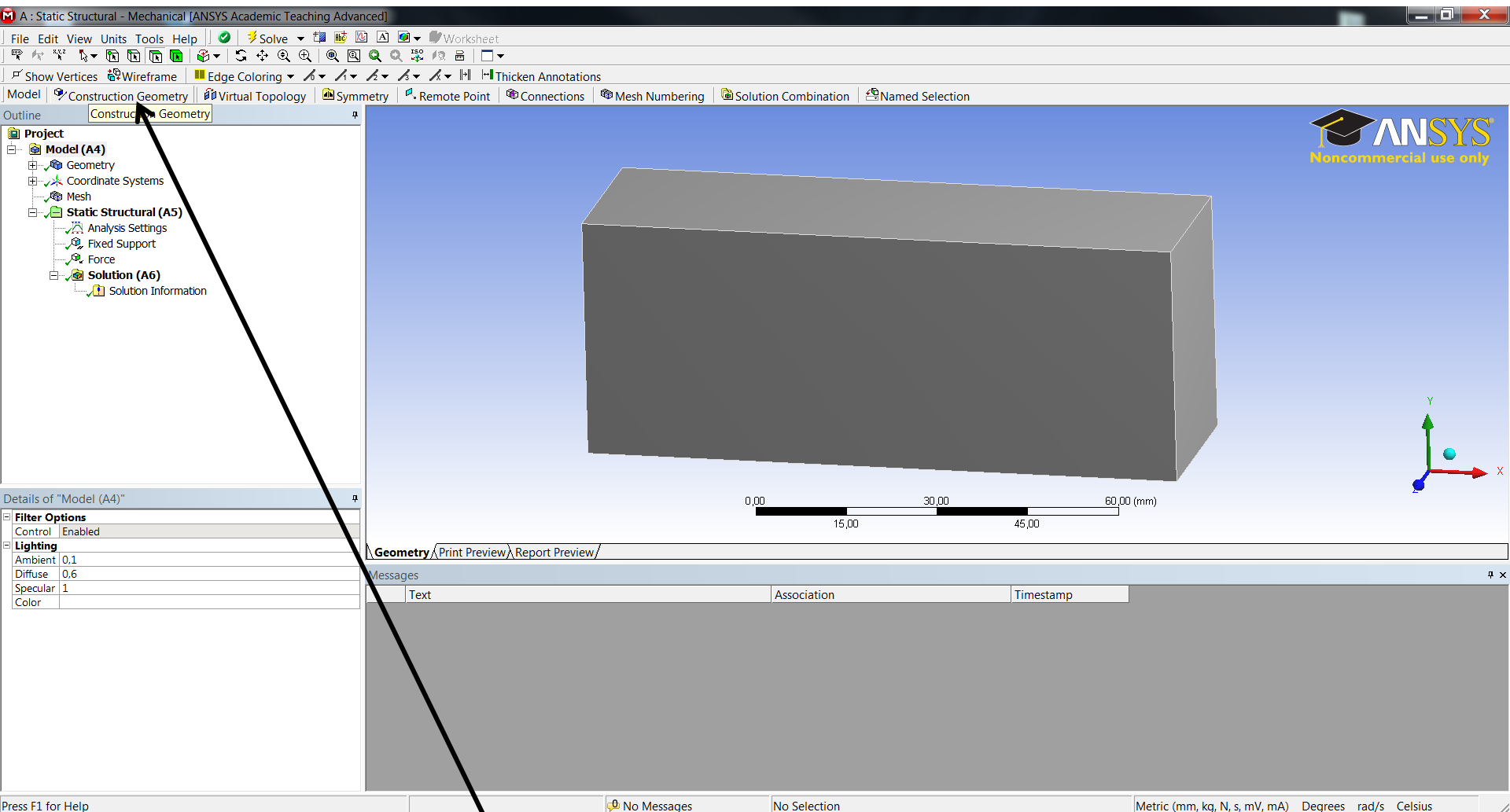


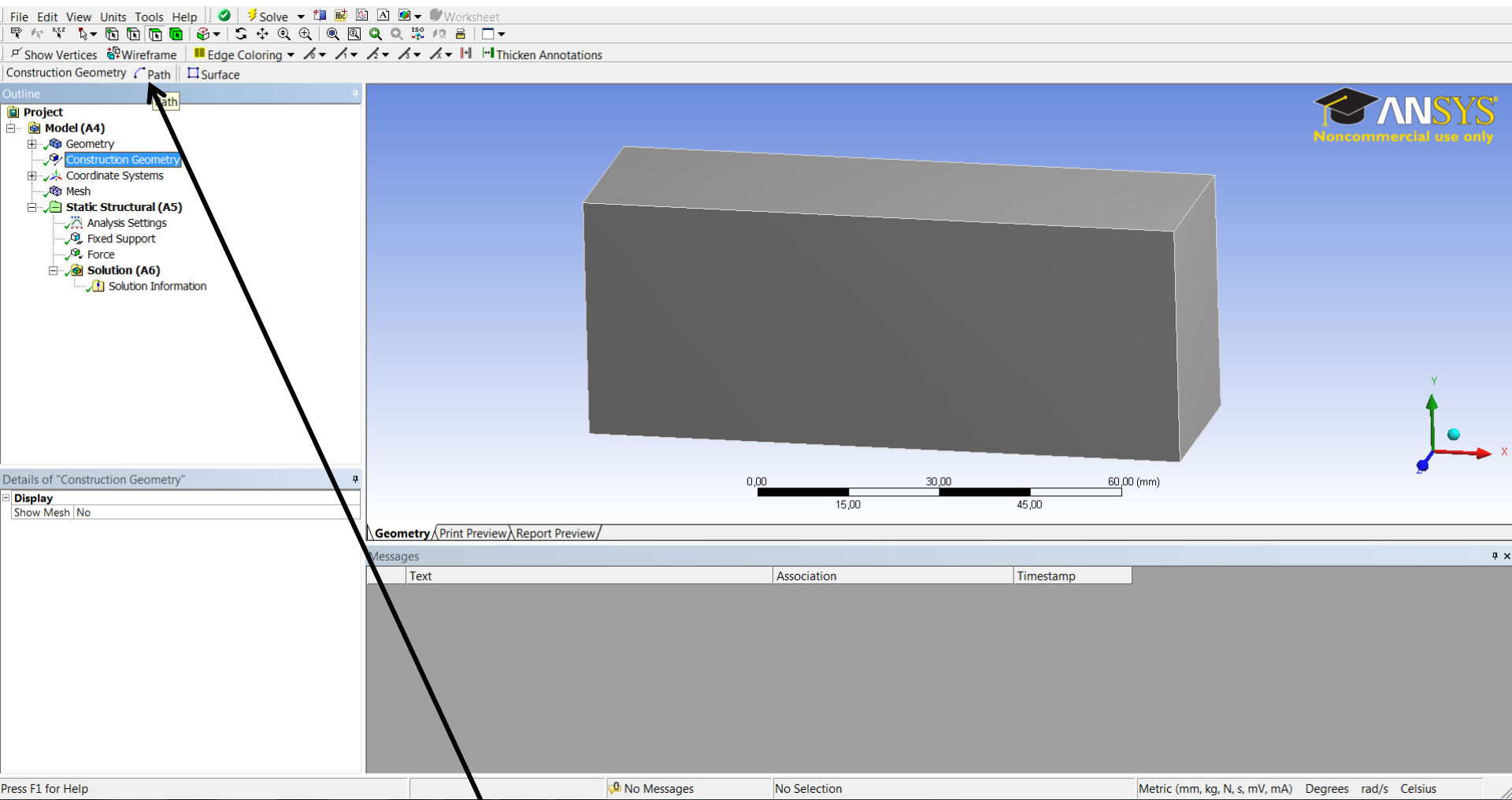
Get the stresses to a Hot Spot Calculation

Workbench 13.0

Aalborg Universitet esbjerg
Søren Heide Lambertsen



Select Construction Geometry



Path

Outline

- Project
 - Model (A4)
 - Geometry
 - Construction Geometry
 - Path
 - Coordinate Systems
 - Mesh
 - Static Structural (A5)
 - Analysis Settings
 - Fixed Support
 - Force
 - Solution (A6)
 - Solution Information

Path
30-11-2011 13:59

■ Path

0,00 15,00 30,00 45,00 60,00 (mm)

ANSYS
Noncommercial use only

Details of "Path"

Definition

Path Type	Two Points
Path Coordinate System	Global Coordinate System
Number of Sampling Points	47
Suppressed	No

Start

Coordinate System	Global Coordinate System
Start X Coordinate	0. mm
Start Y Coordinate	0. mm
Start Z Coordinate	0. mm
Location	Click to Change

End

Coordinate System	Global Coordinate System
End X Coordinate	0. mm
End Y Coordinate	0. mm
End Z Coordinate	0. mm
Location	Click to Change

Geometry | Print Preview | Report Preview

Messages

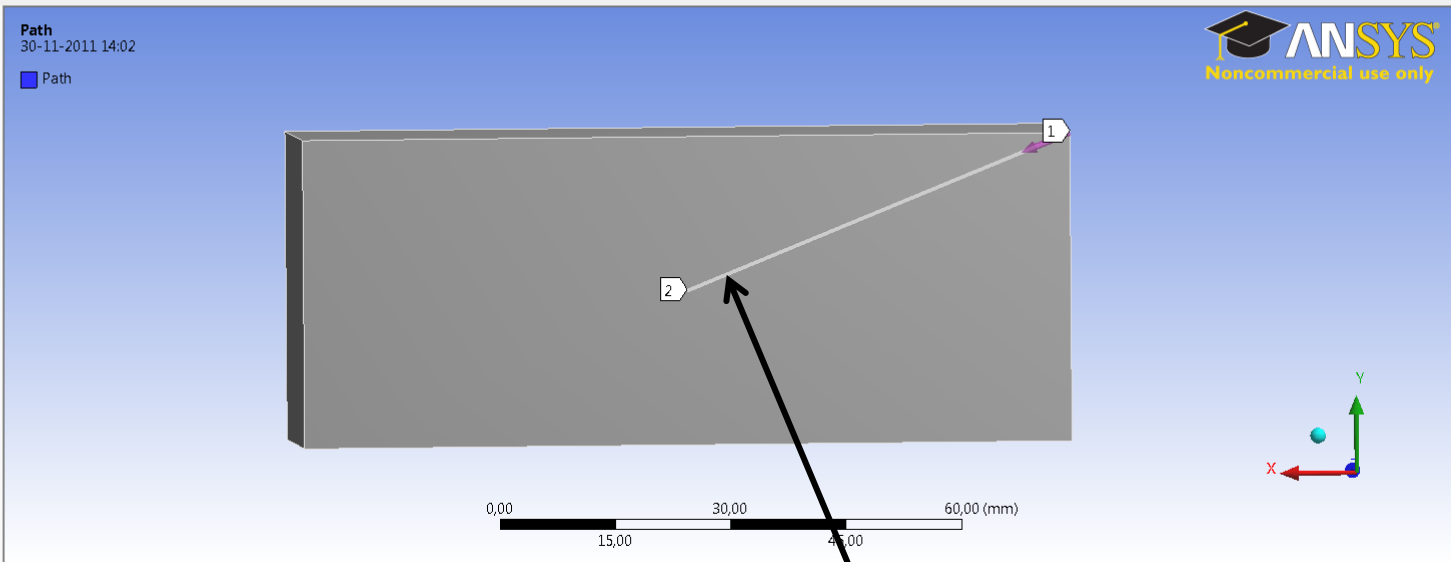
Text	Association	Timestamp

Enter the coordinates on the line you want the stresses from.

Path Path

Outline

- Project
 - Model (A4)
 - Geometry
 - Construction Geometry
 - Path
 - Coordinate Systems
 - Mesh
 - Static Structural (A5)
 - Analysis Settings
 - Fixed Support
 - Force
 - Solution (A6)
 - Solution Information



Details of "Path"

Definition	
Path Type	Two Points
Path Coordinate System	Global Coordinate System
Number of Sampling Points	47
Suppressed	No
Start	
Coordinate System	Global Coordinate System
Start X Coordinate	0, mm
Start Y Coordinate	40, mm
Start Z Coordinate	0, mm
Location	Click to Change
End	
Coordinate System	Global Coordinate System
End X Coordinate	50, mm
End Y Coordinate	20, mm
End Z Coordinate	0, mm
Location	Click to Change

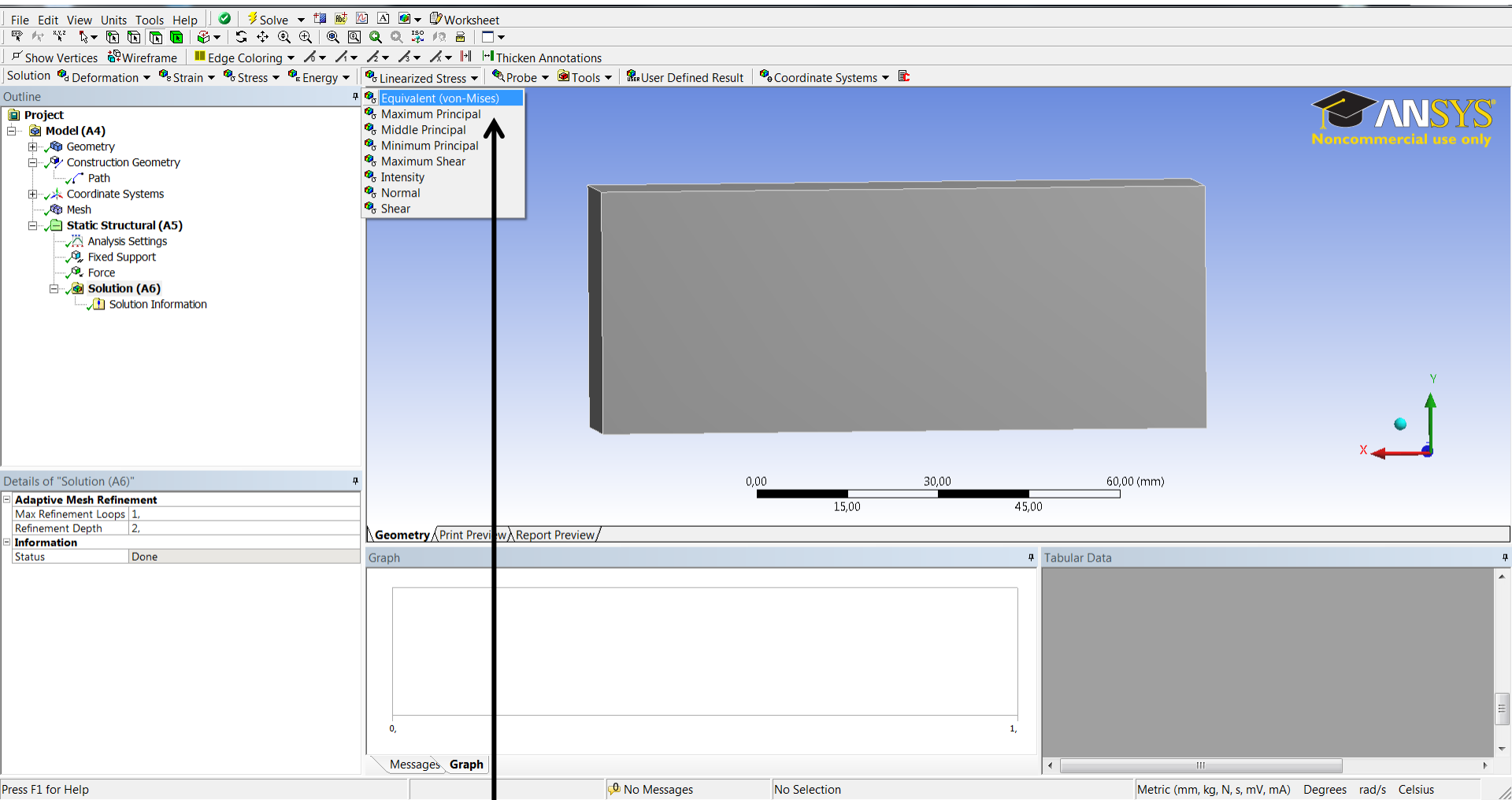
Geometry | Print Preview | Report Preview |

Messages

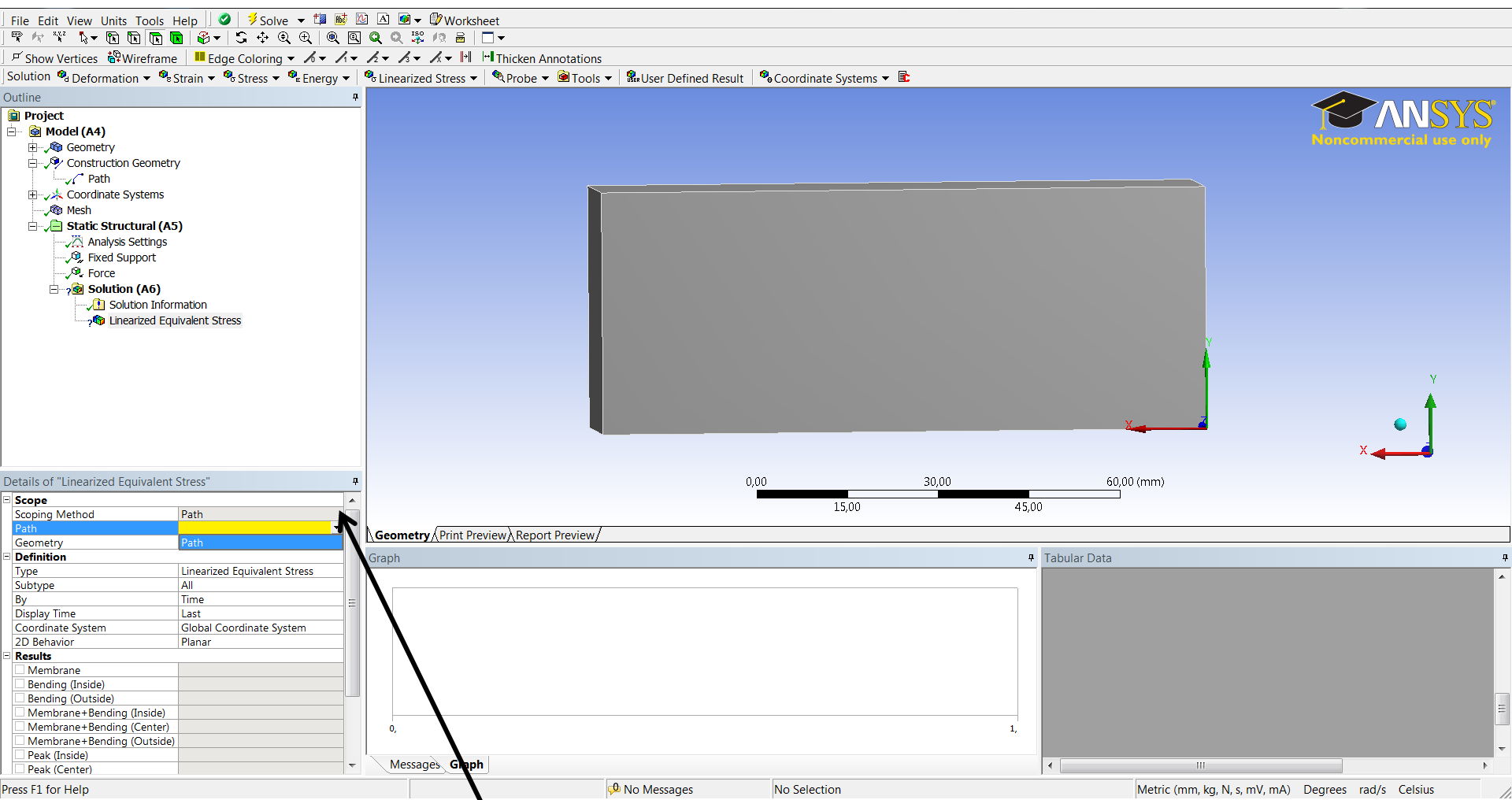
Text	Association	Timestamp
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Like this

You can see the line



Then select Linearized Stress and select the stress type.

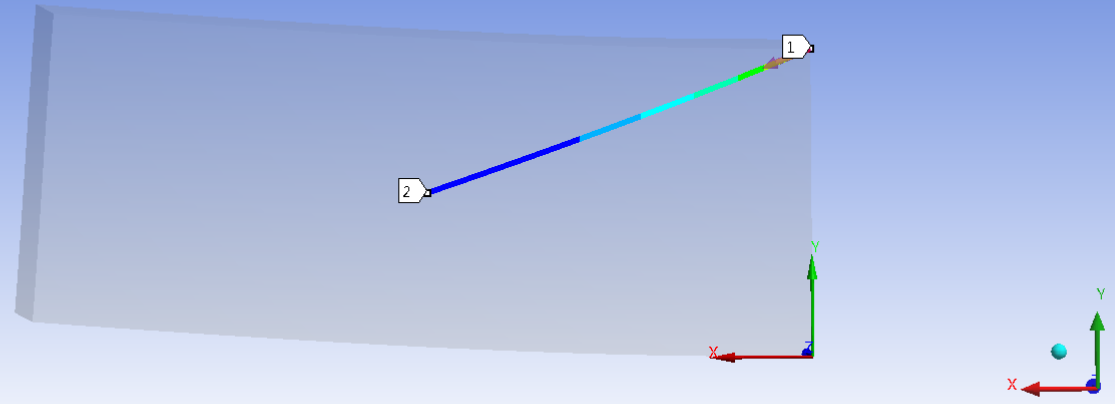
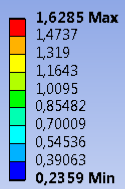


Select the Path name in the menu.

Project

- Model (A4)
 - Geometry
 - Construction Geometry
 - Path
 - Coordinate Systems
 - Mesh
 - Static Structural (A5)
 - Analysis Settings
 - Fixed Support
 - Force
 - Solution (A6)
 - Solution Information
 - Linearized Equivalent Stress

A: Static Structural
 Linearized Equivalent Stress
 Type: Linearized Equivalent Stress
 Unit: MPa
 Global Coordinate System
 Time: 1
 30-11-2011 14:03



Details of "Linearized Equivalent Stress"

Scope

Scoping Method	Path
Path	Path
Geometry	All Bodies

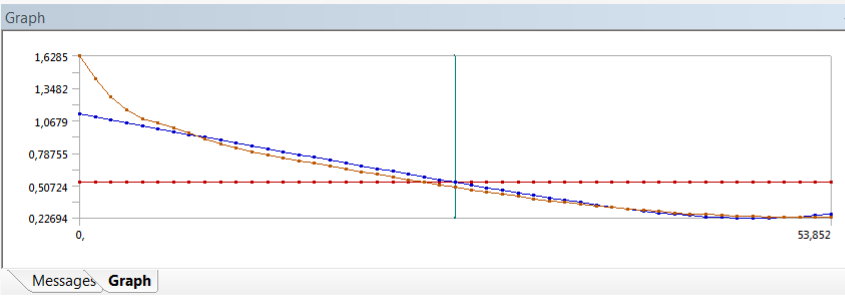
Definition

Type	Linearized Equivalent Stress
Subtype	All
By	Time
Display Time	Last
Coordinate System	Global Coordinate System
2D Behavior	Planar

Results

<input type="checkbox"/> Membrane	0,53621 MPa
<input type="checkbox"/> Bending (Inside)	0,61444 MPa
<input type="checkbox"/> Bending (Outside)	0,61444 MPa
<input type="checkbox"/> Membrane+Bending (Inside)	1,1234 MPa
<input type="checkbox"/> Membrane+Bending (Center)	0,53621 MPa
<input type="checkbox"/> Membrane+Bending (Outside)	0,26085 MPa
<input type="checkbox"/> Peak (Inside)	0,87393 MPa
<input type="checkbox"/> Peak (Center)	5,4587e-002 MPa

Geometry | Print Preview | Report Preview



Tabular Data

	Length [mm]	Membrane [MPa]	Bending [MPa]	Membrane+Bending [MPa]
35	38,145	0,53621	0,25602	0,32297
36	39,267	0,53621	0,28162	0,30529
37	40,389	0,53621	0,30722	0,28879
38	41,511	0,53621	0,33282	0,2737
39	42,633	0,53621	0,35842	0,26025
40	43,754	0,53621	0,38402	0,24872
41	44,876	0,53621	0,40963	0,23939
42	45,998	0,53621	0,43523	0,23251
43	47,12	0,53621	0,46083	0,22831
44	48,242	0,53621	0,48643	0,22604

Then the stresses at the Path line will be shown.