

FLUENT - Steady Flow Past a Cylinder - Step 2

Author: Rajesh Bhaskaran & Yong Sheng Khoo, Cornell University

Problem Specification

1. Create Geometry in GAMBIT

2. Mesh Geometry in GAMBIT

3. Specify Boundary Types in GAMBIT

4. Set Up Problem in FLUENT

5. Solve

6. Analyze Results

7. Refine Mesh

Problem 1

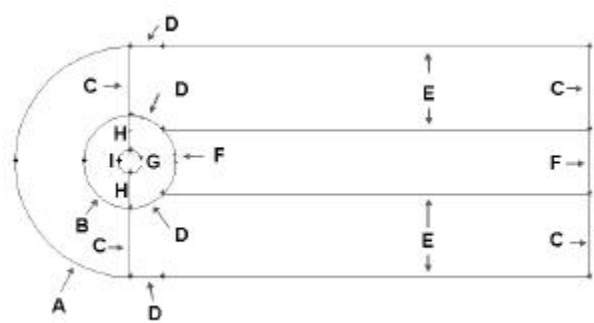
Problem 2

Step 2: Mesh Geometry in GAMBIT

Mesh Edges

Before we mesh the faces, we should mesh the edges so that we can better define the mesh.

Following figure shows the edges with different mesh properties.



Higher Resolution Image

Label	Edge Mesh Properties
A	Interval Count: 36, Double First Length: 0.5
B	Interval Count: 36, Double First Length: 0.2
C	Interval Count: 30, First Length: 0.1
D	Interval Count: 18
E	Interval Count: 90, First Length: 0.1
F	Interval Count: 36
G	Interval Count: 72
H	Interval Count: 30
I	Interval Count: 36, Double First Length: 0.05

Operation Toolpad > Mesh Command Button  > Edge Command Button  > Mesh Edges 

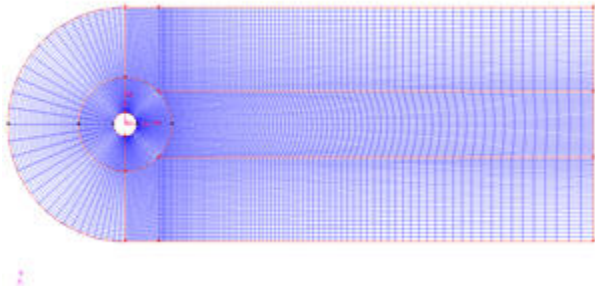
Mesh edge 'A' through 'I' according to the properties shown on the table.

After we have all the edge meshes, we can mesh the faces:

Operation Toolpad > Mesh Command Button  > Face Command Button  > Mesh Faces 

Select the face one by one. You can use the defaults of *Quad* (i.e. quadrilaterals) and *Map*. Click *Apply*.

The meshed face should look as follows:



[Higher Resolution Image](#)

[Go to Step 3: Specify Boundary Types in GAMBIT](#)

[See and rate the complete Learning Module](#)

[Go to all FLUENT Learning Modules](#)