

Changes from SHELL181 to SHELL281
Workbench 13.0

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Outline

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

```
*** NOTE *** CP = 1.778 TIME= 14:41:10
The Sparse Matrix solver is currently running in the in-core memory
mode. This memory mode uses the most amount of memory in order to
avoid using the hard drive as much as possible, which most often
results in the fastest solution time. This mode is recommended if
enough physical memory is present to accommodate all of the solver
data.
Sparse solver maximum pivot= 389300.7 at node 49 ROTY.
Sparse solver minimum pivot= 115.390872 at node 37 UZ.
Sparse solver minimum pivot in absolute value= 115.390872 at node 37
UZ.

*** ELEMENT RESULT CALCULATION TIMES
TYPE NUMBER ENAME TOTAL CP AVE CP
1 66 SHELL181 0.000 0.000000
2 6 SURF156 0.000 0.000000

*** NODAL LOAD CALCULATION TIMES
TYPE NUMBER ENAME TOTAL CP AVE CP
1 66 SHELL181 0.000 0.000000
2 6 SURF156 0.000 0.000000
*** LOAD STEP 1 SUBSTEP 1 COMPLETED. CUM ITER = 1
*** TIME = 1.00000 TIME INC = 1.00000 NEW TRIANG MATRIX

*** ANSYS BINARY FILE STATISTICS
BUFFER SIZE USED= 16384
0.064 MB WRITTEN ON ELEMENT MATRIX FILE: file.emat
0.436 MB WRITTEN ON ELEMENT SAVED DATA FILE: file.esav
0.125 MB WRITTEN ON ASSEMBLED MATRIX FILE: file.full
0.250 MB WRITTEN ON RESULTS FILE: file.rst
*****
```

Details of "Solution Information"

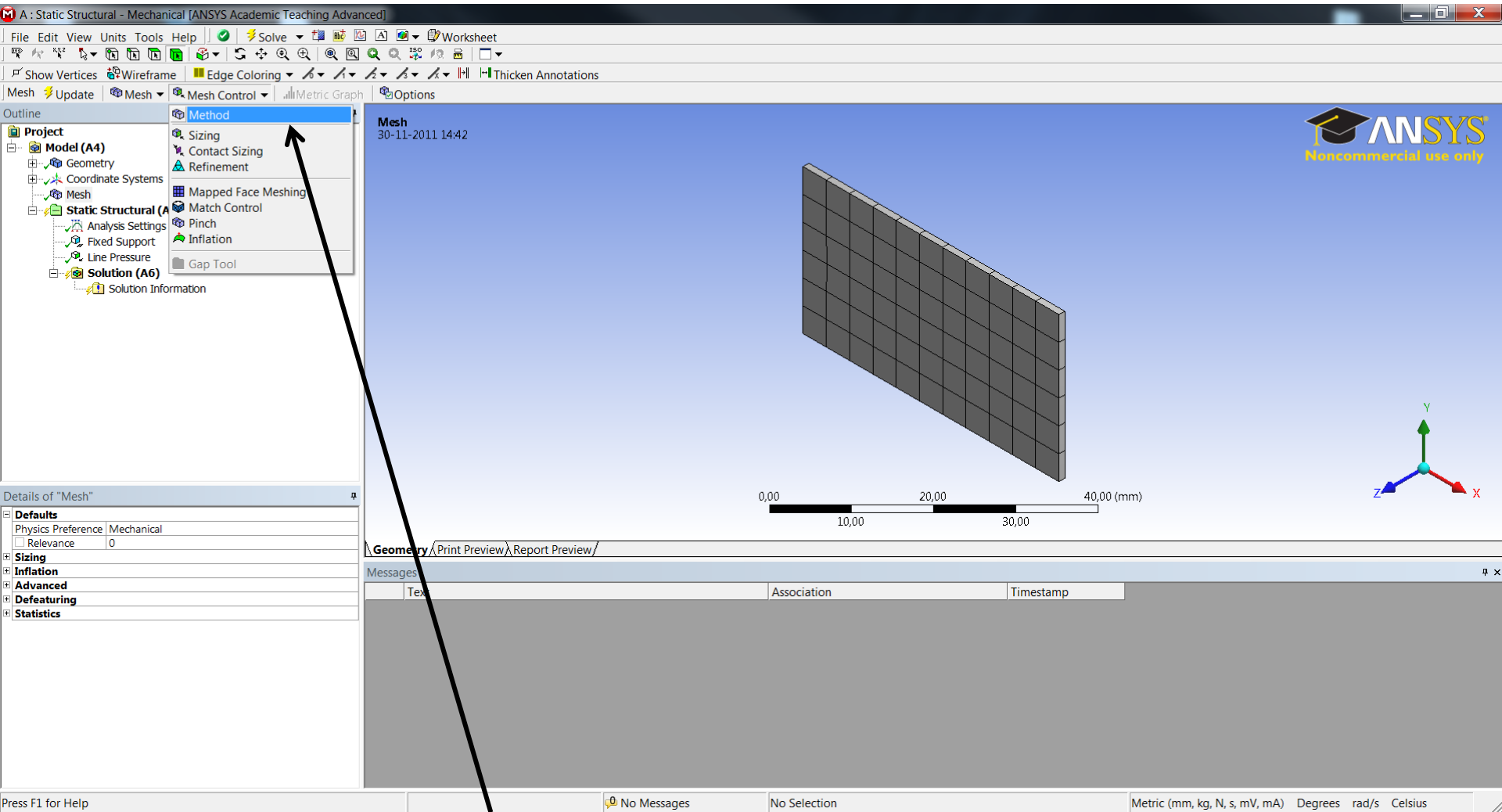
Solution Information	
Solution Output	Solver Output
Newton-Raphson Residuals	0
Update Interval	2.5 s
Display Points	All

Graphics Worksheet

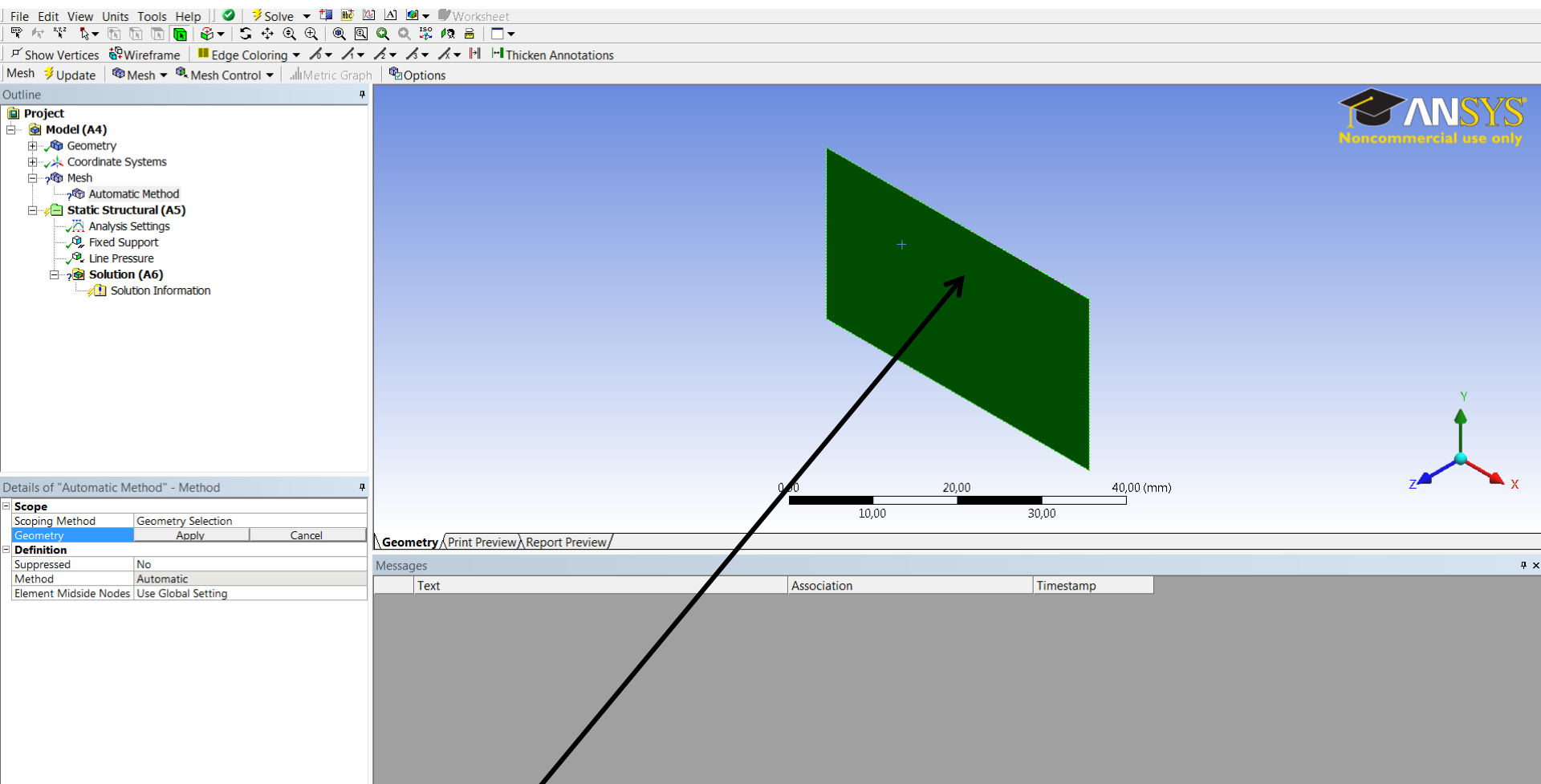
Messages

Text	Association	Timestamp
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The SHELL181 is used



Select Mesh then Mesh control and Method



Select the Geometry and click apply

File Edit View Units Tools Help | Solve | Worksheet

Show Vertices Wireframe Edge Coloring Thicken Annotations

Mesh Update Mesh Mesh Control Metric Graph Options

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Automatic Method
30-11-2011 14:43

Automatic Method

0,00 10,00 20,00 30,00 40,00 (mm)

Geometry (Print Preview) Report Preview /

Details of "Automatic Method" - Method

Scope	
Scoping Method	Geometry Selection
Geometry	1 Body
Definition	
Suppressed	No
Method	Quadrilateral Dominant
Element Midside Nodes	Use Global Setting
Free Face Mesh Type	Use Global Setting
	Dropped
	Kept

Messages

Text	Association	Timestamp

Press F1 for Help | No Messages | No Selection | Metric (mm, kg, N, s, mV, mA) Degrees rad/s Celsius

In the Automatic method menu select Kept under Element Midside nodes.

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Details of "Solution Information"

Solution Information	
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Newton-Raphson Residuals	0
Update Interval	2.5 s
Display Points	All

Worksheet

```
Range of element maximum matrix coefficients in global coordinates
Maximum = 441716.09 at element 13.
Minimum = 432499.491 at element 62.

*** ELEMENT MATRIX FORMULATION TIMES
TYPE NUMBER  ENAME      TOTAL CP  AVE CP
1      66  SHELL281  0.062    0.000945
2      6   SURF156  0.000    0.000000
Time at end of element matrix formulation CP = 1.66921067.

SPARSE MATRIX DIRECT SOLVER.
Number of equations =      1320,   Maximum wavefront =      96
Memory allocated for solver =      15.259 MB
Memory required for in-core =      2.704 MB
Optimal memory required for out-of-core =      0.964 MB
Minimum memory required for out-of-core =      0.840 MB

*** NOTE ***
CP =      1.716  TIME= 14:43:42
The Sparse Matrix solver is currently running in the in-core memory
mode. This memory mode uses the most amount of memory in order to
avoid using the hard drive as much as possible, which most often
results in the fastest solution time. This mode is recommended if
enough physical memory is present to accommodate all of the solver
data.
Sparse solver maximum pivot= 881542.644 at node 192 UX.
Sparse solver minimum pivot= 47.0575698 at node 158 UZ.
Sparse solver minimum pivot in absolute value= 47.0575698 at node 158
UZ.

*** ELEMENT RESULT CALCULATION TIMES
TYPE NUMBER  ENAME      TOTAL CP  AVE CP
1      66  SHELL281  0.062    0.000945
```

Messages

Text	Association	Timestamp
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Now SHELL281 is used