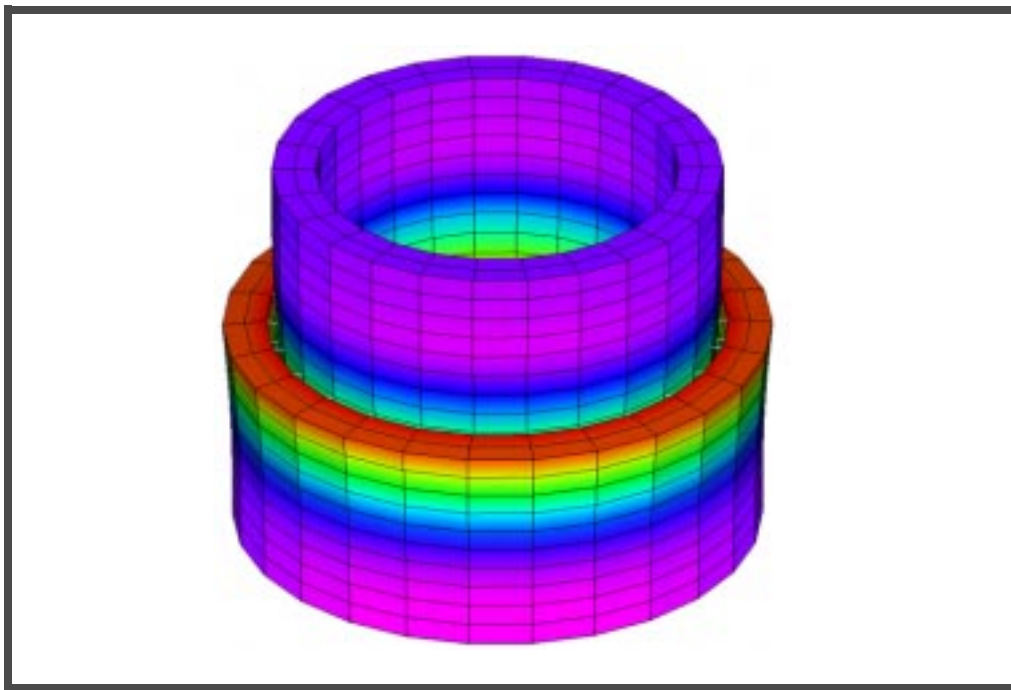

WORKSHOP 12b

Shrink Fit-Reversing Gap Connectivity



Objectives

- Reverse the direction of the gaps in previous exercise to see the effect of element connectivity on the results.
- Submit the model to MSC.Nastran for analysis.

Model Description:

The previous exercise connected the interface nodes with gap elements. The gap elements connected the nodes from the lower ring to the upper ring. Users will delete the original gap elements and re-connect the gap elements in the reverse order to see the effect of the gap connectivity on the model results.

Suggested Exercise Steps:

1. Open the model from the previous exercise.
2. Rename the model **sfitb.mod**.
3. Delete the gap elements.
4. Redefine gap elements in the opposite order of the previous exercise.
5. Submit the model to MSC.Nastran for analysis

Exercise Procedure:

1. Start up MSC.Nastran for Windows 4.0.2 and open an existing model.

Double click on the icon labeled MSC.Nastran for Windows V4.0.2.

On the *Open Model File* form, select **Open Model**.

Open Model File:

prob12a

Open

2. Delete the original gap elements.

Delete/Model/Element...

Method^

Property

ID:

3

More

OK

At the prompt, OK to delete Elements, choose Yes

Yes

3. Create new gap elements between the interface nodes.

Mesh/Connection/Closest Link...

Group:

4..Outer interface nodes

OK

Group:

3..Inner interface nodes

OK

Connection Type:

● Line Elements

Property:

3..Gap

OK

Coord Sys:

1..Basic Cylindrical

Method^

Global Axis

● Z Axis

OK

4. Save the model as sfitb.

File/Save As...

File name:

prob12b

Save

5. Submit the job for analysis.

File/Export/Analysis Model...

Type:

10..Nonlinear Static

OK

Change the directory to C:\temp.

File name:

prob12b

Write

Run Analysis

OK

When asked if you wish to save the model, respond **Yes**.

Yes

When the MSC.Nastran manager is through running, MSC.Nastran will be restored on your screen, and the *Message Review* form will appear. To read the messages, you could select **Show Details**. Since the analysis ran smoothly, we will not bother with the details this time.

Continue

6. Review the results of the analysis.

View/Rotate... (F8)

OK

View/Select... (F5)

Under the *Deformed Style* window, make the following selection:

Deformed Style: **Deform**

Deformed and Contour Data...

Output Set: **2..Case 1 Time 1**

Deformation: **1..Total Translation**

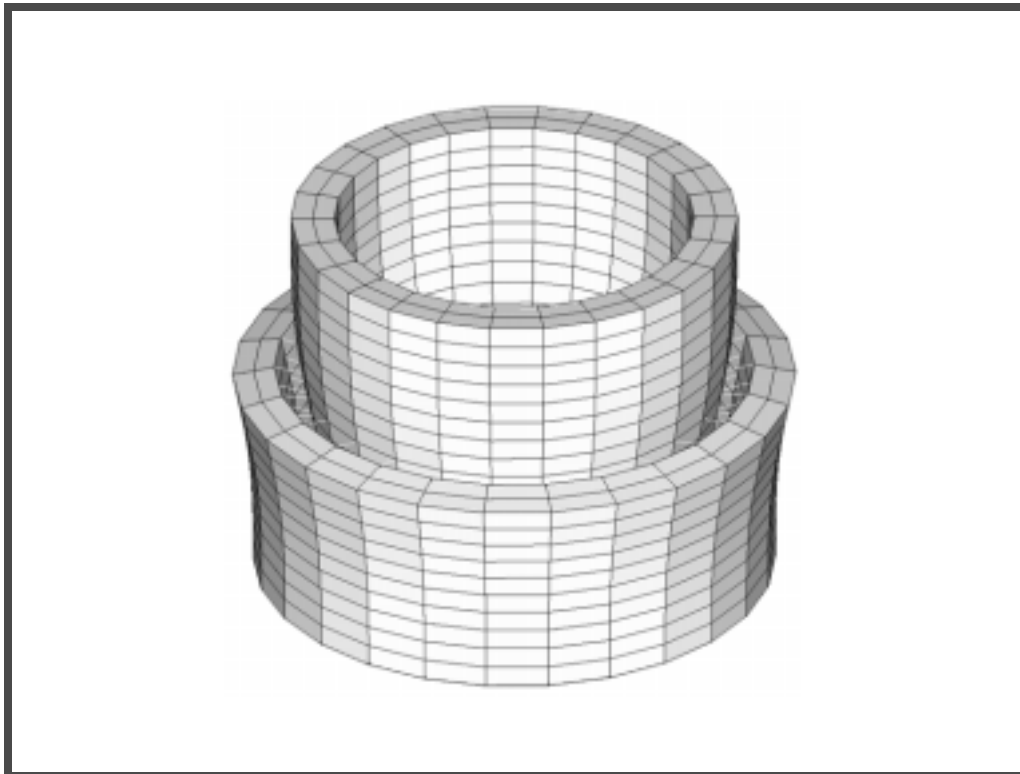
OK

OK

What is the maximum deformation?

Value = _____

Figure 12b.1 - Model with displacement





<i>Displacement</i>	0.0685
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