Reference Values
- Reference Frames
- Named Expressions
- Curvilinear Coordinate System

Solution

- Methods
- Controls
- Report Definitions
- Monitors
- Cell Registers
- Automatic Mesh Adaption
- Initialization
- Calculation Activities
- Run Calculation

Results

- Surfaces

Task Page

Cell Zone Conditions

Zone Filter Text

air

nano

Phase mixture Type fluid ID 7

Edit... Copy... Profiles... Parameters... Display Mesh... Operating Conditions...

Porous Formulation

- Superficial Velocity
- Physical Velocity

Fluid

Zone Name nano

Material Name nano-fluid Edit...

☐ Frame Motion ☐ 3D Fan Zone ☒ Source Terms

☐ Mesh Motion ☐ Fixed Values

☐ Porous Zone

Reference Frame Mesh Motion Porous Zone 3D Fan Zone Embedded LES Reaction Source Terms Fixed Values Multiphase

Rotation-Axis Origin

X [m] 0 Y [m] 0 Z [m] 0

Rotation-Axis Direction

X 0 Y 0 Z 1

Apply Close Help

[Out of Date] Mesh

0 selected all

Console

Mesh Size

Level	Cells	Faces	Nodes	Partitions
0	420320	1276867	436519	1

2 cell zones, 9 face zones.





File Domain Physics User-Defined Solution Results View Parallel Design

Quick Search (Ct...)

Field Functions: Custom..., Units..., Parameters...

User Defined: Functions, Named Expressions, Execute on Demand...

Model Specific: 1D Coupling..., Fan Model...

Outline View: Filter Text

- Setup
 - General
 - Models
 - Multiphase (Off)
 - Energy (On)
 - Viscous (Laminar)
 - Radiation (Off)
 - Heat Exchanger (Off)
 - Species (Off)
 - Discrete Phase (Off)
 - Solidification & Melting (Off)
 - Acoustics (Off)
 - Optics (Off)
 - Structure (Off)
 - Eulerian Wall Film (Off)
 - Potential/Li-ion Battery (Off)
 - Battery Model (Off)
 - Materials
 - Cell Zone Conditions
 - Boundary Conditions
 - Mesh Interfaces
 - Dynamic Mesh
 - Reference Values
 - Reference Frames
 - Named Expressions
 - Curvilinear Coordinate System
- Solution
 - Methods
 - Controls
 - Report Definitions
 - Monitors
 - Cell Registers
 - Automatic Mesh Adaption
 - Initialization
 - Calculation Activities
 - Run Calculation
- Results
 - Surfaces

Task Page: Cell Zone Conditions

Zone: Filter Text

air
nano

Phase: mixture Type: fluid ID: 7

Edit... Copy... Profiles... Parameters... Display Mesh... Operating Conditions...

Porous Formulation: Superficial Velocity, Physical Velocity

Interpreted UDFs

Source File Name: s/Mn=1.088/nahaei va akharin=1.088.txt Browse...

CPP Command Name: cpp

Stack Size: 10000

☐ Display Assembly Listing

☐ Use Contributed CPP

Interpret Close Help

[Out of Date] Mesh

0 selected all

Console

```
\fluent22.2.0/src/ht" -I"C:\PROGRA~1\ANSYSI~1\v222\fluent\fluent22.2.0/src/dx" -I"C:\PROGRA~1\ANSYSI~1\v222\fluent\fluent22.2.0/src/turbulence" -I"C:\PROGRA~1\ANSYSI~1\v222\fluent\fluent22.2.0/src/acoustics" -I"C:\PROGRA~1\ANSYSI~1\v222\fluent\fluent22.2.0/src/parallel" -I"C:\PROGRA~1\ANSYSI~1\v222\fluent\fluent22.2.0/src/etc" -I"C:\PROGRA~1\ANSYSI~1\v222\fluent\fluent22.2.0/src/ue" -I"C:\PROGRA~1\ANSYSI~1\v222\fluent\fluent22.2.0/src/dpm" -I"C:\PROGRA~1\ANSYSI~1\v222\fluent\fluent22.2.0/src/dbns" -I"C:\PROGRA~1\ANSYSI~1\v222\fluent\fluent22.2.0/tgrid/src" -I"C:\PROGRA~1\ANSYSI~1\v222\fluent\fluent22.2.0/cortex/src" -I"C:\PROGRA~1\ANSYSI~1\v222\fluent\fluent22.2.0/client/src" -I"C:\PROGRA~1\ANSYSI~1\v222\fluent\fluent22.2.0/multiport/src" -I"C:\PROGRA~1\ANSYSI~1\v222\fluent\fluent22.2.0/./include" -I. -DUDFCONFIG_H="C:/Users/SADRAF~1/AppData/Local/Temp/udfconfig-8348-node0.h"> "C:/Users/SADRAF~1/AppData/Local/Temp/nahaei va akharin=1.088.txt.8348.0.c"
```



#include "udf.h"

```
#define i      21.95
#define a      0.022
#define b     -0.01
#define mu0    1.256e-6
#define mub    9.27e-24
#define dp     1.0e-8
#define kb     1.3806503e-23
```

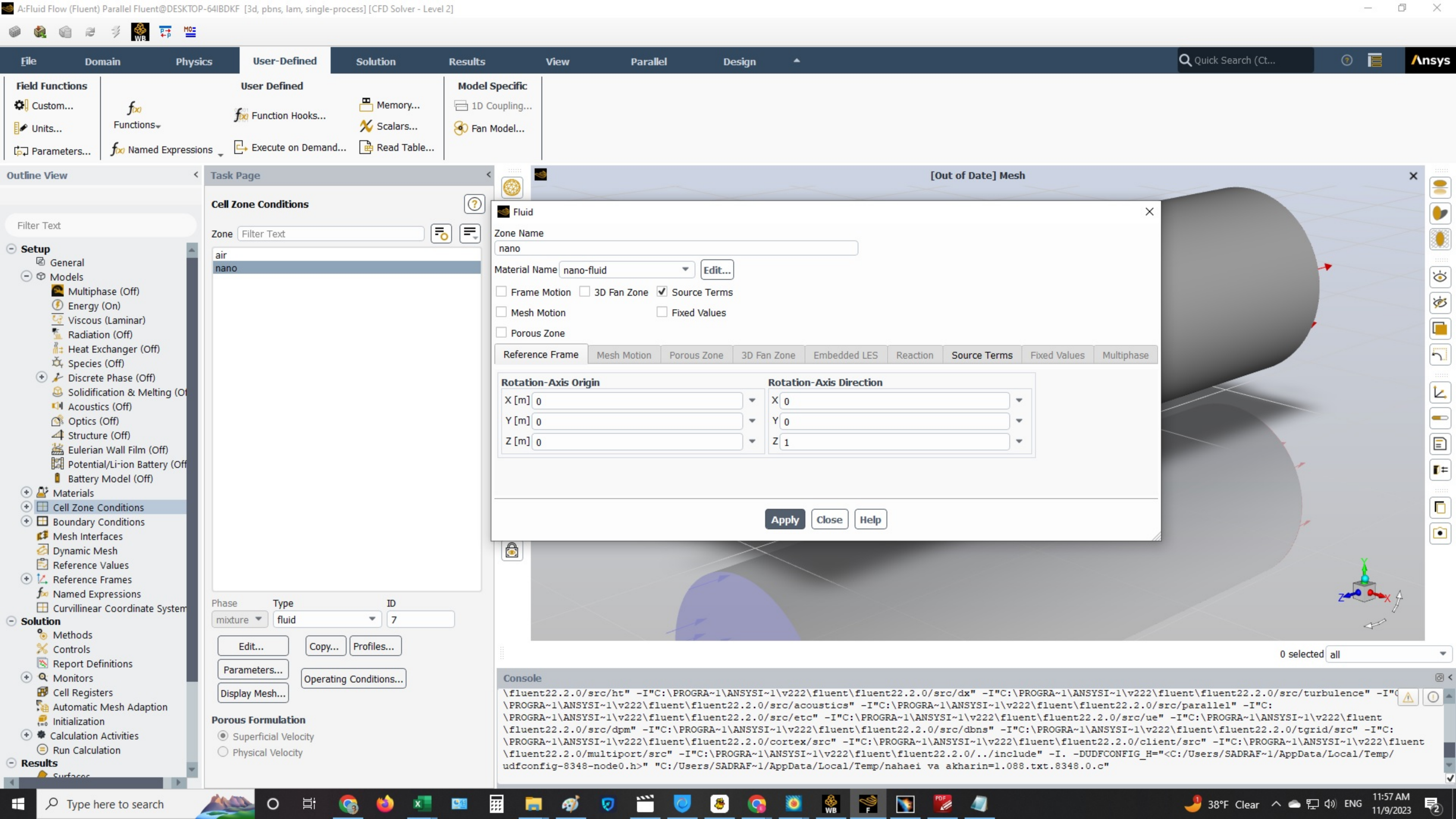
For Mn: 3.47

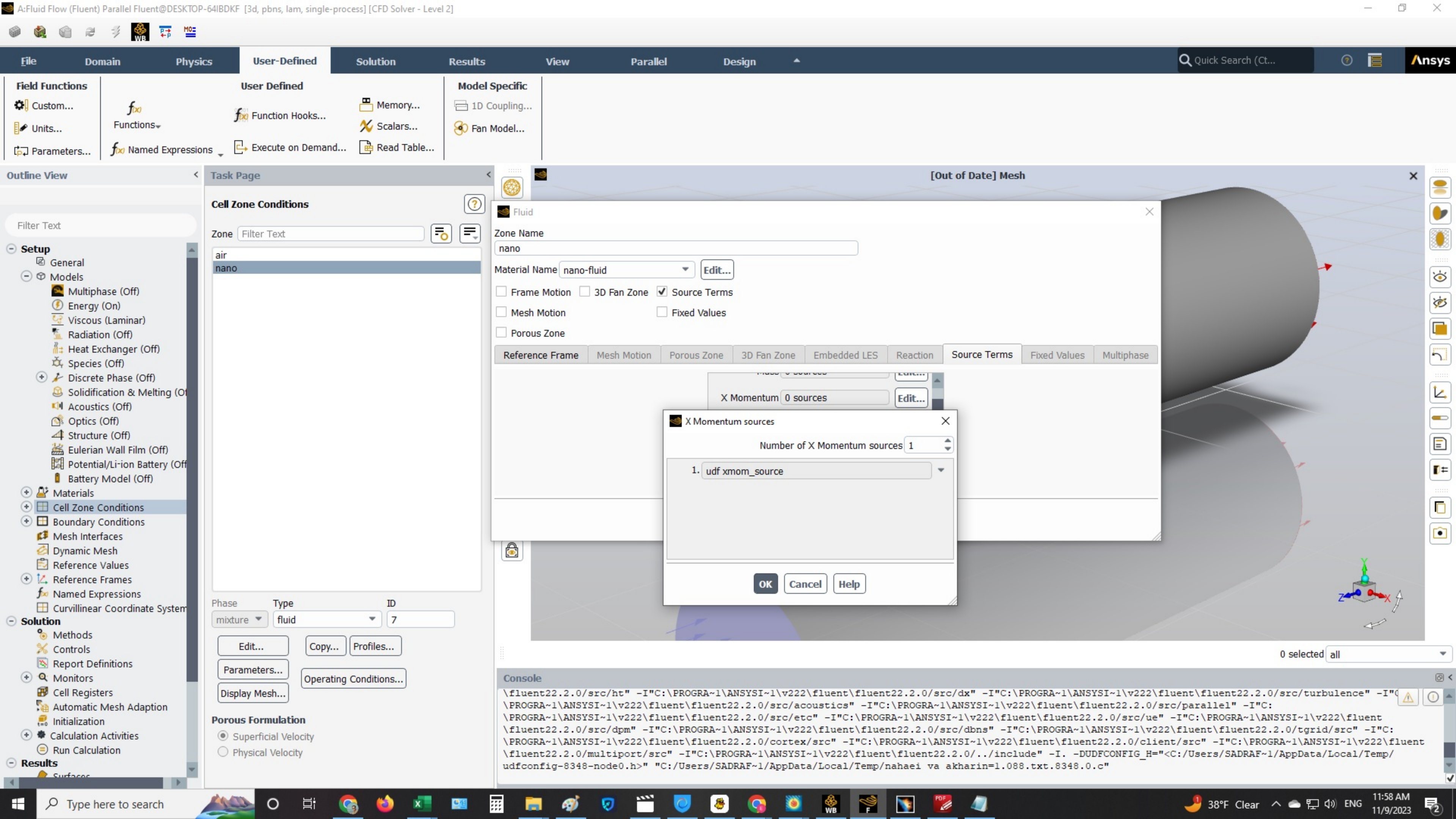
```
/*
*****
*****
*/
```

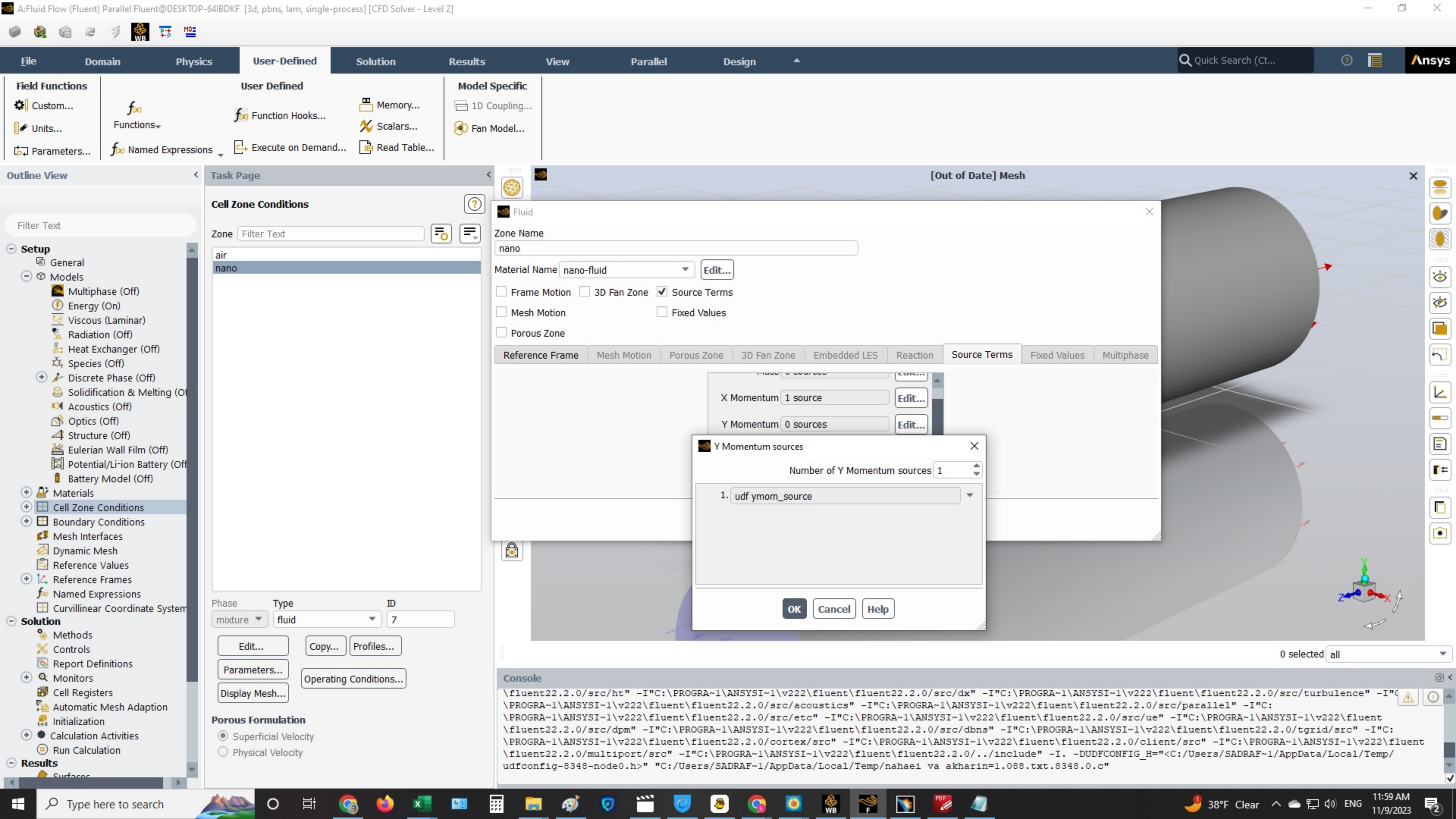
```
DEFINE_SOURCE(xmom_source,c,t,dS,eqn)
{
  real x[ND_ND];
  real T,q,s,n1,n2,n,nn,sqn,o,d,h,mp,eta,f,r,rr,j,m,moo,moshxx,source;
  C_CENTROID(x,c,t);
```

```
T=C_T(c,t);
```

```
q=x[0]-a;
s=x[1]-b;
n1=q*q;
n2=s*s;
n=n1+n2;
sqn=sqrt( n );
o=i/6.28;
h= o/sqn;
```







Field Functions

- Custom...
- Units...
- Parameters...

User Defined

- Functions
- Named Expressions
- Function Hooks...
- Execute on Demand...
- Memory...
- Scalars...
- Read Table...

Model Specific

- 1D Coupling...
- Fan Model...

Outline View

Filter Text

Setup

- General
- Models
 - Multiphase (Off)
 - Energy (On)
 - Viscous (Laminar)
 - Radiation (Off)
 - Heat Exchanger (Off)
 - Species (Off)
 - Discrete Phase (Off)
 - Solidification & Melting (Off)
 - Acoustics (Off)
 - Optics (Off)
 - Structure (Off)
 - Eulerian Wall Film (Off)
 - Potential/Li-ion Battery (Off)
 - Battery Model (Off)
- Materials
- Cell Zone Conditions
- Boundary Conditions
 - Inlet
 - Internal
 - Outlet
 - Wall
 - Mesh Interfaces
 - Dynamic Mesh
 - Reference Values
 - Reference Frames
 - Named Expressions
 - Curvilinear Coordinate System
- Solution**
 - Methods
 - Controls
 - Report Definitions
 - Monitors
 - Cell Registers
 - Automatic Mesh Adaption

Task Page

Boundary Conditions

Zone Filter Text

inlet_air

Velocity Inlet

Zone Name inlet_air

Momentum Thermal Radiation Species DPM Multiphase Potential Structure UDS

Velocity Specification Method Magnitude, Normal to Boundary

Reference Frame Absolute

Velocity Magnitude [m/s] 0.5957

Supersonic/Initial Gauge Pressure [Pa] 0

Apply Close Help

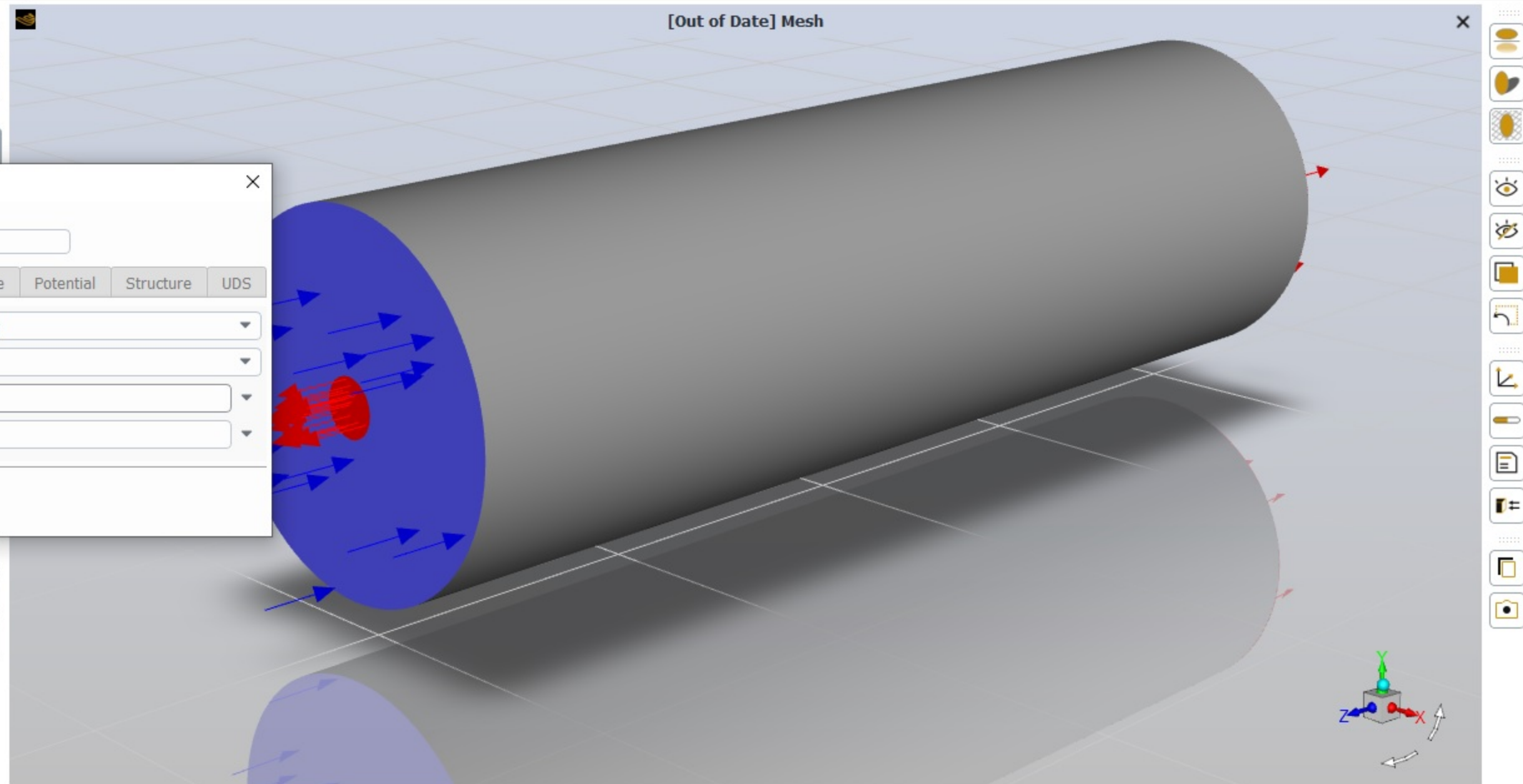
Phase mixture Type velocity-inlet ID 10

Edit... Copy... Profiles...

Parameters... Operating Conditions...

Display Mesh... Periodic Conditions...

Perforated Walls...



Console

```
\fluent22.2.0/src/ht" -I"C:\PROGRA~1\ANSYSI~1\v222\fluent\fluent22.2.0/src/dx" -I"C:\PROGRA~1\ANSYSI~1\v222\fluent\fluent22.2.0/src/turbulence" -I"C:\PROGRA~1\ANSYSI~1\v222\fluent\fluent22.2.0/src/acoustics" -I"C:\PROGRA~1\ANSYSI~1\v222\fluent\fluent22.2.0/src/parallel" -I"C:\PROGRA~1\ANSYSI~1\v222\fluent\fluent22.2.0/src/etc" -I"C:\PROGRA~1\ANSYSI~1\v222\fluent\fluent22.2.0/src/ue" -I"C:\PROGRA~1\ANSYSI~1\v222\fluent\fluent22.2.0/src/dpm" -I"C:\PROGRA~1\ANSYSI~1\v222\fluent\fluent22.2.0/src/dbns" -I"C:\PROGRA~1\ANSYSI~1\v222\fluent\fluent22.2.0/tgrid/src" -I"C:\PROGRA~1\ANSYSI~1\v222\fluent\fluent22.2.0/cortex/src" -I"C:\PROGRA~1\ANSYSI~1\v222\fluent\fluent22.2.0/client/src" -I"C:\PROGRA~1\ANSYSI~1\v222\fluent\fluent22.2.0/multiport/src" -I"C:\PROGRA~1\ANSYSI~1\v222\fluent\fluent22.2.0/./include" -I. -DUDFCONFIG_H="C:/Users/SADRAF~1/AppData/Local/Temp/udfconfig-8348-node0.h"> "C:/Users/SADRAF~1/AppData/Local/Temp/naehai va akharin=1.088.txt.8348.0.c"
```





File Domain Physics **User-Defined** Solution Results View Parallel Design

Quick Search (Ct...)

Field Functions: Custom..., Units..., Parameters...

User Defined: Functions, Named Expressions, Execute on Demand...

Model Specific: 1D Coupling..., Fan Model...

Outline View: Filter Text

- Setup
 - General
 - Models
 - Multiphase (Off)
 - Energy (On)
 - Viscous (Laminar)
 - Radiation (Off)
 - Heat Exchanger (Off)
 - Species (Off)
 - Discrete Phase (Off)
 - Solidification & Melting (Off)
 - Acoustics (Off)
 - Optics (Off)
 - Structure (Off)
 - Eulerian Wall Film (Off)
 - Potential/Li-ion Battery (Off)
 - Battery Model (Off)
 - Materials
 - Cell Zone Conditions
 - Boundary Conditions
 - Inlet
 - Internal
 - Outlet
 - Wall
 - Mesh Interfaces
 - Dynamic Mesh
 - Reference Values
 - Reference Frames
 - Named Expressions
 - Curvilinear Coordinate System
- Solution
 - Methods
 - Controls
 - Report Definitions
 - Monitors
 - Cell Registers
 - Automatic Mesh Adaption

Task Page: Boundary Conditions

Zone: Filter Text

inlet_air

Velocity Inlet

Zone Name: inlet_air

Momentum Thermal Radiation Species DPM Multiphase Potential Structure UDS

Temperature [K]: 293

Apply Close Help

Phase: mixture Type: velocity-inlet ID: 10

Edit... Copy... Profiles... Parameters... Display Mesh... Operating Conditions... Periodic Conditions... Perforated Walls...

[Out of Date] Mesh

0 selected all

Console

```
\fluent22.2.0/src/ht" -I"C:\PROGRA~1\ANSYSI~1\v222\fluent\fluent22.2.0/src/dx" -I"C:\PROGRA~1\ANSYSI~1\v222\fluent\fluent22.2.0/src/turbulence" -I"C:\PROGRA~1\ANSYSI~1\v222\fluent\fluent22.2.0/src/acoustics" -I"C:\PROGRA~1\ANSYSI~1\v222\fluent\fluent22.2.0/src/parallel" -I"C:\PROGRA~1\ANSYSI~1\v222\fluent\fluent22.2.0/src/etc" -I"C:\PROGRA~1\ANSYSI~1\v222\fluent\fluent22.2.0/src/ue" -I"C:\PROGRA~1\ANSYSI~1\v222\fluent\fluent22.2.0/src/dpm" -I"C:\PROGRA~1\ANSYSI~1\v222\fluent\fluent22.2.0/src/dbns" -I"C:\PROGRA~1\ANSYSI~1\v222\fluent\fluent22.2.0/tgrid/src" -I"C:\PROGRA~1\ANSYSI~1\v222\fluent\fluent22.2.0/cortex/src" -I"C:\PROGRA~1\ANSYSI~1\v222\fluent\fluent22.2.0/client/src" -I"C:\PROGRA~1\ANSYSI~1\v222\fluent\fluent22.2.0/multiport/src" -I"C:\PROGRA~1\ANSYSI~1\v222\fluent\fluent22.2.0/./include" -I. -DUDFCONFIG_H="C:/Users/SADRAF~1/AppData/Local/Temp/udfconfig-8348-node0.h"> "C:/Users/SADRAF~1/AppData/Local/Temp/naehai va akharin=1.088.txt.8348.0.c"
```





Field Functions

- Custom...
- Units...
- Parameters...

User Defined

- Functions
- Named Expressions
- Function Hooks...
- Execute on Demand...
- Memory...
- Scalars...
- Read Table...

Model Specific

- 1D Coupling...
- Fan Model...

Outline View

- Filter Text
- Setup
 - General
 - Models
 - Multiphase (Off)
 - Energy (On)
 - Viscous (Laminar)
 - Radiation (Off)
 - Heat Exchanger (Off)
 - Species (Off)
 - Discrete Phase (Off)
 - Solidification & Melting (Off)
 - Acoustics (Off)
 - Optics (Off)
 - Structure (Off)
 - Eulerian Wall Film (Off)
 - Potential/Li-ion Battery (Off)
 - Battery Model (Off)
 - Materials
 - Cell Zone Conditions
 - Boundary Conditions
 - Inlet
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 - Wall
 - Mesh Interfaces
 - Dynamic Mesh
 - Reference Values
 - Reference Frames
 - Named Expressions
 - Curvilinear Coordinate System
 - Solution
 - Methods
 - Controls
 - Report Definitions
 - Monitors
 - Cell Registers
 - Automatic Mesh Adaption

Task Page

Boundary Conditions

Zone Filter Text

- inlet_air
- inlet_nano_fluid

Velocity Inlet

Zone Name inlet_nano_fluid

Momentum Thermal Radiation Species DPM Multiphase Potential Structure UDS

Velocity Specification Method Magnitude, Normal to Boundary

Reference Frame Absolute

Velocity Magnitude [m/s] 0.0135

Supersonic/Initial Gauge Pressure [Pa] 0

Apply Close Help

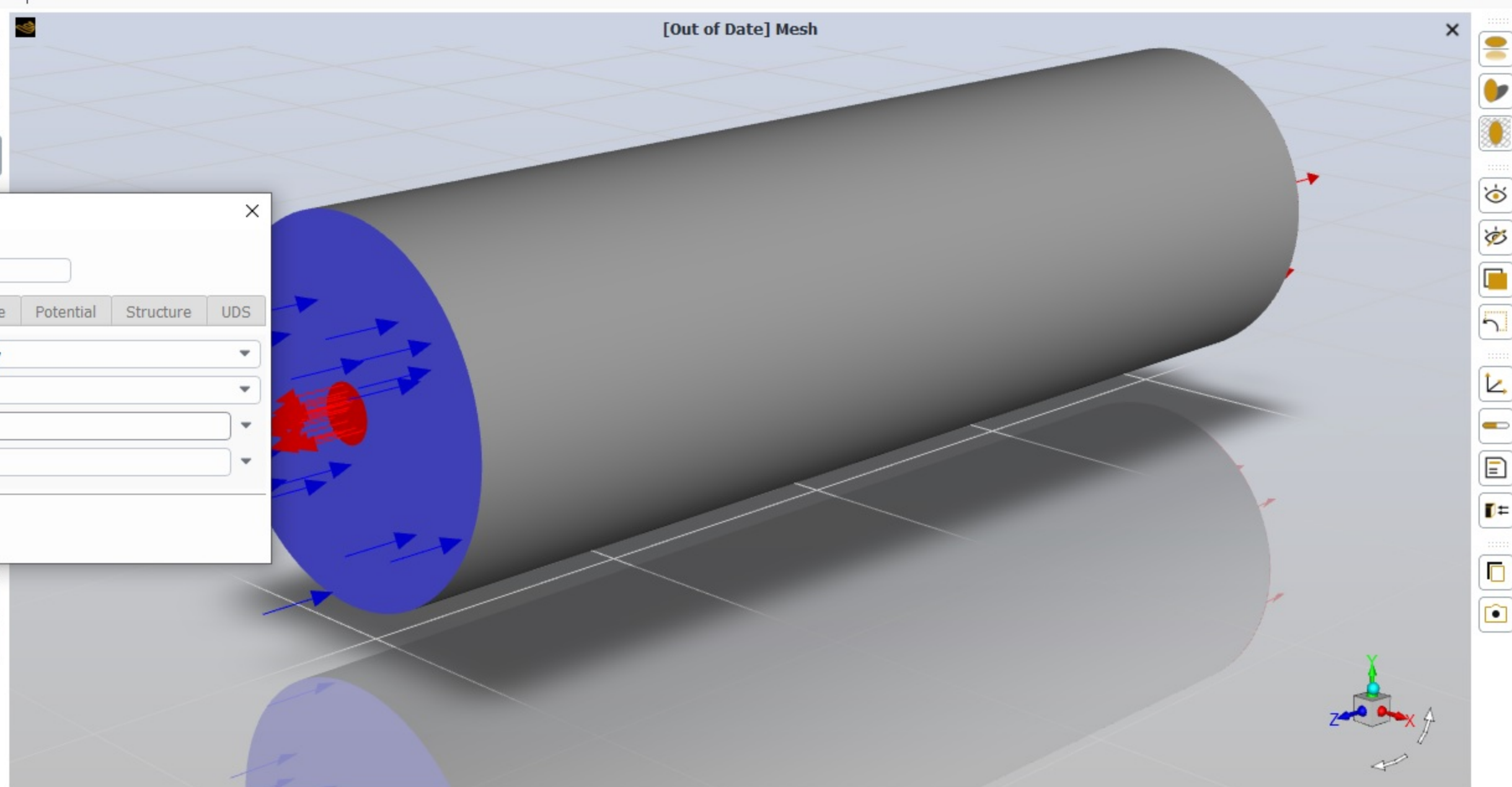
Phase mixture Type velocity-inlet ID 12

Edit... Copy... Profiles...

Parameters... Operating Conditions...

Display Mesh... Periodic Conditions...

Perforated Walls...



Console

```
\fluent22.2.0/src/ht" -I"C:\PROGRA~1\ANSYSI~1\v222\fluent\fluent22.2.0/src/dx" -I"C:\PROGRA~1\ANSYSI~1\v222\fluent\fluent22.2.0/src/turbulence" -I"C:\PROGRA~1\ANSYSI~1\v222\fluent\fluent22.2.0/src/acoustics" -I"C:\PROGRA~1\ANSYSI~1\v222\fluent\fluent22.2.0/src/parallel" -I"C:\PROGRA~1\ANSYSI~1\v222\fluent\fluent22.2.0/src/etc" -I"C:\PROGRA~1\ANSYSI~1\v222\fluent\fluent22.2.0/src/ue" -I"C:\PROGRA~1\ANSYSI~1\v222\fluent\fluent22.2.0/src/dpm" -I"C:\PROGRA~1\ANSYSI~1\v222\fluent\fluent22.2.0/src/dbns" -I"C:\PROGRA~1\ANSYSI~1\v222\fluent\fluent22.2.0/tgrid/src" -I"C:\PROGRA~1\ANSYSI~1\v222\fluent\fluent22.2.0/cortex/src" -I"C:\PROGRA~1\ANSYSI~1\v222\fluent\fluent22.2.0/client/src" -I"C:\PROGRA~1\ANSYSI~1\v222\fluent\fluent22.2.0/multiport/src" -I"C:\PROGRA~1\ANSYSI~1\v222\fluent\fluent22.2.0/./include" -I. -DUDFCONFIG_H="C:/Users/SADRAF~1/AppData/Local/Temp/udfconfig-8348-node0.h>" "C:/Users/SADRAF~1/AppData/Local/Temp/nahaei va akharin=1.088.txt.8348.0.c"
```





Field Functions

- Custom...
- Units...
- Parameters...

User Defined

- Functions
- Named Expressions
- Function Hooks...
- Execute on Demand...
- Memory...
- Scalars...
- Read Table...

Model Specific

- 1D Coupling...
- Fan Model...

Outline View

Filter Text

Setup

- General
- Models
 - Multiphase (Off)
 - Energy (On)
 - Viscous (Laminar)
 - Radiation (Off)
 - Heat Exchanger (Off)
 - Species (Off)
 - Discrete Phase (Off)
 - Solidification & Melting (Off)
 - Acoustics (Off)
 - Optics (Off)
 - Structure (Off)
 - Eulerian Wall Film (Off)
 - Potential/Li-ion Battery (Off)
 - Battery Model (Off)
- Materials
- Cell Zone Conditions
- Boundary Conditions
 - Inlet
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 - Reference Values
 - Reference Frames
 - Named Expressions
 - Curvilinear Coordinate System
- Solution
 - Methods
 - Controls
 - Report Definitions
 - Monitors
 - Cell Registers
 - Automatic Mesh Adaption

Task Page

Boundary Conditions

Zone Filter Text

inlet_air

inlet_nano_fluid

Velocity Inlet

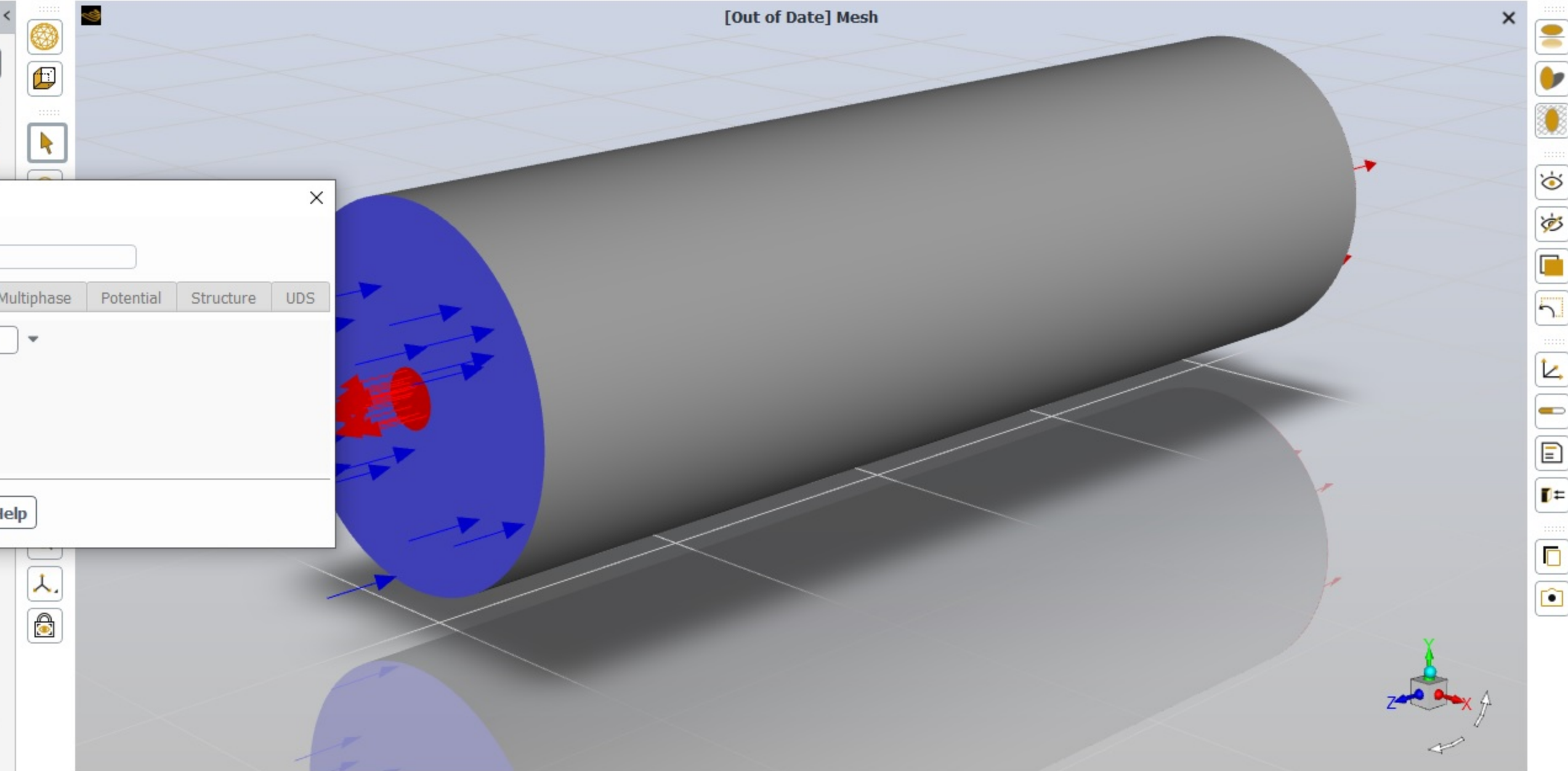
Zone Name inlet_nano_fluid

Momentum Thermal Radiation Species DPM Multiphase Potential Structure UDS

Temperature [K] 298

Apply Close Help

Phase	Type	ID
mixture	velocity-inlet	12
Edit...		
Copy...		
Profiles...		
Parameters...		
Display Mesh...		
Operating Conditions...		
Periodic Conditions...		
Perforated Walls...		



Console

```
\fluent22.2.0/src/ht" -I"C:\PROGRA~1\ANSYSI~1\v222\fluent\fluent22.2.0/src/dx" -I"C:\PROGRA~1\ANSYSI~1\v222\fluent\fluent22.2.0/src/turbulence" -I"C:\PROGRA~1\ANSYSI~1\v222\fluent\fluent22.2.0/src/acoustics" -I"C:\PROGRA~1\ANSYSI~1\v222\fluent\fluent22.2.0/src/parallel" -I"C:\PROGRA~1\ANSYSI~1\v222\fluent\fluent22.2.0/src/etc" -I"C:\PROGRA~1\ANSYSI~1\v222\fluent\fluent22.2.0/src/ue" -I"C:\PROGRA~1\ANSYSI~1\v222\fluent\fluent22.2.0/src/dpm" -I"C:\PROGRA~1\ANSYSI~1\v222\fluent\fluent22.2.0/src/dbns" -I"C:\PROGRA~1\ANSYSI~1\v222\fluent\fluent22.2.0/tgrid/src" -I"C:\PROGRA~1\ANSYSI~1\v222\fluent\fluent22.2.0/cortex/src" -I"C:\PROGRA~1\ANSYSI~1\v222\fluent\fluent22.2.0/client/src" -I"C:\PROGRA~1\ANSYSI~1\v222\fluent\fluent22.2.0/multiport/src" -I"C:\PROGRA~1\ANSYSI~1\v222\fluent\fluent22.2.0/./include" -I. -DUDFCONFIG_H="C:/Users/SADRAF~1/AppData/Local/Temp/udfconfig-8348-node0.h"> "C:/Users/SADRAF~1/AppData/Local/Temp/naehai va akharin=1.088.txt.8348.0.c"
```





Field Functions

- Custom...
- Units...
- Parameters...

User Defined

- Functions
- Named Expressions
- Function Hooks...
- Execute on Demand...
- Memory...
- Scalars...
- Read Table...

Model Specific

- 1D Coupling...
- Fan Model...

Outline View

Filter Text

Setup

- General
- Models
 - Multiphase (Off)
 - Energy (On)
 - Viscous (Laminar)
 - Radiation (Off)
 - Heat Exchanger (Off)
 - Species (Off)
 - Discrete Phase (Off)
 - Solidification & Melting (Off)
 - Acoustics (Off)
 - Optics (Off)
 - Structure (Off)
 - Eulerian Wall Film (Off)
 - Potential/Li-ion Battery (Off)
 - Battery Model (Off)
- Materials
- Cell Zone Conditions
- Boundary Conditions
 - Inlet
 - Internal
 - Outlet
 - Wall
 - Mesh Interfaces
 - Dynamic Mesh
 - Reference Values
 - Reference Frames
 - Named Expressions
 - Curvilinear Coordinate System
- Solution**
 - Methods
 - Controls
 - Report Definitions
 - Monitors
 - Cell Registers
 - Automatic Mesh Adaption

Task Page

Boundary Conditions

Zone Filter Text

- inlet_air
- inlet_nano_fluid
- interior-air
- interior-nano
- outlet_air
- outlet_nano_fluid**
- wall_air
- wall_nano_fluid
- wall_nano_fluid-shadow

Phase Type ID

mixture pressure-outlet 9

Edit... Copy... Profiles...

Parameters... Display Mesh...

Operating Conditions... Periodic Conditions... Perforated Walls...

[Out of Date] Mesh

0 selected all

Console

```
\fluent22.2.0/src/ht" -I"C:\PROGRA~1\ANSYSI~1\v222\fluent\fluent22.2.0/src/dx" -I"C:\PROGRA~1\ANSYSI~1\v222\fluent\fluent22.2.0/src/turbulence" -I"C:\PROGRA~1\ANSYSI~1\v222\fluent\fluent22.2.0/src/acoustics" -I"C:\PROGRA~1\ANSYSI~1\v222\fluent\fluent22.2.0/src/parallel" -I"C:\PROGRA~1\ANSYSI~1\v222\fluent\fluent22.2.0/src/etc" -I"C:\PROGRA~1\ANSYSI~1\v222\fluent\fluent22.2.0/src/ue" -I"C:\PROGRA~1\ANSYSI~1\v222\fluent\fluent22.2.0/src/dpm" -I"C:\PROGRA~1\ANSYSI~1\v222\fluent\fluent22.2.0/src/dbns" -I"C:\PROGRA~1\ANSYSI~1\v222\fluent\fluent22.2.0/tgrid/src" -I"C:\PROGRA~1\ANSYSI~1\v222\fluent\fluent22.2.0/cortex/src" -I"C:\PROGRA~1\ANSYSI~1\v222\fluent\fluent22.2.0/client/src" -I"C:\PROGRA~1\ANSYSI~1\v222\fluent\fluent22.2.0/multiport/src" -I"C:\PROGRA~1\ANSYSI~1\v222\fluent\fluent22.2.0/./include" -I. -DUDFCONFIG_H="C:/Users/SADRAF~1/AppData/Local/Temp/udfconfig-8348-node0.h"> "C:/Users/SADRAF~1/AppData/Local/Temp/naehai va akharin=1.088.txt.8348.0.c"
```




File

Domain

Physics

User-Defined

Solution

Results

View

Parallel

Design

Field Functions

Custom...

Units...

Parameters...

Functions

Named Expressions

User Defined

Function Hooks...

Execute on Demand...

Memory...

Scalars...

Read Table...

Model Specific

1D Coupling...

Fan Model...

Outline View

Filter Text

Optics (Off)

Structure (Off)

Eulerian Wall Film (Off)

Potential/Li-ion Battery (Off)

Battery Model (Off)

Materials

Cell Zone Conditions

Boundary Conditions

Inlet

Internal

Outlet

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Mesh Interfaces

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Automatic Mesh Adaption

Initialization

Calculation Activities

Run Calculation

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Surfaces

Graphics

Plots

Animations

Reports

Parameters & Customization

Simulation Reports

Task Page

Solution Methods

Pressure-Velocity Coupling

Scheme

SIMPLE

Flux Type

Rhie-Chow: momentum based

Auto Select

Spatial Discretization

Gradient

Least Squares Cell Based

Pressure

Second Order

Momentum

Second Order Upwind

Energy

Second Order Upwind

Pseudo Time Method

Off

Transient Formulation

Non-Iterative Time Advancement

Frozen Flux Formulation

Warped-Face Gradient Correction

High Order Term Relaxation

Default

[Out of Date] Mesh

0 selected all

Console

\fluent22.2.0/src/ht" -I"C:\PROGRA~1\ANSYSI~1\v222\fluent\fluent22.2.0/src/dx" -I"C:\PROGRA~1\ANSYSI~1\v222\fluent\fluent22.2.0/src/turbulence" -I"C:\PROGRA~1\ANSYSI~1\v222\fluent\fluent22.2.0/src/acoustics" -I"C:\PROGRA~1\ANSYSI~1\v222\fluent\fluent22.2.0/src/parallel" -I"C:\PROGRA~1\ANSYSI~1\v222\fluent\fluent22.2.0/src/etc" -I"C:\PROGRA~1\ANSYSI~1\v222\fluent\fluent22.2.0/src/ue" -I"C:\PROGRA~1\ANSYSI~1\v222\fluent\fluent22.2.0/src/dpm" -I"C:\PROGRA~1\ANSYSI~1\v222\fluent\fluent22.2.0/src/dbns" -I"C:\PROGRA~1\ANSYSI~1\v222\fluent\fluent22.2.0/tgrid/src" -I"C:\PROGRA~1\ANSYSI~1\v222\fluent\fluent22.2.0/cortex/src" -I"C:\PROGRA~1\ANSYSI~1\v222\fluent\fluent22.2.0/client/src" -I"C:\PROGRA~1\ANSYSI~1\v222\fluent\fluent22.2.0/multiport/src" -I"C:\PROGRA~1\ANSYSI~1\v222\fluent\fluent22.2.0/./include" -I. -DUDFCONFIG_H="C:/Users/SADRAF~1/AppData/Local/Temp/udfconfig-8348-node0.h"> "C:/Users/SADRAF~1/AppData/Local/Temp/nahaei va akharin=1.088.txt.8348.0.c"



File Domain Physics User-Defined Solution Results View Parallel Design

Field Functions Custom... Units... Parameters... Functions... Named Expressions Execute on Demand... Memory... Scalars... Read Table... Model Specific 1D Coupling... Fan Model...

Outline View

Filter Text

- Optics (Off)
- Structure (Off)
- Eulerian Wall Film (Off)
- Potential/Li-ion Battery (Off)
- Battery Model (Off)
- Materials
- Cell Zone Conditions
- Boundary Conditions
 - Inlet
 - Internal
 - Outlet
 - Wall
- Mesh Interfaces
- Dynamic Mesh
- Reference Values
- Reference Frames
 - global
- Named Expressions
- Curvilinear Coordinate System
- Solution**
 - Methods
 - Controls
 - Report Definitions
 - Monitors
 - Residual**
 - Report Files
 - Report Plots
 - Convergence Conditions
 - Cell Registers
 - Automatic Mesh Adaption
 - Initialization
 - Calculation Activities
 - Run Calculation
- Results**
 - Surfaces
 - Graphics
 - Plots

Residual Monitors

Options

- ☒ Print to Console
- ☒ Plot
- Curves... Axes...
- Iterations to Plot: 1000
- Iterations to Store: 1000

Equations

Equation	Monitor
continuity	☒
x-velocity	☒
y-velocity	☒
z-velocity	☒
energy	☒

Convergence Conditions...

☒ Show Advanced Options

Residual Values

- ☐ Normalize
- ☒ Scale
- ☐ Compute Local Scale
- Iterations: 5
- Renormalize

Convergence Criterion: none

OK Plot Cancel Help

[Out of Date] Mesh

0 selected all

Console

```
\fluent22.2.0/src/ht" -I"C:\PROGRA~1\ANSYSI~1\v222\fluent\fluent22.2.0/src/dx" -I"C:\PROGRA~1\ANSYSI~1\v222\fluent\fluent22.2.0/src/turbulence" -I"C:\PROGRA~1\ANSYSI~1\v222\fluent\fluent22.2.0/src/acoustics" -I"C:\PROGRA~1\ANSYSI~1\v222\fluent\fluent22.2.0/src/parallel" -I"C:\PROGRA~1\ANSYSI~1\v222\fluent\fluent22.2.0/src/etc" -I"C:\PROGRA~1\ANSYSI~1\v222\fluent\fluent22.2.0/src/ue" -I"C:\PROGRA~1\ANSYSI~1\v222\fluent\fluent22.2.0/src/dpm" -I"C:\PROGRA~1\ANSYSI~1\v222\fluent\fluent22.2.0/src/dbns" -I"C:\PROGRA~1\ANSYSI~1\v222\fluent\fluent22.2.0/tgrid/src" -I"C:\PROGRA~1\ANSYSI~1\v222\fluent\fluent22.2.0/cortex/src" -I"C:\PROGRA~1\ANSYSI~1\v222\fluent\fluent22.2.0/client/src" -I"C:\PROGRA~1\ANSYSI~1\v222\fluent\fluent22.2.0/multiport/src" -I"C:\PROGRA~1\ANSYSI~1\v222\fluent\fluent22.2.0/./include" -I. -DUDFCONFIG_H="C:/Users/SADRAF~1/AppData/Local/Temp/udfconfig-8348-node0.h"> "C:/Users/SADRAF~1/AppData/Local/Temp/nahaei va akharin=1.088.txt.8348.0.c"
```




Field Functions

- Custom...
- Units...
- Parameters...

User Defined

- Functions
- Named Expressions

Function Hooks...

Execute on Demand...

- Memory...
- Scalars...
- Read Table...

Model Specific

- 1D Coupling...
- Fan Model...

Outline View

Filter Text

- Battery Model (Off)
- Materials
- Cell Zone Conditions
- Boundary Conditions
 - Inlet
 - Internal
 - Outlet
 - Wall
- Mesh Interfaces
- Dynamic Mesh
- Reference Values
- Reference Frames
 - global
- Named Expressions
- Curvilinear Coordinate System
- Solution**
 - Methods
 - Controls
 - Report Definitions
 - Monitors
 - Residual
 - Report Files
 - Report Plots
 - Convergence Conditions
 - Cell Registers
 - Automatic Mesh Adaption
 - Initialization
 - Calculation Activities
 - Run Calculation
- Results**
 - Surfaces
 - Graphics
 - Plots
 - Scene
 - Animations
 - Reports
- Parameters & Customization
- Simulation Reports

Task Page

Solution Initialization

Initialization Methods

- ☒ Hybrid Initialization
- ☐ Standard Initialization

More Settings...

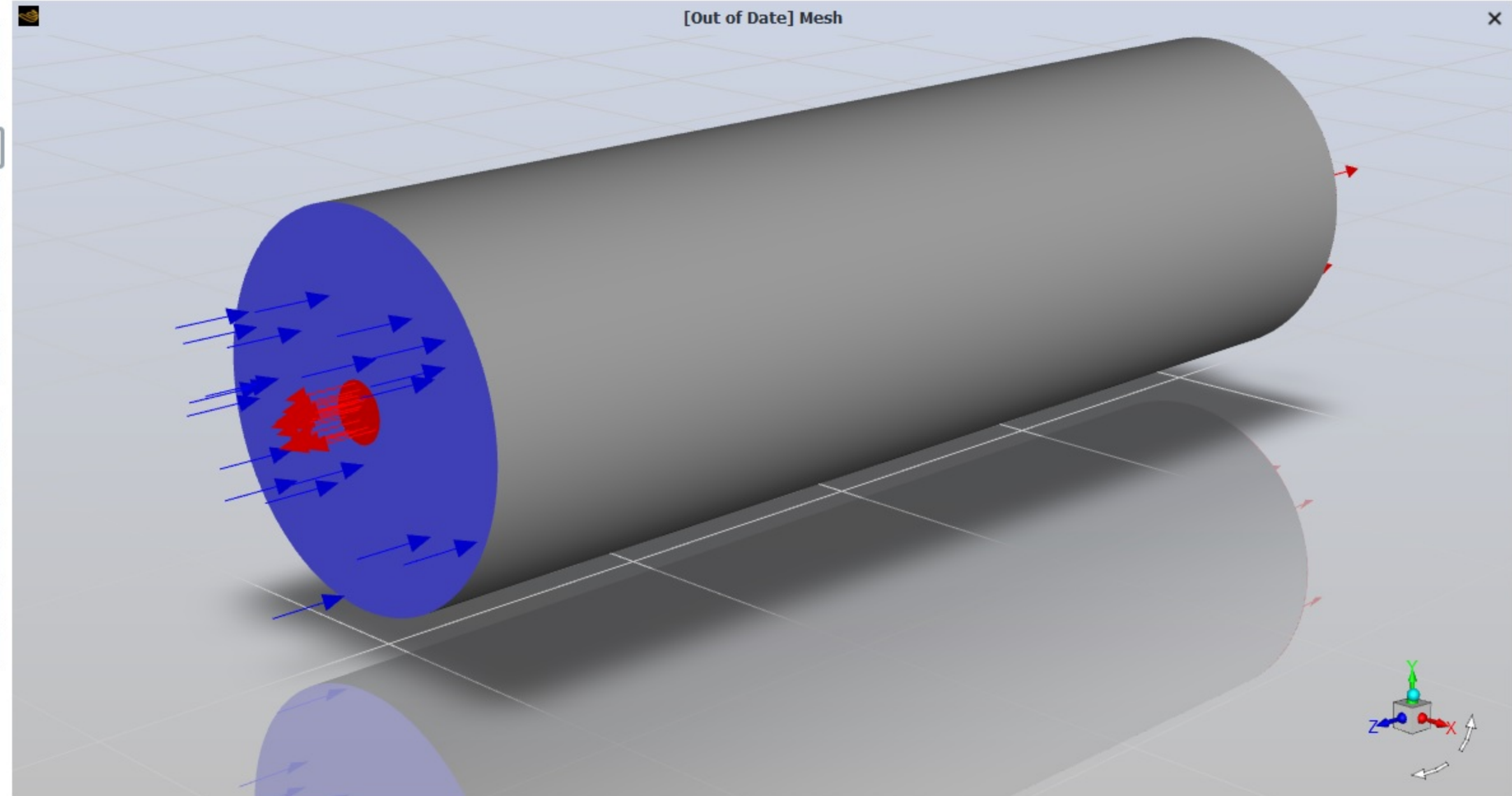
Initialize

Patch...

Reset DPM Sources

Reset LWF

Reset Statistics



0 selected all

Console

```
6      4.077901e-07
7      2.033985e-07
8      9.830735e-08
9      6.526714e-08
10     5.225613e-08
```

Hybrid initialization is done.





File

Domain

Physics

User-Defined

Solution

Results

View

Parallel

Design

Field Functions

Custom...

Units...

Parameters...

Functions

Named Expressions

User Defined

Function Hooks...

Execute on Demand...

Memory...

Scalars...

Read Table...

Model Specific

1D Coupling...

Fan Model...

Outline View

Filter Text

Materials

Cell Zone Conditions

Boundary Conditions

Inlet

Internal

Outlet

Wall

Mesh Interfaces

Dynamic Mesh

Reference Values

Reference Frames

global

Named Expressions

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Report Definitions

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Report Files

Report Plots

Convergence Conditions

Cell Registers

Automatic Mesh Adaption

Initialization

Calculation Activities

Run Calculation

Results

Surfaces

Graphics

Plots

Scene

Animations

Reports

Parameters & Customization

Task Page

Run Calculation

Check Case...

Update Dynamic Mesh...

Parameters

Number of Iterations

1500

Reporting Interval

1

Profile Update Interval

1

Solution Processing

Statistics

Data Sampling for Steady Statistics

Data File Quantities...

Solution Advancement

Calculate

[Out of Date] Mesh

Scaled Residuals

1e+00

1e-01

1e-02

1e-03

1e-04

1e-05

1e-06

0

5

10

15

Iterations

continuity

x-velocity

y-velocity

z-velocity

energy

Console

10 1.0940e-01 4.3074e-04 4.3676e-04 2.5500e-03 1.3291e-06 0:32:59 1490

11 9.8309e-02 4.0494e-04 4.1388e-04 2.3793e-03 1.3266e-06 0:36:17 1489

iter continuity x-velocity y-velocity z-velocity energy time/iter

12 8.8761e-02 3.7948e-04 3.8987e-04 2.2328e-03 1.3247e-06 0:33:58 1488

13 8.4895e-02 3.5544e-04 3.6573e-04 2.0923e-03 1.2788e-06 0:37:04 1487

14 8.4388e-02 3.3412e-04 3.4441e-04 1.9514e-03 1.2033e-06 0:34:36 1486

Calculating the solution... (1486 iterations remaining)

0%

Stop

Type here to search

37°F Clear

12:23 PM
11/9/2023