Solver Output

ANSYS Mechanical

***************************************************************
*                  ANSYS 12.1 LEGAL NOTICES                    *
***************************************************************
*                                                             *
* COPYRIGHT AND TRADEMARK INFORMATION                         *
*                                                             *
* Copyright 2009 SAS IP, Inc.  All rights reserved.           *
* Unauthorized use, distribution or duplication is prohibited. *
* See the ANSYS, Inc. online documentation or the ANSYS, Inc. *
* documentation CD for the complete Legal Notice.             *
*                                                             *
* DISCLAIMER NOTICE                                           *
*                                                             *
* THIS ANSYS SOFTWARE PRODUCT AND PROGRAM DOCUMENTATION       *
* EMBODY TRADE SECRETS AND CONFIDENTIAL AND PROPRIETARY       *
* INFORMATION OF ANSYS, INC., ITS SUBSIDIARIES, OR LICENSORS.  *
* The software products and documentation are furnished by *
* ANSYS, Inc. or its subsidiaries under a software license *
* agreement that contains provisions concerning *
* non-disclosure, copying, length and nature of use, *
* compliance with exporting laws, warranties, disclaimers, *
* limitations of liability, and remedies, and other *
* provisions. The software products and documentation may be *
* used, disclosed, transferred, or copied only in accordance *
* with the terms and conditions of that software license *
* agreement.                                                 *
*                                                             *
* ANSYS, Inc. and ANSYS Europe, Ltd. are UL registered Companies. *
*                                                             *
***************************************************************

***** ANSYS COMMAND LINE ARGUMENTS *****
BATCH MODE REQUESTED (-b) = NOLIST
INPUT FILE COPY MODE (-c) = COPY
2 PARALLEL CPUs REQUESTED
MEMORY REQUESTED (MB) = 96
START-UP FILE MODE = NOREAD
STOP FILE MODE = NOREAD
DATABASE SIZE REQUESTED (MB) = 32
00000000 VERSION=WINDOWS x64 RELEASE= 12.1 UP20091102
CURRENT JOBNAME=file 17:34:11 AUG 28, 2012 CP= 0.421
PARAMETER _DS_PROGRESS = 999.0000000
/INPUT FILE= ds.dat LINE= 0
DO NOT WRITE ELEMENT RESULTS INTO DATABASE

GET _WALLSTRT FROM ACTI ITEM=TIME WALL VALUE= 17.5697222

TITLE=
Suction_pipe_28.08.2012
--- Data in consistent NMM units.
MPA UNITS SPECIFIED FOR INTERNAL
LENGTH = MILLIMETERS (mm)
MASS = TONNE (Mg)
TIME = SECONDS (sec)
TEMPERATURE = CELSIUS (C)
TOFFSET = 273.0
FORCE = NEWTON (N)
HEAT = MILLIJOULES (mJ)
INPUT UNITS ARE ALSO SET TO MPA

**** TRACK MONITOR LEVEL= 1
TRACK PRINT LEVEL = 0
TRACK SUMMARY LEVEL= 0

***** ANSYS - ENGINEERING ANALYSIS SYSTEM RELEASE 12.1 *****
ANSYS Mechanical
*** ANSYS ANALYSIS DEFINITION (PREP7) *****
*********** Nodes for the whole assembly ***********
*********** Elements for Body 1 "Surface Body" ***********
*********** Elements for Body 2 "Surface Body" ***********
*********** Send User Defined Coordinate System(s) ***********
*********** Set Reference Temperature ***********
*********** Send Materials ***********
*********** Send Sheet Properties ***********
*********** Create Contact "Contact Region" ***********
Real Contact Set For Above Contact Is 4 3
*********** Fixed Supports ***********

***** ROUTINE COMPLETED ***** CP = 0.515

--- Number of total nodes = 6027
--- Number of contact elements = 416
--- Number of spring elements = 0
--- Number of solid elements = 5976
--- Number of total elements = 6392

*GET  _WALLBSOL FROM ACTI ITEM=TIME WALL VALUE= 17.5697222

***** ANSYS SOLUTION ROUTINE *****

PERFORM A MODAL ANALYSIS
THIS WILL BE A NEW ANALYSIS
USE SYM. BLOCK LANCZOS MODE E TRACTION METHOD
E TRACT 10 MODES
NORMALIZE THE MODE SHAPES TO THE MASS MATRIX
ERASE THE CURRENT DATABASE OUTPUT CONTROL TABLE.
WRITE ALL ITEMS TO THE DATABASE WITH A FREQUENCY OF NONE
FOR ALL APPLICABLE ENTITIES
WRITE NSOL ITEMS TO THE DATABASE WITH A FREQUENCY OF ALL
FOR ALL APPLICABLE ENTITIES
PRINTOUT RESUMED BY /GOP

E PLOT ALL E TRACTED MODES
DO NOT CALCULATE ELEMENT RESULTS

*GET  ANSINTER_ FROM ACTI ITEM=INT VALUE= 0.0000000

*IF  ANSINTER_ (= 0.00000 ) NE 0 (= 0.00000 ) THEN

*ENDIF

***** ANSYS SOLVE COMMAND *****

*** WARNING *** CP = 0.515 TIME= 17:34:11
Element shape check is currently inactive. Issue SHPP,ON or
SHPP,WARN to reactivate, if desired.

*** NOTE *** CP = 0.546 TIME= 17:34:11
The model data was checked and warning messages were found.
Please review output or errors file ( D:\FEA_2012_13\MIZ015\FEA\ProjectScratch\ScrC758\file.err ) for these warning
messages.

*** SELECTION OF ELEMENT TECHNOLOGIES FOR APPLICABLE ELEMENTS ***
--- GIVE SUGGESTIONS AND RESET THE KEY OPTIONS ---

ELEMENT TYPE 1 IS SHELL181. IT IS ASSOCIATED WITH ELASTOPLASTIC
MATERIALS ONLY. KEYOPT(8)=2 IS SUGGESTED AND KEYOPT(1)=2 IS SUGGESTED FOR
HIGHER ACCURACY OF MEMBRANE STRESSES OTHERWISE, KEYOPT(1)=0 IS SUGGESTED.
KEYOPT(8) HAS BEEN RESET BUT KEYOPT(1) CAN NOT BE RESET HERE. PLEASE RESET
IT MANUALLY IF NECESSARY.

KEYOPT(1)=0

ELEMENT TYPE 2 IS SHELL181. IT IS ASSOCIATED WITH ELASTOPLASTIC
MATERIALS ONLY. KEYOPT(8)=2 IS SUGGESTED AND KEYOPT(1)=2 IS SUGGESTED FOR
HIGHER ACCURACY OF MEMBRANE STRESSES OTHERWISE, KEYOPT(1)=0 IS SUGGESTED.
KEYOPT(8) HAS BEEN RESET BUT KEYOPT(1) CAN NOT BE RESET HERE. PLEASE RESET
IT MANUALLY IF NECESSARY.

KEYOPT(1)=0

ELEMENT TYPE 3 HAS KEYOPT(1)=2. FOR THE SPECIFIED ANALYSIS TYPE, LUMPED MASS
MTRI OPTION (LUMPM, ON) IS SUGGESTED.

ELEMENT TYPE 4 HAS KEYOPT(1)=2. FOR THE SPECIFIED ANALYSIS TYPE, LUMPED MASS
MTRI OPTION (LUMPM, ON) IS SUGGESTED.
Material number 4 (used by element 5977) should normally have at least one MP or one TB type command associated with it. Output of energy by material may not be available.

The step data was checked and warning messages were found. Please review output or errors file (D:FEA_2012-13 OPTMA-M0015_FEADirectoryScratchScrC758/file.err) for these warning messages.

The conditions for direct assembly have been met. No .emat or .erot files will be produced.

Symmetric Deformable-deformable contact pair identified by real constant set 3 and contact element type 3 has been set up. The companion pair has real constant set ID 4. Both pairs should have the same behavior. For asymmetric contact analysis, you may deactivate the current pair and use its companion pair. Contact algorithm: Penalty method
Contact detection at: Gauss integration point Contact stiffness factor FKN 10.00000
The resulting contact stiffness 0.59278006
Default penetration tolerance factor FTOLN 0.100000
The resulting penetration tolerance 0.360000
Default opening contact stiffness ONSF will be used.
Default tangent stiffness factor FTK 1.000000
Default Max. friction stress TAUFR max. 0.100000
Average contact surface length 2.946800
Average contact pair depth 3.600000
User defined pinball region PINB 0.979240
Initial penetration/gap is excluded.
Bonded contact (always) is defined.

Min. Initial gap 0.566595164 was detected between contact element 6180 and target element 6353.
The gap is closed due to initial adjustment.
Max. Closed gap 0.664059952 has been detected between contact element 6092 and target element 6248.

Symmetric Deformable-deformable contact pair identified by real constant set 4 and contact element type 3 has been set up. The companion pair has real constant set ID 3. Both pairs should have the same behavior. For asymmetric contact analysis, you may deactivate the current pair and use its companion pair. Contact algorithm: Penalty method
Contact detection at: Gauss integration point Contact stiffness factor FKN 10.00000
The resulting contact stiffness 0.59278006
Default penetration tolerance factor FTOLN 0.100000
The resulting penetration tolerance 0.360000
Default opening contact stiffness ONSF will be used.
Default tangent stiffness factor FTK 1.000000
Default Max. friction stress TAUFR max. 0.100000
Average contact surface length 2.823700
Average contact pair depth 3.880000
User defined pinball region PINB 0.979240
Initial penetration/gap is excluded.
Bonded contact (always) is defined.

Min. Initial gap 0.531614275 was detected between contact element 6207 and target element 5988.
The gap is closed due to initial adjustment.
Max. Closed gap 0.646599532 has been detected between contact element 6092 and target element 6248.

Symmetric Deformable-deformable contact pair identified by real constant set 4 and contact element type 3 has been set up. The companion pair has real constant set ID 3. Both pairs should have the same behavior. For asymmetric contact analysis, you may deactivate the current pair and use its companion pair. Contact algorithm: Penalty method
Contact detection at: Gauss integration point Contact stiffness factor FKN 10.00000
The resulting contact stiffness 0.59278006
Default penetration tolerance factor FTOLN 0.100000
The resulting penetration tolerance 0.360000
Default opening contact stiffness ONSF will be used.
Default tangent stiffness factor FTK 1.000000
Default Max. friction stress TAUFR max. 0.100000
Average contact surface length 2.823700
Average contact pair depth 3.880000
User defined pinball region PINB 0.979240
Initial penetration/gap is excluded.
Bonded contact (always) is defined.

Min. Initial gap 0.531614275 was detected between contact element 6207 and target element 5988.
The gap is closed due to initial adjustment.
Max. Closed gap 0.646599532 has been detected between contact element 6092 and target element 6248.

Center of Mass, Mass, and Mass Moments of Inertia

Calculations assume element mass at element centroid
Total Mass = 0.428882-03
MOM. OF INERTIA
MOM. OF INERTIA
CENTER OF MASS            ABOUT ORIGIN        ABOUT CENTER OF MASS
XC = -8.0314          IXX = 14.280          IXX = 6.633
YC = 126.83          IYY = 3.594          IYY = 2.814
ZC = 41.890          IZZ = 11.220          IZZ = 4.297
IXY = 0.4759          IXY = -2.311          IXY = -0.4217E-01
IYZ = -2.321          IYZ = -0.4217E-01
IZX = -0.368E-01      IZX = -0.1806

*** MASS SUMMARY BY ELEMENT TYPE ***

<table>
<thead>
<tr>
<th>TYPE</th>
<th>MASS</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>0.521739E-04</td>
</tr>
<tr>
<td>2</td>
<td>0.376685E-03</td>
</tr>
</tbody>
</table>

Range of element maximum matrix coefficients in global coordinates
Maximum = 825945.175 at element 6228.
Minimum = 45279.0232 at element 1252.

*** ELEMENT MATRIX FORMULATION TIMES ***

<table>
<thead>
<tr>
<th>TYPE</th>
<th>NUMBER</th>
<th>ENAME</th>
<th>TOTAL CP</th>
<th>AVE CP</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>774</td>
<td>SHELL181</td>
<td>0.125</td>
<td>0.000161</td>
</tr>
<tr>
<td>2</td>
<td>920</td>
<td>SHELL181</td>
<td>0.564</td>
<td>0.000105</td>
</tr>
<tr>
<td>3</td>
<td>208</td>
<td>CONTA174</td>
<td>0.016</td>
<td>0.000075</td>
</tr>
<tr>
<td>4</td>
<td>208</td>
<td>TARGE170</td>
<td>0.000</td>
<td>0.000000</td>
</tr>
</tbody>
</table>

Time at end of element matrix formulation CP = 1.5132097.

BLOCK LANCZOS CALCULATION OF UP TO 10 EIGENVECTORS.

NUMBER OF EQUATIONS = 32946
MIN. IN. WAVEFRONT = 126
MIN. IN. MODES STORED = 10
MIN. IN. EIGENVALUE = 0.00000E 00
MIN. IN. EIGENVALUE = 0.10000E 09

*** NOTE ***
CP = 1.654   TIME= 17:34:12
The initial memory allocation (-m) has been exceeded.
Supplemental memory allocations are being used.
Memory allocated for solver = 92.393 MB
Memory required for in-core = 77.477 MB
Optimal memory required for out-of-core = 41.941 MB
Minimum memory required for out-of-core = 32.633 MB

*** NOTE ***
CP = 1.810   TIME= 17:34:12
The Block Lanczos 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 must often result in the fastest solution time. This mode is recommended if enough physical memory is present to accommodate all of the solver data.

LANCZOS CYCLE NUMBER = 1
new shift: 8.4724D+03     modes still needed: 10

FREQUENCIES AT CURRENT LANCZOS CYCLE
1  0.18269791E+04 
2  0.19295438E+04 
3  0.16742331E+04 
4  0.16341635E+04 
5  0.10633885E+04 
6  0.93045236E+03 
7  0.79484812E+03 
8  0.58976161E+03 
9  0.37365736E+03 
10  0.24948864E+03 
11  0.22670871E+03 
12  0.13926136E+03 
13  0.98479065E+02 

number of steps : 7
eigenvalues found: 13
total no. eigenvalues: 13

LANCZOS CYCLE NUMBER = 2
new shift: 1.0805D+08     modes still needed: 0

***** ANSYS ENGINEERING ANALYSIS SYSTEM RELEASE 12.1 *****
ANSYS Mechanical
VERSION=WINDOWS x64   17:34:13  AUG 28, 2012 CP= 3.900
Suction_pipe_28.08.2012--Modal (B5)

***** FREQUENCIES FROM BLOCK LANCZOS ITERATION *****

<table>
<thead>
<tr>
<th>MODE</th>
<th>FREQUENCY (HERTZ)</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>98.47906502492</td>
</tr>
<tr>
<td>2</td>
<td>139.2613589560</td>
</tr>
<tr>
<td>3</td>
<td>226.707055536</td>
</tr>
<tr>
<td>4</td>
<td>249.4886838987</td>
</tr>
<tr>
<td>5</td>
<td>373.6573631023</td>
</tr>
<tr>
<td>6</td>
<td>589.7616087952</td>
</tr>
<tr>
<td>7</td>
<td>794.8481998284</td>
</tr>
<tr>
<td>8</td>
<td>930.4523673253</td>
</tr>
<tr>
<td>9</td>
<td>1063.388505478</td>
</tr>
<tr>
<td>10</td>
<td>1634.363532720</td>
</tr>
</tbody>
</table>

***** PARTICIPATION FACTOR CALCULATION *****

<table>
<thead>
<tr>
<th>MODE</th>
<th>FREQUENCY</th>
<th>PERIOD</th>
<th>PARTIC. FACTOR</th>
<th>RATIO</th>
<th>EFFECTIVE MASS</th>
<th>MASS FRACTION TO TOTAL MASS</th>
</tr>
</thead>
</table>

file://C:/Program%20Files/ANSYS%20Inc/v121/aisol/DesignSpace/DSPages/html/DSSol...
<table>
<thead>
<tr>
<th>MODE</th>
<th>FREQUENCY</th>
<th>PERIOD</th>
<th>PARTIC.FACTOR</th>
<th>RATIO</th>
<th>EFFECTIVE MASS</th>
<th>MASS FRACTION</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>98.479</td>
<td>0.10154E-01</td>
<td>0.14176E-01</td>
<td>1.00000</td>
<td>0.20367E-03</td>
<td>0.634381</td>
</tr>
<tr>
<td>2</td>
<td>139.261</td>
<td>0.71807E-02</td>
<td>0.33742E-02</td>
<td>0.238014</td>
<td>0.113849E-04</td>
<td>0.691452</td>
</tr>
<tr>
<td>3</td>
<td>226.709</td>
<td>0.44109E-02</td>
<td>0.11564E-01</td>
<td>0.120893</td>
<td>0.339078E-05</td>
<td>0.702493</td>
</tr>
<tr>
<td>4</td>
<td>249.489</td>
<td>0.40082E-02</td>
<td>0.10944E-01</td>
<td>0.077197</td>
<td>0.119764E-05</td>
<td>0.706392</td>
</tr>
<tr>
<td>5</td>
<td>373.657</td>
<td>0.26762E-02</td>
<td>0.80148E-02</td>
<td>0.565388</td>
<td>0.642732E-04</td>
<td>0.915559</td>
</tr>
<tr>
<td>6</td>
<td>589.762</td>
<td>0.16566E-02</td>
<td>0.26373E-02</td>
<td>0.256181</td>
<td>0.131315E-04</td>
<td>0.958316</td>
</tr>
<tr>
<td>7</td>
<td>794.848</td>
<td>0.12581E-02</td>
<td>0.18998E-03</td>
<td>0.013237</td>
<td>0.569188E-07</td>
<td>0.988433</td>
</tr>
<tr>
<td>8</td>
<td>930.452</td>
<td>0.10747E-02</td>
<td>0.18982E-03</td>
<td>0.028668</td>
<td>0.79242E-06</td>
<td>0.961003</td>
</tr>
<tr>
<td>9</td>
<td>1063.39</td>
<td>0.94039E-03</td>
<td>0.27263E-02</td>
<td>0.192315</td>
<td>0.743728E-05</td>
<td>0.985205</td>
</tr>
<tr>
<td>10</td>
<td>1381.38</td>
<td>0.51036E-03</td>
<td>0.135034</td>
<td>0.45547E-05</td>
<td>1.00000</td>
<td>0.10950E-03</td>
</tr>
</tbody>
</table>

**CUMULATIVE PARTICIPATION FACTOR**

<table>
<thead>
<tr>
<th><strong>MODE</strong></th>
<th><strong>FREQUENCY</strong></th>
<th><strong>PERIOD</strong></th>
<th><strong>PARTIC.FACTOR</strong></th>
<th><strong>RATIO</strong></th>
<th><strong>EFFECTIVE MASS</strong></th>
<th><strong>MASS FRACTION</strong></th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>98.479</td>
<td>0.10154E-01</td>
<td>0.15552E-03</td>
<td>0.013683</td>
<td>0.24815E-07</td>
<td>0.722022E-04</td>
</tr>
<tr>
<td>2</td>
<td>139.261</td>
<td>0.71807E-02</td>
<td>0.36161E-02</td>
<td>0.846491</td>
<td>0.256585E-04</td>
<td>0.276417</td>
</tr>
<tr>
<td>3</td>
<td>226.709</td>
<td>0.44109E-02</td>
<td>0.68408E-02</td>
<td>0.601861</td>
<td>0.467938E-04</td>
<td>0.416115</td>
</tr>
<tr>
<td>4</td>
<td>249.489</td>
<td>0.40082E-02</td>
<td>0.11256E-01</td>
<td>1.000000</td>
<td>0.12918E-03</td>
<td>0.801769</td>
</tr>
<tr>
<td>5</td>
<td>373.657</td>
<td>0.26762E-02</td>
<td>0.72460E-02</td>
<td>0.241595</td>
<td>0.75402E-06</td>
<td>0.824279</td>
</tr>
<tr>
<td>6</td>
<td>589.762</td>
<td>0.16566E-02</td>
<td>0.24789E-02</td>
<td>0.288510</td>
<td>0.103754E-04</td>
<td>0.981314</td>
</tr>
<tr>
<td>7</td>
<td>794.848</td>
<td>0.12581E-02</td>
<td>0.18998E-03</td>
<td>0.013237</td>
<td>0.569188E-07</td>
<td>0.988433</td>
</tr>
<tr>
<td>8</td>
<td>930.452</td>
<td>0.10747E-02</td>
<td>0.18982E-03</td>
<td>0.028668</td>
<td>0.79242E-06</td>
<td>0.961003</td>
</tr>
<tr>
<td>9</td>
<td>1063.39</td>
<td>0.94039E-03</td>
<td>0.27263E-02</td>
<td>0.192315</td>
<td>0.743728E-05</td>
<td>0.985205</td>
</tr>
<tr>
<td>10</td>
<td>1381.38</td>
<td>0.51036E-03</td>
<td>0.135034</td>
<td>0.45547E-05</td>
<td>1.000000</td>
<td>0.10950E-03</td>
</tr>
</tbody>
</table>

**MODE** | **FREQUENCY** | **PERIOD** | **PARTIC.FACTOR** | **RATIO** | **EFFECTIVE MASS** | **MASS FRACTION** |
<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>98.479</td>
<td>0.10154E-01</td>
<td>0.15552E-03</td>
<td>0.013683</td>
<td>0.24815E-07</td>
<td>0.722022E-04</td>
</tr>
<tr>
<td>2</td>
<td>139.261</td>
<td>0.71807E-02</td>
<td>0.36161E-02</td>
<td>0.846491</td>
<td>0.256585E-04</td>
<td>0.276417</td>
</tr>
<tr>
<td>3</td>
<td>226.709</td>
<td>0.44109E-02</td>
<td>0.68408E-02</td>
<td>0.601861</td>
<td>0.467938E-04</td>
<td>0.416115</td>
</tr>
<tr>
<td>4</td>
<td>249.489</td>
<td>0.40082E-02</td>
<td>0.11256E-01</td>
<td>1.000000</td>
<td>0.12918E-03</td>
<td>0.801769</td>
</tr>
<tr>
<td>5</td>
<td>373.657</td>
<td>0.26762E-02</td>
<td>0.72460E-02</td>
<td>0.241595</td>
<td>0.75402E-06</td>
<td>0.824279</td>
</tr>
<tr>
<td>6</td>
<td>589.762</td>
<td>0.16566E-02</td>
<td>0.24789E-02</td>
<td>0.288510</td>
<td>0.103754E-04</td>
<td>0.981314</td>
</tr>
<tr>
<td>7</td>
<td>794.848</td>
<td>0.12581E-02</td>
<td>0.18998E-03</td>
<td>0.013237</td>
<td>0.569188E-07</td>
<td>0.988433</td>
</tr>
<tr>
<td>8</td>
<td>930.452</td>
<td>0.10747E-02</td>
<td>0.18982E-03</td>
<td>0.028668</td>
<td>0.79242E-06</td>
<td>0.961003</td>
</tr>
<tr>
<td>9</td>
<td>1063.39</td>
<td>0.94039E-03</td>
<td>0.27263E-02</td>
<td>0.192315</td>
<td>0.743728E-05</td>
<td>0.985205</td>
</tr>
<tr>
<td>10</td>
<td>1381.38</td>
<td>0.51036E-03</td>
<td>0.135034</td>
<td>0.45547E-05</td>
<td>1.000000</td>
<td>0.10950E-03</td>
</tr>
</tbody>
</table>
*** ANSYS BINARY FILE STATISTICS
BUFFER SIZE USED= 16384
2.625 MB WRITTEN ON ELEMENT SAVED DATA FILE: file.esav
16.875 MB WRITTEN ON ASSEMBLED MATRIX FILE: file.full
3.688 MB WRITTEN ON MODAL MTRAX FILE: file.mode
5.250 MB WRITTEN ON RESULTS FILE: file.rst
FINISH SOLUTION PROCESSING

***** ROUTINE COMPLETED ***** CF = 4.056

*GET _WALLASOL FROM ACTI ITEM=TIME WALL VALUE= 17.570556

**** ANSYS - ENGINEERING ANALYSIS SYSTEM RELEASE 12.1 ****
ANSYS Mechanical
00000000 VERSION=WINDOWS x64 17:34:14 AUG 28, 2012 CF= 4.072
Suction_pipe_28.08.2012 -- Modal (B5)

***** ANSYS RESULTS INTERPRETATION (POST1) *****

*** NOTE ***
Reading results into the database (SET command) will update the current
displacement and force boundary conditions in the database with the
values from the results file for that load set. Note that any
subsequent solutions will use these values unless action is taken to
either SAVE the current values or not overwrite them (/EXIT,NOSAVE).

Set Output of ML File to:
PARM, , , , , , , , , , , , , , , , DATABASE WRITTEN ON FILE
parm.xml
E IT THE ANSYS POST1 DATABASE PROCESSOR

***** ROUTINE COMPLETED ***** CF = 4.072

PRINTOUT RESUMED BY /GOP

*GET _WALLDONE FROM ACTI ITEM=TIME WALL VALUE= 17.570556

PARAMETER _PREPTIME =  0.000000000
PARAMETER _SOLVTIME = 3.000000000
PARAMETER _POSTTIME =  0.000000000
PARAMETER _TOTALTIME = 3.000000000
E IT ANSYS WITHOUT SAVING DATABASE

NUMBER OF WARNING MESSAGES ENCOUNTERED=  4
NUMBER OF ERROR MESSAGES ENCOUNTERED=  0

*******************************************************************************
CPU TIME SPENT FOR CONTACT DATABASE =  0.000
CONTACT SEARCH = 0.000
CONTACT ELEMENTS = 0.000
OTHER ELEMENTS = 0.780
CE SAVING = 0.000
EQUATION SOLVER = 3.292
TOTAL SYSTEM = 4.072
*******************************************************************************

--------------------- ANSYS STATISTICS ---------------------
Release: 12.1 UP20091102 Version: WINDOWS x64
Date Run: 08/28/2012 Time: 17:34
Windows Process ID: 4044
Number of cores: 2 (Shared Memory Parallel)
Job Name: file
Working Directory: D:\FEA_2012-13 OPTW\- MID2015 FEA _ProjectScratch Scoc768

Elapsed time spent pre-processing model (/PREP7) : 0.0 seconds
Elapsed time spent solution - preprocessing : 0.1 seconds
Elapsed time spent computing solution : 2.3 seconds
Elapsed time spent solution - post-processing : 0.0 seconds
Elapsed time spent post-processing model (/POST1) : 0.0 seconds

--------------------- END ANSYS STATISTICS ---------------------

*ANSYS RUN COMPLETED

Release 12.1 UP20091102 WINDOWS x64

---------------------------------------------------------------------------
<table>
<thead>
<tr>
<th>ANSYS RUN COMPLETED</th>
</tr>
</thead>
</table>
---------------------------------------------------------------------------

Maximum Scratch Memory Used = 27317732 Words 104.209 MB

CP Time (sec) = 4.072  Time = 17:34:14
Elapsed Time (sec) = 7.000  Date = 08/28/2012

*============================================================================*

Page 7 of 7