

ANSYS 12 - Beam (2D Element) - Step 5

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Step 5: Solution

Now that we have set up the boundary conditions, we can actually solve for a solution. Before we do that, let's take a minute to think about what is the post-processing that we are interested in. We are interested in the deflection and bending stress on the beam. Let's set up those post-processing parameters before we click solve button.

Let's start with inserting Total Deformation.

Outline > Solution (A6) > Insert > Total Deformation

Next let's insert bending moment. This is the stress in the x direction. Unfortunately, this value is not readily available in ANSYS. Let's define our own variable.

Outline > Solution (A6) > Insert > User Defined Result

Under *Details of "User Defined Result"*, enter SX for *Expression*. Finally click *Solve* at the top menu.

Outline

- Model (A4)
 - Geometry
 - Coordinate Systems
 - Mesh
 - Static Structural (A5)
 - Analysis Settings
 - Displacement
 - Displacement 2
 - Force
 - Force 2
 - Solution (A6)
 - Solution Information
 - Total Deformation
 - User Defined Result

Details of "User Defined Result"

Scope	
Scoping Method	Geometry Selection
Geometry	All Bodies
Definition	
Type	User Defined Result
Expression	= sx
Input Unit System	Metric (m, kg, N, s, V, A)
Output Unit	
By	Time
Display Time	Last
Coordinate System	Global Coordinate System
Calculate Time History	Yes
Use Average	Yes
Identifier	
Results	

[Go to Step 6: Results](#)

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