Solver-Ausgabe

```
 ANSYS Academic Teaching Advanced


 *------------------------------------------------------------*
 |                                                            |
 |   W E L C O M E   T O   T H E   A N S Y S   P R O G R A M  |
 |                                                            |
 *------------------------------------------------------------*



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 ************************************************************



        *****  ANSYS COMMAND LINE ARGUMENTS  *****
 BATCH MODE REQUESTED (-b)    = NOLIST
 INPUT FILE COPY MODE (-c)    = COPY
   2 PARALLEL CPUS REQUESTED
 DESIGNXPLORER 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  09:55:45  SEP 23, 2010 CP=      0.500


PARAMETER _DS_PROGRESS =     999.0000000

/INPUT FILE= ds.dat  LINE=       0

*GET  _WALLSTRT  FROM  ACTI  ITEM=TIME WALL  VALUE=  9.92944444

TITLE=
Schweißen Flachprobe--Thermisch-transient (E5)

--- 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
1

***** ANSYS - ENGINEERING ANALYSIS SYSTEM  RELEASE 12.1     *****
ANSYS Academic Teaching Advanced
00000000          VERSION=WINDOWS x64   09:55:46  SEP 23, 2010 CP=      0.531

Schweißen Flachprobe--Thermisch-transient (E5)


         ***** ANSYS ANALYSIS DEFINITION (PREP7) *****
*********** Nodes for the whole assembly ***********
*********** Elements for Body 1 "Rechteck 30mmx15mmx1mm mit 0,5x0,5x1-loch" ***
*********** Elements for Body 2 "Rechteck 30mmx15mmx1mm" ***********
*********** Elements for Body 3 "Rechteck 0,5mmx0,5mmx1mm" ***********
*********** Send User Defined Coordinate System(s) ***********
*********** Send Materials ***********
*********** Define Temperature Constraint ***********
*********** Create "Wärmestrom" ***********
*********** Create "Interne Wärmeerzeugung" ***********
***************** Define Uniform Initial temperature ***************


***** ROUTINE COMPLETED *****  CP =         2.203


--- Number of total nodes = 100813
--- Number of contact elements = 2
--- Number of spring elements = 0
--- Number of solid elements = 65407
--- Number of total elements = 65409

*GET  _WALLBSOL  FROM  ACTI  ITEM=TIME WALL  VALUE=  9.92972222
******************************************************************************
************************    SOLUTION       *******************************
******************************************************************************
```

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


PERFORM A TRANSIENT ANALYSIS
 THIS WILL BE A NEW ANALYSIS

NEW SOLUTION CONTROL OPTION IS ACTIVATED,
THE FOLLOWING COMMANDS ARE RESET TO NEW DEFAULTS:
AUTOTS, DELTIM, NSUB, CNVTOL, LNSRCH, PRED, NROPT,
TINTP, CUTCONTROL, OPNCONTROL, MONITOR, NEQIT, SSTIF, KBC.

CONTACT TIME PREDICTIONS ARE BASED ON ELEMENT KEYOPT(7) SPECIFIED

STEP BOUNDARY CONDITION KEY= 1

DO NOT SAVE ANY RESTART FILES AT ALL

CONTACT INFORMATION PRINTOUT LEVEL    1

*** WARNING ***                         CP =       2.250   TIME= 09:55:47
Temperature-dependent properties have not been specified.  The
THOPT,QUASI option does not perform equilibrium iterations.  Small
time steps may be required to obtain accurate results.

Use Quasi-Linear Thermal Transient Solution

Tolerance for Reform of Thermal Matrix=     0.050

 ***** Fast Property Table Information *****
 Number of entries per property=    64
 Minimum temperature =      0.00
 Maximum temperature =   1000.00

USE INCOMPLETE CHOLESKI CONJUGATE GRADIENT SOLVER
 TOLERANCE = 0.10000E-07  OPTION = IN-CORE

NLHIST: ADDED NODAL RESULTS HISTORY FOR:
      NAME = MAX_TEMP
 ITEM/COMP = TEMPMAX
      NODE =         0

NLHIST: ADDED NODAL RESULTS HISTORY FOR:
      NAME = MIN_TEMP
 ITEM/COMP = TEMPMIN
      NODE =         0
********* Initial Time Increment Check And Fourier Modulus *********
 Specified Initial Time Increment: 0.0001
 Estimated Increment Needed, le*le/alpha, Body 1: 0.00322658
 Estimated Increment Needed, le*le/alpha, Body 2: 0.00323524
 Estimated Increment Needed, le*le/alpha, Body 3: 0.00313854
************************************************
****************** SOLVE FOR LS 1 ****************

SPECIFIED CONSTRAINT TEMP FOR PICKED NODES
SET ACCORDING TO TABLE PARAMETER = _LOADVARI231

SELECT       FOR ITEM=TYPE COMPONENT=
 IN RANGE       4 TO        4 STEP        1

       2  ELEMENTS (OF    65409  DEFINED) SELECTED BY  ESEL  COMMAND.

SELECT      ALL NODES HAVING ANY ELEMENT IN ELEMENT SET.

       9 NODES (OF   100813  DEFINED) SELECTED FROM
       2 SELECTED ELEMENTS BY NSLE COMMAND.

GENERATE SURFACE LOAD HFLU ON SURFACE DEFINED BY ALL SELECTED NODES
ACCORDING TO TABLE PARAMETER = _LOADVARI210

NUMBER OF HFLU ELEMENT FACE LOADS STORED =      2
```

```
 ALL SELECT   FOR ITEM=NODE COMPONENT=
  IN RANGE       1 TO   100813 STEP        1

   100813  NODES (OF   100813  DEFINED) SELECTED BY NSEL  COMMAND.

 ALL SELECT   FOR ITEM=ELEM COMPONENT=
  IN RANGE       1 TO    65409 STEP        1

    65409  ELEMENTS (OF    65409  DEFINED) SELECTED BY  ESEL  COMMAND.

 SPECIFIED BODY FORCE HGEN FOR ALL PICKED ELEMENTS AT STARTING LOCATION      1
 IS SET ACCORDING TO TABLE PARAMETER = _LOADVARI202

 USE AUTOMATIC TIME STEPPING THIS LOAD STEP

 USE     100 SUBSTEPS INITIALLY THIS LOAD STEP FOR ALL  DEGREES OF FREEDOM
 FOR AUTOMATIC TIME STEPPING:
   USE   1000 SUBSTEPS AS A MAXIMUM
   USE     10 SUBSTEPS AS A MINIMUM

 TIME= 0.10000E-01

 INCLUDE TRANSIENT EFFECTS FOR  ALL DEGREES OF FREEDOM THIS LOAD STEP

 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

 WRITE RSOL ITEMS TO THE DATABASE WITH A FREQUENCY OF ALL
   FOR ALL APPLICABLE ENTITIES

 WRITE FFLU ITEMS TO THE DATABASE WITH A FREQUENCY OF ALL
   FOR ALL APPLICABLE ENTITIES

 PRINTOUT RESUMED BY /GOP

 CONVERGENCE ON HEAT BASED ON THE NORM OF THE N-R LOAD
   WITH A TOLERANCE OF 0.1000E-02 AND A MINIMUM REFERENCE VALUE OF 0.1000E-02
   USING THE L2 NORM (CHECK THE SRSS VALUE)

 *GET  ANSINTER_  FROM  ACTI  ITEM=INT        VALUE=  0.00000000

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

 *ENDIF

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

 *** WARNING ***                         CP =       3.000   TIME= 09:55:48
 Element shape checking is currently inactive.  Issue SHPP,ON or
 SHPP,WARN to reactivate, if desired.

 *** NOTE ***                            CP =       3.250   TIME= 09:55:48
 The model data was checked and warning messages were found.
  Please review output or errors file ( D:\Daten\Ansys
 Simulation\_ProjectScratch\Scr8B73\file.err ) for these warning
 messages.
1

 ***** ANSYS - ENGINEERING ANALYSIS SYSTEM  RELEASE 12.1     *****
 ANSYS Academic Teaching Advanced
 00000000          VERSION=WINDOWS x64   09:55:48  SEP 23, 2010 CP=      3.250
```

Schweißen Flachprobe--Thermisch-transient (E5)

S O L U T I O N O P T I O N S

```
  PROBLEM DIMENSIONALITY. . . . . .3-D
  DEGREES OF FREEDOM. . . . . TEMP
  ANALYSIS TYPE . . . . . .TRANSIENT
     SOLUTION METHOD. . . . . .QUASI
  EQUATION SOLVER OPTION. . . . . .ICCG
     TOLERANCE. . . . . 1.00000E-08
  GLOBALLY ASSEMBLED MATRIX . . . . . .SYMMETRIC
```

*** WARNING *** CP = 3.375 TIME= 09:55:48
Material number 4 (used by element 65408) should normally have at least one MP or one TB type command associated with it. Output of energy by material may not be available.

*** NOTE *** CP = 3.562 TIME= 09:55:48
The step data was checked and warning messages were found. Please review output or errors file (D:\Daten\Ansys Simulation_ProjectScratch\Scr8B73\file.err) for these warning messages.

*** NOTE *** CP = 5.047 TIME= 09:55:49
The initial memory allocation (-m) has been exceeded. Supplemental memory allocations are being used.

L O A D S T E P O P T I O N S

```
  LOAD STEP NUMBER. . . . . 1
  TIME AT END OF THE LOAD STEP. . . . . 0.10000E-01
  AUTOMATIC TIME STEPPING . . . . . ON
     INITIAL NUMBER OF SUBSTEPS . . . . . 100
     MAXIMUM NUMBER OF SUBSTEPS . . . . . 1000
     MINIMUM NUMBER OF SUBSTEPS . . . . . 10
  STEP CHANGE BOUNDARY CONDITIONS . . . . . YES
  TRANSIENT (INERTIA) EFFECTS
     THERMAL DOFS . . . . . ON
  TRANSIENT INTEGRATION PARAMETERS
     THETA. . . . . 1.0000
     OSCILLATION LIMIT CRITERION. . . . . 0.50000
     TOLERANCE. . . . . 0.0000
  PRINT OUTPUT CONTROLS . . . . . .NO PRINTOUT
  DATABASE OUTPUT CONTROLS
     ITEM     FREQUENCY   COMPONENT
      ALL       NONE
     NSOL        ALL
     RSOL        ALL
     FFLU        ALL
```

SOLUTION MONITORING INFO IS WRITTEN TO FILE=
file.mntr

**** CENTER OF MASS, MASS, AND MASS MOMENTS OF INERTIA ****

CALCULATIONS ASSUME ELEMENT MASS AT ELEMENT CENTROID

TOTAL MASS = 0.70562E-05

CENTER OF MASS	MOM. OF INERTIA ABOUT ORIGIN	MOM. OF INERTIA ABOUT CENTER OF MASS

```
 XC =   15.000          IXX =   0.5315E-03      IXX =   0.5297E-03
 YC =  0.49938          IYY =   0.2646E-02      IYY =   0.1058E-02
 ZC = -0.93621E-02      IZZ =   0.2119E-02      IZZ =   0.5297E-03
                        IXY =  -0.5286E-04      IXY =  -0.3255E-10
                        IYZ =   0.6565E-07      IYZ =   0.3266E-07
                        IZX =   0.9909E-06      IZX =  -0.3542E-10


 *** MASS SUMMARY BY ELEMENT TYPE ***

 TYPE      MASS
    1  0.352175E-05
    2  0.353247E-05
    3  0.196250E-08

Range of element maximum matrix coefficients in global coordinates
Maximum = 60.3938985 at element 61121.
Minimum = 11.4143611 at element 58463.

  *** ELEMENT MATRIX FORMULATION TIMES
 TYPE  NUMBER   ENAME      TOTAL CP  AVE CP

    1   32710  SOLID87       1.500   0.000046
    2   32678  SOLID87       1.625   0.000050
    3      19  SOLID87       0.000   0.000000
    4       2  SURF152       0.000   0.000000
Time at end of element matrix formulation CP = 7.234375.

 ICCG FACTORIZATION PASS =     1  PSI=  0.0320

 TOTAL NUMBER OF NON-ZERO TERMS IN IC MATRIX IS   822948
 TOTAL NUMBER OF FILL-IN TERMS REJECTED IS  2784594
 THE TOLERANCE FOR REJECTIONS IS  0.32000E-01


IC CONJUGATE GRADIENT SOLUTION CONVERGED
 NUMBER OF ITERATIONS=           9
 NUMBER OF EQUATIONS =      100813
 NUMBER OF TERMS     =     1381819
 CALCULATED NORM     = 0.14725E-03
 TARGET NORM         = 0.91519E-03
 SPECIFIED TOLERANCE = 0.59899E-05
  Symmetric ICCG Solution Time =       0.641

  *** ELEMENT RESULT CALCULATION TIMES
 TYPE  NUMBER   ENAME      TOTAL CP  AVE CP

    1   32710  SOLID87       1.156   0.000035
    2   32678  SOLID87       0.969   0.000030
    3      19  SOLID87       0.000   0.000000
    4       2  SURF152       0.000   0.000000

  *** NODAL LOAD CALCULATION TIMES
 TYPE  NUMBER   ENAME      TOTAL CP  AVE CP

    1   32710  SOLID87       0.250   0.000008
    2   32678  SOLID87       0.156   0.000005
    3      19  SOLID87       0.000   0.000000
    4       2  SURF152       0.000   0.000000
*** LOAD STEP     1   SUBSTEP     1  COMPLETED.    CUM ITER =      1
*** TIME =  0.100000E-03     TIME INC =  0.100000E-03  NEW TRIANG MATRIX
*** RESPONSE EIGENVALUE =  10.47       OSCILLATION LIMIT = 0.1047E-02
*** AUTO STEP TIME:  NEXT TIME INC = 0.10000E-03  UNCHANGED

*** LOAD STEP     1   SUBSTEP     2  COMPLETED.    CUM ITER =      2
*** TIME =  0.200000E-03     TIME INC =  0.100000E-03  NEW TRIANG MATRIX
*** RESPONSE EIGENVALUE =  9.119       OSCILLATION LIMIT = 0.9119E-03
*** AUTO TIME STEP:  NEXT TIME INC = 0.30000E-03  INCREASED (FACTOR = 3.0000)

*** LOAD STEP     1   SUBSTEP     3  COMPLETED.    CUM ITER =      3
```

```
*** TIME =  0.500000E-03     TIME INC =  0.300000E-03  NEW TRIANG MATRIX
*** RESPONSE EIGENVALUE =  6.590       OSCILLATION LIMIT = 0.1977E-02
*** AUTO TIME STEP:  NEXT TIME INC = 0.90000E-03  INCREASED (FACTOR = 3.0000)

*** LOAD STEP     1   SUBSTEP     4  COMPLETED.    CUM ITER =      4
*** TIME =  0.140000E-02     TIME INC =  0.900000E-03  NEW TRIANG MATRIX
*** RESPONSE EIGENVALUE =  4.199       OSCILLATION LIMIT = 0.3779E-02
*** AUTO TIME STEP:  NEXT TIME INC = 0.10000E-02  INCREASED (FACTOR = 1.1111)

*** LOAD STEP     1   SUBSTEP     5  COMPLETED.    CUM ITER =      5
*** TIME =  0.240000E-02     TIME INC =  0.100000E-02  NEW TRIANG MATRIX
*** RESPONSE EIGENVALUE =  3.352       OSCILLATION LIMIT = 0.3352E-02
*** AUTO STEP TIME:  NEXT TIME INC = 0.10000E-02  UNCHANGED

*** LOAD STEP     1   SUBSTEP     6  COMPLETED.    CUM ITER =      6
*** TIME =  0.340000E-02     TIME INC =  0.100000E-02  NEW TRIANG MATRIX
*** RESPONSE EIGENVALUE =  2.888       OSCILLATION LIMIT = 0.2888E-02
*** AUTO STEP TIME:  NEXT TIME INC = 0.10000E-02  UNCHANGED

*** LOAD STEP     1   SUBSTEP     7  COMPLETED.    CUM ITER =      7
*** TIME =  0.440000E-02     TIME INC =  0.100000E-02  NEW TRIANG MATRIX
*** RESPONSE EIGENVALUE =  2.578       OSCILLATION LIMIT = 0.2578E-02
*** AUTO STEP TIME:  NEXT TIME INC = 0.10000E-02  UNCHANGED

*** LOAD STEP     1   SUBSTEP     8  COMPLETED.    CUM ITER =      8
*** TIME =  0.540000E-02     TIME INC =  0.100000E-02  NEW TRIANG MATRIX
*** RESPONSE EIGENVALUE =  2.353       OSCILLATION LIMIT = 0.2353E-02
*** AUTO STEP TIME:  NEXT TIME INC = 0.10000E-02  UNCHANGED

*** LOAD STEP     1   SUBSTEP     9  COMPLETED.    CUM ITER =      9
*** TIME =  0.640000E-02     TIME INC =  0.100000E-02  NEW TRIANG MATRIX
*** RESPONSE EIGENVALUE =  2.178       OSCILLATION LIMIT = 0.2178E-02
*** AUTO STEP TIME:  NEXT TIME INC = 0.10000E-02  UNCHANGED

*** LOAD STEP     1   SUBSTEP    10  COMPLETED.    CUM ITER =     10
*** TIME =  0.740000E-02     TIME INC =  0.100000E-02  NEW TRIANG MATRIX
*** RESPONSE EIGENVALUE =  2.038       OSCILLATION LIMIT = 0.2038E-02
*** AUTO STEP TIME:  NEXT TIME INC = 0.10000E-02  UNCHANGED

*** LOAD STEP     1   SUBSTEP    11  COMPLETED.    CUM ITER =     11
*** TIME =  0.840000E-02     TIME INC =  0.100000E-02  NEW TRIANG MATRIX
*** RESPONSE EIGENVALUE =  1.923       OSCILLATION LIMIT = 0.1923E-02
*** AUTO STEP TIME:  NEXT TIME INC = 0.10000E-02  UNCHANGED

*** LOAD STEP     1   SUBSTEP    12  COMPLETED.    CUM ITER =     12
*** TIME =  0.940000E-02     TIME INC =  0.100000E-02  NEW TRIANG MATRIX
*** RESPONSE EIGENVALUE =  1.826       OSCILLATION LIMIT = 0.1826E-02
*** AUTO TIME STEP:  NEXT TIME INC = 0.60000E-03  DECREASED (FACTOR = 0.6000)

*** LOAD STEP     1   SUBSTEP    13  COMPLETED.    CUM ITER =     13
*** TIME =  0.100000E-01     TIME INC =  0.600000E-03  NEW TRIANG MATRIX
*** RESPONSE EIGENVALUE =  1.775       OSCILLATION LIMIT = 0.1065E-02


*** ANSYS BINARY FILE STATISTICS
 BUFFER SIZE USED= 16384
     386.062 MB WRITTEN ON RESULTS FILE: file.rth
************************************************
*************** FINISHED SOLVE FOR LS 1 *************
************************************************
****************** SOLVE FOR LS 2 ****************

SPECIFIED BODY FORCE HGEN FOR ALL PICKED ELEMENTS AT STARTING LOCATION      1
IS SET ACCORDING TO TABLE PARAMETER = _LOADVARI202

USE AUTOMATIC TIME STEPPING THIS LOAD STEP

USE INITIAL TIME STEP SIZE OF 0.1000000     FOR ALL  DEGREES OF FREEDOM
FOR AUTOMATIC TIME STEPPING:
  USE 0.1000000     AS THE MINIMUM TIME STEP SIZE
```

```
  USE 0.1000000     AS THE MAXIMUM TIME STEP SIZE

 TIME= 0.20000E-01

 INCLUDE TRANSIENT EFFECTS FOR  ALL DEGREES OF FREEDOM THIS LOAD STEP

 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

 WRITE RSOL ITEMS TO THE DATABASE WITH A FREQUENCY OF ALL
   FOR ALL APPLICABLE ENTITIES

 WRITE FFLU ITEMS TO THE DATABASE WITH A FREQUENCY OF ALL
   FOR ALL APPLICABLE ENTITIES

 CONVERGENCE ON HEAT BASED ON THE NORM OF THE N-R LOAD
   WITH A TOLERANCE OF 0.1000E-02 AND A MINIMUM REFERENCE VALUE OF 0.1000E-02
   USING THE L2 NORM (CHECK THE SRSS VALUE)

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

 *** WARNING ***                          CP =      41.453   TIME= 09:56:10
 Material number 4 (used by element 65408 ) should normally have at
 least one MP or one TB type command associated with it.  Output of
 energy by material may not be available.

 *** NOTE ***                             CP =      41.625   TIME= 09:56:10
 The step data was checked and warning messages were found.
  Please review output or errors file ( D:\Daten\Ansys
 Simulation\_ProjectScratch\Scr8B73\file.err ) for these warning
 messages.
1

 ***** ANSYS - ENGINEERING ANALYSIS SYSTEM  RELEASE 12.1     *****
 ANSYS Academic Teaching Advanced
 00000000          VERSION=WINDOWS x64   09:56:10  SEP 23, 2010 CP=     42.516

 Schweißen Flachprobe--Thermisch-transient (E5)


                     L O A D   S T E P   O P T I O N S

   LOAD STEP NUMBER. . . . . . . . . . . . . . .     2
   TIME AT END OF THE LOAD STEP. . . . . . . . . . 0.20000E-01
   AUTOMATIC TIME STEPPING . . . . . . . . . . .    ON
      STARTING TIME STEP SIZE. . . . . . . . . . . 0.10000E-01
      MINIMUM TIME STEP SIZE . . . . . . . . . . . 0.10000E-01
      MAXIMUM TIME STEP SIZE . . . . . . . . . . . 0.10000E-01
   STEP CHANGE BOUNDARY CONDITIONS . . . . . . . .   YES
   TRANSIENT (INERTIA) EFFECTS
      THERMAL DOFS . . . . . . . . . . . . . . . .    ON
   TRANSIENT INTEGRATION PARAMETERS
      THETA. . . . . . . . . . . . . . . . . . . .  1.0000
      OSCILLATION LIMIT CRITERION. . . . . . . . . 0.50000
      TOLERANCE. . . . . . . . . . . . . . . . . .  0.0000
   PRINT OUTPUT CONTROLS . . . . . . . . . . . . .NO PRINTOUT
   DATABASE OUTPUT CONTROLS
      ITEM     FREQUENCY   COMPONENT
       ALL       NONE
      NSOL        ALL
      RSOL        ALL
      FFLU        ALL
```

```
 SOLUTION MONITORING INFO IS WRITTEN TO FILE=
file.mntr



 *** LOAD STEP     2   SUBSTEP     1  COMPLETED.    CUM ITER =     14
 *** TIME =  0.200000E-01     TIME INC =  0.100000E-01  NEW TRIANG MATRIX
 *** RESPONSE EIGENVALUE = 0.9491       OSCILLATION LIMIT = 0.9491E-02
 ************************************************
 ************** FINISHED SOLVE FOR LS 2 *************
 ************************************************
 ****************** SOLVE FOR LS 3 ****************

 SPECIFIED BODY FORCE HGEN FOR ALL PICKED ELEMENTS AT STARTING LOCATION      1
 IS SET ACCORDING TO TABLE PARAMETER = _LOADVARI202

 USE AUTOMATIC TIME STEPPING THIS LOAD STEP

 USE     100 SUBSTEPS INITIALLY THIS LOAD STEP FOR ALL  DEGREES OF FREEDOM
 FOR AUTOMATIC TIME STEPPING:
   USE   1000 SUBSTEPS AS A MAXIMUM
   USE     10 SUBSTEPS AS A MINIMUM

 TIME= 0.23300E-01

 INCLUDE TRANSIENT EFFECTS FOR  ALL DEGREES OF FREEDOM THIS LOAD STEP

 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

 WRITE RSOL ITEMS TO THE DATABASE WITH A FREQUENCY OF ALL
   FOR ALL APPLICABLE ENTITIES

 WRITE FFLU ITEMS TO THE DATABASE WITH A FREQUENCY OF ALL
   FOR ALL APPLICABLE ENTITIES

 CONVERGENCE ON HEAT BASED ON THE NORM OF THE N-R LOAD
   WITH A TOLERANCE OF 0.1000E-02 AND A MINIMUM REFERENCE VALUE OF 0.1000E-02
   USING THE L2 NORM (CHECK THE SRSS VALUE)

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

 *** WARNING ***                         CP =      47.469   TIME= 09:56:13
 Material number 4 (used by element 65408 ) should normally have at
 least one MP or one TB type command associated with it.  Output of
 energy by material may not be available.

 *** NOTE ***                            CP =      47.719   TIME= 09:56:13
 The step data was checked and warning messages were found.
  Please review output or errors file ( D:\Daten\Ansys
 Simulation\_ProjectScratch\Scr8B73\file.err ) for these warning
 messages.
1

 ***** ANSYS - ENGINEERING ANALYSIS SYSTEM  RELEASE 12.1     *****
 ANSYS Academic Teaching Advanced
 00000000          VERSION=WINDOWS x64   09:56:14  SEP 23, 2010 CP=     48.375

 Schweißen Flachprobe--Thermisch-transient (E5)


                     L O A D   S T E P   O P T I O N S
```

```
  LOAD STEP NUMBER. . . . . .     3
  TIME AT END OF THE LOAD STEP. . . . . 0.23300E-01
  AUTOMATIC TIME STEPPING . . . . . .    ON
     INITIAL NUMBER OF SUBSTEPS . . . . . .   100
     MAXIMUM NUMBER OF SUBSTEPS . . . . . .  1000
     MINIMUM NUMBER OF SUBSTEPS . . . . . .    10
  STEP CHANGE BOUNDARY CONDITIONS . . . . . .   YES
  TRANSIENT (INERTIA) EFFECTS
     THERMAL DOFS . . . . . .    ON
  TRANSIENT INTEGRATION PARAMETERS
     THETA. . . . . .  1.0000
     OSCILLATION LIMIT CRITERION. . . . . 0.50000
     TOLERANCE. . . . . .  0.0000
  PRINT OUTPUT CONTROLS . . . . . .NO PRINTOUT
  DATABASE OUTPUT CONTROLS
     ITEM     FREQUENCY   COMPONENT
      ALL       NONE
     NSOL        ALL
     RSOL        ALL
     FFLU        ALL


 SOLUTION MONITORING INFO IS WRITTEN TO FILE=
file.mntr



 *** LOAD STEP     3   SUBSTEP     1  COMPLETED.    CUM ITER =     15
 *** TIME =  0.200330E-01     TIME INC =  0.330000E-04  NEW TRIANG MATRIX
 *** RESPONSE EIGENVALUE = 0.9480       OSCILLATION LIMIT = 0.3128E-04
 *** AUTO STEP TIME:  NEXT TIME INC = 0.33000E-04  UNCHANGED

 *** LOAD STEP     3   SUBSTEP     2  COMPLETED.    CUM ITER =     16
 *** TIME =  0.200660E-01     TIME INC =  0.330000E-04  NEW TRIANG MATRIX
 *** RESPONSE EIGENVALUE = 0.9471       OSCILLATION LIMIT = 0.3125E-04
 *** AUTO TIME STEP:  NEXT TIME INC = 0.99000E-04  INCREASED (FACTOR = 3.0000)

 *** LOAD STEP     3   SUBSTEP     3  COMPLETED.    CUM ITER =     17
 *** TIME =  0.201650E-01     TIME INC =  0.990000E-04  NEW TRIANG MATRIX
 *** RESPONSE EIGENVALUE = 0.9459       OSCILLATION LIMIT = 0.9364E-04
 *** AUTO TIME STEP:  NEXT TIME INC = 0.29700E-03  INCREASED (FACTOR = 3.0000)

 *** LOAD STEP     3   SUBSTEP     4  COMPLETED.    CUM ITER =     18
 *** TIME =  0.204620E-01     TIME INC =  0.297000E-03  NEW TRIANG MATRIX
 *** RESPONSE EIGENVALUE = 0.9500       OSCILLATION LIMIT = 0.2822E-03
 *** AUTO TIME STEP:  NEXT TIME INC = 0.33000E-03  INCREASED (FACTOR = 1.1111)

 *** LOAD STEP     3   SUBSTEP     5  COMPLETED.    CUM ITER =     19
 *** TIME =  0.207920E-01     TIME INC =  0.330000E-03  NEW TRIANG MATRIX
 *** RESPONSE EIGENVALUE = 0.9635       OSCILLATION LIMIT = 0.3179E-03
 *** AUTO STEP TIME:  NEXT TIME INC = 0.33000E-03  UNCHANGED

 *** LOAD STEP     3   SUBSTEP     6  COMPLETED.    CUM ITER =     20
 *** TIME =  0.211220E-01     TIME INC =  0.330000E-03  NEW TRIANG MATRIX
 *** RESPONSE EIGENVALUE = 0.9858       OSCILLATION LIMIT = 0.3253E-03
 *** AUTO STEP TIME:  NEXT TIME INC = 0.33000E-03  UNCHANGED

 *** LOAD STEP     3   SUBSTEP     7  COMPLETED.    CUM ITER =     21
 *** TIME =  0.214520E-01     TIME INC =  0.330000E-03  NEW TRIANG MATRIX
 *** RESPONSE EIGENVALUE =  1.018       OSCILLATION LIMIT = 0.3359E-03
 *** AUTO STEP TIME:  NEXT TIME INC = 0.33000E-03  UNCHANGED

 *** LOAD STEP     3   SUBSTEP     8  COMPLETED.    CUM ITER =     22
 *** TIME =  0.217820E-01     TIME INC =  0.330000E-03  NEW TRIANG MATRIX
 *** RESPONSE EIGENVALUE =  1.061       OSCILLATION LIMIT = 0.3503E-03
 *** AUTO STEP TIME:  NEXT TIME INC = 0.33000E-03  UNCHANGED

 *** LOAD STEP     3   SUBSTEP     9  COMPLETED.    CUM ITER =     23
 *** TIME =  0.221120E-01     TIME INC =  0.330000E-03  NEW TRIANG MATRIX
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*** RESPONSE EIGENVALUE =  1.118       OSCILLATION LIMIT = 0.3690E-03
*** AUTO STEP TIME:  NEXT TIME INC = 0.33000E-03  UNCHANGED

*** LOAD STEP     3   SUBSTEP    10  COMPLETED.    CUM ITER =     24
*** TIME =  0.224420E-01     TIME INC =  0.330000E-03  NEW TRIANG MATRIX
*** RESPONSE EIGENVALUE =  1.191       OSCILLATION LIMIT = 0.3931E-03
*** AUTO STEP TIME:  NEXT TIME INC = 0.33000E-03  UNCHANGED

*** LOAD STEP     3   SUBSTEP    11  COMPLETED.    CUM ITER =     25
*** TIME =  0.227720E-01     TIME INC =  0.330000E-03  NEW TRIANG MATRIX
*** RESPONSE EIGENVALUE =  1.284       OSCILLATION LIMIT = 0.4237E-03
*** AUTO STEP TIME:  NEXT TIME INC = 0.33000E-03  UNCHANGED

*** LOAD STEP     3   SUBSTEP    12  COMPLETED.    CUM ITER =     26
*** TIME =  0.231020E-01     TIME INC =  0.330000E-03  NEW TRIANG MATRIX
*** RESPONSE EIGENVALUE =  1.401       OSCILLATION LIMIT = 0.4624E-03
*** AUTO TIME STEP:  NEXT TIME INC = 0.19800E-03  DECREASED (FACTOR = 0.6000)

*** LOAD STEP     3   SUBSTEP    13  COMPLETED.    CUM ITER =     27
*** TIME =  0.233000E-01     TIME INC =  0.198000E-03  NEW TRIANG MATRIX
*** RESPONSE EIGENVALUE =  1.487       OSCILLATION LIMIT = 0.2943E-03
************************************************
*************** FINISHED SOLVE FOR LS 3 *************
************************************************
****************** SOLVE FOR LS 4 ****************

SPECIFIED BODY FORCE HGEN FOR ALL PICKED ELEMENTS AT STARTING LOCATION      1
IS SET ACCORDING TO TABLE PARAMETER = _LOADVARI202

USE AUTOMATIC TIME STEPPING THIS LOAD STEP

USE     100 SUBSTEPS INITIALLY THIS LOAD STEP FOR ALL  DEGREES OF FREEDOM
FOR AUTOMATIC TIME STEPPING:
  USE   1000 SUBSTEPS AS A MAXIMUM
  USE     10 SUBSTEPS AS A MINIMUM

TIME= 0.26700E-01

INCLUDE TRANSIENT EFFECTS FOR  ALL DEGREES OF FREEDOM THIS LOAD STEP

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

WRITE RSOL ITEMS TO THE DATABASE WITH A FREQUENCY OF ALL
  FOR ALL APPLICABLE ENTITIES

WRITE FFLU ITEMS TO THE DATABASE WITH A FREQUENCY OF ALL
  FOR ALL APPLICABLE ENTITIES

CONVERGENCE ON HEAT BASED ON THE NORM OF THE N-R LOAD
  WITH A TOLERANCE OF 0.1000E-02 AND A MINIMUM REFERENCE VALUE OF 0.1000E-02
  USING THE L2 NORM (CHECK THE SRSS VALUE)

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

*** WARNING ***                         CP =      84.281   TIME= 09:56:34
Material number 4 (used by element 65408 ) should normally have at
least one MP or one TB type command associated with it.  Output of
energy by material may not be available.

*** NOTE ***                            CP =      84.484   TIME= 09:56:35
The step data was checked and warning messages were found.
 Please review output or errors file ( D:\Daten\Ansys
Simulation\_ProjectScratch\Scr8B73\file.err ) for these warning
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 messages.
1

 ***** ANSYS - ENGINEERING ANALYSIS SYSTEM  RELEASE 12.1     *****
 ANSYS Academic Teaching Advanced
 00000000          VERSION=WINDOWS x64   09:56:35  SEP 23, 2010 CP=     85.219

 Schweißen Flachprobe--Thermisch-transient (E5)


                     L O A D   S T E P   O P T I O N S

   LOAD STEP NUMBER. . . . . .     4
   TIME AT END OF THE LOAD STEP. . . . . 0.26700E-01
   AUTOMATIC TIME STEPPING . . . . . .    ON
      INITIAL NUMBER OF SUBSTEPS . . . . . .   100
      MAXIMUM NUMBER OF SUBSTEPS . . . . . .  1000
      MINIMUM NUMBER OF SUBSTEPS . . . . . .    10
   STEP CHANGE BOUNDARY CONDITIONS . . . . . .   YES
   TRANSIENT (INERTIA) EFFECTS
      THERMAL DOFS . . . . . .    ON
   TRANSIENT INTEGRATION PARAMETERS
      THETA. . . . . .  1.0000
      OSCILLATION LIMIT CRITERION. . . . . 0.50000
      TOLERANCE. . . . . .  0.0000
   PRINT OUTPUT CONTROLS . . . . . .NO PRINTOUT
   DATABASE OUTPUT CONTROLS
      ITEM     FREQUENCY   COMPONENT
       ALL       NONE
      NSOL        ALL
      RSOL        ALL
      FFLU        ALL


 SOLUTION MONITORING INFO IS WRITTEN TO FILE=
file.mntr



 *** LOAD STEP     4   SUBSTEP     1  COMPLETED.    CUM ITER =     28
 *** TIME =  0.233340E-01     TIME INC =  0.340000E-04  NEW TRIANG MATRIX
 *** RESPONSE EIGENVALUE =  1.487       OSCILLATION LIMIT = 0.5055E-04
 *** AUTO STEP TIME:  NEXT TIME INC = 0.34000E-04  UNCHANGED

 *** LOAD STEP     4   SUBSTEP     2  COMPLETED.    CUM ITER =     29
 *** TIME =  0.233680E-01     TIME INC =  0.340000E-04  NEW TRIANG MATRIX
 *** RESPONSE EIGENVALUE =  1.487       OSCILLATION LIMIT = 0.5056E-04
 *** AUTO TIME STEP:  NEXT TIME INC = 0.10200E-03  INCREASED (FACTOR = 3.0000)

 *** LOAD STEP     4   SUBSTEP     3  COMPLETED.    CUM ITER =     30
 *** TIME =  0.234700E-01     TIME INC =  0.102000E-03  NEW TRIANG MATRIX
 *** RESPONSE EIGENVALUE =  1.491       OSCILLATION LIMIT = 0.1521E-03
 *** AUTO TIME STEP:  NEXT TIME INC = 0.30600E-03  INCREASED (FACTOR = 3.0000)

 *** LOAD STEP     4   SUBSTEP     4  COMPLETED.    CUM ITER =     31
 *** TIME =  0.237760E-01     TIME INC =  0.306000E-03  NEW TRIANG MATRIX
 *** RESPONSE EIGENVALUE =  1.518       OSCILLATION LIMIT = 0.4645E-03
 *** AUTO TIME STEP:  NEXT TIME INC = 0.34000E-03  INCREASED (FACTOR = 1.1111)

 *** LOAD STEP     4   SUBSTEP     5  COMPLETED.    CUM ITER =     32
 *** TIME =  0.241160E-01     TIME INC =  0.340000E-03  NEW TRIANG MATRIX
 *** RESPONSE EIGENVALUE =  1.566       OSCILLATION LIMIT = 0.5324E-03
 *** AUTO STEP TIME:  NEXT TIME INC = 0.34000E-03  UNCHANGED

 *** LOAD STEP     4   SUBSTEP     6  COMPLETED.    CUM ITER =     33
 *** TIME =  0.244560E-01     TIME INC =  0.340000E-03  NEW TRIANG MATRIX
 *** RESPONSE EIGENVALUE =  1.631       OSCILLATION LIMIT = 0.5545E-03
 *** AUTO STEP TIME:  NEXT TIME INC = 0.34000E-03  UNCHANGED
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*** LOAD STEP     4   SUBSTEP     7  COMPLETED.    CUM ITER =     34
*** TIME =  0.247960E-01     TIME INC =  0.340000E-03  NEW TRIANG MATRIX
*** RESPONSE EIGENVALUE =  1.714       OSCILLATION LIMIT = 0.5827E-03
*** AUTO STEP TIME:  NEXT TIME INC = 0.34000E-03  UNCHANGED

*** LOAD STEP     4   SUBSTEP     8  COMPLETED.    CUM ITER =     35
*** TIME =  0.251360E-01     TIME INC =  0.340000E-03  NEW TRIANG MATRIX
*** RESPONSE EIGENVALUE =  1.817       OSCILLATION LIMIT = 0.6177E-03
*** AUTO STEP TIME:  NEXT TIME INC = 0.34000E-03  UNCHANGED

*** LOAD STEP     4   SUBSTEP     9  COMPLETED.    CUM ITER =     36
*** TIME =  0.254760E-01     TIME INC =  0.340000E-03  NEW TRIANG MATRIX
*** RESPONSE EIGENVALUE =  1.942       OSCILLATION LIMIT = 0.6604E-03
*** AUTO STEP TIME:  NEXT TIME INC = 0.34000E-03  UNCHANGED

*** LOAD STEP     4   SUBSTEP    10  COMPLETED.    CUM ITER =     37
*** TIME =  0.258160E-01     TIME INC =  0.340000E-03  NEW TRIANG MATRIX
*** RESPONSE EIGENVALUE =  2.095       OSCILLATION LIMIT = 0.7123E-03
*** AUTO STEP TIME:  NEXT TIME INC = 0.34000E-03  UNCHANGED

*** LOAD STEP     4   SUBSTEP    11  COMPLETED.    CUM ITER =     38
*** TIME =  0.261560E-01     TIME INC =  0.340000E-03  NEW TRIANG MATRIX
*** RESPONSE EIGENVALUE =  2.279       OSCILLATION LIMIT = 0.7750E-03
*** AUTO STEP TIME:  NEXT TIME INC = 0.34000E-03  UNCHANGED

*** LOAD STEP     4   SUBSTEP    12  COMPLETED.    CUM ITER =     39
*** TIME =  0.264960E-01     TIME INC =  0.340000E-03  NEW TRIANG MATRIX
*** RESPONSE EIGENVALUE =  2.502       OSCILLATION LIMIT = 0.8508E-03
*** AUTO TIME STEP:  NEXT TIME INC = 0.20400E-03  DECREASED (FACTOR = 0.6000)

*** LOAD STEP     4   SUBSTEP    13  COMPLETED.    CUM ITER =     40
*** TIME =  0.267000E-01     TIME INC =  0.204000E-03  NEW TRIANG MATRIX
*** RESPONSE EIGENVALUE =  2.658       OSCILLATION LIMIT = 0.5422E-03
************************************************
*************** FINISHED SOLVE FOR LS 4 *************
************************************************
****************** SOLVE FOR LS 5 ****************

SPECIFIED BODY FORCE HGEN FOR ALL PICKED ELEMENTS AT STARTING LOCATION      1
IS SET ACCORDING TO TABLE PARAMETER = _LOADVARI202

USE AUTOMATIC TIME STEPPING THIS LOAD STEP

USE     100 SUBSTEPS INITIALLY THIS LOAD STEP FOR ALL  DEGREES OF FREEDOM
FOR AUTOMATIC TIME STEPPING:
  USE   1000 SUBSTEPS AS A MAXIMUM
  USE     10 SUBSTEPS AS A MINIMUM

TIME= 0.30000E-01

INCLUDE TRANSIENT EFFECTS FOR  ALL DEGREES OF FREEDOM THIS LOAD STEP

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

WRITE RSOL ITEMS TO THE DATABASE WITH A FREQUENCY OF ALL
  FOR ALL APPLICABLE ENTITIES

WRITE FFLU ITEMS TO THE DATABASE WITH A FREQUENCY OF ALL
  FOR ALL APPLICABLE ENTITIES

CONVERGENCE ON HEAT BASED ON THE NORM OF THE N-R LOAD
  WITH A TOLERANCE OF 0.1000E-02 AND A MINIMUM REFERENCE VALUE OF 0.1000E-02
  USING THE L2 NORM (CHECK THE SRSS VALUE)
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 *****  ANSYS SOLVE    COMMAND  *****

 *** WARNING ***                          CP =     121.578   TIME= 09:56:55
 Material number 4 (used by element 65408 ) should normally have at
 least one MP or one TB type command associated with it.  Output of
 energy by material may not be available.

 *** NOTE ***                             CP =     121.750   TIME= 09:56:56
 The step data was checked and warning messages were found.
  Please review output or errors file ( D:\Daten\Ansys
 Simulation\_ProjectScratch\Scr8B73\file.err ) for these warning
 messages.
1

 ***** ANSYS - ENGINEERING ANALYSIS SYSTEM  RELEASE 12.1     *****
 ANSYS Academic Teaching Advanced
 00000000          VERSION=WINDOWS x64   09:56:56  SEP 23, 2010 CP=    122.594

 Schweißen Flachprobe--Thermisch-transient (E5)


                     L O A D   S T E P   O P T I O N S

   LOAD STEP NUMBER. . . . . . . . . . . . . . . .     5
   TIME AT END OF THE LOAD STEP. . . . . . . . . . 0.30000E-01
   AUTOMATIC TIME STEPPING . . . . . . . . . . . .    ON
      INITIAL NUMBER OF SUBSTEPS . . . . . . . . .   100
      MAXIMUM NUMBER OF SUBSTEPS . . . . . . . . .  1000
      MINIMUM NUMBER OF SUBSTEPS . . . . . . . . .    10
   STEP CHANGE BOUNDARY CONDITIONS . . . . . . . .   YES
   TRANSIENT (INERTIA) EFFECTS
      THERMAL DOFS . . . . . . . . . . . . . . . .    ON
   TRANSIENT INTEGRATION PARAMETERS
      THETA. . . . . . . . . . . . . . . . . . . .  1.0000
      OSCILLATION LIMIT CRITERION. . . . . . . . . 0.50000
      TOLERANCE. . . . . . . . . . . . . . . . . .  0.0000
   PRINT OUTPUT CONTROLS . . . . . . . . . . . . .NO PRINTOUT
   DATABASE OUTPUT CONTROLS
      ITEM     FREQUENCY   COMPONENT
       ALL       NONE
      NSOL        ALL
      RSOL        ALL
      FFLU        ALL


 SOLUTION MONITORING INFO IS WRITTEN TO FILE=
file.mntr




 *** LOAD STEP     5   SUBSTEP     1  COMPLETED.    CUM ITER =     41
 *** TIME =  0.267330E-01     TIME INC =  0.330000E-04  NEW TRIANG MATRIX
 *** RESPONSE EIGENVALUE =  2.663       OSCILLATION LIMIT = 0.8789E-04
 *** AUTO STEP TIME:  NEXT TIME INC = 0.33000E-04  UNCHANGED

 *** LOAD STEP     5   SUBSTEP     2  COMPLETED.    CUM ITER =     42
 *** TIME =  0.267660E-01     TIME INC =  0.330000E-04  NEW TRIANG MATRIX
 *** RESPONSE EIGENVALUE =  2.669       OSCILLATION LIMIT = 0.8809E-04
 *** AUTO TIME STEP:  NEXT TIME INC = 0.99000E-04  INCREASED (FACTOR = 3.0000)

 *** LOAD STEP     5   SUBSTEP     3  COMPLETED.    CUM ITER =     43
 *** TIME =  0.268650E-01     TIME INC =  0.990000E-04  NEW TRIANG MATRIX
 *** RESPONSE EIGENVALUE =  2.689       OSCILLATION LIMIT = 0.2662E-03
 *** AUTO TIME STEP:  NEXT TIME INC = 0.29700E-03  INCREASED (FACTOR = 3.0000)

 *** LOAD STEP     5   SUBSTEP     4  COMPLETED.    CUM ITER =     44
 *** TIME =  0.271620E-01     TIME INC =  0.297000E-03  NEW TRIANG MATRIX
 *** RESPONSE EIGENVALUE =  2.769       OSCILLATION LIMIT = 0.8223E-03
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*** AUTO TIME STEP:  NEXT TIME INC = 0.33000E-03  INCREASED (FACTOR = 1.1111)

*** LOAD STEP     5   SUBSTEP     5  COMPLETED.    CUM ITER =     45
*** TIME =  0.274920E-01     TIME INC =  0.330000E-03  NEW TRIANG MATRIX
*** RESPONSE EIGENVALUE =  2.882       OSCILLATION LIMIT = 0.9509E-03
*** AUTO STEP TIME:  NEXT TIME INC = 0.33000E-03  UNCHANGED

*** LOAD STEP     5   SUBSTEP     6  COMPLETED.    CUM ITER =     46
*** TIME =  0.278220E-01     TIME INC =  0.330000E-03  NEW TRIANG MATRIX
*** RESPONSE EIGENVALUE =  3.020       OSCILLATION LIMIT = 0.9965E-03
*** AUTO STEP TIME:  NEXT TIME INC = 0.33000E-03  UNCHANGED

*** LOAD STEP     5   SUBSTEP     7  COMPLETED.    CUM ITER =     47
*** TIME =  0.281520E-01     TIME INC =  0.330000E-03  NEW TRIANG MATRIX
*** RESPONSE EIGENVALUE =  3.185       OSCILLATION LIMIT = 0.1051E-02
*** AUTO STEP TIME:  NEXT TIME INC = 0.33000E-03  UNCHANGED

*** LOAD STEP     5   SUBSTEP     8  COMPLETED.    CUM ITER =     48
*** TIME =  0.284820E-01     TIME INC =  0.330000E-03  NEW TRIANG MATRIX
*** RESPONSE EIGENVALUE =  3.382       OSCILLATION LIMIT = 0.1116E-02
*** AUTO STEP TIME:  NEXT TIME INC = 0.33000E-03  UNCHANGED

*** LOAD STEP     5   SUBSTEP     9  COMPLETED.    CUM ITER =     49
*** TIME =  0.288120E-01     TIME INC =  0.330000E-03  NEW TRIANG MATRIX
*** RESPONSE EIGENVALUE =  3.612       OSCILLATION LIMIT = 0.1192E-02
*** AUTO STEP TIME:  NEXT TIME INC = 0.33000E-03  UNCHANGED

*** LOAD STEP     5   SUBSTEP    10  COMPLETED.    CUM ITER =     50
*** TIME =  0.291420E-01     TIME INC =  0.330000E-03  NEW TRIANG MATRIX
*** RESPONSE EIGENVALUE =  3.883       OSCILLATION LIMIT = 0.1281E-02
*** AUTO STEP TIME:  NEXT TIME INC = 0.33000E-03  UNCHANGED

*** LOAD STEP     5   SUBSTEP    11  COMPLETED.    CUM ITER =     51
*** TIME =  0.294720E-01     TIME INC =  0.330000E-03  NEW TRIANG MATRIX
*** RESPONSE EIGENVALUE =  4.199       OSCILLATION LIMIT = 0.1386E-02
*** AUTO STEP TIME:  NEXT TIME INC = 0.33000E-03  UNCHANGED

*** LOAD STEP     5   SUBSTEP    12  COMPLETED.    CUM ITER =     52
*** TIME =  0.298020E-01     TIME INC =  0.330000E-03  NEW TRIANG MATRIX
*** RESPONSE EIGENVALUE =  4.571       OSCILLATION LIMIT = 0.1508E-02
*** AUTO TIME STEP:  NEXT TIME INC = 0.19800E-03  DECREASED (FACTOR = 0.6000)

*** LOAD STEP     5   SUBSTEP    13  COMPLETED.    CUM ITER =     53
*** TIME =  0.300000E-01     TIME INC =  0.198000E-03  NEW TRIANG MATRIX
*** RESPONSE EIGENVALUE =  4.824       OSCILLATION LIMIT = 0.9551E-03
************************************************
************** FINISHED SOLVE FOR LS 5 *************
************************************************
****************** SOLVE FOR LS 6 ****************

SPECIFIED BODY FORCE HGEN FOR ALL PICKED ELEMENTS AT STARTING LOCATION      1
IS SET ACCORDING TO TABLE PARAMETER = _LOADVARI202

USE AUTOMATIC TIME STEPPING THIS LOAD STEP

USE     100 SUBSTEPS INITIALLY THIS LOAD STEP FOR ALL  DEGREES OF FREEDOM
FOR AUTOMATIC TIME STEPPING:
  USE   1000 SUBSTEPS AS A MAXIMUM
  USE     10 SUBSTEPS AS A MINIMUM

TIME= 0.33400E-01

INCLUDE TRANSIENT EFFECTS FOR  ALL DEGREES OF FREEDOM THIS LOAD STEP

ERASE THE CURRENT DATABASE OUTPUT CONTROL TABLE.


WRITE ALL  ITEMS TO THE DATABASE WITH A FREQUENCY OF NONE
  FOR ALL APPLICABLE ENTITIES
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 WRITE NSOL ITEMS TO THE DATABASE WITH A FREQUENCY OF ALL
   FOR ALL APPLICABLE ENTITIES

 WRITE RSOL ITEMS TO THE DATABASE WITH A FREQUENCY OF ALL
   FOR ALL APPLICABLE ENTITIES

 WRITE FFLU ITEMS TO THE DATABASE WITH A FREQUENCY OF ALL
   FOR ALL APPLICABLE ENTITIES

 CONVERGENCE ON HEAT BASED ON THE NORM OF THE N-R LOAD
   WITH A TOLERANCE OF 0.1000E-02 AND A MINIMUM REFERENCE VALUE OF 0.1000E-02
   USING THE L2 NORM (CHECK THE SRSS VALUE)

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

 *** WARNING ***                          CP =     159.531   TIME= 09:57:17
 Material number 4 (used by element 65408 ) should normally have at
 least one MP or one TB type command associated with it.  Output of
 energy by material may not be available.

 *** NOTE ***                             CP =     159.828   TIME= 09:57:17
 The step data was checked and warning messages were found.
  Please review output or errors file ( D:\Daten\Ansys
 Simulation\_ProjectScratch\Scr8B73\file.err ) for these warning
 messages.
1

 ***** ANSYS - ENGINEERING ANALYSIS SYSTEM  RELEASE 12.1     *****
 ANSYS Academic Teaching Advanced
 00000000          VERSION=WINDOWS x64   09:57:17  SEP 23, 2010 CP=    160.531

 Schweißen Flachprobe--Thermisch-transient (E5)


                     L O A D   S T E P   O P T I O N S

   LOAD STEP NUMBER. . . . . . . . . . . . . . . .     6
   TIME AT END OF THE LOAD STEP. . . . . . . . . . 0.33400E-01
   AUTOMATIC TIME STEPPING . . . . . . . . . . . .    ON
      INITIAL NUMBER OF SUBSTEPS . . . . . . . . .   100
      MAXIMUM NUMBER OF SUBSTEPS . . . . . . . . .  1000
      MINIMUM NUMBER OF SUBSTEPS . . . . . . . . .    10
   STEP CHANGE BOUNDARY CONDITIONS . . . . . . . .   YES
   TRANSIENT (INERTIA) EFFECTS
      THERMAL DOFS . . . . . . . . . . . . . . . .    ON
   TRANSIENT INTEGRATION PARAMETERS
      THETA. . . . . . . . . . . . . . . . . . . .  1.0000
      OSCILLATION LIMIT CRITERION. . . . . . . . . 0.50000
      TOLERANCE. . . . . . . . . . . . . . . . . .  0.0000
   PRINT OUTPUT CONTROLS . . . . . . . . . . . . .NO PRINTOUT
   DATABASE OUTPUT CONTROLS
      ITEM     FREQUENCY   COMPONENT
       ALL       NONE
      NSOL        ALL
      RSOL        ALL
      FFLU        ALL


 SOLUTION MONITORING INFO IS WRITTEN TO FILE=
file.mntr




 *** LOAD STEP     6   SUBSTEP     1  COMPLETED.    CUM ITER =     54
 *** TIME =  0.300340E-01     TIME INC =  0.340000E-04  NEW TRIANG MATRIX
 *** RESPONSE EIGENVALUE =  4.834       OSCILLATION LIMIT = 0.1643E-03
 *** AUTO STEP TIME:  NEXT TIME INC = 0.34000E-04  UNCHANGED

 *** LOAD STEP     6   SUBSTEP     2  COMPLETED.    CUM ITER =     55
```

```
*** TIME =  0.300680E-01     TIME INC =  0.340000E-04  NEW TRIANG MATRIX
*** RESPONSE EIGENVALUE =  4.844       OSCILLATION LIMIT = 0.1647E-03
*** AUTO TIME STEP:  NEXT TIME INC = 0.10200E-03  INCREASED (FACTOR = 3.0000)

*** LOAD STEP     6   SUBSTEP     3  COMPLETED.    CUM ITER =     56
*** TIME =  0.301700E-01     TIME INC =  0.102000E-03  NEW TRIANG MATRIX
*** RESPONSE EIGENVALUE =  4.879       OSCILLATION LIMIT = 0.4976E-03
*** AUTO TIME STEP:  NEXT TIME INC = 0.30600E-03  INCREASED (FACTOR = 3.0000)

*** LOAD STEP     6   SUBSTEP     4  COMPLETED.    CUM ITER =     57
*** TIME =  0.304760E-01     TIME INC =  0.306000E-03  NEW TRIANG MATRIX
*** RESPONSE EIGENVALUE =  5.008       OSCILLATION LIMIT = 0.1533E-02
*** AUTO TIME STEP:  NEXT TIME INC = 0.34000E-03  INCREASED (FACTOR = 1.1111)

*** LOAD STEP     6   SUBSTEP     5  COMPLETED.    CUM ITER =     58
*** TIME =  0.308160E-01     TIME INC =  0.340000E-03  NEW TRIANG MATRIX
*** RESPONSE EIGENVALUE =  5.185       OSCILLATION LIMIT = 0.1763E-02
*** AUTO STEP TIME:  NEXT TIME INC = 0.34000E-03  UNCHANGED

*** LOAD STEP     6   SUBSTEP     6  COMPLETED.    CUM ITER =     59
*** TIME =  0.311560E-01     TIME INC =  0.340000E-03  NEW TRIANG MATRIX
*** RESPONSE EIGENVALUE =  5.396       OSCILLATION LIMIT = 0.1835E-02
*** AUTO STEP TIME:  NEXT TIME INC = 0.34000E-03  UNCHANGED

*** LOAD STEP     6   SUBSTEP     7  COMPLETED.    CUM ITER =     60
*** TIME =  0.314960E-01     TIME INC =  0.340000E-03  NEW TRIANG MATRIX
*** RESPONSE EIGENVALUE =  5.644       OSCILLATION LIMIT = 0.1919E-02
*** AUTO STEP TIME:  NEXT TIME INC = 0.34000E-03  UNCHANGED

*** LOAD STEP     6   SUBSTEP     8  COMPLETED.    CUM ITER =     61
*** TIME =  0.318360E-01     TIME INC =  0.340000E-03  NEW TRIANG MATRIX
*** RESPONSE EIGENVALUE =  5.930       OSCILLATION LIMIT = 0.2016E-02
*** AUTO STEP TIME:  NEXT TIME INC = 0.34000E-03  UNCHANGED

*** LOAD STEP     6   SUBSTEP     9  COMPLETED.    CUM ITER =     62
*** TIME =  0.321760E-01     TIME INC =  0.340000E-03  NEW TRIANG MATRIX
*** RESPONSE EIGENVALUE =  6.260       OSCILLATION LIMIT = 0.2128E-02
*** AUTO STEP TIME:  NEXT TIME INC = 0.34000E-03  UNCHANGED

*** LOAD STEP     6   SUBSTEP    10  COMPLETED.    CUM ITER =     63
*** TIME =  0.325160E-01     TIME INC =  0.340000E-03  NEW TRIANG MATRIX
*** RESPONSE EIGENVALUE =  6.638       OSCILLATION LIMIT = 0.2257E-02
*** AUTO STEP TIME:  NEXT TIME INC = 0.34000E-03  UNCHANGED

*** LOAD STEP     6   SUBSTEP    11  COMPLETED.    CUM ITER =     64
*** TIME =  0.328560E-01     TIME INC =  0.340000E-03  NEW TRIANG MATRIX
*** RESPONSE EIGENVALUE =  7.071       OSCILLATION LIMIT = 0.2404E-02
*** AUTO STEP TIME:  NEXT TIME INC = 0.34000E-03  UNCHANGED

*** LOAD STEP     6   SUBSTEP    12  COMPLETED.    CUM ITER =     65
*** TIME =  0.331960E-01     TIME INC =  0.340000E-03  NEW TRIANG MATRIX
*** RESPONSE EIGENVALUE =  7.565       OSCILLATION LIMIT = 0.2572E-02
*** AUTO TIME STEP:  NEXT TIME INC = 0.20400E-03  DECREASED (FACTOR = 0.6000)

*** LOAD STEP     6   SUBSTEP    13  COMPLETED.    CUM ITER =     66
*** TIME =  0.334000E-01     TIME INC =  0.204000E-03  NEW TRIANG MATRIX
*** RESPONSE EIGENVALUE =  7.893       OSCILLATION LIMIT = 0.1610E-02
************************************************
************** FINISHED SOLVE FOR LS 6 *************
************************************************
****************** SOLVE FOR LS 7 ****************

SPECIFIED BODY FORCE HGEN FOR ALL PICKED ELEMENTS AT STARTING LOCATION      1
IS SET ACCORDING TO TABLE PARAMETER = _LOADVARI202

USE AUTOMATIC TIME STEPPING THIS LOAD STEP

USE     100 SUBSTEPS INITIALLY THIS LOAD STEP FOR ALL  DEGREES OF FREEDOM
FOR AUTOMATIC TIME STEPPING:
  USE   1000 SUBSTEPS AS A MAXIMUM
```

```
  USE     10 SUBSTEPS AS A MINIMUM

 TIME= 0.37400E-01

 INCLUDE TRANSIENT EFFECTS FOR  ALL DEGREES OF FREEDOM THIS LOAD STEP

 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

 WRITE RSOL ITEMS TO THE DATABASE WITH A FREQUENCY OF ALL
   FOR ALL APPLICABLE ENTITIES

 WRITE FFLU ITEMS TO THE DATABASE WITH A FREQUENCY OF ALL
   FOR ALL APPLICABLE ENTITIES

 CONVERGENCE ON HEAT BASED ON THE NORM OF THE N-R LOAD
   WITH A TOLERANCE OF 0.1000E-02 AND A MINIMUM REFERENCE VALUE OF 0.1000E-02
   USING THE L2 NORM (CHECK THE SRSS VALUE)

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

 *** WARNING ***                          CP =     196.656   TIME= 09:57:38
 Material number 4 (used by element 65408 ) should normally have at
 least one MP or one TB type command associated with it.  Output of
 energy by material may not be available.

 *** NOTE ***                             CP =     196.812   TIME= 09:57:38
 The step data was checked and warning messages were found.
  Please review output or errors file ( D:\Daten\Ansys
 Simulation\_ProjectScratch\Scr8B73\file.err ) for these warning
 messages.
1

 ***** ANSYS - ENGINEERING ANALYSIS SYSTEM  RELEASE 12.1     *****
 ANSYS Academic Teaching Advanced
 00000000          VERSION=WINDOWS x64   09:57:38  SEP 23, 2010 CP=    197.703

 Schweißen Flachprobe--Thermisch-transient (E5)


                     L O A D   S T E P   O P T I O N S

   LOAD STEP NUMBER. . . . . . . . . . . . . . . .     7
   TIME AT END OF THE LOAD STEP. . . . . . . . . . 0.37400E-01
   AUTOMATIC TIME STEPPING . . . . . . . . . . . .    ON
      INITIAL NUMBER OF SUBSTEPS . . . . . . . . .   100
      MAXIMUM NUMBER OF SUBSTEPS . . . . . . . . .  1000
      MINIMUM NUMBER OF SUBSTEPS . . . . . . . . .    10
   STEP CHANGE BOUNDARY CONDITIONS . . . . . . . .   YES
   TRANSIENT (INERTIA) EFFECTS
      THERMAL DOFS . . . . . . . . . . . . . . . .    ON
   TRANSIENT INTEGRATION PARAMETERS
      THETA. . . . . . . . . . . . . . . . . . . .  1.0000
      OSCILLATION LIMIT CRITERION. . . . . . . . . 0.50000
      TOLERANCE. . . . . . . . . . . . . . . . . .  0.0000
   PRINT OUTPUT CONTROLS . . . . . . . . . . . . .NO PRINTOUT
   DATABASE OUTPUT CONTROLS
      ITEM     FREQUENCY   COMPONENT
       ALL       NONE
      NSOL        ALL
      RSOL        ALL
      FFLU        ALL
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 SOLUTION MONITORING INFO IS WRITTEN TO FILE=
file.mntr



 *** LOAD STEP     7   SUBSTEP     1  COMPLETED.    CUM ITER =     67
 *** TIME =  0.334400E-01     TIME INC =  0.400000E-04  NEW TRIANG MATRIX
 *** RESPONSE EIGENVALUE =  7.907       OSCILLATION LIMIT = 0.3163E-03
 *** AUTO STEP TIME:  NEXT TIME INC = 0.40000E-04  UNCHANGED

 *** LOAD STEP     7   SUBSTEP     2  COMPLETED.    CUM ITER =     68
 *** TIME =  0.334800E-01     TIME INC =  0.400000E-04  NEW TRIANG MATRIX
 *** RESPONSE EIGENVALUE =  7.922       OSCILLATION LIMIT = 0.3169E-03
 *** AUTO TIME STEP:  NEXT TIME INC = 0.12000E-03  INCREASED (FACTOR = 3.0000)

 *** LOAD STEP     7   SUBSTEP     3  COMPLETED.    CUM ITER =     69
 *** TIME =  0.336000E-01     TIME INC =  0.120000E-03  NEW TRIANG MATRIX
 *** RESPONSE EIGENVALUE =  7.970       OSCILLATION LIMIT = 0.9564E-03
 *** AUTO TIME STEP:  NEXT TIME INC = 0.36000E-03  INCREASED (FACTOR = 3.0000)

 *** LOAD STEP     7   SUBSTEP     4  COMPLETED.    CUM ITER =     70
 *** TIME =  0.339600E-01     TIME INC =  0.360000E-03  NEW TRIANG MATRIX
 *** RESPONSE EIGENVALUE =  8.150       OSCILLATION LIMIT = 0.2934E-02
 *** AUTO TIME STEP:  NEXT TIME INC = 0.40000E-03  INCREASED (FACTOR = 1.1111)

 *** LOAD STEP     7   SUBSTEP     5  COMPLETED.    CUM ITER =     71
 *** TIME =  0.343600E-01     TIME INC =  0.400000E-03  NEW TRIANG MATRIX
 *** RESPONSE EIGENVALUE =  8.393       OSCILLATION LIMIT = 0.3357E-02
 *** AUTO STEP TIME:  NEXT TIME INC = 0.40000E-03  UNCHANGED

 *** LOAD STEP     7   SUBSTEP     6  COMPLETED.    CUM ITER =     72
 *** TIME =  0.347600E-01     TIME INC =  0.400000E-03  NEW TRIANG MATRIX
 *** RESPONSE EIGENVALUE =  8.682       OSCILLATION LIMIT = 0.3473E-02
 *** AUTO STEP TIME:  NEXT TIME INC = 0.40000E-03  UNCHANGED

 *** LOAD STEP     7   SUBSTEP     7  COMPLETED.    CUM ITER =     73
 *** TIME =  0.351600E-01     TIME INC =  0.400000E-03  NEW TRIANG MATRIX
 *** RESPONSE EIGENVALUE =  9.018       OSCILLATION LIMIT = 0.3607E-02
 *** AUTO STEP TIME:  NEXT TIME INC = 0.40000E-03  UNCHANGED

 *** LOAD STEP     7   SUBSTEP     8  COMPLETED.    CUM ITER =     74
 *** TIME =  0.355600E-01     TIME INC =  0.400000E-03  NEW TRIANG MATRIX
 *** RESPONSE EIGENVALUE =  9.404       OSCILLATION LIMIT = 0.3762E-02
 *** AUTO STEP TIME:  NEXT TIME INC = 0.40000E-03  UNCHANGED

 *** LOAD STEP     7   SUBSTEP     9  COMPLETED.    CUM ITER =     75
 *** TIME =  0.359600E-01     TIME INC =  0.400000E-03  NEW TRIANG MATRIX
 *** RESPONSE EIGENVALUE =  9.844       OSCILLATION LIMIT = 0.3937E-02
 *** AUTO STEP TIME:  NEXT TIME INC = 0.40000E-03  UNCHANGED

 *** LOAD STEP     7   SUBSTEP    10  COMPLETED.    CUM ITER =     76
 *** TIME =  0.363600E-01     TIME INC =  0.400000E-03  NEW TRIANG MATRIX
 *** RESPONSE EIGENVALUE =  10.34       OSCILLATION LIMIT = 0.4136E-02
 *** AUTO STEP TIME:  NEXT TIME INC = 0.40000E-03  UNCHANGED

 *** LOAD STEP     7   SUBSTEP    11  COMPLETED.    CUM ITER =     77
 *** TIME =  0.367600E-01     TIME INC =  0.400000E-03  NEW TRIANG MATRIX
 *** RESPONSE EIGENVALUE =  10.90       OSCILLATION LIMIT = 0.4360E-02
 *** AUTO STEP TIME:  NEXT TIME INC = 0.40000E-03  UNCHANGED

 *** LOAD STEP     7   SUBSTEP    12  COMPLETED.    CUM ITER =     78
 *** TIME =  0.371600E-01     TIME INC =  0.400000E-03  NEW TRIANG MATRIX
 *** RESPONSE EIGENVALUE =  11.53       OSCILLATION LIMIT = 0.4612E-02
 *** AUTO TIME STEP:  NEXT TIME INC = 0.24000E-03  DECREASED (FACTOR = 0.6000)

 *** LOAD STEP     7   SUBSTEP    13  COMPLETED.    CUM ITER =     79
 *** TIME =  0.374000E-01     TIME INC =  0.240000E-03  NEW TRIANG MATRIX
 *** RESPONSE EIGENVALUE =  11.94       OSCILLATION LIMIT = 0.2866E-02
 ************************************************
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*************** FINISHED SOLVE FOR LS 7 *************
************************************************
****************** SOLVE FOR LS 8 ****************

SPECIFIED BODY FORCE HGEN FOR ALL PICKED ELEMENTS AT STARTING LOCATION      1
IS SET ACCORDING TO TABLE PARAMETER = _LOADVARI202

USE AUTOMATIC TIME STEPPING THIS LOAD STEP

USE     100 SUBSTEPS INITIALLY THIS LOAD STEP FOR ALL  DEGREES OF FREEDOM
FOR AUTOMATIC TIME STEPPING:
  USE   1000 SUBSTEPS AS A MAXIMUM
  USE     10 SUBSTEPS AS A MINIMUM

TIME= 0.43200E-01

INCLUDE TRANSIENT EFFECTS FOR  ALL DEGREES OF FREEDOM THIS LOAD STEP

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

WRITE RSOL ITEMS TO THE DATABASE WITH A FREQUENCY OF ALL
  FOR ALL APPLICABLE ENTITIES

WRITE FFLU ITEMS TO THE DATABASE WITH A FREQUENCY OF ALL
  FOR ALL APPLICABLE ENTITIES

CONVERGENCE ON HEAT BASED ON THE NORM OF THE N-R LOAD
  WITH A TOLERANCE OF 0.1000E-02 AND A MINIMUM REFERENCE VALUE OF 0.1000E-02
  USING THE L2 NORM (CHECK THE SRSS VALUE)

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

*** WARNING ***                         CP =     233.188   TIME= 09:57:59
Material number 4 (used by element 65408 ) should normally have at
least one MP or one TB type command associated with it.  Output of
energy by material may not be available.

*** NOTE ***                            CP =     233.375   TIME= 09:57:59
The step data was checked and warning messages were found.
 Please review output or errors file ( D:\Daten\Ansys
Simulation\_ProjectScratch\Scr8B73\file.err ) for these warning
messages.
1

***** ANSYS - ENGINEERING ANALYSIS SYSTEM  RELEASE 12.1     *****
ANSYS Academic Teaching Advanced
00000000          VERSION=WINDOWS x64   09:57:59  SEP 23, 2010 CP=    234.109

Schweißen Flachprobe--Thermisch-transient (E5)


                    L O A D   S T E P   O P T I O N S

  LOAD STEP NUMBER. . . . . . . . . . . . . . . .     8
  TIME AT END OF THE LOAD STEP. . . . . . . . . . 0.43200E-01
  AUTOMATIC TIME STEPPING . . . . . . . . . . . .    ON
     INITIAL NUMBER OF SUBSTEPS . . . . . . . . .   100
     MAXIMUM NUMBER OF SUBSTEPS . . . . . . . . .  1000
     MINIMUM NUMBER OF SUBSTEPS . . . . . . . . .    10
  STEP CHANGE BOUNDARY CONDITIONS . . . . . . . .   YES
  TRANSIENT (INERTIA) EFFECTS
     THERMAL DOFS . . . . . . . . . . . . . . . .    ON
  TRANSIENT INTEGRATION PARAMETERS
```

```
     THETA. . . . . . . . . . . . . . . . . . . .  1.0000
     OSCILLATION LIMIT CRITERION. . . . . . . . . 0.50000
     TOLERANCE. . . . . . . . . . . . . . . . . .  0.0000
   PRINT OUTPUT CONTROLS . . . . . . . . . . . . .NO PRINTOUT
   DATABASE OUTPUT CONTROLS
      ITEM     FREQUENCY   COMPONENT
       ALL       NONE
      NSOL        ALL
      RSOL        ALL
      FFLU        ALL


 SOLUTION MONITORING INFO IS WRITTEN TO FILE=
file.mntr



 *** LOAD STEP     8   SUBSTEP     1  COMPLETED.    CUM ITER =     80
 *** TIME =  0.374580E-01     TIME INC =  0.580000E-04  NEW TRIANG MATRIX
 *** RESPONSE EIGENVALUE =  11.94       OSCILLATION LIMIT = 0.6926E-03
 *** AUTO STEP TIME:  NEXT TIME INC = 0.58000E-04  UNCHANGED

 *** LOAD STEP     8   SUBSTEP     2  COMPLETED.    CUM ITER =     81
 *** TIME =  0.375160E-01     TIME INC =  0.580000E-04  NEW TRIANG MATRIX
 *** RESPONSE EIGENVALUE =  11.94       OSCILLATION LIMIT = 0.6927E-03
 *** AUTO TIME STEP:  NEXT TIME INC = 0.17400E-03  INCREASED (FACTOR = 3.0000)

 *** LOAD STEP     8   SUBSTEP     3  COMPLETED.    CUM ITER =     82
 *** TIME =  0.376900E-01     TIME INC =  0.174000E-03  NEW TRIANG MATRIX
 *** RESPONSE EIGENVALUE =  11.95       OSCILLATION LIMIT = 0.2080E-02
 *** AUTO TIME STEP:  NEXT TIME INC = 0.52200E-03  INCREASED (FACTOR = 3.0000)

 *** LOAD STEP     8   SUBSTEP     4  COMPLETED.    CUM ITER =     83
 *** TIME =  0.382120E-01     TIME INC =  0.522000E-03  NEW TRIANG MATRIX
 *** RESPONSE EIGENVALUE =  12.04       OSCILLATION LIMIT = 0.6287E-02
 *** AUTO TIME STEP:  NEXT TIME INC = 0.58000E-03  INCREASED (FACTOR = 1.1111)

 *** LOAD STEP     8   SUBSTEP     5  COMPLETED.    CUM ITER =     84
 *** TIME =  0.387920E-01     TIME INC =  0.580000E-03  NEW TRIANG MATRIX
 *** RESPONSE EIGENVALUE =  12.20       OSCILLATION LIMIT = 0.7079E-02
 *** AUTO STEP TIME:  NEXT TIME INC = 0.58000E-03  UNCHANGED

 *** LOAD STEP     8   SUBSTEP     6  COMPLETED.    CUM ITER =     85
 *** TIME =  0.393720E-01     TIME INC =  0.580000E-03  NEW TRIANG MATRIX
 *** RESPONSE EIGENVALUE =  12.42       OSCILLATION LIMIT = 0.7205E-02
 *** AUTO STEP TIME:  NEXT TIME INC = 0.58000E-03  UNCHANGED

 *** LOAD STEP     8   SUBSTEP     7  COMPLETED.    CUM ITER =     86
 *** TIME =  0.399520E-01     TIME INC =  0.580000E-03  NEW TRIANG MATRIX
 *** RESPONSE EIGENVALUE =  12.70       OSCILLATION LIMIT = 0.7363E-02
 *** AUTO STEP TIME:  NEXT TIME INC = 0.58000E-03  UNCHANGED

 *** LOAD STEP     8   SUBSTEP     8  COMPLETED.    CUM ITER =     87
 *** TIME =  0.405320E-01     TIME INC =  0.580000E-03  NEW TRIANG MATRIX
 *** RESPONSE EIGENVALUE =  13.02       OSCILLATION LIMIT = 0.7553E-02
 *** AUTO STEP TIME:  NEXT TIME INC = 0.58000E-03  UNCHANGED

 *** LOAD STEP     8   SUBSTEP     9  COMPLETED.    CUM ITER =     88
 *** TIME =  0.411120E-01     TIME INC =  0.580000E-03  NEW TRIANG MATRIX
 *** RESPONSE EIGENVALUE =  13.41       OSCILLATION LIMIT = 0.7775E-02
 *** AUTO STEP TIME:  NEXT TIME INC = 0.58000E-03  UNCHANGED

 *** LOAD STEP     8   SUBSTEP    10  COMPLETED.    CUM ITER =     89
 *** TIME =  0.416920E-01     TIME INC =  0.580000E-03  NEW TRIANG MATRIX
 *** RESPONSE EIGENVALUE =  13.84       OSCILLATION LIMIT = 0.8028E-02
 *** AUTO STEP TIME:  NEXT TIME INC = 0.58000E-03  UNCHANGED

 *** LOAD STEP     8   SUBSTEP    11  COMPLETED.    CUM ITER =     90
 *** TIME =  0.422720E-01     TIME INC =  0.580000E-03  NEW TRIANG MATRIX
```

```
*** RESPONSE EIGENVALUE =  14.33       OSCILLATION LIMIT = 0.8313E-02
*** AUTO STEP TIME:  NEXT TIME INC = 0.58000E-03  UNCHANGED

*** LOAD STEP     8   SUBSTEP    12  COMPLETED.    CUM ITER =     91
*** TIME =  0.428520E-01     TIME INC =  0.580000E-03  NEW TRIANG MATRIX
*** RESPONSE EIGENVALUE =  14.88       OSCILLATION LIMIT = 0.8630E-02
*** AUTO TIME STEP:  NEXT TIME INC = 0.34800E-03  DECREASED (FACTOR = 0.6000)

*** LOAD STEP     8   SUBSTEP    13  COMPLETED.    CUM ITER =     92
*** TIME =  0.432000E-01     TIME INC =  0.348000E-03  NEW TRIANG MATRIX
*** RESPONSE EIGENVALUE =  15.23       OSCILLATION LIMIT = 0.5300E-02
************************************************
************** FINISHED SOLVE FOR LS 8 *************
************************************************
****************** SOLVE FOR LS 9 ****************

SPECIFIED BODY FORCE HGEN FOR ALL PICKED ELEMENTS AT STARTING LOCATION      1
IS SET ACCORDING TO TABLE PARAMETER = _LOADVARI202

USE AUTOMATIC TIME STEPPING THIS LOAD STEP

USE     100 SUBSTEPS INITIALLY THIS LOAD STEP FOR ALL  DEGREES OF FREEDOM
FOR AUTOMATIC TIME STEPPING:
  USE   1000 SUBSTEPS AS A MAXIMUM
  USE     10 SUBSTEPS AS A MINIMUM

TIME= 0.53600E-01

INCLUDE TRANSIENT EFFECTS FOR  ALL DEGREES OF FREEDOM THIS LOAD STEP

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

WRITE RSOL ITEMS TO THE DATABASE WITH A FREQUENCY OF ALL
  FOR ALL APPLICABLE ENTITIES

WRITE FFLU ITEMS TO THE DATABASE WITH A FREQUENCY OF ALL
  FOR ALL APPLICABLE ENTITIES

CONVERGENCE ON HEAT BASED ON THE NORM OF THE N-R LOAD
  WITH A TOLERANCE OF 0.1000E-02 AND A MINIMUM REFERENCE VALUE OF 0.1000E-02
  USING THE L2 NORM (CHECK THE SRSS VALUE)

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

*** WARNING ***                         CP =     269.766   TIME= 09:58:20
Material number 4 (used by element 65408 ) should normally have at
least one MP or one TB type command associated with it.  Output of
energy by material may not be available.

*** NOTE ***                            CP =     269.969   TIME= 09:58:20
The step data was checked and warning messages were found.
 Please review output or errors file ( D:\Daten\Ansys
Simulation\_ProjectScratch\Scr8B73\file.err ) for these warning
messages.
1

***** ANSYS - ENGINEERING ANALYSIS SYSTEM  RELEASE 12.1     *****
ANSYS Academic Teaching Advanced
00000000          VERSION=WINDOWS x64   09:58:20  SEP 23, 2010 CP=    270.656

Schweißen Flachprobe--Thermisch-transient (E5)
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                    L O A D   S T E P   O P T I O N S

   LOAD STEP NUMBER. . . . . .     9
   TIME AT END OF THE LOAD STEP. . . . . 0.53600E-01
   AUTOMATIC TIME STEPPING . . . . . .    ON
      INITIAL NUMBER OF SUBSTEPS . . . . . .   100
      MAXIMUM NUMBER OF SUBSTEPS . . . . . .  1000
      MINIMUM NUMBER OF SUBSTEPS . . . . . .    10
   STEP CHANGE BOUNDARY CONDITIONS . . . . . .   YES
   TRANSIENT (INERTIA) EFFECTS
      THERMAL DOFS . . . . . .    ON
   TRANSIENT INTEGRATION PARAMETERS
      THETA. . . . . .  1.0000
      OSCILLATION LIMIT CRITERION. . . . . 0.50000
      TOLERANCE. . . . . .  0.0000
   PRINT OUTPUT CONTROLS . . . . . .NO PRINTOUT
   DATABASE OUTPUT CONTROLS
      ITEM     FREQUENCY   COMPONENT
       ALL       NONE
      NSOL        ALL
      RSOL        ALL
      FFLU        ALL


 SOLUTION MONITORING INFO IS WRITTEN TO FILE=
file.mntr



 *** LOAD STEP     9   SUBSTEP     1  COMPLETED.    CUM ITER =     93
 *** TIME =  0.433040E-01     TIME INC =  0.104000E-03  NEW TRIANG MATRIX
 *** RESPONSE EIGENVALUE =  15.18       OSCILLATION LIMIT = 0.1579E-02
 *** AUTO STEP TIME:  NEXT TIME INC = 0.10400E-03  UNCHANGED

 *** LOAD STEP     9   SUBSTEP     2  COMPLETED.    CUM ITER =     94
 *** TIME =  0.434080E-01     TIME INC =  0.104000E-03  NEW TRIANG MATRIX
 *** RESPONSE EIGENVALUE =  15.14       OSCILLATION LIMIT = 0.1575E-02
 *** AUTO TIME STEP:  NEXT TIME INC = 0.31200E-03  INCREASED (FACTOR = 3.0000)

 *** LOAD STEP     9   SUBSTEP     3  COMPLETED.    CUM ITER =     95
 *** TIME =  0.437200E-01     TIME INC =  0.312000E-03  NEW TRIANG MATRIX
 *** RESPONSE EIGENVALUE =  15.02       OSCILLATION LIMIT = 0.4686E-02
 *** AUTO TIME STEP:  NEXT TIME INC = 0.93600E-03  INCREASED (FACTOR = 3.0000)

 *** LOAD STEP     9   SUBSTEP     4  COMPLETED.    CUM ITER =     96
 *** TIME =  0.446560E-01     TIME INC =  0.936000E-03  NEW TRIANG MATRIX
 *** RESPONSE EIGENVALUE =  14.75       OSCILLATION LIMIT = 0.1381E-01
 *** AUTO TIME STEP:  NEXT TIME INC = 0.10400E-02  INCREASED (FACTOR = 1.1111)

 *** LOAD STEP     9   SUBSTEP     5  COMPLETED.    CUM ITER =     97
 *** TIME =  0.456960E-01     TIME INC =  0.104000E-02  NEW TRIANG MATRIX
 *** RESPONSE EIGENVALUE =  14.55       OSCILLATION LIMIT = 0.1513E-01
 *** AUTO STEP TIME:  NEXT TIME INC = 0.10400E-02  UNCHANGED

 *** LOAD STEP     9   SUBSTEP     6  COMPLETED.    CUM ITER =     98
 *** TIME =  0.467360E-01     TIME INC =  0.104000E-02  NEW TRIANG MATRIX
 *** RESPONSE EIGENVALUE =  14.43       OSCILLATION LIMIT = 0.1500E-01
 *** AUTO STEP TIME:  NEXT TIME INC = 0.10400E-02  UNCHANGED

 *** LOAD STEP     9   SUBSTEP     7  COMPLETED.    CUM ITER =     99
 *** TIME =  0.477760E-01     TIME INC =  0.104000E-02  NEW TRIANG MATRIX
 *** RESPONSE EIGENVALUE =  14.37       OSCILLATION LIMIT = 0.1494E-01
 *** AUTO STEP TIME:  NEXT TIME INC = 0.10400E-02  UNCHANGED

 *** LOAD STEP     9   SUBSTEP     8  COMPLETED.    CUM ITER =    100
 *** TIME =  0.488160E-01     TIME INC =  0.104000E-02  NEW TRIANG MATRIX
 *** RESPONSE EIGENVALUE =  14.37       OSCILLATION LIMIT = 0.1494E-01
 *** AUTO STEP TIME:  NEXT TIME INC = 0.10400E-02  UNCHANGED
```

```
*** LOAD STEP     9   SUBSTEP     9  COMPLETED.    CUM ITER =    101
*** TIME =  0.498560E-01     TIME INC =  0.104000E-02  NEW TRIANG MATRIX
*** RESPONSE EIGENVALUE =  14.42       OSCILLATION LIMIT = 0.1500E-01
*** AUTO STEP TIME:  NEXT TIME INC = 0.10400E-02  UNCHANGED

*** LOAD STEP     9   SUBSTEP    10  COMPLETED.    CUM ITER =    102
*** TIME =  0.508960E-01     TIME INC =  0.104000E-02  NEW TRIANG MATRIX
*** RESPONSE EIGENVALUE =  14.53       OSCILLATION LIMIT = 0.1511E-01
*** AUTO STEP TIME:  NEXT TIME INC = 0.10400E-02  UNCHANGED

*** LOAD STEP     9   SUBSTEP    11  COMPLETED.    CUM ITER =    103
*** TIME =  0.519360E-01     TIME INC =  0.104000E-02  NEW TRIANG MATRIX
*** RESPONSE EIGENVALUE =  14.67       OSCILLATION LIMIT = 0.1526E-01
*** AUTO STEP TIME:  NEXT TIME INC = 0.10400E-02  UNCHANGED

*** LOAD STEP     9   SUBSTEP    12  COMPLETED.    CUM ITER =    104
*** TIME =  0.529760E-01     TIME INC =  0.104000E-02  NEW TRIANG MATRIX
*** RESPONSE EIGENVALUE =  14.85       OSCILLATION LIMIT = 0.1545E-01
*** AUTO TIME STEP:  NEXT TIME INC = 0.62400E-03  DECREASED (FACTOR = 0.6000)

*** LOAD STEP     9   SUBSTEP    13  COMPLETED.    CUM ITER =    105
*** TIME =  0.536000E-01     TIME INC =  0.624000E-03  NEW TRIANG MATRIX
*** RESPONSE EIGENVALUE =  14.97       OSCILLATION LIMIT = 0.9344E-02
************************************************
*************** FINISHED SOLVE FOR LS 9 *************
************************************************
****************** SOLVE FOR LS 10 ****************

SPECIFIED BODY FORCE HGEN FOR ALL PICKED ELEMENTS AT STARTING LOCATION      1
IS SET ACCORDING TO TABLE PARAMETER = _LOADVARI202

USE AUTOMATIC TIME STEPPING THIS LOAD STEP

USE     100 SUBSTEPS INITIALLY THIS LOAD STEP FOR ALL  DEGREES OF FREEDOM
FOR AUTOMATIC TIME STEPPING:
  USE   1000 SUBSTEPS AS A MAXIMUM
  USE     10 SUBSTEPS AS A MINIMUM

TIME= 0.76100E-01

INCLUDE TRANSIENT EFFECTS FOR  ALL DEGREES OF FREEDOM THIS LOAD STEP

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

WRITE RSOL ITEMS TO THE DATABASE WITH A FREQUENCY OF ALL
  FOR ALL APPLICABLE ENTITIES

WRITE FFLU ITEMS TO THE DATABASE WITH A FREQUENCY OF ALL
  FOR ALL APPLICABLE ENTITIES

CONVERGENCE ON HEAT BASED ON THE NORM OF THE N-R LOAD
  WITH A TOLERANCE OF 0.1000E-02 AND A MINIMUM REFERENCE VALUE OF 0.1000E-02
  USING THE L2 NORM (CHECK THE SRSS VALUE)

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

*** WARNING ***                         CP =     306.562   TIME= 09:58:41
Material number 4 (used by element 65408 ) should normally have at
least one MP or one TB type command associated with it.  Output of
energy by material may not be available.

*** NOTE ***                            CP =     306.844   TIME= 09:58:41
The step data was checked and warning messages were found.
```

```
 Please review output or errors file ( D:\Daten\Ansys
Simulation\_ProjectScratch\Scr8B73\file.err ) for these warning
messages.
1

 ***** ANSYS - ENGINEERING ANALYSIS SYSTEM  RELEASE 12.1     *****
 ANSYS Academic Teaching Advanced
 00000000          VERSION=WINDOWS x64   09:58:41  SEP 23, 2010 CP=    307.469

 Schweißen Flachprobe--Thermisch-transient (E5)


                     L O A D   S T E P   O P T I O N S

   LOAD STEP NUMBER. . . . . . . . . . . . . . . .    10
   TIME AT END OF THE LOAD STEP. . . . . . . . . . 0.76100E-01
   AUTOMATIC TIME STEPPING . . . . . . . . . . . .    ON
      INITIAL NUMBER OF SUBSTEPS . . . . . . . . .   100
      MAXIMUM NUMBER OF SUBSTEPS . . . . . . . . .  1000
      MINIMUM NUMBER OF SUBSTEPS . . . . . . . . .    10
   STEP CHANGE BOUNDARY CONDITIONS . . . . . . . .   YES
   TRANSIENT (INERTIA) EFFECTS
      THERMAL DOFS . . . . . . . . . . . . . . . .    ON
   TRANSIENT INTEGRATION PARAMETERS
      THETA. . . . . . . . . . . . . . . . . . . .  1.0000
      OSCILLATION LIMIT CRITERION. . . . . . . . . 0.50000
      TOLERANCE. . . . . . . . . . . . . . . . . .  0.0000
   PRINT OUTPUT CONTROLS . . . . . . . . . . . . .NO PRINTOUT
   DATABASE OUTPUT CONTROLS
      ITEM     FREQUENCY   COMPONENT
       ALL       NONE
      NSOL        ALL
      RSOL        ALL
      FFLU        ALL


 SOLUTION MONITORING INFO IS WRITTEN TO FILE=
file.mntr




 *** LOAD STEP    10   SUBSTEP     1  COMPLETED.    CUM ITER =    106
 *** TIME =  0.538250E-01     TIME INC =  0.225000E-03  NEW TRIANG MATRIX
 *** RESPONSE EIGENVALUE =  14.86       OSCILLATION LIMIT = 0.3344E-02
 *** AUTO STEP TIME:  NEXT TIME INC = 0.22500E-03  UNCHANGED

 *** LOAD STEP    10   SUBSTEP     2  COMPLETED.    CUM ITER =    107
 *** TIME =  0.540500E-01     TIME INC =  0.225000E-03  NEW TRIANG MATRIX
 *** RESPONSE EIGENVALUE =  14.75       OSCILLATION LIMIT = 0.3320E-02
 *** AUTO TIME STEP:  NEXT TIME INC = 0.67500E-03  INCREASED (FACTOR = 3.0000)

 *** LOAD STEP    10   SUBSTEP     3  COMPLETED.    CUM ITER =    108
 *** TIME =  0.547250E-01     TIME INC =  0.675000E-03  NEW TRIANG MATRIX
 *** RESPONSE EIGENVALUE =  14.45       OSCILLATION LIMIT = 0.9756E-02
 *** AUTO TIME STEP:  NEXT TIME INC = 0.20250E-02  INCREASED (FACTOR = 3.0000)

 *** LOAD STEP    10   SUBSTEP     4  COMPLETED.    CUM ITER =    109
 *** TIME =  0.567500E-01     TIME INC =  0.202500E-02  NEW TRIANG MATRIX
 *** RESPONSE EIGENVALUE =  13.70       OSCILLATION LIMIT = 0.2775E-01
 *** AUTO TIME STEP:  NEXT TIME INC = 0.22500E-02  INCREASED (FACTOR = 1.1111)

 *** LOAD STEP    10   SUBSTEP     5  COMPLETED.    CUM ITER =    110
 *** TIME =  0.590000E-01     TIME INC =  0.225000E-02  NEW TRIANG MATRIX
 *** RESPONSE EIGENVALUE =  13.02       OSCILLATION LIMIT = 0.2929E-01
 *** AUTO STEP TIME:  NEXT TIME INC = 0.22500E-02  UNCHANGED

 *** LOAD STEP    10   SUBSTEP     6  COMPLETED.    CUM ITER =    111
 *** TIME =  0.612500E-01     TIME INC =  0.225000E-02  NEW TRIANG MATRIX
 *** RESPONSE EIGENVALUE =  12.45       OSCILLATION LIMIT = 0.2801E-01
```

```
*** AUTO STEP TIME:  NEXT TIME INC = 0.22500E-02  UNCHANGED

*** LOAD STEP    10   SUBSTEP     7  COMPLETED.    CUM ITER =    112
*** TIME =  0.635000E-01     TIME INC =  0.225000E-02  NEW TRIANG MATRIX
*** RESPONSE EIGENVALUE =  11.98       OSCILLATION LIMIT = 0.2695E-01
*** AUTO STEP TIME:  NEXT TIME INC = 0.22500E-02  UNCHANGED

*** LOAD STEP    10   SUBSTEP     8  COMPLETED.    CUM ITER =    113
*** TIME =  0.657500E-01     TIME INC =  0.225000E-02  NEW TRIANG MATRIX
*** RESPONSE EIGENVALUE =  11.58       OSCILLATION LIMIT = 0.2606E-01
*** AUTO STEP TIME:  NEXT TIME INC = 0.22500E-02  UNCHANGED

*** LOAD STEP    10   SUBSTEP     9  COMPLETED.    CUM ITER =    114
*** TIME =  0.680000E-01     TIME INC =  0.225000E-02  NEW TRIANG MATRIX
*** RESPONSE EIGENVALUE =  11.26       OSCILLATION LIMIT = 0.2533E-01
*** AUTO STEP TIME:  NEXT TIME INC = 0.22500E-02  UNCHANGED

*** LOAD STEP    10   SUBSTEP    10  COMPLETED.    CUM ITER =    115
*** TIME =  0.702500E-01     TIME INC =  0.225000E-02  NEW TRIANG MATRIX
*** RESPONSE EIGENVALUE =  10.99       OSCILLATION LIMIT = 0.2473E-01
*** AUTO STEP TIME:  NEXT TIME INC = 0.22500E-02  UNCHANGED

*** LOAD STEP    10   SUBSTEP    11  COMPLETED.    CUM ITER =    116
*** TIME =  0.725000E-01     TIME INC =  0.225000E-02  NEW TRIANG MATRIX
*** RESPONSE EIGENVALUE =  10.77       OSCILLATION LIMIT = 0.2424E-01
*** AUTO STEP TIME:  NEXT TIME INC = 0.22500E-02  UNCHANGED

*** LOAD STEP    10   SUBSTEP    12  COMPLETED.    CUM ITER =    117
*** TIME =  0.747500E-01     TIME INC =  0.225000E-02  NEW TRIANG MATRIX
*** RESPONSE EIGENVALUE =  10.60       OSCILLATION LIMIT = 0.2384E-01
*** AUTO TIME STEP:  NEXT TIME INC = 0.13500E-02  DECREASED (FACTOR = 0.6000)

*** LOAD STEP    10   SUBSTEP    13  COMPLETED.    CUM ITER =    118
*** TIME =  0.761000E-01     TIME INC =  0.135000E-02  NEW TRIANG MATRIX
*** RESPONSE EIGENVALUE =  10.50       OSCILLATION LIMIT = 0.1418E-01
************************************************
*************** FINISHED SOLVE FOR LS 10 *************
************************************************
****************** SOLVE FOR LS 11 ****************

SPECIFIED BODY FORCE HGEN FOR ALL PICKED ELEMENTS AT STARTING LOCATION      1
IS SET ACCORDING TO TABLE PARAMETER = _LOADVARI202

USE AUTOMATIC TIME STEPPING THIS LOAD STEP

USE     100 SUBSTEPS INITIALLY THIS LOAD STEP FOR ALL  DEGREES OF FREEDOM
FOR AUTOMATIC TIME STEPPING:
  USE   1000 SUBSTEPS AS A MAXIMUM
  USE     10 SUBSTEPS AS A MINIMUM

TIME= 0.11640

INCLUDE TRANSIENT EFFECTS FOR  ALL DEGREES OF FREEDOM THIS LOAD STEP

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

WRITE RSOL ITEMS TO THE DATABASE WITH A FREQUENCY OF ALL
  FOR ALL APPLICABLE ENTITIES

WRITE FFLU ITEMS TO THE DATABASE WITH A FREQUENCY OF ALL
  FOR ALL APPLICABLE ENTITIES

CONVERGENCE ON HEAT BASED ON THE NORM OF THE N-R LOAD
```

```
  WITH A TOLERANCE OF 0.1000E-02 AND A MINIMUM REFERENCE VALUE OF 0.1000E-02
  USING THE L2 NORM (CHECK THE SRSS VALUE)

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

 *** WARNING ***                          CP =     344.172   TIME= 09:59:02
 Material number 4 (used by element 65408 ) should normally have at
 least one MP or one TB type command associated with it.  Output of
 energy by material may not be available.

 *** NOTE ***                            CP =     344.359   TIME= 09:59:02
 The step data was checked and warning messages were found.
  Please review output or errors file ( D:\Daten\Ansys
 Simulation\_ProjectScratch\Scr8B73\file.err ) for these warning
 messages.
1

 ***** ANSYS - ENGINEERING ANALYSIS SYSTEM  RELEASE 12.1     *****
 ANSYS Academic Teaching Advanced
 00000000          VERSION=WINDOWS x64   09:59:02  SEP 23, 2010 CP=    345.094

 Schweißen Flachprobe--Thermisch-transient (E5)


                     L O A D   S T E P   O P T I O N S

   LOAD STEP NUMBER. . . . . . . . . . . . . . . .    11
   TIME AT END OF THE LOAD STEP. . . . . . . . . . 0.11640
   AUTOMATIC TIME STEPPING . . . . . . . . . . . .    ON
      INITIAL NUMBER OF SUBSTEPS . . . . . . . . .   100
      MAXIMUM NUMBER OF SUBSTEPS . . . . . . . . .  1000
      MINIMUM NUMBER OF SUBSTEPS . . . . . . . . .    10
   STEP CHANGE BOUNDARY CONDITIONS . . . . . . . .   YES
   TRANSIENT (INERTIA) EFFECTS
      THERMAL DOFS . . . . . . . . . . . . . . . .    ON
   TRANSIENT INTEGRATION PARAMETERS
      THETA. . . . . . . . . . . . . . . . . . . .  1.0000
      OSCILLATION LIMIT CRITERION. . . . . . . . . 0.50000
      TOLERANCE. . . . . . . . . . . . . . . . . .  0.0000
   PRINT OUTPUT CONTROLS . . . . . . . . . . . . .NO PRINTOUT
   DATABASE OUTPUT CONTROLS
      ITEM     FREQUENCY   COMPONENT
       ALL       NONE
      NSOL        ALL
      RSOL        ALL
      FFLU        ALL


 SOLUTION MONITORING INFO IS WRITTEN TO FILE=
file.mntr




 *** LOAD STEP    11   SUBSTEP     1  COMPLETED.    CUM ITER =    119
 *** TIME =  0.765030E-01     TIME INC =  0.403000E-03  NEW TRIANG MATRIX
 *** RESPONSE EIGENVALUE =  10.42       OSCILLATION LIMIT = 0.4197E-02
 *** AUTO STEP TIME:  NEXT TIME INC = 0.40300E-03  UNCHANGED

 *** LOAD STEP    11   SUBSTEP     2  COMPLETED.    CUM ITER =    120
 *** TIME =  0.769060E-01     TIME INC =  0.403000E-03  NEW TRIANG MATRIX
 *** RESPONSE EIGENVALUE =  10.33       OSCILLATION LIMIT = 0.4163E-02
 *** AUTO TIME STEP:  NEXT TIME INC = 0.12090E-02  INCREASED (FACTOR = 3.0000)

 *** LOAD STEP    11   SUBSTEP     3  COMPLETED.    CUM ITER =    121
 *** TIME =  0.781150E-01     TIME INC =  0.120900E-02  NEW TRIANG MATRIX
 *** RESPONSE EIGENVALUE =  10.09       OSCILLATION LIMIT = 0.1219E-01
 *** AUTO TIME STEP:  NEXT TIME INC = 0.36270E-02  INCREASED (FACTOR = 3.0000)

 *** LOAD STEP    11   SUBSTEP     4  COMPLETED.    CUM ITER =    122
```

```
*** TIME =  0.817420E-01     TIME INC =  0.362700E-02  NEW TRIANG MATRIX
*** RESPONSE EIGENVALUE =  9.462       OSCILLATION LIMIT = 0.3432E-01
*** AUTO TIME STEP:  NEXT TIME INC = 0.40300E-02  INCREASED (FACTOR = 1.1111)

*** LOAD STEP    11   SUBSTEP     5  COMPLETED.    CUM ITER =    123
*** TIME =  0.857720E-01     TIME INC =  0.403000E-02  NEW TRIANG MATRIX
*** RESPONSE EIGENVALUE =  8.874       OSCILLATION LIMIT = 0.3576E-01
*** AUTO STEP TIME:  NEXT TIME INC = 0.40300E-02  UNCHANGED

*** LOAD STEP    11   SUBSTEP     6  COMPLETED.    CUM ITER =    124
*** TIME =  0.898020E-01     TIME INC =  0.403000E-02  NEW TRIANG MATRIX
*** RESPONSE EIGENVALUE =  8.370       OSCILLATION LIMIT = 0.3373E-01
*** AUTO STEP TIME:  NEXT TIME INC = 0.40300E-02  UNCHANGED

*** LOAD STEP    11   SUBSTEP     7  COMPLETED.    CUM ITER =    125
*** TIME =  0.938320E-01     TIME INC =  0.403000E-02  NEW TRIANG MATRIX
*** RESPONSE EIGENVALUE =  7.937       OSCILLATION LIMIT = 0.3199E-01
*** AUTO STEP TIME:  NEXT TIME INC = 0.40300E-02  UNCHANGED

*** LOAD STEP    11   SUBSTEP     8  COMPLETED.    CUM ITER =    126
*** TIME =  0.978620E-01     TIME INC =  0.403000E-02  NEW TRIANG MATRIX
*** RESPONSE EIGENVALUE =  7.564       OSCILLATION LIMIT = 0.3048E-01
*** AUTO STEP TIME:  NEXT TIME INC = 0.40300E-02  UNCHANGED

*** LOAD STEP    11   SUBSTEP     9  COMPLETED.    CUM ITER =    127
*** TIME =  0.101892         TIME INC =  0.403000E-02  NEW TRIANG MATRIX
*** RESPONSE EIGENVALUE =  7.241       OSCILLATION LIMIT = 0.2918E-01
*** AUTO STEP TIME:  NEXT TIME INC = 0.40300E-02  UNCHANGED

*** LOAD STEP    11   SUBSTEP    10  COMPLETED.    CUM ITER =    128
*** TIME =  0.105922         TIME INC =  0.403000E-02  NEW TRIANG MATRIX
*** RESPONSE EIGENVALUE =  6.961       OSCILLATION LIMIT = 0.2805E-01
*** AUTO STEP TIME:  NEXT TIME INC = 0.40300E-02  UNCHANGED

*** LOAD STEP    11   SUBSTEP    11  COMPLETED.    CUM ITER =    129
*** TIME =  0.109952         TIME INC =  0.403000E-02  NEW TRIANG MATRIX
*** RESPONSE EIGENVALUE =  6.719       OSCILLATION LIMIT = 0.2708E-01
*** AUTO STEP TIME:  NEXT TIME INC = 0.40300E-02  UNCHANGED

*** LOAD STEP    11   SUBSTEP    12  COMPLETED.    CUM ITER =    130
*** TIME =  0.113982         TIME INC =  0.403000E-02  NEW TRIANG MATRIX
*** RESPONSE EIGENVALUE =  6.510       OSCILLATION LIMIT = 0.2624E-01
*** AUTO TIME STEP:  NEXT TIME INC = 0.24180E-02  DECREASED (FACTOR = 0.6000)

*** LOAD STEP    11   SUBSTEP    13  COMPLETED.    CUM ITER =    131
*** TIME =  0.116400         TIME INC =  0.241800E-02  NEW TRIANG MATRIX
*** RESPONSE EIGENVALUE =  6.395       OSCILLATION LIMIT = 0.1546E-01
************************************************
*************** FINISHED SOLVE FOR LS 11 *************
************************************************
****************** SOLVE FOR LS 12 ****************

SPECIFIED BODY FORCE HGEN FOR ALL PICKED ELEMENTS AT STARTING LOCATION      1
IS SET ACCORDING TO TABLE PARAMETER = _LOADVARI202

USE AUTOMATIC TIME STEPPING THIS LOAD STEP

USE     100 SUBSTEPS INITIALLY THIS LOAD STEP FOR ALL  DEGREES OF FREEDOM
FOR AUTOMATIC TIME STEPPING:
  USE   1000 SUBSTEPS AS A MAXIMUM
  USE     10 SUBSTEPS AS A MINIMUM

TIME= 0.17809

INCLUDE TRANSIENT EFFECTS FOR  ALL DEGREES OF FREEDOM THIS LOAD STEP

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

 WRITE RSOL ITEMS TO THE DATABASE WITH A FREQUENCY OF ALL
  FOR ALL APPLICABLE ENTITIES

 WRITE FFLU ITEMS TO THE DATABASE WITH A FREQUENCY OF ALL
  FOR ALL APPLICABLE ENTITIES

 CONVERGENCE ON HEAT BASED ON THE NORM OF THE N-R LOAD
  WITH A TOLERANCE OF 0.1000E-02 AND A MINIMUM REFERENCE VALUE OF 0.1000E-02
  USING THE L2 NORM (CHECK THE SRSS VALUE)

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

 *** WARNING ***                          CP =     382.391   TIME= 09:59:23
 Material number 4 (used by element 65408 ) should normally have at
 least one MP or one TB type command associated with it.  Output of
 energy by material may not be available.

 *** NOTE ***                            CP =     382.578   TIME= 09:59:23
 The step data was checked and warning messages were found.
  Please review output or errors file ( D:\Daten\Ansys
 Simulation\_ProjectScratch\Scr8B73\file.err ) for these warning
 messages.
1

 ***** ANSYS - ENGINEERING ANALYSIS SYSTEM  RELEASE 12.1     *****
 ANSYS Academic Teaching Advanced
 00000000          VERSION=WINDOWS x64   09:59:24  SEP 23, 2010 CP=    383.469

 Schweißen Flachprobe--Thermisch-transient (E5)


                     L O A D   S T E P   O P T I O N S

   LOAD STEP NUMBER. . . . . . . . . . . . . . . .    12
   TIME AT END OF THE LOAD STEP. . . . . . . . . . 0.17809
   AUTOMATIC TIME STEPPING . . . . . . . . . . . .    ON
      INITIAL NUMBER OF SUBSTEPS . . . . . . . . .   100
      MAXIMUM NUMBER OF SUBSTEPS . . . . . . . . .  1000
      MINIMUM NUMBER OF SUBSTEPS . . . . . . . . .    10
   STEP CHANGE BOUNDARY CONDITIONS . . . . . . . .   YES
   TRANSIENT (INERTIA) EFFECTS
      THERMAL DOFS . . . . . . . . . . . . . . . .    ON
   TRANSIENT INTEGRATION PARAMETERS
      THETA. . . . . . . . . . . . . . . . . . . .  1.0000
      OSCILLATION LIMIT CRITERION. . . . . . . . . 0.50000
      TOLERANCE. . . . . . . . . . . . . . . . . .  0.0000
   PRINT OUTPUT CONTROLS . . . . . . . . . . . . .NO PRINTOUT
   DATABASE OUTPUT CONTROLS
      ITEM     FREQUENCY   COMPONENT
       ALL       NONE
      NSOL        ALL
      RSOL        ALL
      FFLU        ALL


 SOLUTION MONITORING INFO IS WRITTEN TO FILE=
file.mntr




 *** LOAD STEP    12   SUBSTEP     1  COMPLETED.    CUM ITER =    132
 *** TIME =  0.117017         TIME INC =  0.616900E-03  NEW TRIANG MATRIX
 *** RESPONSE EIGENVALUE =  6.347       OSCILLATION LIMIT = 0.3915E-02
 *** AUTO STEP TIME:  NEXT TIME INC = 0.61690E-03  UNCHANGED
```

```
*** LOAD STEP    12   SUBSTEP     2  COMPLETED.    CUM ITER =    133
*** TIME =  0.117634         TIME INC =  0.616900E-03  NEW TRIANG MATRIX
*** RESPONSE EIGENVALUE =  6.300       OSCILLATION LIMIT = 0.3886E-02
*** AUTO TIME STEP:  NEXT TIME INC = 0.18507E-02  INCREASED (FACTOR = 3.0000)

*** LOAD STEP    12   SUBSTEP     3  COMPLETED.    CUM ITER =    134
*** TIME =  0.119485         TIME INC =  0.185070E-02  NEW TRIANG MATRIX
*** RESPONSE EIGENVALUE =  6.166       OSCILLATION LIMIT = 0.1141E-01
*** AUTO TIME STEP:  NEXT TIME INC = 0.55521E-02  INCREASED (FACTOR = 3.0000)

*** LOAD STEP    12   SUBSTEP     4  COMPLETED.    CUM ITER =    135
*** TIME =  0.125037         TIME INC =  0.555210E-02  NEW TRIANG MATRIX
*** RESPONSE EIGENVALUE =  5.817       OSCILLATION LIMIT = 0.3230E-01
*** AUTO TIME STEP:  NEXT TIME INC = 0.61690E-02  INCREASED (FACTOR = 1.1111)

*** LOAD STEP    12   SUBSTEP     5  COMPLETED.    CUM ITER =    136
*** TIME =  0.131206         TIME INC =  0.616900E-02  NEW TRIANG MATRIX
*** RESPONSE EIGENVALUE =  5.483       OSCILLATION LIMIT = 0.3382E-01
*** AUTO STEP TIME:  NEXT TIME INC = 0.61690E-02  UNCHANGED

*** LOAD STEP    12   SUBSTEP     6  COMPLETED.    CUM ITER =    137
*** TIME =  0.137375         TIME INC =  0.616900E-02  NEW TRIANG MATRIX
*** RESPONSE EIGENVALUE =  5.193       OSCILLATION LIMIT = 0.3203E-01
*** AUTO STEP TIME:  NEXT TIME INC = 0.61690E-02  UNCHANGED

*** LOAD STEP    12   SUBSTEP     7  COMPLETED.    CUM ITER =    138
*** TIME =  0.143544         TIME INC =  0.616900E-02  NEW TRIANG MATRIX
*** RESPONSE EIGENVALUE =  4.940       OSCILLATION LIMIT = 0.3048E-01
*** AUTO STEP TIME:  NEXT TIME INC = 0.61690E-02  UNCHANGED

*** LOAD STEP    12   SUBSTEP     8  COMPLETED.    CUM ITER =    139
*** TIME =  0.149713         TIME INC =  0.616900E-02  NEW TRIANG MATRIX
*** RESPONSE EIGENVALUE =  4.720       OSCILLATION LIMIT = 0.2912E-01
*** AUTO STEP TIME:  NEXT TIME INC = 0.61690E-02  UNCHANGED

*** LOAD STEP    12   SUBSTEP     9  COMPLETED.    CUM ITER =    140
*** TIME =  0.155882         TIME INC =  0.616900E-02  NEW TRIANG MATRIX
*** RESPONSE EIGENVALUE =  4.528       OSCILLATION LIMIT = 0.2793E-01
*** AUTO STEP TIME:  NEXT TIME INC = 0.61690E-02  UNCHANGED

*** LOAD STEP    12   SUBSTEP    10  COMPLETED.    CUM ITER =    141
*** TIME =  0.162051         TIME INC =  0.616900E-02  NEW TRIANG MATRIX
*** RESPONSE EIGENVALUE =  4.360       OSCILLATION LIMIT = 0.2690E-01
*** AUTO STEP TIME:  NEXT TIME INC = 0.61690E-02  UNCHANGED

*** LOAD STEP    12   SUBSTEP    11  COMPLETED.    CUM ITER =    142
*** TIME =  0.168220         TIME INC =  0.616900E-02  NEW TRIANG MATRIX
*** RESPONSE EIGENVALUE =  4.214       OSCILLATION LIMIT = 0.2599E-01
*** AUTO STEP TIME:  NEXT TIME INC = 0.61690E-02  UNCHANGED

*** LOAD STEP    12   SUBSTEP    12  COMPLETED.    CUM ITER =    143
*** TIME =  0.174389         TIME INC =  0.616900E-02  NEW TRIANG MATRIX
*** RESPONSE EIGENVALUE =  4.086       OSCILLATION LIMIT = 0.2520E-01
*** AUTO TIME STEP:  NEXT TIME INC = 0.37014E-02  DECREASED (FACTOR = 0.6000)

*** LOAD STEP    12   SUBSTEP    13  COMPLETED.    CUM ITER =    144
*** TIME =  0.178090         TIME INC =  0.370140E-02  NEW TRIANG MATRIX
*** RESPONSE EIGENVALUE =  4.015       OSCILLATION LIMIT = 0.1486E-01
************************************************
*************** FINISHED SOLVE FOR LS 12 *************
************************************************
****************** SOLVE FOR LS 13 ****************

SPECIFIED BODY FORCE HGEN FOR ALL PICKED ELEMENTS AT STARTING LOCATION      1
IS SET ACCORDING TO TABLE PARAMETER = _LOADVARI202

USE AUTOMATIC TIME STEPPING THIS LOAD STEP

USE     100 SUBSTEPS INITIALLY THIS LOAD STEP FOR ALL  DEGREES OF FREEDOM
```

```
 FOR AUTOMATIC TIME STEPPING:
   USE   1000 SUBSTEPS AS A MAXIMUM
   USE     10 SUBSTEPS AS A MINIMUM

 TIME= 0.27090

 INCLUDE TRANSIENT EFFECTS FOR  ALL DEGREES OF FREEDOM THIS LOAD STEP

 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

 WRITE RSOL ITEMS TO THE DATABASE WITH A FREQUENCY OF ALL
   FOR ALL APPLICABLE ENTITIES

 WRITE FFLU ITEMS TO THE DATABASE WITH A FREQUENCY OF ALL
   FOR ALL APPLICABLE ENTITIES

 CONVERGENCE ON HEAT BASED ON THE NORM OF THE N-R LOAD
   WITH A TOLERANCE OF 0.1000E-02 AND A MINIMUM REFERENCE VALUE OF 0.1000E-02
   USING THE L2 NORM (CHECK THE SRSS VALUE)

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

 *** WARNING ***                          CP =     420.984   TIME= 09:59:45
 Material number 4 (used by element 65408 ) should normally have at
 least one MP or one TB type command associated with it.  Output of
 energy by material may not be available.

 *** NOTE ***                             CP =     421.266   TIME= 09:59:45
 The step data was checked and warning messages were found.
  Please review output or errors file ( D:\Daten\Ansys
 Simulation\_ProjectScratch\Scr8B73\file.err ) for these warning
 messages.
1

 ***** ANSYS - ENGINEERING ANALYSIS SYSTEM  RELEASE 12.1     *****
 ANSYS Academic Teaching Advanced
 00000000          VERSION=WINDOWS x64   09:59:46  SEP 23, 2010 CP=    421.938

 Schweißen Flachprobe--Thermisch-transient (E5)


                     L O A D   S T E P   O P T I O N S

   LOAD STEP NUMBER. . . . . . . . . . . . . . . .    13
   TIME AT END OF THE LOAD STEP. . . . . . . . . . 0.27090
   AUTOMATIC TIME STEPPING . . . . . . . . . . . .    ON
      INITIAL NUMBER OF SUBSTEPS . . . . . . . . .   100
      MAXIMUM NUMBER OF SUBSTEPS . . . . . . . . .  1000
      MINIMUM NUMBER OF SUBSTEPS . . . . . . . . .    10
   STEP CHANGE BOUNDARY CONDITIONS . . . . . . . .   YES
   TRANSIENT (INERTIA) EFFECTS
      THERMAL DOFS . . . . . . . . . . . . . . . .    ON
   TRANSIENT INTEGRATION PARAMETERS
      THETA. . . . . . . . . . . . . . . . . . . .  1.0000
      OSCILLATION LIMIT CRITERION. . . . . . . . . 0.50000
      TOLERANCE. . . . . . . . . . . . . . . . . .  0.0000
   PRINT OUTPUT CONTROLS . . . . . . . . . . . . .NO PRINTOUT
   DATABASE OUTPUT CONTROLS
      ITEM     FREQUENCY   COMPONENT
       ALL       NONE
      NSOL        ALL
      RSOL        ALL
      FFLU        ALL
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 SOLUTION MONITORING INFO IS WRITTEN TO FILE=
file.mntr



 *** LOAD STEP    13   SUBSTEP     1  COMPLETED.    CUM ITER =    145
 *** TIME =  0.179018         TIME INC =  0.928100E-03  NEW TRIANG MATRIX
 *** RESPONSE EIGENVALUE =  3.988       OSCILLATION LIMIT = 0.3702E-02
 *** AUTO STEP TIME:  NEXT TIME INC = 0.92810E-03  UNCHANGED

 *** LOAD STEP    13   SUBSTEP     2  COMPLETED.    CUM ITER =    146
 *** TIME =  0.179946         TIME INC =  0.928100E-03  NEW TRIANG MATRIX
 *** RESPONSE EIGENVALUE =  3.962       OSCILLATION LIMIT = 0.3677E-02
 *** AUTO TIME STEP:  NEXT TIME INC = 0.27843E-02  INCREASED (FACTOR = 3.0000)

 *** LOAD STEP    13   SUBSTEP     3  COMPLETED.    CUM ITER =    147
 *** TIME =  0.182730         TIME INC =  0.278430E-02  NEW TRIANG MATRIX
 *** RESPONSE EIGENVALUE =  3.887       OSCILLATION LIMIT = 0.1082E-01
 *** AUTO TIME STEP:  NEXT TIME INC = 0.83529E-02  INCREASED (FACTOR = 3.0000)

 *** LOAD STEP    13   SUBSTEP     4  COMPLETED.    CUM ITER =    148
 *** TIME =  0.191083         TIME INC =  0.835290E-02  NEW TRIANG MATRIX
 *** RESPONSE EIGENVALUE =  3.692       OSCILLATION LIMIT = 0.3084E-01
 *** AUTO TIME STEP:  NEXT TIME INC = 0.92810E-02  INCREASED (FACTOR = 1.1111)

 *** LOAD STEP    13   SUBSTEP     5  COMPLETED.    CUM ITER =    149
 *** TIME =  0.200364         TIME INC =  0.928100E-02  NEW TRIANG MATRIX
 *** RESPONSE EIGENVALUE =  3.504       OSCILLATION LIMIT = 0.3253E-01
 *** AUTO STEP TIME:  NEXT TIME INC = 0.92810E-02  UNCHANGED

 *** LOAD STEP    13   SUBSTEP     6  COMPLETED.    CUM ITER =    150
 *** TIME =  0.209645         TIME INC =  0.928100E-02  NEW TRIANG MATRIX
 *** RESPONSE EIGENVALUE =  3.342       OSCILLATION LIMIT = 0.3102E-01
 *** AUTO STEP TIME:  NEXT TIME INC = 0.92810E-02  UNCHANGED

 *** LOAD STEP    13   SUBSTEP     7  COMPLETED.    CUM ITER =    151
 *** TIME =  0.218926         TIME INC =  0.928100E-02  NEW TRIANG MATRIX
 *** RESPONSE EIGENVALUE =  3.201       OSCILLATION LIMIT = 0.2971E-01
 *** AUTO STEP TIME:  NEXT TIME INC = 0.92810E-02  UNCHANGED

 *** LOAD STEP    13   SUBSTEP     8  COMPLETED.    CUM ITER =    152
 *** TIME =  0.228207         TIME INC =  0.928100E-02  NEW TRIANG MATRIX
 *** RESPONSE EIGENVALUE =  3.079       OSCILLATION LIMIT = 0.2858E-01
 *** AUTO STEP TIME:  NEXT TIME INC = 0.92810E-02  UNCHANGED

 *** LOAD STEP    13   SUBSTEP     9  COMPLETED.    CUM ITER =    153
 *** TIME =  0.237488         TIME INC =  0.928100E-02  NEW TRIANG MATRIX
 *** RESPONSE EIGENVALUE =  2.973       OSCILLATION LIMIT = 0.2759E-01
 *** AUTO STEP TIME:  NEXT TIME INC = 0.92810E-02  UNCHANGED

 *** LOAD STEP    13   SUBSTEP    10  COMPLETED.    CUM ITER =    154
 *** TIME =  0.246769         TIME INC =  0.928100E-02  NEW TRIANG MATRIX
 *** RESPONSE EIGENVALUE =  2.881       OSCILLATION LIMIT = 0.2674E-01
 *** AUTO STEP TIME:  NEXT TIME INC = 0.92810E-02  UNCHANGED

 *** LOAD STEP    13   SUBSTEP    11  COMPLETED.    CUM ITER =    155
 *** TIME =  0.256050         TIME INC =  0.928100E-02  NEW TRIANG MATRIX
 *** RESPONSE EIGENVALUE =  2.802       OSCILLATION LIMIT = 0.2601E-01
 *** AUTO STEP TIME:  NEXT TIME INC = 0.92810E-02  UNCHANGED

 *** LOAD STEP    13   SUBSTEP    12  COMPLETED.    CUM ITER =    156
 *** TIME =  0.265331         TIME INC =  0.928100E-02  NEW TRIANG MATRIX
 *** RESPONSE EIGENVALUE =  2.735       OSCILLATION LIMIT = 0.2538E-01
 *** AUTO TIME STEP:  NEXT TIME INC = 0.55686E-02  DECREASED (FACTOR = 0.6000)

 *** LOAD STEP    13   SUBSTEP    13  COMPLETED.    CUM ITER =    157
 *** TIME =  0.270900         TIME INC =  0.556860E-02  NEW TRIANG MATRIX
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 *** RESPONSE EIGENVALUE =  2.698       OSCILLATION LIMIT = 0.1502E-01
 ************************************************
 *************** FINISHED SOLVE FOR LS 13 *************
 ************************************************
 ****************** SOLVE FOR LS 14 ****************

 SPECIFIED BODY FORCE HGEN FOR ALL PICKED ELEMENTS AT STARTING LOCATION      1
 IS SET ACCORDING TO TABLE PARAMETER = _LOADVARI202

 USE AUTOMATIC TIME STEPPING THIS LOAD STEP

 USE     100 SUBSTEPS INITIALLY THIS LOAD STEP FOR ALL  DEGREES OF FREEDOM
 FOR AUTOMATIC TIME STEPPING:
   USE   1000 SUBSTEPS AS A MAXIMUM
   USE     10 SUBSTEPS AS A MINIMUM

 TIME= 0.37090

 INCLUDE TRANSIENT EFFECTS FOR  ALL DEGREES OF FREEDOM THIS LOAD STEP

 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

 WRITE RSOL ITEMS TO THE DATABASE WITH A FREQUENCY OF ALL
   FOR ALL APPLICABLE ENTITIES

 WRITE FFLU ITEMS TO THE DATABASE WITH A FREQUENCY OF ALL
   FOR ALL APPLICABLE ENTITIES

 CONVERGENCE ON HEAT BASED ON THE NORM OF THE N-R LOAD
   WITH A TOLERANCE OF 0.1000E-02 AND A MINIMUM REFERENCE VALUE OF 0.1000E-02
   USING THE L2 NORM (CHECK THE SRSS VALUE)

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

 *** WARNING ***                         CP =     460.203   TIME= 10:00:07
 Material number 4 (used by element 65408 ) should normally have at
 least one MP or one TB type command associated with it.  Output of
 energy by material may not be available.

 *** NOTE ***                            CP =     460.375   TIME= 10:00:07
 The step data was checked and warning messages were found.
  Please review output or errors file ( D:\Daten\Ansys
 Simulation\_ProjectScratch\Scr8B73\file.err ) for these warning
 messages.
1

 ***** ANSYS - ENGINEERING ANALYSIS SYSTEM  RELEASE 12.1     *****
 ANSYS Academic Teaching Advanced
 00000000          VERSION=WINDOWS x64   10:00:08  SEP 23, 2010 CP=    461.078

 Schweißen Flachprobe--Thermisch-transient (E5)


                     L O A D   S T E P   O P T I O N S

   LOAD STEP NUMBER. . . . . . . . . . . . . . . .    14
   TIME AT END OF THE LOAD STEP. . . . . . . . . . 0.37090
   AUTOMATIC TIME STEPPING . . . . . . . . . . . .    ON
      INITIAL NUMBER OF SUBSTEPS . . . . . . . . .   100
      MAXIMUM NUMBER OF SUBSTEPS . . . . . . . . .  1000
      MINIMUM NUMBER OF SUBSTEPS . . . . . . . . .    10
   STEP CHANGE BOUNDARY CONDITIONS . . . . . . . .   YES
   TRANSIENT (INERTIA) EFFECTS
```

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      THERMAL DOFS . . . . . .    ON
   TRANSIENT INTEGRATION PARAMETERS
      THETA. . . . . .  1.0000
      OSCILLATION LIMIT CRITERION. . . . . 0.50000
      TOLERANCE. . . . . .  0.0000
   PRINT OUTPUT CONTROLS . . . . . .NO PRINTOUT
   DATABASE OUTPUT CONTROLS
      ITEM     FREQUENCY   COMPONENT
       ALL       NONE
      NSOL        ALL
      RSOL        ALL
      FFLU        ALL


 SOLUTION MONITORING INFO IS WRITTEN TO FILE=
file.mntr



 *** LOAD STEP    14   SUBSTEP     1  COMPLETED.    CUM ITER =    158
 *** TIME =  0.271900         TIME INC =  0.100000E-02  NEW TRIANG MATRIX
 *** RESPONSE EIGENVALUE =  2.687       OSCILLATION LIMIT = 0.2687E-02
 *** AUTO STEP TIME:  NEXT TIME INC = 0.10000E-02  UNCHANGED

 *** LOAD STEP    14   SUBSTEP     2  COMPLETED.    CUM ITER =    159
 *** TIME =  0.272900         TIME INC =  0.100000E-02  NEW TRIANG MATRIX
 *** RESPONSE EIGENVALUE =  2.676       OSCILLATION LIMIT = 0.2676E-02
 *** AUTO TIME STEP:  NEXT TIME INC = 0.30000E-02  INCREASED (FACTOR = 3.0000)

 *** LOAD STEP    14   SUBSTEP     3  COMPLETED.    CUM ITER =    160
 *** TIME =  0.275900         TIME INC =  0.300000E-02  NEW TRIANG MATRIX
 *** RESPONSE EIGENVALUE =  2.646       OSCILLATION LIMIT = 0.7939E-02
 *** AUTO TIME STEP:  NEXT TIME INC = 0.90000E-02  INCREASED (FACTOR = 3.0000)

 *** LOAD STEP    14   SUBSTEP     4  COMPLETED.    CUM ITER =    161
 *** TIME =  0.284900         TIME INC =  0.900000E-02  NEW TRIANG MATRIX
 *** RESPONSE EIGENVALUE =  2.565       OSCILLATION LIMIT = 0.2309E-01
 *** AUTO TIME STEP:  NEXT TIME INC = 0.10000E-01  INCREASED (FACTOR = 1.1111)

 *** LOAD STEP    14   SUBSTEP     5  COMPLETED.    CUM ITER =    162
 *** TIME =  0.294900         TIME INC =  0.100000E-01  NEW TRIANG MATRIX
 *** RESPONSE EIGENVALUE =  2.486       OSCILLATION LIMIT = 0.2486E-01
 *** AUTO STEP TIME:  NEXT TIME INC = 0.10000E-01  UNCHANGED

 *** LOAD STEP    14   SUBSTEP     6  COMPLETED.    CUM ITER =    163
 *** TIME =  0.304900         TIME INC =  0.100000E-01  NEW TRIANG MATRIX
 *** RESPONSE EIGENVALUE =  2.416       OSCILLATION LIMIT = 0.2416E-01
 *** AUTO STEP TIME:  NEXT TIME INC = 0.10000E-01  UNCHANGED

 *** LOAD STEP    14   SUBSTEP     7  COMPLETED.    CUM ITER =    164
 *** TIME =  0.314900         TIME INC =  0.100000E-01  NEW TRIANG MATRIX
 *** RESPONSE EIGENVALUE =  2.354       OSCILLATION LIMIT = 0.2354E-01
 *** AUTO STEP TIME:  NEXT TIME INC = 0.10000E-01  UNCHANGED

 *** LOAD STEP    14   SUBSTEP     8  COMPLETED.    CUM ITER =    165
 *** TIME =  0.324900         TIME INC =  0.100000E-01  NEW TRIANG MATRIX
 *** RESPONSE EIGENVALUE =  2.299       OSCILLATION LIMIT = 0.2299E-01
 *** AUTO STEP TIME:  NEXT TIME INC = 0.10000E-01  UNCHANGED

 *** LOAD STEP    14   SUBSTEP     9  COMPLETED.    CUM ITER =    166
 *** TIME =  0.334900         TIME INC =  0.100000E-01  NEW TRIANG MATRIX
 *** RESPONSE EIGENVALUE =  2.251       OSCILLATION LIMIT = 0.2251E-01
 *** AUTO STEP TIME:  NEXT TIME INC = 0.10000E-01  UNCHANGED

 *** LOAD STEP    14   SUBSTEP    10  COMPLETED.    CUM ITER =    167
 *** TIME =  0.344900         TIME INC =  0.100000E-01  NEW TRIANG MATRIX
 *** RESPONSE EIGENVALUE =  2.209       OSCILLATION LIMIT = 0.2209E-01
 *** AUTO STEP TIME:  NEXT TIME INC = 0.10000E-01  UNCHANGED
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 *** LOAD STEP    14   SUBSTEP    11  COMPLETED.    CUM ITER =    168
 *** TIME =  0.354900         TIME INC =  0.100000E-01  NEW TRIANG MATRIX
 *** RESPONSE EIGENVALUE =  2.173       OSCILLATION LIMIT = 0.2173E-01
 *** AUTO STEP TIME:  NEXT TIME INC = 0.10000E-01  UNCHANGED

 *** LOAD STEP    14   SUBSTEP    12  COMPLETED.    CUM ITER =    169
 *** TIME =  0.364900         TIME INC =  0.100000E-01  NEW TRIANG MATRIX
 *** RESPONSE EIGENVALUE =  2.142       OSCILLATION LIMIT = 0.2142E-01
 *** AUTO TIME STEP:  NEXT TIME INC = 0.60000E-02  DECREASED (FACTOR = 0.6000)

 *** LOAD STEP    14   SUBSTEP    13  COMPLETED.    CUM ITER =    170
 *** TIME =  0.370900         TIME INC =  0.600000E-02  NEW TRIANG MATRIX
 *** RESPONSE EIGENVALUE =  2.125       OSCILLATION LIMIT = 0.1275E-01
 ************************************************
 ************** FINISHED SOLVE FOR LS 14 *************
 ************************************************
 ****************** SOLVE FOR LS 15 ****************

 SPECIFIED BODY FORCE HGEN FOR ALL PICKED ELEMENTS AT STARTING LOCATION      1
 IS SET ACCORDING TO TABLE PARAMETER = _LOADVARI202

 USE AUTOMATIC TIME STEPPING THIS LOAD STEP

 USE     100 SUBSTEPS INITIALLY THIS LOAD STEP FOR ALL  DEGREES OF FREEDOM
 FOR AUTOMATIC TIME STEPPING:
   USE   1000 SUBSTEPS AS A MAXIMUM
   USE     10 SUBSTEPS AS A MINIMUM

 TIME= 0.47090

 INCLUDE TRANSIENT EFFECTS FOR  ALL DEGREES OF FREEDOM THIS LOAD STEP

 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

 WRITE RSOL ITEMS TO THE DATABASE WITH A FREQUENCY OF ALL
   FOR ALL APPLICABLE ENTITIES

 WRITE FFLU ITEMS TO THE DATABASE WITH A FREQUENCY OF ALL
   FOR ALL APPLICABLE ENTITIES

 CONVERGENCE ON HEAT BASED ON THE NORM OF THE N-R LOAD
   WITH A TOLERANCE OF 0.1000E-02 AND A MINIMUM REFERENCE VALUE OF 0.1000E-02
   USING THE L2 NORM (CHECK THE SRSS VALUE)

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

 *** WARNING ***                         CP =     499.641   TIME= 10:00:30
 Material number 4 (used by element 65408 ) should normally have at
 least one MP or one TB type command associated with it.  Output of
 energy by material may not be available.

 *** NOTE ***                            CP =     499.953   TIME= 10:00:30
 The step data was checked and warning messages were found.
  Please review output or errors file ( D:\Daten\Ansys
 Simulation\_ProjectScratch\Scr8B73\file.err ) for these warning
 messages.
1

 ***** ANSYS - ENGINEERING ANALYSIS SYSTEM  RELEASE 12.1     *****
 ANSYS Academic Teaching Advanced
 00000000          VERSION=WINDOWS x64   10:00:30  SEP 23, 2010 CP=    500.641

 Schweißen Flachprobe--Thermisch-transient (E5)
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                    L O A D   S T E P   O P T I O N S

   LOAD STEP NUMBER. . . . . . . . . . . . . . . .    15
   TIME AT END OF THE LOAD STEP. . . . . . . . . . 0.47090
   AUTOMATIC TIME STEPPING . . . . . . . . . . . .    ON
      INITIAL NUMBER OF SUBSTEPS . . . . . . . . .   100
      MAXIMUM NUMBER OF SUBSTEPS . . . . . . . . .  1000
      MINIMUM NUMBER OF SUBSTEPS . . . . . . . . .    10
   STEP CHANGE BOUNDARY CONDITIONS . . . . . . . .   YES
   TRANSIENT (INERTIA) EFFECTS
      THERMAL DOFS . . . . . . . . . . . . . . . .    ON
   TRANSIENT INTEGRATION PARAMETERS
      THETA. . . . . . . . . . . . . . . . . . . .  1.0000
      OSCILLATION LIMIT CRITERION. . . . . . . . . 0.50000
      TOLERANCE. . . . . . . . . . . . . . . . . .  0.0000
   PRINT OUTPUT CONTROLS . . . . . . . . . . . . .NO PRINTOUT
   DATABASE OUTPUT CONTROLS
      ITEM     FREQUENCY   COMPONENT
       ALL       NONE
      NSOL        ALL
      RSOL        ALL
      FFLU        ALL


 SOLUTION MONITORING INFO IS WRITTEN TO FILE=
file.mntr



 *** LOAD STEP    15   SUBSTEP     1  COMPLETED.    CUM ITER =    171
 *** TIME =  0.371900         TIME INC =  0.100000E-02  NEW TRIANG MATRIX
 *** RESPONSE EIGENVALUE =  2.120       OSCILLATION LIMIT = 0.2120E-02
 *** AUTO STEP TIME:  NEXT TIME INC = 0.10000E-02  UNCHANGED

 *** LOAD STEP    15   SUBSTEP     2  COMPLETED.    CUM ITER =    172
 *** TIME =  0.372900         TIME INC =  0.100000E-02  NEW TRIANG MATRIX
 *** RESPONSE EIGENVALUE =  2.115       OSCILLATION LIMIT = 0.2115E-02
 *** AUTO TIME STEP:  NEXT TIME INC = 0.30000E-02  INCREASED (FACTOR = 3.0000)

 *** LOAD STEP    15   SUBSTEP     3  COMPLETED.    CUM ITER =    173
 *** TIME =  0.375900         TIME INC =  0.300000E-02  NEW TRIANG MATRIX
 *** RESPONSE EIGENVALUE =  2.101       OSCILLATION LIMIT = 0.6304E-02
 *** AUTO TIME STEP:  NEXT TIME INC = 0.90000E-02  INCREASED (FACTOR = 3.0000)

 *** LOAD STEP    15   SUBSTEP     4  COMPLETED.    CUM ITER =    174
 *** TIME =  0.384900         TIME INC =  0.900000E-02  NEW TRIANG MATRIX
 *** RESPONSE EIGENVALUE =  2.064       OSCILLATION LIMIT = 0.1858E-01
 *** AUTO TIME STEP:  NEXT TIME INC = 0.10000E-01  INCREASED (FACTOR = 1.1111)

 *** LOAD STEP    15   SUBSTEP     5  COMPLETED.    CUM ITER =    175
 *** TIME =  0.394900         TIME INC =  0.100000E-01  NEW TRIANG MATRIX
 *** RESPONSE EIGENVALUE =  2.027       OSCILLATION LIMIT = 0.2027E-01
 *** AUTO STEP TIME:  NEXT TIME INC = 0.10000E-01  UNCHANGED

 *** LOAD STEP    15   SUBSTEP     6  COMPLETED.    CUM ITER =    176
 *** TIME =  0.404900         TIME INC =  0.100000E-01  NEW TRIANG MATRIX
 *** RESPONSE EIGENVALUE =  1.994       OSCILLATION LIMIT = 0.1994E-01
 *** AUTO STEP TIME:  NEXT TIME INC = 0.10000E-01  UNCHANGED

 *** LOAD STEP    15   SUBSTEP     7  COMPLETED.    CUM ITER =    177
 *** TIME =  0.414900         TIME INC =  0.100000E-01  NEW TRIANG MATRIX
 *** RESPONSE EIGENVALUE =  1.964       OSCILLATION LIMIT = 0.1964E-01
 *** AUTO STEP TIME:  NEXT TIME INC = 0.10000E-01  UNCHANGED

 *** LOAD STEP    15   SUBSTEP     8  COMPLETED.    CUM ITER =    178
 *** TIME =  0.424900         TIME INC =  0.100000E-01  NEW TRIANG MATRIX
 *** RESPONSE EIGENVALUE =  1.938       OSCILLATION LIMIT = 0.1938E-01
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*** AUTO STEP TIME:  NEXT TIME INC = 0.10000E-01  UNCHANGED

*** LOAD STEP    15   SUBSTEP     9  COMPLETED.    CUM ITER =    179
*** TIME =  0.434900         TIME INC =  0.100000E-01  NEW TRIANG MATRIX
*** RESPONSE EIGENVALUE =  1.916       OSCILLATION LIMIT = 0.1916E-01
*** AUTO STEP TIME:  NEXT TIME INC = 0.10000E-01  UNCHANGED

*** LOAD STEP    15   SUBSTEP    10  COMPLETED.    CUM ITER =    180
*** TIME =  0.444900         TIME INC =  0.100000E-01  NEW TRIANG MATRIX
*** RESPONSE EIGENVALUE =  1.896       OSCILLATION LIMIT = 0.1896E-01
*** AUTO STEP TIME:  NEXT TIME INC = 0.10000E-01  UNCHANGED

*** LOAD STEP    15   SUBSTEP    11  COMPLETED.    CUM ITER =    181
*** TIME =  0.454900         TIME INC =  0.100000E-01  NEW TRIANG MATRIX
*** RESPONSE EIGENVALUE =  1.879       OSCILLATION LIMIT = 0.1879E-01
*** AUTO STEP TIME:  NEXT TIME INC = 0.10000E-01  UNCHANGED

*** LOAD STEP    15   SUBSTEP    12  COMPLETED.    CUM ITER =    182
*** TIME =  0.464900         TIME INC =  0.100000E-01  NEW TRIANG MATRIX
*** RESPONSE EIGENVALUE =  1.865       OSCILLATION LIMIT = 0.1865E-01
*** AUTO TIME STEP:  NEXT TIME INC = 0.60000E-02  DECREASED (FACTOR = 0.6000)

*** LOAD STEP    15   SUBSTEP    13  COMPLETED.    CUM ITER =    183
*** TIME =  0.470900         TIME INC =  0.600000E-02  NEW TRIANG MATRIX
*** RESPONSE EIGENVALUE =  1.857       OSCILLATION LIMIT = 0.1114E-01
*****************************************************
*************** FINISHED SOLVE FOR LS 15 *************
*****************************************************
****************** SOLVE FOR LS 16 ****************

SPECIFIED BODY FORCE HGEN FOR ALL PICKED ELEMENTS AT STARTING LOCATION      1
IS SET ACCORDING TO TABLE PARAMETER = _LOADVARI202

USE AUTOMATIC TIME STEPPING THIS LOAD STEP

USE     100 SUBSTEPS INITIALLY THIS LOAD STEP FOR ALL  DEGREES OF FREEDOM
FOR AUTOMATIC TIME STEPPING:
  USE   1000 SUBSTEPS AS A MAXIMUM
  USE     10 SUBSTEPS AS A MINIMUM

TIME= 0.57090

INCLUDE TRANSIENT EFFECTS FOR  ALL DEGREES OF FREEDOM THIS LOAD STEP

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

WRITE RSOL ITEMS TO THE DATABASE WITH A FREQUENCY OF ALL
  FOR ALL APPLICABLE ENTITIES

WRITE FFLU ITEMS TO THE DATABASE WITH A FREQUENCY OF ALL
  FOR ALL APPLICABLE ENTITIES

CONVERGENCE ON HEAT BASED ON THE NORM OF THE N-R LOAD
  WITH A TOLERANCE OF 0.1000E-02 AND A MINIMUM REFERENCE VALUE OF 0.1000E-02
  USING THE L2 NORM (CHECK THE SRSS VALUE)

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

*** WARNING ***                         CP =     539.953   TIME= 10:00:53
Material number 4 (used by element 65408 ) should normally have at
least one MP or one TB type command associated with it.  Output of
energy by material may not be available.
```

```
 *** NOTE ***                            CP =     540.172   TIME= 10:00:53
 The step data was checked and warning messages were found.
  Please review output or errors file ( D:\Daten\Ansys
 Simulation\_ProjectScratch\Scr8B73\file.err ) for these warning
 messages.
1

 ***** ANSYS - ENGINEERING ANALYSIS SYSTEM  RELEASE 12.1     *****
 ANSYS Academic Teaching Advanced
 00000000          VERSION=WINDOWS x64   10:00:53  SEP 23, 2010 CP=    540.766

 Schweißen Flachprobe--Thermisch-transient (E5)


                     L O A D   S T E P   O P T I O N S

   LOAD STEP NUMBER. . . . . . . . . . . . . . .    16
   TIME AT END OF THE LOAD STEP. . . . . . . . . . 0.57090
   AUTOMATIC TIME STEPPING . . . . . . . . . . .    ON
      INITIAL NUMBER OF SUBSTEPS . . . . . . . .   100
      MAXIMUM NUMBER OF SUBSTEPS . . . . . . . .  1000
      MINIMUM NUMBER OF SUBSTEPS . . . . . . . .    10
   STEP CHANGE BOUNDARY CONDITIONS . . . . . . .   YES
   TRANSIENT (INERTIA) EFFECTS
      THERMAL DOFS . . . . . . . . . . . . . . .    ON
   TRANSIENT INTEGRATION PARAMETERS
      THETA. . . . . . . . . . . . . . . . . . .  1.0000
      OSCILLATION LIMIT CRITERION. . . . . . . . 0.50000
      TOLERANCE. . . . . . . . . . . . . . . . .  0.0000
   PRINT OUTPUT CONTROLS . . . . . . . . . . . .NO PRINTOUT
   DATABASE OUTPUT CONTROLS
      ITEM     FREQUENCY   COMPONENT
       ALL       NONE
      NSOL        ALL
      RSOL        ALL
      FFLU        ALL


 SOLUTION MONITORING INFO IS WRITTEN TO FILE=
file.mntr




 *** LOAD STEP    16   SUBSTEP     1  COMPLETED.    CUM ITER =    184
 *** TIME =  0.471900         TIME INC =  0.100000E-02  NEW TRIANG MATRIX
 *** RESPONSE EIGENVALUE =  1.855       OSCILLATION LIMIT = 0.1855E-02
 *** AUTO STEP TIME:  NEXT TIME INC = 0.10000E-02  UNCHANGED

 *** LOAD STEP    16   SUBSTEP     2  COMPLETED.    CUM ITER =    185
 *** TIME =  0.472900         TIME INC =  0.100000E-02  NEW TRIANG MATRIX
 *** RESPONSE EIGENVALUE =  1.852       OSCILLATION LIMIT = 0.1852E-02
 *** AUTO TIME STEP:  NEXT TIME INC = 0.30000E-02  INCREASED (FACTOR = 3.0000)

 *** LOAD STEP    16   SUBSTEP     3  COMPLETED.    CUM ITER =    186
 *** TIME =  0.475900         TIME INC =  0.300000E-02  NEW TRIANG MATRIX
 *** RESPONSE EIGENVALUE =  1.845       OSCILLATION LIMIT = 0.5536E-02
 *** AUTO TIME STEP:  NEXT TIME INC = 0.90000E-02  INCREASED (FACTOR = 3.0000)

 *** LOAD STEP    16   SUBSTEP     4  COMPLETED.    CUM ITER =    187
 *** TIME =  0.484900         TIME INC =  0.900000E-02  NEW TRIANG MATRIX
 *** RESPONSE EIGENVALUE =  1.826       OSCILLATION LIMIT = 0.1644E-01
 *** AUTO TIME STEP:  NEXT TIME INC = 0.10000E-01  INCREASED (FACTOR = 1.1111)

 *** LOAD STEP    16   SUBSTEP     5  COMPLETED.    CUM ITER =    188
 *** TIME =  0.494900         TIME INC =  0.100000E-01  NEW TRIANG MATRIX
 *** RESPONSE EIGENVALUE =  1.808       OSCILLATION LIMIT = 0.1808E-01
 *** AUTO STEP TIME:  NEXT TIME INC = 0.10000E-01  UNCHANGED

 *** LOAD STEP    16   SUBSTEP     6  COMPLETED.    CUM ITER =    189
```

```
*** TIME =  0.504900         TIME INC =  0.100000E-01  NEW TRIANG MATRIX
*** RESPONSE EIGENVALUE =  1.791       OSCILLATION LIMIT = 0.1791E-01
*** AUTO STEP TIME:  NEXT TIME INC = 0.10000E-01  UNCHANGED

*** LOAD STEP    16   SUBSTEP     7  COMPLETED.    CUM ITER =    190
*** TIME =  0.514900         TIME INC =  0.100000E-01  NEW TRIANG MATRIX
*** RESPONSE EIGENVALUE =  1.777       OSCILLATION LIMIT = 0.1777E-01
*** AUTO STEP TIME:  NEXT TIME INC = 0.10000E-01  UNCHANGED

*** LOAD STEP    16   SUBSTEP     8  COMPLETED.    CUM ITER =    191
*** TIME =  0.524900         TIME INC =  0.100000E-01  NEW TRIANG MATRIX
*** RESPONSE EIGENVALUE =  1.765       OSCILLATION LIMIT = 0.1765E-01
*** AUTO STEP TIME:  NEXT TIME INC = 0.10000E-01  UNCHANGED

*** LOAD STEP    16   SUBSTEP     9  COMPLETED.    CUM ITER =    192
*** TIME =  0.534900         TIME INC =  0.100000E-01  NEW TRIANG MATRIX
*** RESPONSE EIGENVALUE =  1.754       OSCILLATION LIMIT = 0.1754E-01
*** AUTO STEP TIME:  NEXT TIME INC = 0.10000E-01  UNCHANGED

*** LOAD STEP    16   SUBSTEP    10  COMPLETED.    CUM ITER =    193
*** TIME =  0.544900         TIME INC =  0.100000E-01  NEW TRIANG MATRIX
*** RESPONSE EIGENVALUE =  1.746       OSCILLATION LIMIT = 0.1746E-01
*** AUTO STEP TIME:  NEXT TIME INC = 0.10000E-01  UNCHANGED

*** LOAD STEP    16   SUBSTEP    11  COMPLETED.    CUM ITER =    194
*** TIME =  0.554900         TIME INC =  0.100000E-01  NEW TRIANG MATRIX
*** RESPONSE EIGENVALUE =  1.738       OSCILLATION LIMIT = 0.1738E-01
*** AUTO STEP TIME:  NEXT TIME INC = 0.10000E-01  UNCHANGED

*** LOAD STEP    16   SUBSTEP    12  COMPLETED.    CUM ITER =    195
*** TIME =  0.564900         TIME INC =  0.100000E-01  NEW TRIANG MATRIX
*** RESPONSE EIGENVALUE =  1.733       OSCILLATION LIMIT = 0.1733E-01
*** AUTO TIME STEP:  NEXT TIME INC = 0.60000E-02  DECREASED (FACTOR = 0.6000)

*** LOAD STEP    16   SUBSTEP    13  COMPLETED.    CUM ITER =    196
*** TIME =  0.570900         TIME INC =  0.600000E-02  NEW TRIANG MATRIX
*** RESPONSE EIGENVALUE =  1.730       OSCILLATION LIMIT = 0.1038E-01
************************************************
************** FINISHED SOLVE FOR LS 16 *************
************************************************
****************** SOLVE FOR LS 17 ****************

SPECIFIED BODY FORCE HGEN FOR ALL PICKED ELEMENTS AT STARTING LOCATION      1
IS SET ACCORDING TO TABLE PARAMETER = _LOADVARI202

USE AUTOMATIC TIME STEPPING THIS LOAD STEP

USE     100 SUBSTEPS INITIALLY THIS LOAD STEP FOR ALL  DEGREES OF FREEDOM
FOR AUTOMATIC TIME STEPPING:
  USE   1000 SUBSTEPS AS A MAXIMUM
  USE     10 SUBSTEPS AS A MINIMUM

TIME= 0.67090

INCLUDE TRANSIENT EFFECTS FOR  ALL DEGREES OF FREEDOM THIS LOAD STEP

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

WRITE RSOL ITEMS TO THE DATABASE WITH A FREQUENCY OF ALL
  FOR ALL APPLICABLE ENTITIES

WRITE FFLU ITEMS TO THE DATABASE WITH A FREQUENCY OF ALL
  FOR ALL APPLICABLE ENTITIES
```

```
 CONVERGENCE ON HEAT BASED ON THE NORM OF THE N-R LOAD
   WITH A TOLERANCE OF 0.1000E-02 AND A MINIMUM REFERENCE VALUE OF 0.1000E-02
   USING THE L2 NORM (CHECK THE SRSS VALUE)

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

 *** WARNING ***                          CP =     579.328   TIME= 10:01:15
 Material number 4 (used by element 65408 ) should normally have at
 least one MP or one TB type command associated with it.  Output of
 energy by material may not be available.

 *** NOTE ***                            CP =     579.656   TIME= 10:01:15
 The step data was checked and warning messages were found.
  Please review output or errors file ( D:\Daten\Ansys
 Simulation\_ProjectScratch\Scr8B73\file.err ) for these warning
 messages.
1

 ***** ANSYS - ENGINEERING ANALYSIS SYSTEM  RELEASE 12.1     *****
 ANSYS Academic Teaching Advanced
 00000000          VERSION=WINDOWS x64   10:01:16  SEP 23, 2010 CP=    580.391

 Schweißen Flachprobe--Thermisch-transient (E5)


                     L O A D   S T E P   O P T I O N S

   LOAD STEP NUMBER. . . . . . . . . . . . . . . .    17
   TIME AT END OF THE LOAD STEP. . . . . . . . . . 0.67090
   AUTOMATIC TIME STEPPING . . . . . . . . . . . .    ON
      INITIAL NUMBER OF SUBSTEPS . . . . . . . . .   100
      MAXIMUM NUMBER OF SUBSTEPS . . . . . . . . .  1000
      MINIMUM NUMBER OF SUBSTEPS . . . . . . . . .    10
   STEP CHANGE BOUNDARY CONDITIONS . . . . . . . .   YES
   TRANSIENT (INERTIA) EFFECTS
      THERMAL DOFS . . . . . . . . . . . . . . . .    ON
   TRANSIENT INTEGRATION PARAMETERS
      THETA. . . . . . . . . . . . . . . . . . . .  1.0000
      OSCILLATION LIMIT CRITERION. . . . . . . . . 0.50000
      TOLERANCE. . . . . . . . . . . . . . . . . .  0.0000
   PRINT OUTPUT CONTROLS . . . . . . . . . . . . .NO PRINTOUT
   DATABASE OUTPUT CONTROLS
      ITEM     FREQUENCY   COMPONENT
       ALL       NONE
      NSOL        ALL
      RSOL        ALL
      FFLU        ALL


 SOLUTION MONITORING INFO IS WRITTEN TO FILE=
file.mntr




 *** LOAD STEP    17   SUBSTEP     1  COMPLETED.    CUM ITER =    197
 *** TIME =  0.571900         TIME INC =  0.100000E-02  NEW TRIANG MATRIX
 *** RESPONSE EIGENVALUE =  1.729       OSCILLATION LIMIT = 0.1729E-02
 *** AUTO STEP TIME:  NEXT TIME INC = 0.10000E-02  UNCHANGED

 *** LOAD STEP    17   SUBSTEP     2  COMPLETED.    CUM ITER =    198
 *** TIME =  0.572900         TIME INC =  0.100000E-02  NEW TRIANG MATRIX
 *** RESPONSE EIGENVALUE =  1.728       OSCILLATION LIMIT = 0.1728E-02
 *** AUTO TIME STEP:  NEXT TIME INC = 0.30000E-02  INCREASED (FACTOR = 3.0000)

 *** LOAD STEP    17   SUBSTEP     3  COMPLETED.    CUM ITER =    199
 *** TIME =  0.575900         TIME INC =  0.300000E-02  NEW TRIANG MATRIX
 *** RESPONSE EIGENVALUE =  1.724       OSCILLATION LIMIT = 0.5173E-02
 *** AUTO TIME STEP:  NEXT TIME INC = 0.90000E-02  INCREASED (FACTOR = 3.0000)
```

```
*** LOAD STEP    17   SUBSTEP     4  COMPLETED.    CUM ITER =    200
*** TIME =  0.584900         TIME INC =  0.900000E-02  NEW TRIANG MATRIX
*** RESPONSE EIGENVALUE =  1.715       OSCILLATION LIMIT = 0.1544E-01
*** AUTO TIME STEP:  NEXT TIME INC = 0.10000E-01  INCREASED (FACTOR = 1.1111)

*** LOAD STEP    17   SUBSTEP     5  COMPLETED.    CUM ITER =    201
*** TIME =  0.594900         TIME INC =  0.100000E-01  NEW TRIANG MATRIX
*** RESPONSE EIGENVALUE =  1.707       OSCILLATION LIMIT = 0.1707E-01
*** AUTO STEP TIME:  NEXT TIME INC = 0.10000E-01  UNCHANGED

*** LOAD STEP    17   SUBSTEP     6  COMPLETED.    CUM ITER =    202
*** TIME =  0.604900         TIME INC =  0.100000E-01  NEW TRIANG MATRIX
*** RESPONSE EIGENVALUE =  1.699       OSCILLATION LIMIT = 0.1699E-01
*** AUTO STEP TIME:  NEXT TIME INC = 0.10000E-01  UNCHANGED

*** LOAD STEP    17   SUBSTEP     7  COMPLETED.    CUM ITER =    203
*** TIME =  0.614900         TIME INC =  0.100000E-01  NEW TRIANG MATRIX
*** RESPONSE EIGENVALUE =  1.693       OSCILLATION LIMIT = 0.1693E-01
*** AUTO STEP TIME:  NEXT TIME INC = 0.10000E-01  UNCHANGED

*** LOAD STEP    17   SUBSTEP     8  COMPLETED.    CUM ITER =    204
*** TIME =  0.624900         TIME INC =  0.100000E-01  NEW TRIANG MATRIX
*** RESPONSE EIGENVALUE =  1.689       OSCILLATION LIMIT = 0.1689E-01
*** AUTO STEP TIME:  NEXT TIME INC = 0.10000E-01  UNCHANGED

*** LOAD STEP    17   SUBSTEP     9  COMPLETED.    CUM ITER =    205
*** TIME =  0.634900         TIME INC =  0.100000E-01  NEW TRIANG MATRIX
*** RESPONSE EIGENVALUE =  1.685       OSCILLATION LIMIT = 0.1685E-01
*** AUTO STEP TIME:  NEXT TIME INC = 0.10000E-01  UNCHANGED

*** LOAD STEP    17   SUBSTEP    10  COMPLETED.    CUM ITER =    206
*** TIME =  0.644900         TIME INC =  0.100000E-01  NEW TRIANG MATRIX
*** RESPONSE EIGENVALUE =  1.683       OSCILLATION LIMIT = 0.1683E-01
*** AUTO STEP TIME:  NEXT TIME INC = 0.10000E-01  UNCHANGED

*** LOAD STEP    17   SUBSTEP    11  COMPLETED.    CUM ITER =    207
*** TIME =  0.654900         TIME INC =  0.100000E-01  NEW TRIANG MATRIX
*** RESPONSE EIGENVALUE =  1.681       OSCILLATION LIMIT = 0.1681E-01
*** AUTO STEP TIME:  NEXT TIME INC = 0.10000E-01  UNCHANGED

*** LOAD STEP    17   SUBSTEP    12  COMPLETED.    CUM ITER =    208
*** TIME =  0.664900         TIME INC =  0.100000E-01  NEW TRIANG MATRIX
*** RESPONSE EIGENVALUE =  1.681       OSCILLATION LIMIT = 0.1681E-01
*** AUTO TIME STEP:  NEXT TIME INC = 0.60000E-02  DECREASED (FACTOR = 0.6000)

*** LOAD STEP    17   SUBSTEP    13  COMPLETED.    CUM ITER =    209
*** TIME =  0.670900         TIME INC =  0.600000E-02  NEW TRIANG MATRIX
*** RESPONSE EIGENVALUE =  1.681       OSCILLATION LIMIT = 0.1009E-01
************************************************
************** FINISHED SOLVE FOR LS 17 *************
************************************************
****************** SOLVE FOR LS 18 ****************

SPECIFIED BODY FORCE HGEN FOR ALL PICKED ELEMENTS AT STARTING LOCATION      1
IS SET ACCORDING TO TABLE PARAMETER = _LOADVARI202

USE AUTOMATIC TIME STEPPING THIS LOAD STEP

USE     100 SUBSTEPS INITIALLY THIS LOAD STEP FOR ALL  DEGREES OF FREEDOM
FOR AUTOMATIC TIME STEPPING:
  USE   1000 SUBSTEPS AS A MAXIMUM
  USE     10 SUBSTEPS AS A MINIMUM

TIME= 0.77090

INCLUDE TRANSIENT EFFECTS FOR  ALL DEGREES OF FREEDOM THIS LOAD STEP

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

 WRITE RSOL ITEMS TO THE DATABASE WITH A FREQUENCY OF ALL
   FOR ALL APPLICABLE ENTITIES

 WRITE FFLU ITEMS TO THE DATABASE WITH A FREQUENCY OF ALL
   FOR ALL APPLICABLE ENTITIES

 CONVERGENCE ON HEAT BASED ON THE NORM OF THE N-R LOAD
   WITH A TOLERANCE OF 0.1000E-02 AND A MINIMUM REFERENCE VALUE OF 0.1000E-02
   USING THE L2 NORM (CHECK THE SRSS VALUE)

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

 *** WARNING ***                          CP =     619.312   TIME= 10:01:39
 Material number 4 (used by element 65408 ) should normally have at
 least one MP or one TB type command associated with it.  Output of
 energy by material may not be available.

 *** NOTE ***                             CP =     619.484   TIME= 10:01:39
 The step data was checked and warning messages were found.
  Please review output or errors file ( D:\Daten\Ansys
 Simulation\_ProjectScratch\Scr8B73\file.err ) for these warning
 messages.
1

 ***** ANSYS - ENGINEERING ANALYSIS SYSTEM  RELEASE 12.1     *****
 ANSYS Academic Teaching Advanced
 00000000          VERSION=WINDOWS x64   10:01:39  SEP 23, 2010 CP=    620.359

 Schweißen Flachprobe--Thermisch-transient (E5)


                     L O A D   S T E P   O P T I O N S

   LOAD STEP NUMBER. . . . . . . . . . . . . . . .    18
   TIME AT END OF THE LOAD STEP. . . . . . . . . . 0.77090
   AUTOMATIC TIME STEPPING . . . . . . . . . . . .    ON
      INITIAL NUMBER OF SUBSTEPS . . . . . . . . .   100
      MAXIMUM NUMBER OF SUBSTEPS . . . . . . . . .  1000
      MINIMUM NUMBER OF SUBSTEPS . . . . . . . . .    10
   STEP CHANGE BOUNDARY CONDITIONS . . . . . . . .   YES
   TRANSIENT (INERTIA) EFFECTS
      THERMAL DOFS . . . . . . . . . . . . . . . .    ON
   TRANSIENT INTEGRATION PARAMETERS
      THETA. . . . . . . . . . . . . . . . . . . .  1.0000
      OSCILLATION LIMIT CRITERION. . . . . . . . . 0.50000
      TOLERANCE. . . . . . . . . . . . . . . . . .  0.0000
   PRINT OUTPUT CONTROLS . . . . . . . . . . . . .NO PRINTOUT
   DATABASE OUTPUT CONTROLS
      ITEM     FREQUENCY   COMPONENT
       ALL       NONE
      NSOL        ALL
      RSOL        ALL
      FFLU        ALL


 SOLUTION MONITORING INFO IS WRITTEN TO FILE=
file.mntr




 *** LOAD STEP    18   SUBSTEP     1  COMPLETED.    CUM ITER =    210
 *** TIME =  0.671900         TIME INC =  0.100000E-02  NEW TRIANG MATRIX
```

```
*** RESPONSE EIGENVALUE =  1.680       OSCILLATION LIMIT = 0.1680E-02
*** AUTO STEP TIME:  NEXT TIME INC = 0.10000E-02  UNCHANGED

*** LOAD STEP    18   SUBSTEP     2  COMPLETED.    CUM ITER =    211
*** TIME =  0.672900         TIME INC =  0.100000E-02  NEW TRIANG MATRIX
*** RESPONSE EIGENVALUE =  1.680       OSCILLATION LIMIT = 0.1680E-02
*** AUTO TIME STEP:  NEXT TIME INC = 0.30000E-02  INCREASED (FACTOR = 3.0000)

*** LOAD STEP    18   SUBSTEP     3  COMPLETED.    CUM ITER =    212
*** TIME =  0.675900         TIME INC =  0.300000E-02  NEW TRIANG MATRIX
*** RESPONSE EIGENVALUE =  1.678       OSCILLATION LIMIT = 0.5035E-02
*** AUTO TIME STEP:  NEXT TIME INC = 0.90000E-02  INCREASED (FACTOR = 3.0000)

*** LOAD STEP    18   SUBSTEP     4  COMPLETED.    CUM ITER =    213
*** TIME =  0.684900         TIME INC =  0.900000E-02  NEW TRIANG MATRIX
*** RESPONSE EIGENVALUE =  1.675       OSCILLATION LIMIT = 0.1508E-01
*** AUTO TIME STEP:  NEXT TIME INC = 0.10000E-01  INCREASED (FACTOR = 1.1111)

*** LOAD STEP    18   SUBSTEP     5  COMPLETED.    CUM ITER =    214
*** TIME =  0.694900         TIME INC =  0.100000E-01  NEW TRIANG MATRIX
*** RESPONSE EIGENVALUE =  1.672       OSCILLATION LIMIT = 0.1672E-01
*** AUTO STEP TIME:  NEXT TIME INC = 0.10000E-01  UNCHANGED

*** LOAD STEP    18   SUBSTEP     6  COMPLETED.    CUM ITER =    215
*** TIME =  0.704900         TIME INC =  0.100000E-01  NEW TRIANG MATRIX
*** RESPONSE EIGENVALUE =  1.670       OSCILLATION LIMIT = 0.1670E-01
*** AUTO STEP TIME:  NEXT TIME INC = 0.10000E-01  UNCHANGED

*** LOAD STEP    18   SUBSTEP     7  COMPLETED.    CUM ITER =    216
*** TIME =  0.714900         TIME INC =  0.100000E-01  NEW TRIANG MATRIX
*** RESPONSE EIGENVALUE =  1.669       OSCILLATION LIMIT = 0.1669E-01
*** AUTO STEP TIME:  NEXT TIME INC = 0.10000E-01  UNCHANGED

*** LOAD STEP    18   SUBSTEP     8  COMPLETED.    CUM ITER =    217
*** TIME =  0.724900         TIME INC =  0.100000E-01  NEW TRIANG MATRIX
*** RESPONSE EIGENVALUE =  1.669       OSCILLATION LIMIT = 0.1669E-01
*** AUTO STEP TIME:  NEXT TIME INC = 0.10000E-01  UNCHANGED

*** LOAD STEP    18   SUBSTEP     9  COMPLETED.    CUM ITER =    218
*** TIME =  0.734900         TIME INC =  0.100000E-01  NEW TRIANG MATRIX
*** RESPONSE EIGENVALUE =  1.670       OSCILLATION LIMIT = 0.1670E-01
*** AUTO STEP TIME:  NEXT TIME INC = 0.10000E-01  UNCHANGED

*** LOAD STEP    18   SUBSTEP    10  COMPLETED.    CUM ITER =    219
*** TIME =  0.744900         TIME INC =  0.100000E-01  NEW TRIANG MATRIX
*** RESPONSE EIGENVALUE =  1.671       OSCILLATION LIMIT = 0.1671E-01
*** AUTO STEP TIME:  NEXT TIME INC = 0.10000E-01  UNCHANGED

*** LOAD STEP    18   SUBSTEP    11  COMPLETED.    CUM ITER =    220
*** TIME =  0.754900         TIME INC =  0.100000E-01  NEW TRIANG MATRIX
*** RESPONSE EIGENVALUE =  1.673       OSCILLATION LIMIT = 0.1673E-01
*** AUTO STEP TIME:  NEXT TIME INC = 0.10000E-01  UNCHANGED

*** LOAD STEP    18   SUBSTEP    12  COMPLETED.    CUM ITER =    221
*** TIME =  0.764900         TIME INC =  0.100000E-01  NEW TRIANG MATRIX
*** RESPONSE EIGENVALUE =  1.675       OSCILLATION LIMIT = 0.1675E-01
*** AUTO TIME STEP:  NEXT TIME INC = 0.60000E-02  DECREASED (FACTOR = 0.6000)

*** LOAD STEP    18   SUBSTEP    13  COMPLETED.    CUM ITER =    222
*** TIME =  0.770900         TIME INC =  0.600000E-02  NEW TRIANG MATRIX
*** RESPONSE EIGENVALUE =  1.677       OSCILLATION LIMIT = 0.1006E-01
**************************************************
*************** FINISHED SOLVE FOR LS 18 *************
**************************************************
****************** SOLVE FOR LS 19 ****************

SPECIFIED BODY FORCE HGEN FOR ALL PICKED ELEMENTS AT STARTING LOCATION      1
IS SET ACCORDING TO TABLE PARAMETER = _LOADVARI202

USE AUTOMATIC TIME STEPPING THIS LOAD STEP
```

```
 USE     100 SUBSTEPS INITIALLY THIS LOAD STEP FOR ALL  DEGREES OF FREEDOM
 FOR AUTOMATIC TIME STEPPING:
   USE   1000 SUBSTEPS AS A MAXIMUM
   USE     10 SUBSTEPS AS A MINIMUM

 TIME= 0.87090

 INCLUDE TRANSIENT EFFECTS FOR  ALL DEGREES OF FREEDOM THIS LOAD STEP

 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

 WRITE RSOL ITEMS TO THE DATABASE WITH A FREQUENCY OF ALL
   FOR ALL APPLICABLE ENTITIES

 WRITE FFLU ITEMS TO THE DATABASE WITH A FREQUENCY OF ALL
   FOR ALL APPLICABLE ENTITIES

 CONVERGENCE ON HEAT BASED ON THE NORM OF THE N-R LOAD
   WITH A TOLERANCE OF 0.1000E-02 AND A MINIMUM REFERENCE VALUE OF 0.1000E-02
   USING THE L2 NORM (CHECK THE SRSS VALUE)

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

 *** WARNING ***                          CP =     658.594   TIME= 10:02:01
 Material number 4 (used by element 65408 ) should normally have at
 least one MP or one TB type command associated with it.  Output of
 energy by material may not be available.

 *** NOTE ***                             CP =     658.828   TIME= 10:02:01
 The step data was checked and warning messages were found.
  Please review output or errors file ( D:\Daten\Ansys
 Simulation\_ProjectScratch\Scr8B73\file.err ) for these warning
 messages.
1

 ***** ANSYS - ENGINEERING ANALYSIS SYSTEM  RELEASE 12.1     *****
 ANSYS Academic Teaching Advanced
 00000000          VERSION=WINDOWS x64   10:02:02  SEP 23, 2010 CP=    659.594

 Schweißen Flachprobe--Thermisch-transient (E5)


                     L O A D   S T E P   O P T I O N S

   LOAD STEP NUMBER. . . . . . . . . . . . . . . .    19
   TIME AT END OF THE LOAD STEP. . . . . . . . . . 0.87090
   AUTOMATIC TIME STEPPING . . . . . . . . . . . .    ON
      INITIAL NUMBER OF SUBSTEPS . . . . . . . . .   100
      MAXIMUM NUMBER OF SUBSTEPS . . . . . . . . .  1000
      MINIMUM NUMBER OF SUBSTEPS . . . . . . . . .    10
   STEP CHANGE BOUNDARY CONDITIONS . . . . . . . .   YES
   TRANSIENT (INERTIA) EFFECTS
      THERMAL DOFS . . . . . . . . . . . . . . . .    ON
   TRANSIENT INTEGRATION PARAMETERS
      THETA. . . . . . . . . . . . . . . . . . . .  1.0000
      OSCILLATION LIMIT CRITERION. . . . . . . . . 0.50000
      TOLERANCE. . . . . . . . . . . . . . . . . .  0.0000
   PRINT OUTPUT CONTROLS . . . . . . . . . . . . .NO PRINTOUT
   DATABASE OUTPUT CONTROLS
      ITEM     FREQUENCY   COMPONENT
       ALL       NONE
      NSOL        ALL
```

```
      RSOL        ALL
      FFLU        ALL


 SOLUTION MONITORING INFO IS WRITTEN TO FILE=
file.mntr



 *** LOAD STEP    19   SUBSTEP     1  COMPLETED.    CUM ITER =    223
 *** TIME =  0.771900         TIME INC =  0.100000E-02  NEW TRIANG MATRIX
 *** RESPONSE EIGENVALUE =  1.677       OSCILLATION LIMIT = 0.1677E-02
 *** AUTO STEP TIME:  NEXT TIME INC = 0.10000E-02  UNCHANGED

 *** LOAD STEP    19   SUBSTEP     2  COMPLETED.    CUM ITER =    224
 *** TIME =  0.772900         TIME INC =  0.100000E-02  NEW TRIANG MATRIX
 *** RESPONSE EIGENVALUE =  1.677       OSCILLATION LIMIT = 0.1677E-02
 *** AUTO TIME STEP:  NEXT TIME INC = 0.30000E-02  INCREASED (FACTOR = 3.0000)

 *** LOAD STEP    19   SUBSTEP     3  COMPLETED.    CUM ITER =    225
 *** TIME =  0.775900         TIME INC =  0.300000E-02  NEW TRIANG MATRIX
 *** RESPONSE EIGENVALUE =  1.677       OSCILLATION LIMIT = 0.5030E-02
 *** AUTO TIME STEP:  NEXT TIME INC = 0.90000E-02  INCREASED (FACTOR = 3.0000)

 *** LOAD STEP    19   SUBSTEP     4  COMPLETED.    CUM ITER =    226
 *** TIME =  0.784900         TIME INC =  0.900000E-02  NEW TRIANG MATRIX
 *** RESPONSE EIGENVALUE =  1.677       OSCILLATION LIMIT = 0.1509E-01
 *** AUTO TIME STEP:  NEXT TIME INC = 0.10000E-01  INCREASED (FACTOR = 1.1111)

 *** LOAD STEP    19   SUBSTEP     5  COMPLETED.    CUM ITER =    227
 *** TIME =  0.794900         TIME INC =  0.100000E-01  NEW TRIANG MATRIX
 *** RESPONSE EIGENVALUE =  1.677       OSCILLATION LIMIT = 0.1677E-01
 *** AUTO STEP TIME:  NEXT TIME INC = 0.10000E-01  UNCHANGED

 *** LOAD STEP    19   SUBSTEP     6  COMPLETED.    CUM ITER =    228
 *** TIME =  0.804900         TIME INC =  0.100000E-01  NEW TRIANG MATRIX
 *** RESPONSE EIGENVALUE =  1.679       OSCILLATION LIMIT = 0.1679E-01
 *** AUTO STEP TIME:  NEXT TIME INC = 0.10000E-01  UNCHANGED

 *** LOAD STEP    19   SUBSTEP     7  COMPLETED.    CUM ITER =    229
 *** TIME =  0.814900         TIME INC =  0.100000E-01  NEW TRIANG MATRIX
 *** RESPONSE EIGENVALUE =  1.681       OSCILLATION LIMIT = 0.1681E-01
 *** AUTO STEP TIME:  NEXT TIME INC = 0.10000E-01  UNCHANGED

 *** LOAD STEP    19   SUBSTEP     8  COMPLETED.    CUM ITER =    230
 *** TIME =  0.824900         TIME INC =  0.100000E-01  NEW TRIANG MATRIX
 *** RESPONSE EIGENVALUE =  1.683       OSCILLATION LIMIT = 0.1683E-01
 *** AUTO STEP TIME:  NEXT TIME INC = 0.10000E-01  UNCHANGED

 *** LOAD STEP    19   SUBSTEP     9  COMPLETED.    CUM ITER =    231
 *** TIME =  0.834900         TIME INC =  0.100000E-01  NEW TRIANG MATRIX
 *** RESPONSE EIGENVALUE =  1.686       OSCILLATION LIMIT = 0.1686E-01
 *** AUTO STEP TIME:  NEXT TIME INC = 0.10000E-01  UNCHANGED

 *** LOAD STEP    19   SUBSTEP    10  COMPLETED.    CUM ITER =    232
 *** TIME =  0.844900         TIME INC =  0.100000E-01  NEW TRIANG MATRIX
 *** RESPONSE EIGENVALUE =  1.689       OSCILLATION LIMIT = 0.1689E-01
 *** AUTO STEP TIME:  NEXT TIME INC = 0.10000E-01  UNCHANGED

 *** LOAD STEP    19   SUBSTEP    11  COMPLETED.    CUM ITER =    233
 *** TIME =  0.854900         TIME INC =  0.100000E-01  NEW TRIANG MATRIX
 *** RESPONSE EIGENVALUE =  1.693       OSCILLATION LIMIT = 0.1693E-01
 *** AUTO STEP TIME:  NEXT TIME INC = 0.10000E-01  UNCHANGED

 *** LOAD STEP    19   SUBSTEP    12  COMPLETED.    CUM ITER =    234
 *** TIME =  0.864900         TIME INC =  0.100000E-01  NEW TRIANG MATRIX
 *** RESPONSE EIGENVALUE =  1.697       OSCILLATION LIMIT = 0.1697E-01
 *** AUTO TIME STEP:  NEXT TIME INC = 0.60000E-02  DECREASED (FACTOR = 0.6000)
```

```
 *** LOAD STEP    19   SUBSTEP    13  COMPLETED.    CUM ITER =    235
 *** TIME =  0.870900         TIME INC =  0.600000E-02  NEW TRIANG MATRIX
 *** RESPONSE EIGENVALUE =  1.699       OSCILLATION LIMIT = 0.1020E-01
 ************************************************
 ************** FINISHED SOLVE FOR LS 19 *************
 ************************************************
 ****************** SOLVE FOR LS 20 ****************

 SPECIFIED BODY FORCE HGEN FOR ALL PICKED ELEMENTS AT STARTING LOCATION      1
 IS SET ACCORDING TO TABLE PARAMETER = _LOADVARI202

 USE AUTOMATIC TIME STEPPING THIS LOAD STEP

 USE     100 SUBSTEPS INITIALLY THIS LOAD STEP FOR ALL  DEGREES OF FREEDOM
 FOR AUTOMATIC TIME STEPPING:
   USE   1000 SUBSTEPS AS A MAXIMUM
   USE     10 SUBSTEPS AS A MINIMUM

 TIME= 0.93545

 INCLUDE TRANSIENT EFFECTS FOR  ALL DEGREES OF FREEDOM THIS LOAD STEP

 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

 WRITE RSOL ITEMS TO THE DATABASE WITH A FREQUENCY OF ALL
   FOR ALL APPLICABLE ENTITIES

 WRITE FFLU ITEMS TO THE DATABASE WITH A FREQUENCY OF ALL
   FOR ALL APPLICABLE ENTITIES

 CONVERGENCE ON HEAT BASED ON THE NORM OF THE N-R LOAD
   WITH A TOLERANCE OF 0.1000E-02 AND A MINIMUM REFERENCE VALUE OF 0.1000E-02
   USING THE L2 NORM (CHECK THE SRSS VALUE)

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

 *** WARNING ***                         CP =     697.812   TIME= 10:02:24
 Material number 4 (used by element 65408 ) should normally have at
 least one MP or one TB type command associated with it.  Output of
 energy by material may not be available.

 *** NOTE ***                            CP =     697.984   TIME= 10:02:24
 The step data was checked and warning messages were found.
  Please review output or errors file ( D:\Daten\Ansys
 Simulation\_ProjectScratch\Scr8B73\file.err ) for these warning
 messages.
1

 ***** ANSYS - ENGINEERING ANALYSIS SYSTEM  RELEASE 12.1     *****
 ANSYS Academic Teaching Advanced
 00000000          VERSION=WINDOWS x64   10:02:24  SEP 23, 2010 CP=    698.844

 Schweißen Flachprobe--Thermisch-transient (E5)


                     L O A D   S T E P   O P T I O N S

   LOAD STEP NUMBER. . . . . . . . . . . . . . . .    20
   TIME AT END OF THE LOAD STEP. . . . . . . . . . 0.93545
   AUTOMATIC TIME STEPPING . . . . . . . . . . . .    ON
      INITIAL NUMBER OF SUBSTEPS . . . . . . . . .   100
      MAXIMUM NUMBER OF SUBSTEPS . . . . . . . . .  1000
      MINIMUM NUMBER OF SUBSTEPS . . . . . . . . .    10
```

```
  STEP CHANGE BOUNDARY CONDITIONS . . . . . .   YES
  TRANSIENT (INERTIA) EFFECTS
     THERMAL DOFS . . . . . .    ON
  TRANSIENT INTEGRATION PARAMETERS
     THETA. . . . . .  1.0000
     OSCILLATION LIMIT CRITERION. . . . . 0.50000
     TOLERANCE. . . . . .  0.0000
  PRINT OUTPUT CONTROLS . . . . . .NO PRINTOUT
  DATABASE OUTPUT CONTROLS
     ITEM     FREQUENCY   COMPONENT
      ALL       NONE
     NSOL        ALL
     RSOL        ALL
     FFLU        ALL


 SOLUTION MONITORING INFO IS WRITTEN TO FILE=
file.mntr



 *** LOAD STEP    20   SUBSTEP     1  COMPLETED.    CUM ITER =    236
 *** TIME =  0.871546         TIME INC =  0.645500E-03  NEW TRIANG MATRIX
 *** RESPONSE EIGENVALUE =  1.700       OSCILLATION LIMIT = 0.1097E-02
 *** AUTO STEP TIME:  NEXT TIME INC = 0.64550E-03  UNCHANGED

 *** LOAD STEP    20   SUBSTEP     2  COMPLETED.    CUM ITER =    237
 *** TIME =  0.872191         TIME INC =  0.645500E-03  NEW TRIANG MATRIX
 *** RESPONSE EIGENVALUE =  1.700       OSCILLATION LIMIT = 0.1097E-02
 *** AUTO TIME STEP:  NEXT TIME INC = 0.19365E-02  INCREASED (FACTOR = 3.0000)

 *** LOAD STEP    20   SUBSTEP     3  COMPLETED.    CUM ITER =    238
 *** TIME =  0.874128         TIME INC =  0.193650E-02  NEW TRIANG MATRIX
 *** RESPONSE EIGENVALUE =  1.700       OSCILLATION LIMIT = 0.3293E-02
 *** AUTO TIME STEP:  NEXT TIME INC = 0.58095E-02  INCREASED (FACTOR = 3.0000)

 *** LOAD STEP    20   SUBSTEP     4  COMPLETED.    CUM ITER =    239
 *** TIME =  0.879937         TIME INC =  0.580950E-02  NEW TRIANG MATRIX
 *** RESPONSE EIGENVALUE =  1.702       OSCILLATION LIMIT = 0.9887E-02
 *** AUTO TIME STEP:  NEXT TIME INC = 0.64550E-02  INCREASED (FACTOR = 1.1111)

 *** LOAD STEP    20   SUBSTEP     5  COMPLETED.    CUM ITER =    240
 *** TIME =  0.886392         TIME INC =  0.645500E-02  NEW TRIANG MATRIX
 *** RESPONSE EIGENVALUE =  1.704       OSCILLATION LIMIT = 0.1100E-01
 *** AUTO STEP TIME:  NEXT TIME INC = 0.64550E-02  UNCHANGED

 *** LOAD STEP    20   SUBSTEP     6  COMPLETED.    CUM ITER =    241
 *** TIME =  0.892847         TIME INC =  0.645500E-02  NEW TRIANG MATRIX
 *** RESPONSE EIGENVALUE =  1.706       OSCILLATION LIMIT = 0.1101E-01
 *** AUTO STEP TIME:  NEXT TIME INC = 0.64550E-02  UNCHANGED

 *** LOAD STEP    20   SUBSTEP     7  COMPLETED.    CUM ITER =    242
 *** TIME =  0.899302         TIME INC =  0.645500E-02  NEW TRIANG MATRIX
 *** RESPONSE EIGENVALUE =  1.708       OSCILLATION LIMIT = 0.1103E-01
 *** AUTO STEP TIME:  NEXT TIME INC = 0.64550E-02  UNCHANGED

 *** LOAD STEP    20   SUBSTEP     8  COMPLETED.    CUM ITER =    243
 *** TIME =  0.905757         TIME INC =  0.645500E-02  NEW TRIANG MATRIX
 *** RESPONSE EIGENVALUE =  1.710       OSCILLATION LIMIT = 0.1104E-01
 *** AUTO STEP TIME:  NEXT TIME INC = 0.64550E-02  UNCHANGED

 *** LOAD STEP    20   SUBSTEP     9  COMPLETED.    CUM ITER =    244
 *** TIME =  0.912212         TIME INC =  0.645500E-02  NEW TRIANG MATRIX
 *** RESPONSE EIGENVALUE =  1.713       OSCILLATION LIMIT = 0.1106E-01
 *** AUTO STEP TIME:  NEXT TIME INC = 0.64550E-02  UNCHANGED

 *** LOAD STEP    20   SUBSTEP    10  COMPLETED.    CUM ITER =    245
 *** TIME =  0.918667         TIME INC =  0.645500E-02  NEW TRIANG MATRIX
 *** RESPONSE EIGENVALUE =  1.716       OSCILLATION LIMIT = 0.1107E-01
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 *** AUTO STEP TIME:  NEXT TIME INC = 0.64550E-02  UNCHANGED

 *** LOAD STEP    20   SUBSTEP    11  COMPLETED.    CUM ITER =    246
 *** TIME =  0.925122         TIME INC =  0.645500E-02  NEW TRIANG MATRIX
 *** RESPONSE EIGENVALUE =  1.718       OSCILLATION LIMIT = 0.1109E-01
 *** AUTO STEP TIME:  NEXT TIME INC = 0.64550E-02  UNCHANGED

 *** LOAD STEP    20   SUBSTEP    12  COMPLETED.    CUM ITER =    247
 *** TIME =  0.931577         TIME INC =  0.645500E-02  NEW TRIANG MATRIX
 *** RESPONSE EIGENVALUE =  1.721       OSCILLATION LIMIT = 0.1111E-01
 *** AUTO TIME STEP:  NEXT TIME INC = 0.38730E-02  DECREASED (FACTOR = 0.6000)

 *** LOAD STEP    20   SUBSTEP    13  COMPLETED.    CUM ITER =    248
 *** TIME =  0.935450         TIME INC =  0.387300E-02  NEW TRIANG MATRIX
 *** RESPONSE EIGENVALUE =  1.723       OSCILLATION LIMIT = 0.6673E-02
 ************************************************
 ************** FINISHED SOLVE FOR LS 20 *************
 ************************************************
 ****************** SOLVE FOR LS 21 ****************

 SPECIFIED BODY FORCE HGEN FOR ALL PICKED ELEMENTS AT STARTING LOCATION      1
 IS SET ACCORDING TO TABLE PARAMETER = _LOADVARI202

 USE AUTOMATIC TIME STEPPING THIS LOAD STEP

 USE     100 SUBSTEPS INITIALLY THIS LOAD STEP FOR ALL  DEGREES OF FREEDOM
 FOR AUTOMATIC TIME STEPPING:
   USE   1000 SUBSTEPS AS A MAXIMUM
   USE     10 SUBSTEPS AS A MINIMUM

 TIME=  1.0000

 INCLUDE TRANSIENT EFFECTS FOR  ALL DEGREES OF FREEDOM THIS LOAD STEP

 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

 WRITE RSOL ITEMS TO THE DATABASE WITH A FREQUENCY OF ALL
   FOR ALL APPLICABLE ENTITIES

 WRITE FFLU ITEMS TO THE DATABASE WITH A FREQUENCY OF ALL
   FOR ALL APPLICABLE ENTITIES

 CONVERGENCE ON HEAT BASED ON THE NORM OF THE N-R LOAD
   WITH A TOLERANCE OF 0.1000E-02 AND A MINIMUM REFERENCE VALUE OF 0.1000E-02
   USING THE L2 NORM (CHECK THE SRSS VALUE)

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

 *** WARNING ***                          CP =     736.797   TIME= 10:02:46
 Material number 4 (used by element 65408 ) should normally have at
 least one MP or one TB type command associated with it.  Output of
 energy by material may not be available.

 *** NOTE ***                            CP =     737.125   TIME= 10:02:46
 The step data was checked and warning messages were found.
  Please review output or errors file ( D:\Daten\Ansys
 Simulation\_ProjectScratch\Scr8B73\file.err ) for these warning
 messages.
1

 ***** ANSYS - ENGINEERING ANALYSIS SYSTEM  RELEASE 12.1     *****
 ANSYS Academic Teaching Advanced
 00000000          VERSION=WINDOWS x64   10:02:47  SEP 23, 2010 CP=    737.875
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Schweißen Flachprobe--Thermisch-transient (E5)

L O A D S T E P O P T I O N S

```
  LOAD STEP NUMBER. . . . . .    21
  TIME AT END OF THE LOAD STEP. . . . . .  1.0000
  AUTOMATIC TIME STEPPING . . . . . .    ON
     INITIAL NUMBER OF SUBSTEPS . . . . . .   100
     MAXIMUM NUMBER OF SUBSTEPS . . . . . .  1000
     MINIMUM NUMBER OF SUBSTEPS . . . . . .    10
  STEP CHANGE BOUNDARY CONDITIONS . . . . . .   YES
  TRANSIENT (INERTIA) EFFECTS
     THERMAL DOFS . . . . . .    ON
  TRANSIENT INTEGRATION PARAMETERS
     THETA. . . . . .  1.0000
     OSCILLATION LIMIT CRITERION. . . . . 0.50000
     TOLERANCE. . . . . .  0.0000
  PRINT OUTPUT CONTROLS . . . . . .NO PRINTOUT
  DATABASE OUTPUT CONTROLS
     ITEM     FREQUENCY   COMPONENT
      ALL       NONE
     NSOL        ALL
     RSOL        ALL
     FFLU        ALL


 SOLUTION MONITORING INFO IS WRITTEN TO FILE=
file.mntr



 *** LOAD STEP    21   SUBSTEP     1  COMPLETED.    CUM ITER =    249
 *** TIME =  0.936095         TIME INC =  0.645500E-03  NEW TRIANG MATRIX
 *** RESPONSE EIGENVALUE =  1.723       OSCILLATION LIMIT = 0.1112E-02
 *** AUTO STEP TIME:  NEXT TIME INC = 0.64550E-03  UNCHANGED

 *** LOAD STEP    21   SUBSTEP     2  COMPLETED.    CUM ITER =    250
 *** TIME =  0.936741         TIME INC =  0.645500E-03  NEW TRIANG MATRIX
 *** RESPONSE EIGENVALUE =  1.723       OSCILLATION LIMIT = 0.1112E-02
 *** AUTO TIME STEP:  NEXT TIME INC = 0.19365E-02  INCREASED (FACTOR = 3.0000)

 *** LOAD STEP    21   SUBSTEP     3  COMPLETED.    CUM ITER =    251
 *** TIME =  0.938677         TIME INC =  0.193650E-02  NEW TRIANG MATRIX
 *** RESPONSE EIGENVALUE =  1.724       OSCILLATION LIMIT = 0.3338E-02
 *** AUTO TIME STEP:  NEXT TIME INC = 0.58095E-02  INCREASED (FACTOR = 3.0000)

 *** LOAD STEP    21   SUBSTEP     4  COMPLETED.    CUM ITER =    252
 *** TIME =  0.944487         TIME INC =  0.580950E-02  NEW TRIANG MATRIX
 *** RESPONSE EIGENVALUE =  1.726       OSCILLATION LIMIT = 0.1003E-01
 *** AUTO TIME STEP:  NEXT TIME INC = 0.64550E-02  INCREASED (FACTOR = 1.1111)

 *** LOAD STEP    21   SUBSTEP     5  COMPLETED.    CUM ITER =    253
 *** TIME =  0.950942         TIME INC =  0.645500E-02  NEW TRIANG MATRIX
 *** RESPONSE EIGENVALUE =  1.728       OSCILLATION LIMIT = 0.1115E-01
 *** AUTO STEP TIME:  NEXT TIME INC = 0.64550E-02  UNCHANGED

 *** LOAD STEP    21   SUBSTEP     6  COMPLETED.    CUM ITER =    254
 *** TIME =  0.957397         TIME INC =  0.645500E-02  NEW TRIANG MATRIX
 *** RESPONSE EIGENVALUE =  1.730       OSCILLATION LIMIT = 0.1117E-01
 *** AUTO STEP TIME:  NEXT TIME INC = 0.64550E-02  UNCHANGED

 *** LOAD STEP    21   SUBSTEP     7  COMPLETED.    CUM ITER =    255
 *** TIME =  0.963852         TIME INC =  0.645500E-02  NEW TRIANG MATRIX
 *** RESPONSE EIGENVALUE =  1.733       OSCILLATION LIMIT = 0.1119E-01
 *** AUTO STEP TIME:  NEXT TIME INC = 0.64550E-02  UNCHANGED

 *** LOAD STEP    21   SUBSTEP     8  COMPLETED.    CUM ITER =    256
```

```
*** TIME =  0.970307         TIME INC =  0.645500E-02  NEW TRIANG MATRIX
*** RESPONSE EIGENVALUE =  1.735       OSCILLATION LIMIT = 0.1120E-01
*** AUTO STEP TIME:  NEXT TIME INC = 0.64550E-02  UNCHANGED

*** LOAD STEP    21   SUBSTEP     9  COMPLETED.    CUM ITER =    257
*** TIME =  0.976762         TIME INC =  0.645500E-02  NEW TRIANG MATRIX
*** RESPONSE EIGENVALUE =  1.738       OSCILLATION LIMIT = 0.1122E-01
*** AUTO STEP TIME:  NEXT TIME INC = 0.64550E-02  UNCHANGED

*** LOAD STEP    21   SUBSTEP    10  COMPLETED.    CUM ITER =    258
*** TIME =  0.983217         TIME INC =  0.645500E-02  NEW TRIANG MATRIX
*** RESPONSE EIGENVALUE =  1.741       OSCILLATION LIMIT = 0.1124E-01
*** AUTO STEP TIME:  NEXT TIME INC = 0.64550E-02  UNCHANGED

*** LOAD STEP    21   SUBSTEP    11  COMPLETED.    CUM ITER =    259
*** TIME =  0.989672         TIME INC =  0.645500E-02  NEW TRIANG MATRIX
*** RESPONSE EIGENVALUE =  1.743       OSCILLATION LIMIT = 0.1125E-01
*** AUTO STEP TIME:  NEXT TIME INC = 0.64550E-02  UNCHANGED

*** LOAD STEP    21   SUBSTEP    12  COMPLETED.    CUM ITER =    260
*** TIME =  0.996127         TIME INC =  0.645500E-02  NEW TRIANG MATRIX
*** RESPONSE EIGENVALUE =  1.746       OSCILLATION LIMIT = 0.1127E-01
*** AUTO TIME STEP:  NEXT TIME INC = 0.38730E-02  DECREASED (FACTOR = 0.6000)

*** LOAD STEP    21   SUBSTEP    13  COMPLETED.    CUM ITER =    261
*** TIME =   1.00000         TIME INC =  0.387300E-02  NEW TRIANG MATRIX
*** RESPONSE EIGENVALUE =  1.748       OSCILLATION LIMIT = 0.6769E-02
************************************************
*************** FINISHED SOLVE FOR LS 21 *************
************************************************
****************** SOLVE FOR LS 22 ****************

SPECIFIED BODY FORCE HGEN FOR ALL PICKED ELEMENTS AT STARTING LOCATION      1
IS SET ACCORDING TO TABLE PARAMETER = _LOADVARI202

USE AUTOMATIC TIME STEPPING THIS LOAD STEP

USE     100 SUBSTEPS INITIALLY THIS LOAD STEP FOR ALL  DEGREES OF FREEDOM
FOR AUTOMATIC TIME STEPPING:
  USE   1000 SUBSTEPS AS A MAXIMUM
  USE     10 SUBSTEPS AS A MINIMUM

TIME=  1.1000

INCLUDE TRANSIENT EFFECTS FOR  ALL DEGREES OF FREEDOM THIS LOAD STEP

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

WRITE RSOL ITEMS TO THE DATABASE WITH A FREQUENCY OF ALL
  FOR ALL APPLICABLE ENTITIES

WRITE FFLU ITEMS TO THE DATABASE WITH A FREQUENCY OF ALL
  FOR ALL APPLICABLE ENTITIES

CONVERGENCE ON HEAT BASED ON THE NORM OF THE N-R LOAD
  WITH A TOLERANCE OF 0.1000E-02 AND A MINIMUM REFERENCE VALUE OF 0.1000E-02
  USING THE L2 NORM (CHECK THE SRSS VALUE)

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

*** WARNING ***                         CP =     775.719   TIME= 10:03:08
Material number 4 (used by element 65408 ) should normally have at
least one MP or one TB type command associated with it.  Output of
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 energy by material may not be available.

 *** NOTE ***                            CP =     775.938   TIME= 10:03:09
 The step data was checked and warning messages were found.
  Please review output or errors file ( D:\Daten\Ansys
 Simulation\_ProjectScratch\Scr8B73\file.err ) for these warning
 messages.
1

 ***** ANSYS - ENGINEERING ANALYSIS SYSTEM  RELEASE 12.1     *****
 ANSYS Academic Teaching Advanced
 00000000          VERSION=WINDOWS x64   10:03:09  SEP 23, 2010 CP=    776.656

 Schweißen Flachprobe--Thermisch-transient (E5)


                     L O A D   S T E P   O P T I O N S

   LOAD STEP NUMBER. . . . . . . . . . . . . . . .    22
   TIME AT END OF THE LOAD STEP. . . . . . . . . .  1.1000
   AUTOMATIC TIME STEPPING . . . . . . . . . . . .    ON
      INITIAL NUMBER OF SUBSTEPS . . . . . . . . .   100
      MAXIMUM NUMBER OF SUBSTEPS . . . . . . . . .  1000
      MINIMUM NUMBER OF SUBSTEPS . . . . . . . . .    10
   STEP CHANGE BOUNDARY CONDITIONS . . . . . . . .   YES
   TRANSIENT (INERTIA) EFFECTS
      THERMAL DOFS . . . . . . . . . . . . . . . .    ON
   TRANSIENT INTEGRATION PARAMETERS
      THETA. . . . . . . . . . . . . . . . . . . .  1.0000
      OSCILLATION LIMIT CRITERION. . . . . . . . . 0.50000
      TOLERANCE. . . . . . . . . . . . . . . . . .  0.0000
   PRINT OUTPUT CONTROLS . . . . . . . . . . . . .NO PRINTOUT
   DATABASE OUTPUT CONTROLS
      ITEM     FREQUENCY   COMPONENT
       ALL       NONE
      NSOL        ALL
      RSOL        ALL
      FFLU        ALL


 SOLUTION MONITORING INFO IS WRITTEN TO FILE=
file.mntr




 *** LOAD STEP    22   SUBSTEP     1  COMPLETED.    CUM ITER =    262
 *** TIME =   1.00100         TIME INC =  0.100000E-02  NEW TRIANG MATRIX
 *** RESPONSE EIGENVALUE =  1.748       OSCILLATION LIMIT = 0.1748E-02
 *** AUTO STEP TIME:  NEXT TIME INC = 0.10000E-02  UNCHANGED

 *** LOAD STEP    22   SUBSTEP     2  COMPLETED.    CUM ITER =    263
 *** TIME =   1.00200         TIME INC =  0.100000E-02  NEW TRIANG MATRIX
 *** RESPONSE EIGENVALUE =  1.748       OSCILLATION LIMIT = 0.1748E-02
 *** AUTO TIME STEP:  NEXT TIME INC = 0.30000E-02  INCREASED (FACTOR = 3.0000)

 *** LOAD STEP    22   SUBSTEP     3  COMPLETED.    CUM ITER =    264
 *** TIME =   1.00500         TIME INC =  0.300000E-02  NEW TRIANG MATRIX
 *** RESPONSE EIGENVALUE =  1.749       OSCILLATION LIMIT = 0.5247E-02
 *** AUTO TIME STEP:  NEXT TIME INC = 0.90000E-02  INCREASED (FACTOR = 3.0000)

 *** LOAD STEP    22   SUBSTEP     4  COMPLETED.    CUM ITER =    265
 *** TIME =   1.01400         TIME INC =  0.900000E-02  NEW TRIANG MATRIX
 *** RESPONSE EIGENVALUE =  1.752       OSCILLATION LIMIT = 0.1576E-01
 *** AUTO TIME STEP:  NEXT TIME INC = 0.10000E-01  INCREASED (FACTOR = 1.1111)

 *** LOAD STEP    22   SUBSTEP     5  COMPLETED.    CUM ITER =    266
 *** TIME =   1.02400         TIME INC =  0.100000E-01  NEW TRIANG MATRIX
 *** RESPONSE EIGENVALUE =  1.755       OSCILLATION LIMIT = 0.1755E-01
 *** AUTO STEP TIME:  NEXT TIME INC = 0.10000E-01  UNCHANGED
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*** LOAD STEP    22   SUBSTEP     6  COMPLETED.    CUM ITER =    267
*** TIME =   1.03400         TIME INC =  0.100000E-01  NEW TRIANG MATRIX
*** RESPONSE EIGENVALUE =  1.758       OSCILLATION LIMIT = 0.1758E-01
*** AUTO STEP TIME:  NEXT TIME INC = 0.10000E-01  UNCHANGED

*** LOAD STEP    22   SUBSTEP     7  COMPLETED.    CUM ITER =    268
*** TIME =   1.04400         TIME INC =  0.100000E-01  NEW TRIANG MATRIX
*** RESPONSE EIGENVALUE =  1.761       OSCILLATION LIMIT = 0.1761E-01
*** AUTO STEP TIME:  NEXT TIME INC = 0.10000E-01  UNCHANGED

*** LOAD STEP    22   SUBSTEP     8  COMPLETED.    CUM ITER =    269
*** TIME =   1.05400         TIME INC =  0.100000E-01  NEW TRIANG MATRIX
*** RESPONSE EIGENVALUE =  1.764       OSCILLATION LIMIT = 0.1764E-01
*** AUTO STEP TIME:  NEXT TIME INC = 0.10000E-01  UNCHANGED

*** LOAD STEP    22   SUBSTEP     9  COMPLETED.    CUM ITER =    270
*** TIME =   1.06400         TIME INC =  0.100000E-01  NEW TRIANG MATRIX
*** RESPONSE EIGENVALUE =  1.767       OSCILLATION LIMIT = 0.1767E-01
*** AUTO STEP TIME:  NEXT TIME INC = 0.10000E-01  UNCHANGED

*** LOAD STEP    22   SUBSTEP    10  COMPLETED.    CUM ITER =    271
*** TIME =   1.07400         TIME INC =  0.100000E-01  NEW TRIANG MATRIX
*** RESPONSE EIGENVALUE =  1.771       OSCILLATION LIMIT = 0.1771E-01
*** AUTO STEP TIME:  NEXT TIME INC = 0.10000E-01  UNCHANGED

*** LOAD STEP    22   SUBSTEP    11  COMPLETED.    CUM ITER =    272
*** TIME =   1.08400         TIME INC =  0.100000E-01  NEW TRIANG MATRIX
*** RESPONSE EIGENVALUE =  1.774       OSCILLATION LIMIT = 0.1774E-01
*** AUTO STEP TIME:  NEXT TIME INC = 0.10000E-01  UNCHANGED

*** LOAD STEP    22   SUBSTEP    12  COMPLETED.    CUM ITER =    273
*** TIME =   1.09400         TIME INC =  0.100000E-01  NEW TRIANG MATRIX
*** RESPONSE EIGENVALUE =  1.777       OSCILLATION LIMIT = 0.1777E-01
*** AUTO TIME STEP:  NEXT TIME INC = 0.60000E-02  DECREASED (FACTOR = 0.6000)

*** LOAD STEP    22   SUBSTEP    13  COMPLETED.    CUM ITER =    274
*** TIME =   1.10000         TIME INC =  0.600000E-02  NEW TRIANG MATRIX
*** RESPONSE EIGENVALUE =  1.779       OSCILLATION LIMIT = 0.1067E-01
************************************************
************** FINISHED SOLVE FOR LS 22 *************
************************************************
****************** SOLVE FOR LS 23 ****************

SPECIFIED BODY FORCE HGEN FOR ALL PICKED ELEMENTS AT STARTING LOCATION      1
IS SET ACCORDING TO TABLE PARAMETER = _LOADVARI202

USE AUTOMATIC TIME STEPPING THIS LOAD STEP

USE     100 SUBSTEPS INITIALLY THIS LOAD STEP FOR ALL  DEGREES OF FREEDOM
FOR AUTOMATIC TIME STEPPING:
  USE   1000 SUBSTEPS AS A MAXIMUM
  USE     10 SUBSTEPS AS A MINIMUM

TIME=  1.2000

INCLUDE TRANSIENT EFFECTS FOR  ALL DEGREES OF FREEDOM THIS LOAD STEP

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

WRITE RSOL ITEMS TO THE DATABASE WITH A FREQUENCY OF ALL
  FOR ALL APPLICABLE ENTITIES
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 WRITE FFLU ITEMS TO THE DATABASE WITH A FREQUENCY OF ALL
   FOR ALL APPLICABLE ENTITIES

 CONVERGENCE ON HEAT BASED ON THE NORM OF THE N-R LOAD
   WITH A TOLERANCE OF 0.1000E-02 AND A MINIMUM REFERENCE VALUE OF 0.1000E-02
   USING THE L2 NORM (CHECK THE SRSS VALUE)

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

 *** WARNING ***                          CP =     815.156   TIME= 10:03:31
 Material number 4 (used by element 65408 ) should normally have at
 least one MP or one TB type command associated with it.  Output of
 energy by material may not be available.

 *** NOTE ***                            CP =     815.328   TIME= 10:03:32
 The step data was checked and warning messages were found.
  Please review output or errors file ( D:\Daten\Ansys
 Simulation\_ProjectScratch\Scr8B73\file.err ) for these warning
 messages.
1

 ***** ANSYS - ENGINEERING ANALYSIS SYSTEM  RELEASE 12.1     *****
 ANSYS Academic Teaching Advanced
 00000000          VERSION=WINDOWS x64   10:03:32  SEP 23, 2010 CP=    816.219

 Schweißen Flachprobe--Thermisch-transient (E5)


                     L O A D   S T E P   O P T I O N S

   LOAD STEP NUMBER. . . . . . . . . . . . . . . .    23
   TIME AT END OF THE LOAD STEP. . . . . . . . . .  1.2000
   AUTOMATIC TIME STEPPING . . . . . . . . . . . .    ON
      INITIAL NUMBER OF SUBSTEPS . . . . . . . . .   100
      MAXIMUM NUMBER OF SUBSTEPS . . . . . . . . .  1000
      MINIMUM NUMBER OF SUBSTEPS . . . . . . . . .    10
   STEP CHANGE BOUNDARY CONDITIONS . . . . . . . .   YES
   TRANSIENT (INERTIA) EFFECTS
      THERMAL DOFS . . . . . . . . . . . . . . . .    ON
   TRANSIENT INTEGRATION PARAMETERS
      THETA. . . . . . . . . . . . . . . . . . . .  1.0000
      OSCILLATION LIMIT CRITERION. . . . . . . . . 0.50000
      TOLERANCE. . . . . . . . . . . . . . . . . .  0.0000
   PRINT OUTPUT CONTROLS . . . . . . . . . . . . .NO PRINTOUT
   DATABASE OUTPUT CONTROLS
      ITEM     FREQUENCY   COMPONENT
       ALL       NONE
      NSOL        ALL
      RSOL        ALL
      FFLU        ALL


 SOLUTION MONITORING INFO IS WRITTEN TO FILE=
file.mntr




 *** LOAD STEP    23   SUBSTEP     1  COMPLETED.    CUM ITER =    275
 *** TIME =   1.10100         TIME INC =  0.100000E-02  NEW TRIANG MATRIX
 *** RESPONSE EIGENVALUE =  1.779       OSCILLATION LIMIT = 0.1779E-02
 *** AUTO STEP TIME:  NEXT TIME INC = 0.10000E-02  UNCHANGED

 *** LOAD STEP    23   SUBSTEP     2  COMPLETED.    CUM ITER =    276
 *** TIME =   1.10200         TIME INC =  0.100000E-02  NEW TRIANG MATRIX
 *** RESPONSE EIGENVALUE =  1.779       OSCILLATION LIMIT = 0.1779E-02
 *** AUTO TIME STEP:  NEXT TIME INC = 0.30000E-02  INCREASED (FACTOR = 3.0000)

 *** LOAD STEP    23   SUBSTEP     3  COMPLETED.    CUM ITER =    277
 *** TIME =   1.10500         TIME INC =  0.300000E-02  NEW TRIANG MATRIX
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*** RESPONSE EIGENVALUE =  1.780       OSCILLATION LIMIT = 0.5339E-02
*** AUTO TIME STEP:  NEXT TIME INC = 0.90000E-02  INCREASED (FACTOR = 3.0000)

*** LOAD STEP    23   SUBSTEP     4  COMPLETED.    CUM ITER =    278
*** TIME =   1.11400         TIME INC =  0.900000E-02  NEW TRIANG MATRIX
*** RESPONSE EIGENVALUE =  1.782       OSCILLATION LIMIT = 0.1603E-01
*** AUTO TIME STEP:  NEXT TIME INC = 0.10000E-01  INCREASED (FACTOR = 1.1111)

*** LOAD STEP    23   SUBSTEP     5  COMPLETED.    CUM ITER =    279
*** TIME =   1.12400         TIME INC =  0.100000E-01  NEW TRIANG MATRIX
*** RESPONSE EIGENVALUE =  1.783       OSCILLATION LIMIT = 0.1783E-01
*** AUTO STEP TIME:  NEXT TIME INC = 0.10000E-01  UNCHANGED

*** LOAD STEP    23   SUBSTEP     6  COMPLETED.    CUM ITER =    280
*** TIME =   1.13400         TIME INC =  0.100000E-01  NEW TRIANG MATRIX
*** RESPONSE EIGENVALUE =  1.785       OSCILLATION LIMIT = 0.1785E-01
*** AUTO STEP TIME:  NEXT TIME INC = 0.10000E-01  UNCHANGED

*** LOAD STEP    23   SUBSTEP     7  COMPLETED.    CUM ITER =    281
*** TIME =   1.14400         TIME INC =  0.100000E-01  NEW TRIANG MATRIX
*** RESPONSE EIGENVALUE =  1.787       OSCILLATION LIMIT = 0.1787E-01
*** AUTO STEP TIME:  NEXT TIME INC = 0.10000E-01  UNCHANGED

*** LOAD STEP    23   SUBSTEP     8  COMPLETED.    CUM ITER =    282
*** TIME =   1.15400         TIME INC =  0.100000E-01  NEW TRIANG MATRIX
*** RESPONSE EIGENVALUE =  1.789       OSCILLATION LIMIT = 0.1789E-01
*** AUTO STEP TIME:  NEXT TIME INC = 0.10000E-01  UNCHANGED

*** LOAD STEP    23   SUBSTEP     9  COMPLETED.    CUM ITER =    283
*** TIME =   1.16400         TIME INC =  0.100000E-01  NEW TRIANG MATRIX
*** RESPONSE EIGENVALUE =  1.790       OSCILLATION LIMIT = 0.1790E-01
*** AUTO STEP TIME:  NEXT TIME INC = 0.10000E-01  UNCHANGED

*** LOAD STEP    23   SUBSTEP    10  COMPLETED.    CUM ITER =    284
*** TIME =   1.17400         TIME INC =  0.100000E-01  NEW TRIANG MATRIX
*** RESPONSE EIGENVALUE =  1.791       OSCILLATION LIMIT = 0.1791E-01
*** AUTO STEP TIME:  NEXT TIME INC = 0.10000E-01  UNCHANGED

*** LOAD STEP    23   SUBSTEP    11  COMPLETED.    CUM ITER =    285
*** TIME =   1.18400         TIME INC =  0.100000E-01  NEW TRIANG MATRIX
*** AUTO STEP TIME:  NEXT TIME INC = 0.10000E-01  UNCHANGED

*** LOAD STEP    23   SUBSTEP    12  COMPLETED.    CUM ITER =    286
*** TIME =   1.19400         TIME INC =  0.100000E-01  NEW TRIANG MATRIX
*** AUTO TIME STEP:  NEXT TIME INC = 0.60000E-02  DECREASED (FACTOR = 0.6000)

*** LOAD STEP    23   SUBSTEP    13  COMPLETED.    CUM ITER =    287
*** TIME =   1.20000         TIME INC =  0.600000E-02  NEW TRIANG MATRIX
************************************************
*************** FINISHED SOLVE FOR LS 23 **************
************************************************
****************** SOLVE FOR LS 24 ****************

SPECIFIED BODY FORCE HGEN FOR ALL PICKED ELEMENTS AT STARTING LOCATION      1
IS SET ACCORDING TO TABLE PARAMETER = _LOADVARI202

USE AUTOMATIC TIME STEPPING THIS LOAD STEP

USE     100 SUBSTEPS INITIALLY THIS LOAD STEP FOR ALL  DEGREES OF FREEDOM
FOR AUTOMATIC TIME STEPPING:
  USE   1000 SUBSTEPS AS A MAXIMUM
  USE     10 SUBSTEPS AS A MINIMUM

TIME=  1.3000

INCLUDE TRANSIENT EFFECTS FOR  ALL DEGREES OF FREEDOM THIS LOAD STEP

ERASE THE CURRENT DATABASE OUTPUT CONTROL TABLE.
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 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

 WRITE RSOL ITEMS TO THE DATABASE WITH A FREQUENCY OF ALL
   FOR ALL APPLICABLE ENTITIES

 WRITE FFLU ITEMS TO THE DATABASE WITH A FREQUENCY OF ALL
   FOR ALL APPLICABLE ENTITIES

 CONVERGENCE ON HEAT BASED ON THE NORM OF THE N-R LOAD
   WITH A TOLERANCE OF 0.1000E-02 AND A MINIMUM REFERENCE VALUE OF 0.1000E-02
   USING THE L2 NORM (CHECK THE SRSS VALUE)

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

 *** WARNING ***                          CP =     853.953   TIME= 10:03:54
 Material number 4 (used by element 65408 ) should normally have at
 least one MP or one TB type command associated with it.  Output of
 energy by material may not be available.

 *** NOTE ***                             CP =     854.250   TIME= 10:03:54
 The step data was checked and warning messages were found.
  Please review output or errors file ( D:\Daten\Ansys
 Simulation\_ProjectScratch\Scr8B73\file.err ) for these warning
 messages.
1

 ***** ANSYS - ENGINEERING ANALYSIS SYSTEM  RELEASE 12.1     *****
 ANSYS Academic Teaching Advanced
 00000000          VERSION=WINDOWS x64   10:03:55  SEP 23, 2010 CP=    854.953

 Schweißen Flachprobe--Thermisch-transient (E5)


                     L O A D   S T E P   O P T I O N S

   LOAD STEP NUMBER. . . . . . . . . . . . . . . .    24
   TIME AT END OF THE LOAD STEP. . . . . . . . . .  1.3000
   AUTOMATIC TIME STEPPING . . . . . . . . . . . .    ON
      INITIAL NUMBER OF SUBSTEPS . . . . . . . . .   100
      MAXIMUM NUMBER OF SUBSTEPS . . . . . . . . .  1000
      MINIMUM NUMBER OF SUBSTEPS . . . . . . . . .    10
   STEP CHANGE BOUNDARY CONDITIONS . . . . . . . .   YES
   TRANSIENT (INERTIA) EFFECTS
      THERMAL DOFS . . . . . . . . . . . . . . . .    ON
   TRANSIENT INTEGRATION PARAMETERS
      THETA. . . . . . . . . . . . . . . . . . . .  1.0000
      OSCILLATION LIMIT CRITERION. . . . . . . . . 0.50000
      TOLERANCE. . . . . . . . . . . . . . . . . .  0.0000
   PRINT OUTPUT CONTROLS . . . . . . . . . . . . .NO PRINTOUT
   DATABASE OUTPUT CONTROLS
      ITEM     FREQUENCY   COMPONENT
       ALL       NONE
      NSOL        ALL
      RSOL        ALL
      FFLU        ALL


 SOLUTION MONITORING INFO IS WRITTEN TO FILE=
file.mntr




 *** LOAD STEP    24   SUBSTEP     1  COMPLETED.    CUM ITER =    288
 *** TIME =   1.20100         TIME INC =  0.100000E-02  NEW TRIANG MATRIX
 *** AUTO STEP TIME:  NEXT TIME INC = 0.10000E-02  UNCHANGED
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*** LOAD STEP    24   SUBSTEP     2  COMPLETED.    CUM ITER =    289
*** TIME =   1.20200         TIME INC =  0.100000E-02  NEW TRIANG MATRIX
*** AUTO STEP TIME:  NEXT TIME INC = 0.10000E-02  UNCHANGED

*** LOAD STEP    24   SUBSTEP     3  COMPLETED.    CUM ITER =    290
*** TIME =   1.20300         TIME INC =  0.100000E-02  NEW TRIANG MATRIX
*** AUTO STEP TIME:  NEXT TIME INC = 0.10000E-02  UNCHANGED

*** LOAD STEP    24   SUBSTEP     4  COMPLETED.    CUM ITER =    291
*** TIME =   1.20400         TIME INC =  0.100000E-02  NEW TRIANG MATRIX
*** AUTO STEP TIME:  NEXT TIME INC = 0.10000E-02  UNCHANGED

*** LOAD STEP    24   SUBSTEP     5  COMPLETED.    CUM ITER =    292
*** TIME =   1.20500         TIME INC =  0.100000E-02  NEW TRIANG MATRIX
*** AUTO STEP TIME:  NEXT TIME INC = 0.10000E-02  UNCHANGED

*** LOAD STEP    24   SUBSTEP     6  COMPLETED.    CUM ITER =    293
*** TIME =   1.20600         TIME INC =  0.100000E-02  NEW TRIANG MATRIX
*** AUTO STEP TIME:  NEXT TIME INC = 0.10000E-02  UNCHANGED

*** LOAD STEP    24   SUBSTEP     7  COMPLETED.    CUM ITER =    294
*** TIME =   1.20700         TIME INC =  0.100000E-02  NEW TRIANG MATRIX
*** AUTO STEP TIME:  NEXT TIME INC = 0.10000E-02  UNCHANGED

*** LOAD STEP    24   SUBSTEP     8  COMPLETED.    CUM ITER =    295
*** TIME =   1.20800         TIME INC =  0.100000E-02  NEW TRIANG MATRIX
*** AUTO STEP TIME:  NEXT TIME INC = 0.10000E-02  UNCHANGED

*** LOAD STEP    24   SUBSTEP     9  COMPLETED.    CUM ITER =    296
*** TIME =   1.20900         TIME INC =  0.100000E-02  NEW TRIANG MATRIX
*** AUTO STEP TIME:  NEXT TIME INC = 0.10000E-02  UNCHANGED

*** LOAD STEP    24   SUBSTEP    10  COMPLETED.    CUM ITER =    297
*** TIME =   1.21000         TIME INC =  0.100000E-02  NEW TRIANG MATRIX
*** AUTO STEP TIME:  NEXT TIME INC = 0.10000E-02  UNCHANGED

*** LOAD STEP    24   SUBSTEP    11  COMPLETED.    CUM ITER =    298
*** TIME =   1.21100         TIME INC =  0.100000E-02  NEW TRIANG MATRIX
*** AUTO STEP TIME:  NEXT TIME INC = 0.10000E-02  UNCHANGED

*** LOAD STEP    24   SUBSTEP    12  COMPLETED.    CUM ITER =    299
*** TIME =   1.21200         TIME INC =  0.100000E-02  NEW TRIANG MATRIX
*** AUTO STEP TIME:  NEXT TIME INC = 0.10000E-02  UNCHANGED

*** LOAD STEP    24   SUBSTEP    13  COMPLETED.    CUM ITER =    300
*** TIME =   1.21300         TIME INC =  0.100000E-02  NEW TRIANG MATRIX
*** AUTO STEP TIME:  NEXT TIME INC = 0.10000E-02  UNCHANGED

*** LOAD STEP    24   SUBSTEP    14  COMPLETED.    CUM ITER =    301
*** TIME =   1.21400         TIME INC =  0.100000E-02  NEW TRIANG MATRIX
*** AUTO STEP TIME:  NEXT TIME INC = 0.10000E-02  UNCHANGED

*** LOAD STEP    24   SUBSTEP    15  COMPLETED.    CUM ITER =    302
*** TIME =   1.21500         TIME INC =  0.100000E-02  NEW TRIANG MATRIX
*** AUTO STEP TIME:  NEXT TIME INC = 0.10000E-02  UNCHANGED

*** LOAD STEP    24   SUBSTEP    16  COMPLETED.    CUM ITER =    303
*** TIME =   1.21600         TIME INC =  0.100000E-02  NEW TRIANG MATRIX
*** AUTO STEP TIME:  NEXT TIME INC = 0.10000E-02  UNCHANGED

*** LOAD STEP    24   SUBSTEP    17  COMPLETED.    CUM ITER =    304
*** TIME =   1.21700         TIME INC =  0.100000E-02  NEW TRIANG MATRIX
*** AUTO STEP TIME:  NEXT TIME INC = 0.10000E-02  UNCHANGED

*** LOAD STEP    24   SUBSTEP    18  COMPLETED.    CUM ITER =    305
*** TIME =   1.21800         TIME INC =  0.100000E-02  NEW TRIANG MATRIX
*** AUTO STEP TIME:  NEXT TIME INC = 0.10000E-02  UNCHANGED

*** LOAD STEP    24   SUBSTEP    19  COMPLETED.    CUM ITER =    306
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*** TIME =   1.21900         TIME INC =  0.100000E-02  NEW TRIANG MATRIX
*** AUTO STEP TIME:  NEXT TIME INC = 0.10000E-02  UNCHANGED

*** LOAD STEP    24   SUBSTEP    20  COMPLETED.    CUM ITER =    307
*** TIME =   1.22000         TIME INC =  0.100000E-02  NEW TRIANG MATRIX
*** AUTO STEP TIME:  NEXT TIME INC = 0.10000E-02  UNCHANGED

*** LOAD STEP    24   SUBSTEP    21  COMPLETED.    CUM ITER =    308
*** TIME =   1.22100         TIME INC =  0.100000E-02  NEW TRIANG MATRIX
*** AUTO STEP TIME:  NEXT TIME INC = 0.10000E-02  UNCHANGED

*** LOAD STEP    24   SUBSTEP    22  COMPLETED.    CUM ITER =    309
*** TIME =   1.22200         TIME INC =  0.100000E-02  NEW TRIANG MATRIX
*** AUTO STEP TIME:  NEXT TIME INC = 0.10000E-02  UNCHANGED

*** LOAD STEP    24   SUBSTEP    23  COMPLETED.    CUM ITER =    310
*** TIME =   1.22300         TIME INC =  0.100000E-02  NEW TRIANG MATRIX
*** AUTO STEP TIME:  NEXT TIME INC = 0.10000E-02  UNCHANGED

*** LOAD STEP    24   SUBSTEP    24  COMPLETED.    CUM ITER =    311
*** TIME =   1.22400         TIME INC =  0.100000E-02  NEW TRIANG MATRIX
*** AUTO STEP TIME:  NEXT TIME INC = 0.10000E-02  UNCHANGED

*** LOAD STEP    24   SUBSTEP    25  COMPLETED.    CUM ITER =    312
*** TIME =   1.22500         TIME INC =  0.100000E-02  NEW TRIANG MATRIX
*** AUTO STEP TIME:  NEXT TIME INC = 0.10000E-02  UNCHANGED

*** LOAD STEP    24   SUBSTEP    26  COMPLETED.    CUM ITER =    313
*** TIME =   1.22600         TIME INC =  0.100000E-02  NEW TRIANG MATRIX
*** AUTO STEP TIME:  NEXT TIME INC = 0.10000E-02  UNCHANGED

*** LOAD STEP    24   SUBSTEP    27  COMPLETED.    CUM ITER =    314
*** TIME =   1.22700         TIME INC =  0.100000E-02  NEW TRIANG MATRIX
*** AUTO STEP TIME:  NEXT TIME INC = 0.10000E-02  UNCHANGED

*** LOAD STEP    24   SUBSTEP    28  COMPLETED.    CUM ITER =    315
*** TIME =   1.22800         TIME INC =  0.100000E-02  NEW TRIANG MATRIX
*** AUTO STEP TIME:  NEXT TIME INC = 0.10000E-02  UNCHANGED

*** LOAD STEP    24   SUBSTEP    29  COMPLETED.    CUM ITER =    316
*** TIME =   1.22900         TIME INC =  0.100000E-02  NEW TRIANG MATRIX
*** AUTO STEP TIME:  NEXT TIME INC = 0.10000E-02  UNCHANGED

*** LOAD STEP    24   SUBSTEP    30  COMPLETED.    CUM ITER =    317
*** TIME =   1.23000         TIME INC =  0.100000E-02  NEW TRIANG MATRIX
*** AUTO STEP TIME:  NEXT TIME INC = 0.10000E-02  UNCHANGED

*** LOAD STEP    24   SUBSTEP    31  COMPLETED.    CUM ITER =    318
*** TIME =   1.23100         TIME INC =  0.100000E-02  NEW TRIANG MATRIX
*** AUTO STEP TIME:  NEXT TIME INC = 0.10000E-02  UNCHANGED

*** LOAD STEP    24   SUBSTEP    32  COMPLETED.    CUM ITER =    319
*** TIME =   1.23200         TIME INC =  0.100000E-02  NEW TRIANG MATRIX
*** AUTO STEP TIME:  NEXT TIME INC = 0.10000E-02  UNCHANGED

*** LOAD STEP    24   SUBSTEP    33  COMPLETED.    CUM ITER =    320
*** TIME =   1.23300         TIME INC =  0.100000E-02  NEW TRIANG MATRIX
*** AUTO STEP TIME:  NEXT TIME INC = 0.10000E-02  UNCHANGED

*** LOAD STEP    24   SUBSTEP    34  COMPLETED.    CUM ITER =    321
*** TIME =   1.23400         TIME INC =  0.100000E-02  NEW TRIANG MATRIX
*** AUTO STEP TIME:  NEXT TIME INC = 0.10000E-02  UNCHANGED

*** LOAD STEP    24   SUBSTEP    35  COMPLETED.    CUM ITER =    322
*** TIME =   1.23500         TIME INC =  0.100000E-02  NEW TRIANG MATRIX
*** AUTO STEP TIME:  NEXT TIME INC = 0.10000E-02  UNCHANGED

*** LOAD STEP    24   SUBSTEP    36  COMPLETED.    CUM ITER =    323
*** TIME =   1.23600         TIME INC =  0.100000E-02  NEW TRIANG MATRIX
*** AUTO TIME STEP:  NEXT TIME INC = 0.20000E-02  INCREASED (FACTOR = 2.0000)
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*** LOAD STEP    24   SUBSTEP    37  COMPLETED.    CUM ITER =    324
*** TIME =   1.23800         TIME INC =  0.200000E-02  NEW TRIANG MATRIX
*** AUTO STEP TIME:  NEXT TIME INC = 0.20000E-02  UNCHANGED

*** LOAD STEP    24   SUBSTEP    38  COMPLETED.    CUM ITER =    325
*** TIME =   1.24000         TIME INC =  0.200000E-02  NEW TRIANG MATRIX
*** AUTO STEP TIME:  NEXT TIME INC = 0.20000E-02  UNCHANGED

*** LOAD STEP    24   SUBSTEP    39  COMPLETED.    CUM ITER =    326
*** TIME =   1.24200         TIME INC =  0.200000E-02  NEW TRIANG MATRIX
*** AUTO STEP TIME:  NEXT TIME INC = 0.20000E-02  UNCHANGED

*** LOAD STEP    24   SUBSTEP    40  COMPLETED.    CUM ITER =    327
*** TIME =   1.24400         TIME INC =  0.200000E-02  NEW TRIANG MATRIX
*** AUTO STEP TIME:  NEXT TIME INC = 0.20000E-02  UNCHANGED

*** LOAD STEP    24   SUBSTEP    41  COMPLETED.    CUM ITER =    328
*** TIME =   1.24600         TIME INC =  0.200000E-02  NEW TRIANG MATRIX
*** AUTO STEP TIME:  NEXT TIME INC = 0.20000E-02  UNCHANGED

*** LOAD STEP    24   SUBSTEP    42  COMPLETED.    CUM ITER =    329
*** TIME =   1.24800         TIME INC =  0.200000E-02  NEW TRIANG MATRIX
*** AUTO STEP TIME:  NEXT TIME INC = 0.20000E-02  UNCHANGED

*** LOAD STEP    24   SUBSTEP    43  COMPLETED.    CUM ITER =    330
*** TIME =   1.25000         TIME INC =  0.200000E-02  NEW TRIANG MATRIX
*** AUTO STEP TIME:  NEXT TIME INC = 0.20000E-02  UNCHANGED

*** LOAD STEP    24   SUBSTEP    44  COMPLETED.    CUM ITER =    331
*** TIME =   1.25200         TIME INC =  0.200000E-02  NEW TRIANG MATRIX
*** AUTO STEP TIME:  NEXT TIME INC = 0.20000E-02  UNCHANGED

*** LOAD STEP    24   SUBSTEP    45  COMPLETED.    CUM ITER =    332
*** TIME =   1.25400         TIME INC =  0.200000E-02  NEW TRIANG MATRIX
*** AUTO STEP TIME:  NEXT TIME INC = 0.20000E-02  UNCHANGED

*** LOAD STEP    24   SUBSTEP    46  COMPLETED.    CUM ITER =    333
*** TIME =   1.25600         TIME INC =  0.200000E-02  NEW TRIANG MATRIX
*** AUTO STEP TIME:  NEXT TIME INC = 0.20000E-02  UNCHANGED

*** LOAD STEP    24   SUBSTEP    47  COMPLETED.    CUM ITER =    334
*** TIME =   1.25800         TIME INC =  0.200000E-02  NEW TRIANG MATRIX
*** AUTO STEP TIME:  NEXT TIME INC = 0.20000E-02  UNCHANGED

*** LOAD STEP    24   SUBSTEP    48  COMPLETED.    CUM ITER =    335
*** TIME =   1.26000         TIME INC =  0.200000E-02  NEW TRIANG MATRIX
*** AUTO STEP TIME:  NEXT TIME INC = 0.20000E-02  UNCHANGED

*** LOAD STEP    24   SUBSTEP    49  COMPLETED.    CUM ITER =    336
*** TIME =   1.26200         TIME INC =  0.200000E-02  NEW TRIANG MATRIX
*** AUTO STEP TIME:  NEXT TIME INC = 0.20000E-02  UNCHANGED

*** LOAD STEP    24   SUBSTEP    50  COMPLETED.    CUM ITER =    337
*** TIME =   1.26400         TIME INC =  0.200000E-02  NEW TRIANG MATRIX
*** AUTO STEP TIME:  NEXT TIME INC = 0.20000E-02  UNCHANGED

*** LOAD STEP    24   SUBSTEP    51  COMPLETED.    CUM ITER =    338
*** TIME =   1.26600         TIME INC =  0.200000E-02  NEW TRIANG MATRIX
*** AUTO STEP TIME:  NEXT TIME INC = 0.20000E-02  UNCHANGED

*** LOAD STEP    24   SUBSTEP    52  COMPLETED.    CUM ITER =    339
*** TIME =   1.26800         TIME INC =  0.200000E-02  NEW TRIANG MATRIX
*** AUTO STEP TIME:  NEXT TIME INC = 0.20000E-02  UNCHANGED

*** LOAD STEP    24   SUBSTEP    53  COMPLETED.    CUM ITER =    340
*** TIME =   1.27000         TIME INC =  0.200000E-02  NEW TRIANG MATRIX
*** AUTO STEP TIME:  NEXT TIME INC = 0.20000E-02  UNCHANGED

*** LOAD STEP    24   SUBSTEP    54  COMPLETED.    CUM ITER =    341
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*** TIME =   1.27200         TIME INC =  0.200000E-02  NEW TRIANG MATRIX
*** AUTO STEP TIME:  NEXT TIME INC = 0.20000E-02  UNCHANGED

*** LOAD STEP    24   SUBSTEP    55  COMPLETED.    CUM ITER =    342
*** TIME =   1.27400         TIME INC =  0.200000E-02  NEW TRIANG MATRIX
*** AUTO STEP TIME:  NEXT TIME INC = 0.20000E-02  UNCHANGED

*** LOAD STEP    24   SUBSTEP    56  COMPLETED.    CUM ITER =    343
*** TIME =   1.27600         TIME INC =  0.200000E-02  NEW TRIANG MATRIX
*** AUTO STEP TIME:  NEXT TIME INC = 0.20000E-02  UNCHANGED

*** LOAD STEP    24   SUBSTEP    57  COMPLETED.    CUM ITER =    344
*** TIME =   1.27800         TIME INC =  0.200000E-02  NEW TRIANG MATRIX
*** AUTO STEP TIME:  NEXT TIME INC = 0.20000E-02  UNCHANGED

*** LOAD STEP    24   SUBSTEP    58  COMPLETED.    CUM ITER =    345
*** TIME =   1.28000         TIME INC =  0.200000E-02  NEW TRIANG MATRIX
*** AUTO STEP TIME:  NEXT TIME INC = 0.20000E-02  UNCHANGED

*** LOAD STEP    24   SUBSTEP    59  COMPLETED.    CUM ITER =    346
*** TIME =   1.28200         TIME INC =  0.200000E-02  NEW TRIANG MATRIX
*** AUTO STEP TIME:  NEXT TIME INC = 0.20000E-02  UNCHANGED

*** LOAD STEP    24   SUBSTEP    60  COMPLETED.    CUM ITER =    347
*** TIME =   1.28400         TIME INC =  0.200000E-02  NEW TRIANG MATRIX
*** AUTO STEP TIME:  NEXT TIME INC = 0.20000E-02  UNCHANGED

*** LOAD STEP    24   SUBSTEP    61  COMPLETED.    CUM ITER =    348
*** TIME =   1.28600         TIME INC =  0.200000E-02  NEW TRIANG MATRIX
*** AUTO STEP TIME:  NEXT TIME INC = 0.20000E-02  UNCHANGED

*** LOAD STEP    24   SUBSTEP    62  COMPLETED.    CUM ITER =    349
*** TIME =   1.28800         TIME INC =  0.200000E-02  NEW TRIANG MATRIX
*** AUTO STEP TIME:  NEXT TIME INC = 0.20000E-02  UNCHANGED

*** LOAD STEP    24   SUBSTEP    63  COMPLETED.    CUM ITER =    350
*** TIME =   1.29000         TIME INC =  0.200000E-02  NEW TRIANG MATRIX
*** AUTO STEP TIME:  NEXT TIME INC = 0.20000E-02  UNCHANGED

*** LOAD STEP    24   SUBSTEP    64  COMPLETED.    CUM ITER =    351
*** TIME =   1.29200         TIME INC =  0.200000E-02  NEW TRIANG MATRIX
*** AUTO STEP TIME:  NEXT TIME INC = 0.20000E-02  UNCHANGED

*** LOAD STEP    24   SUBSTEP    65  COMPLETED.    CUM ITER =    352
*** TIME =   1.29400         TIME INC =  0.200000E-02  NEW TRIANG MATRIX
*** AUTO STEP TIME:  NEXT TIME INC = 0.20000E-02  UNCHANGED

*** LOAD STEP    24   SUBSTEP    66  COMPLETED.    CUM ITER =    353
*** TIME =   1.29600         TIME INC =  0.200000E-02  NEW TRIANG MATRIX
*** AUTO STEP TIME:  NEXT TIME INC = 0.20000E-02  UNCHANGED

*** LOAD STEP    24   SUBSTEP    67  COMPLETED.    CUM ITER =    354
*** TIME =   1.29800         TIME INC =  0.200000E-02  NEW TRIANG MATRIX
*** AUTO STEP TIME:  NEXT TIME INC = 0.20000E-02  UNCHANGED

*** LOAD STEP    24   SUBSTEP    68  COMPLETED.    CUM ITER =    355
*** TIME =   1.30000         TIME INC =  0.200000E-02  NEW TRIANG MATRIX
************************************************
*************** FINISHED SOLVE FOR LS 24 *************
************************************************
****************** SOLVE FOR LS 25 ****************

SPECIFIED BODY FORCE HGEN FOR ALL PICKED ELEMENTS AT STARTING LOCATION      1
IS SET ACCORDING TO TABLE PARAMETER = _LOADVARI202

USE AUTOMATIC TIME STEPPING THIS LOAD STEP

USE     100 SUBSTEPS INITIALLY THIS LOAD STEP FOR ALL  DEGREES OF FREEDOM
FOR AUTOMATIC TIME STEPPING:
  USE   1000 SUBSTEPS AS A MAXIMUM
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  USE     10 SUBSTEPS AS A MINIMUM

 TIME=  1.4000

 INCLUDE TRANSIENT EFFECTS FOR  ALL DEGREES OF FREEDOM THIS LOAD STEP

 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

 WRITE RSOL ITEMS TO THE DATABASE WITH A FREQUENCY OF ALL
   FOR ALL APPLICABLE ENTITIES

 WRITE FFLU ITEMS TO THE DATABASE WITH A FREQUENCY OF ALL
   FOR ALL APPLICABLE ENTITIES

 CONVERGENCE ON HEAT BASED ON THE NORM OF THE N-R LOAD
   WITH A TOLERANCE OF 0.1000E-02 AND A MINIMUM REFERENCE VALUE OF 0.1000E-02
   USING THE L2 NORM (CHECK THE SRSS VALUE)

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

 *** WARNING ***                          CP =    1037.359   TIME= 10:05:39
 Material number 4 (used by element 65408 ) should normally have at
 least one MP or one TB type command associated with it.  Output of
 energy by material may not be available.

 *** NOTE ***                             CP =    1037.547   TIME= 10:05:40
 The step data was checked and warning messages were found.
  Please review output or errors file ( D:\Daten\Ansys
 Simulation\_ProjectScratch\Scr8B73\file.err ) for these warning
 messages.
1

 ***** ANSYS - ENGINEERING ANALYSIS SYSTEM  RELEASE 12.1     *****
 ANSYS Academic Teaching Advanced
 00000000          VERSION=WINDOWS x64   10:05:40  SEP 23, 2010 CP=   1038.281

 Schweißen Flachprobe--Thermisch-transient (E5)


                     L O A D   S T E P   O P T I O N S

   LOAD STEP NUMBER. . . . . . . . . . . . . . . .    25
   TIME AT END OF THE LOAD STEP. . . . . . . . . .  1.4000
   AUTOMATIC TIME STEPPING . . . . . . . . . . . .    ON
      INITIAL NUMBER OF SUBSTEPS . . . . . . . . .   100
      MAXIMUM NUMBER OF SUBSTEPS . . . . . . . . .  1000
      MINIMUM NUMBER OF SUBSTEPS . . . . . . . . .    10
   STEP CHANGE BOUNDARY CONDITIONS . . . . . . . .   YES
   TRANSIENT (INERTIA) EFFECTS
      THERMAL DOFS . . . . . . . . . . . . . . . .    ON
   TRANSIENT INTEGRATION PARAMETERS
      THETA. . . . . . . . . . . . . . . . . . . .  1.0000
      OSCILLATION LIMIT CRITERION. . . . . . . . . 0.50000
      TOLERANCE. . . . . . . . . . . . . . . . . .  0.0000
   PRINT OUTPUT CONTROLS . . . . . . . . . . . . .NO PRINTOUT
   DATABASE OUTPUT CONTROLS
      ITEM     FREQUENCY   COMPONENT
       ALL       NONE
      NSOL        ALL
      RSOL        ALL
      FFLU        ALL
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 SOLUTION MONITORING INFO IS WRITTEN TO FILE=
file.mntr



 *** LOAD STEP    25   SUBSTEP     1  COMPLETED.    CUM ITER =    356
 *** TIME =   1.30100         TIME INC =  0.100000E-02  NEW TRIANG MATRIX
 *** AUTO STEP TIME:  NEXT TIME INC = 0.10000E-02  UNCHANGED

 *** LOAD STEP    25   SUBSTEP     2  COMPLETED.    CUM ITER =    357
 *** TIME =   1.30200         TIME INC =  0.100000E-02  NEW TRIANG MATRIX
 *** AUTO STEP TIME:  NEXT TIME INC = 0.10000E-02  UNCHANGED

 *** LOAD STEP    25   SUBSTEP     3  COMPLETED.    CUM ITER =    358
 *** TIME =   1.30300         TIME INC =  0.100000E-02  NEW TRIANG MATRIX
 *** AUTO TIME STEP:  NEXT TIME INC = 0.20000E-02  INCREASED (FACTOR = 2.0000)

 *** LOAD STEP    25   SUBSTEP     4  COMPLETED.    CUM ITER =    359
 *** TIME =   1.30500         TIME INC =  0.200000E-02  NEW TRIANG MATRIX
 *** AUTO STEP TIME:  NEXT TIME INC = 0.20000E-02  UNCHANGED

 *** LOAD STEP    25   SUBSTEP     5  COMPLETED.    CUM ITER =    360
 *** TIME =   1.30700         TIME INC =  0.200000E-02  NEW TRIANG MATRIX
 *** AUTO STEP TIME:  NEXT TIME INC = 0.20000E-02  UNCHANGED

 *** LOAD STEP    25   SUBSTEP     6  COMPLETED.    CUM ITER =    361
 *** TIME =   1.30900         TIME INC =  0.200000E-02  NEW TRIANG MATRIX
 *** AUTO STEP TIME:  NEXT TIME INC = 0.20000E-02  UNCHANGED

 *** LOAD STEP    25   SUBSTEP     7  COMPLETED.    CUM ITER =    362
 *** TIME =   1.31100         TIME INC =  0.200000E-02  NEW TRIANG MATRIX
 *** AUTO STEP TIME:  NEXT TIME INC = 0.20000E-02  UNCHANGED

 *** LOAD STEP    25   SUBSTEP     8  COMPLETED.    CUM ITER =    363
 *** TIME =   1.31300         TIME INC =  0.200000E-02  NEW TRIANG MATRIX
 *** AUTO STEP TIME:  NEXT TIME INC = 0.20000E-02  UNCHANGED

 *** LOAD STEP    25   SUBSTEP     9  COMPLETED.    CUM ITER =    364
 *** TIME =   1.31500         TIME INC =  0.200000E-02  NEW TRIANG MATRIX
 *** AUTO STEP TIME:  NEXT TIME INC = 0.20000E-02  UNCHANGED

 *** LOAD STEP    25   SUBSTEP    10  COMPLETED.    CUM ITER =    365
 *** TIME =   1.31700         TIME INC =  0.200000E-02  NEW TRIANG MATRIX
 *** AUTO STEP TIME:  NEXT TIME INC = 0.20000E-02  UNCHANGED

 *** LOAD STEP    25   SUBSTEP    11  COMPLETED.    CUM ITER =    366
 *** TIME =   1.31900         TIME INC =  0.200000E-02  NEW TRIANG MATRIX
 *** AUTO STEP TIME:  NEXT TIME INC = 0.20000E-02  UNCHANGED

 *** LOAD STEP    25   SUBSTEP    12  COMPLETED.    CUM ITER =    367
 *** TIME =   1.32100         TIME INC =  0.200000E-02  NEW TRIANG MATRIX
 *** AUTO STEP TIME:  NEXT TIME INC = 0.20000E-02  UNCHANGED

 *** LOAD STEP    25   SUBSTEP    13  COMPLETED.    CUM ITER =    368
 *** TIME =   1.32300         TIME INC =  0.200000E-02  NEW TRIANG MATRIX
 *** AUTO STEP TIME:  NEXT TIME INC = 0.20000E-02  UNCHANGED

 *** LOAD STEP    25   SUBSTEP    14  COMPLETED.    CUM ITER =    369
 *** TIME =   1.32500         TIME INC =  0.200000E-02  NEW TRIANG MATRIX
 *** AUTO STEP TIME:  NEXT TIME INC = 0.20000E-02  UNCHANGED

 *** LOAD STEP    25   SUBSTEP    15  COMPLETED.    CUM ITER =    370
 *** TIME =   1.32700         TIME INC =  0.200000E-02  NEW TRIANG MATRIX
 *** AUTO STEP TIME:  NEXT TIME INC = 0.20000E-02  UNCHANGED

 *** LOAD STEP    25   SUBSTEP    16  COMPLETED.    CUM ITER =    371
 *** TIME =   1.32900         TIME INC =  0.200000E-02  NEW TRIANG MATRIX
 *** AUTO STEP TIME:  NEXT TIME INC = 0.20000E-02  UNCHANGED
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*** LOAD STEP    25   SUBSTEP    17  COMPLETED.    CUM ITER =    372
*** TIME =   1.33100         TIME INC =  0.200000E-02  NEW TRIANG MATRIX
*** AUTO STEP TIME:  NEXT TIME INC = 0.20000E-02  UNCHANGED

*** LOAD STEP    25   SUBSTEP    18  COMPLETED.    CUM ITER =    373
*** TIME =   1.33300         TIME INC =  0.200000E-02  NEW TRIANG MATRIX
*** AUTO STEP TIME:  NEXT TIME INC = 0.20000E-02  UNCHANGED

*** LOAD STEP    25   SUBSTEP    19  COMPLETED.    CUM ITER =    374
*** TIME =   1.33500         TIME INC =  0.200000E-02  NEW TRIANG MATRIX
*** AUTO STEP TIME:  NEXT TIME INC = 0.20000E-02  UNCHANGED

*** LOAD STEP    25   SUBSTEP    20  COMPLETED.    CUM ITER =    375
*** TIME =   1.33700         TIME INC =  0.200000E-02  NEW TRIANG MATRIX
*** AUTO STEP TIME:  NEXT TIME INC = 0.20000E-02  UNCHANGED

*** LOAD STEP    25   SUBSTEP    21  COMPLETED.    CUM ITER =    376
*** TIME =   1.33900         TIME INC =  0.200000E-02  NEW TRIANG MATRIX
*** AUTO STEP TIME:  NEXT TIME INC = 0.20000E-02  UNCHANGED

*** LOAD STEP    25   SUBSTEP    22  COMPLETED.    CUM ITER =    377
*** TIME =   1.34100         TIME INC =  0.200000E-02  NEW TRIANG MATRIX
*** AUTO STEP TIME:  NEXT TIME INC = 0.20000E-02  UNCHANGED

*** LOAD STEP    25   SUBSTEP    23  COMPLETED.    CUM ITER =    378
*** TIME =   1.34300         TIME INC =  0.200000E-02  NEW TRIANG MATRIX
*** AUTO STEP TIME:  NEXT TIME INC = 0.20000E-02  UNCHANGED

*** LOAD STEP    25   SUBSTEP    24  COMPLETED.    CUM ITER =    379
*** TIME =   1.34500         TIME INC =  0.200000E-02  NEW TRIANG MATRIX
*** AUTO STEP TIME:  NEXT TIME INC = 0.20000E-02  UNCHANGED

*** LOAD STEP    25   SUBSTEP    25  COMPLETED.    CUM ITER =    380
*** TIME =   1.34700         TIME INC =  0.200000E-02  NEW TRIANG MATRIX
*** AUTO STEP TIME:  NEXT TIME INC = 0.20000E-02  UNCHANGED

*** LOAD STEP    25   SUBSTEP    26  COMPLETED.    CUM ITER =    381
*** TIME =   1.34900         TIME INC =  0.200000E-02  NEW TRIANG MATRIX
*** AUTO STEP TIME:  NEXT TIME INC = 0.20000E-02  UNCHANGED

*** LOAD STEP    25   SUBSTEP    27  COMPLETED.    CUM ITER =    382
*** TIME =   1.35100         TIME INC =  0.200000E-02  NEW TRIANG MATRIX
*** AUTO STEP TIME:  NEXT TIME INC = 0.20000E-02  UNCHANGED

*** LOAD STEP    25   SUBSTEP    28  COMPLETED.    CUM ITER =    383
*** TIME =   1.35300         TIME INC =  0.200000E-02  NEW TRIANG MATRIX
*** AUTO STEP TIME:  NEXT TIME INC = 0.20000E-02  UNCHANGED

*** LOAD STEP    25   SUBSTEP    29  COMPLETED.    CUM ITER =    384
*** TIME =   1.35500         TIME INC =  0.200000E-02  NEW TRIANG MATRIX
*** AUTO STEP TIME:  NEXT TIME INC = 0.20000E-02  UNCHANGED

*** LOAD STEP    25   SUBSTEP    30  COMPLETED.    CUM ITER =    385
*** TIME =   1.35700         TIME INC =  0.200000E-02  NEW TRIANG MATRIX
*** AUTO STEP TIME:  NEXT TIME INC = 0.20000E-02  UNCHANGED

*** LOAD STEP    25   SUBSTEP    31  COMPLETED.    CUM ITER =    386
*** TIME =   1.35900         TIME INC =  0.200000E-02  NEW TRIANG MATRIX
*** AUTO STEP TIME:  NEXT TIME INC = 0.20000E-02  UNCHANGED

*** LOAD STEP    25   SUBSTEP    32  COMPLETED.    CUM ITER =    387
*** TIME =   1.36100         TIME INC =  0.200000E-02  NEW TRIANG MATRIX
*** AUTO STEP TIME:  NEXT TIME INC = 0.20000E-02  UNCHANGED

*** LOAD STEP    25   SUBSTEP    33  COMPLETED.    CUM ITER =    388
*** TIME =   1.36300         TIME INC =  0.200000E-02  NEW TRIANG MATRIX
*** AUTO STEP TIME:  NEXT TIME INC = 0.20000E-02  UNCHANGED

*** LOAD STEP    25   SUBSTEP    34  COMPLETED.    CUM ITER =    389
*** TIME =   1.36500         TIME INC =  0.200000E-02  NEW TRIANG MATRIX
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*** AUTO STEP TIME:  NEXT TIME INC = 0.20000E-02  UNCHANGED

*** LOAD STEP    25   SUBSTEP    35  COMPLETED.    CUM ITER =    390
*** TIME =   1.36700         TIME INC =  0.200000E-02  NEW TRIANG MATRIX
*** AUTO STEP TIME:  NEXT TIME INC = 0.20000E-02  UNCHANGED

*** LOAD STEP    25   SUBSTEP    36  COMPLETED.    CUM ITER =    391
*** TIME =   1.36900         TIME INC =  0.200000E-02  NEW TRIANG MATRIX
*** AUTO STEP TIME:  NEXT TIME INC = 0.20000E-02  UNCHANGED

*** LOAD STEP    25   SUBSTEP    37  COMPLETED.    CUM ITER =    392
*** TIME =   1.37100         TIME INC =  0.200000E-02  NEW TRIANG MATRIX
*** AUTO STEP TIME:  NEXT TIME INC = 0.20000E-02  UNCHANGED

*** LOAD STEP    25   SUBSTEP    38  COMPLETED.    CUM ITER =    393
*** TIME =   1.37300         TIME INC =  0.200000E-02  NEW TRIANG MATRIX
*** AUTO STEP TIME:  NEXT TIME INC = 0.20000E-02  UNCHANGED

*** LOAD STEP    25   SUBSTEP    39  COMPLETED.    CUM ITER =    394
*** TIME =   1.37500         TIME INC =  0.200000E-02  NEW TRIANG MATRIX
*** AUTO STEP TIME:  NEXT TIME INC = 0.20000E-02  UNCHANGED

*** LOAD STEP    25   SUBSTEP    40  COMPLETED.    CUM ITER =    395
*** TIME =   1.37700         TIME INC =  0.200000E-02  NEW TRIANG MATRIX
*** AUTO STEP TIME:  NEXT TIME INC = 0.20000E-02  UNCHANGED

*** LOAD STEP    25   SUBSTEP    41  COMPLETED.    CUM ITER =    396
*** TIME =   1.37900         TIME INC =  0.200000E-02  NEW TRIANG MATRIX
*** AUTO STEP TIME:  NEXT TIME INC = 0.20000E-02  UNCHANGED

*** LOAD STEP    25   SUBSTEP    42  COMPLETED.    CUM ITER =    397
*** TIME =   1.38100         TIME INC =  0.200000E-02  NEW TRIANG MATRIX
*** AUTO STEP TIME:  NEXT TIME INC = 0.20000E-02  UNCHANGED

*** LOAD STEP    25   SUBSTEP    43  COMPLETED.    CUM ITER =    398
*** TIME =   1.38300         TIME INC =  0.200000E-02  NEW TRIANG MATRIX
*** AUTO STEP TIME:  NEXT TIME INC = 0.20000E-02  UNCHANGED

*** LOAD STEP    25   SUBSTEP    44  COMPLETED.    CUM ITER =    399
*** TIME =   1.38500         TIME INC =  0.200000E-02  NEW TRIANG MATRIX
*** AUTO STEP TIME:  NEXT TIME INC = 0.20000E-02  UNCHANGED

*** LOAD STEP    25   SUBSTEP    45  COMPLETED.    CUM ITER =    400
*** TIME =   1.38700         TIME INC =  0.200000E-02  NEW TRIANG MATRIX
*** AUTO STEP TIME:  NEXT TIME INC = 0.20000E-02  UNCHANGED

*** LOAD STEP    25   SUBSTEP    46  COMPLETED.    CUM ITER =    401
*** TIME =   1.38900         TIME INC =  0.200000E-02  NEW TRIANG MATRIX
*** AUTO STEP TIME:  NEXT TIME INC = 0.20000E-02  UNCHANGED

*** LOAD STEP    25   SUBSTEP    47  COMPLETED.    CUM ITER =    402
*** TIME =   1.39100         TIME INC =  0.200000E-02  NEW TRIANG MATRIX
*** AUTO STEP TIME:  NEXT TIME INC = 0.20000E-02  UNCHANGED

*** LOAD STEP    25   SUBSTEP    48  COMPLETED.    CUM ITER =    403
*** TIME =   1.39300         TIME INC =  0.200000E-02  NEW TRIANG MATRIX
*** AUTO STEP TIME:  NEXT TIME INC = 0.20000E-02  UNCHANGED

*** LOAD STEP    25   SUBSTEP    49  COMPLETED.    CUM ITER =    404
*** TIME =   1.39500         TIME INC =  0.200000E-02  NEW TRIANG MATRIX
*** AUTO STEP TIME:  NEXT TIME INC = 0.20000E-02  UNCHANGED

*** LOAD STEP    25   SUBSTEP    50  COMPLETED.    CUM ITER =    405
*** TIME =   1.39700         TIME INC =  0.200000E-02  NEW TRIANG MATRIX
*** AUTO STEP TIME:  NEXT TIME INC = 0.20000E-02  UNCHANGED

*** LOAD STEP    25   SUBSTEP    51  COMPLETED.    CUM ITER =    406
*** TIME =   1.39900         TIME INC =  0.200000E-02  NEW TRIANG MATRIX
*** AUTO TIME STEP:  NEXT TIME INC = 0.10000E-02  DECREASED (FACTOR = 0.5000)
```

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 *** LOAD STEP    25   SUBSTEP    52  COMPLETED.    CUM ITER =    407
 *** TIME =   1.40000         TIME INC =  0.100000E-02  NEW TRIANG MATRIX
 ************************************************
 ************** FINISHED SOLVE FOR LS 25 *************
 ************************************************
 ****************** SOLVE FOR LS 26 ****************

 SPECIFIED BODY FORCE HGEN FOR ALL PICKED ELEMENTS AT STARTING LOCATION      1
 IS SET ACCORDING TO TABLE PARAMETER = _LOADVARI202

 USE AUTOMATIC TIME STEPPING THIS LOAD STEP

 USE     100 SUBSTEPS INITIALLY THIS LOAD STEP FOR ALL  DEGREES OF FREEDOM
 FOR AUTOMATIC TIME STEPPING:
   USE   1000 SUBSTEPS AS A MAXIMUM
   USE     10 SUBSTEPS AS A MINIMUM

 TIME=  1.5000

 INCLUDE TRANSIENT EFFECTS FOR  ALL DEGREES OF FREEDOM THIS LOAD STEP

 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

 WRITE RSOL ITEMS TO THE DATABASE WITH A FREQUENCY OF ALL
   FOR ALL APPLICABLE ENTITIES

 WRITE FFLU ITEMS TO THE DATABASE WITH A FREQUENCY OF ALL
   FOR ALL APPLICABLE ENTITIES

 CONVERGENCE ON HEAT BASED ON THE NORM OF THE N-R LOAD
   WITH A TOLERANCE OF 0.1000E-02 AND A MINIMUM REFERENCE VALUE OF 0.1000E-02
   USING THE L2 NORM (CHECK THE SRSS VALUE)

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

 *** WARNING ***                          CP =    1178.312   TIME= 10:07:01
 Material number 4 (used by element 65408 ) should normally have at
 least one MP or one TB type command associated with it.  Output of
 energy by material may not be available.

 *** NOTE ***                             CP =    1178.609   TIME= 10:07:01
 The step data was checked and warning messages were found.
  Please review output or errors file ( D:\Daten\Ansys
 Simulation\_ProjectScratch\Scr8B73\file.err ) for these warning
 messages.
1

 ***** ANSYS - ENGINEERING ANALYSIS SYSTEM  RELEASE 12.1     *****
 ANSYS Academic Teaching Advanced
 00000000          VERSION=WINDOWS x64   10:07:01  SEP 23, 2010 CP=   1179.312

 Schweißen Flachprobe--Thermisch-transient (E5)


                     L O A D   S T E P   O P T I O N S

   LOAD STEP NUMBER. . . . . . . . . . . . . . . .    26
   TIME AT END OF THE LOAD STEP. . . . . . . . . .  1.5000
   AUTOMATIC TIME STEPPING . . . . . . . . . . . .    ON
      INITIAL NUMBER OF SUBSTEPS . . . . . . . . .   100
      MAXIMUM NUMBER OF SUBSTEPS . . . . . . . . .  1000
      MINIMUM NUMBER OF SUBSTEPS . . . . . . . . .    10
   STEP CHANGE BOUNDARY CONDITIONS . . . . . . . .   YES
```

```
   TRANSIENT (INERTIA) EFFECTS
      THERMAL DOFS . . . . . .    ON
   TRANSIENT INTEGRATION PARAMETERS
      THETA. . . . . .  1.0000
      OSCILLATION LIMIT CRITERION. . . . . 0.50000
      TOLERANCE. . . . . .  0.0000
   PRINT OUTPUT CONTROLS . . . . . .NO PRINTOUT
   DATABASE OUTPUT CONTROLS
      ITEM     FREQUENCY   COMPONENT
       ALL       NONE
      NSOL        ALL
      RSOL        ALL
      FFLU        ALL


 SOLUTION MONITORING INFO IS WRITTEN TO FILE=
file.mntr



 *** LOAD STEP    26   SUBSTEP     1  COMPLETED.    CUM ITER =    408
 *** TIME =   1.40100         TIME INC =  0.100000E-02  NEW TRIANG MATRIX
 *** AUTO STEP TIME:  NEXT TIME INC = 0.10000E-02  UNCHANGED

 *** LOAD STEP    26   SUBSTEP     2  COMPLETED.    CUM ITER =    409
 *** TIME =   1.40200         TIME INC =  0.100000E-02  NEW TRIANG MATRIX
 *** AUTO STEP TIME:  NEXT TIME INC = 0.10000E-02  UNCHANGED

 *** LOAD STEP    26   SUBSTEP     3  COMPLETED.    CUM ITER =    410
 *** TIME =   1.40300         TIME INC =  0.100000E-02  NEW TRIANG MATRIX
 *** AUTO TIME STEP:  NEXT TIME INC = 0.20000E-02  INCREASED (FACTOR = 2.0000)

 *** LOAD STEP    26   SUBSTEP     4  COMPLETED.    CUM ITER =    411
 *** TIME =   1.40500         TIME INC =  0.200000E-02  NEW TRIANG MATRIX
 *** AUTO STEP TIME:  NEXT TIME INC = 0.20000E-02  UNCHANGED

 *** LOAD STEP    26   SUBSTEP     5  COMPLETED.    CUM ITER =    412
 *** TIME =   1.40700         TIME INC =  0.200000E-02  NEW TRIANG MATRIX
 *** AUTO STEP TIME:  NEXT TIME INC = 0.20000E-02  UNCHANGED

 *** LOAD STEP    26   SUBSTEP     6  COMPLETED.    CUM ITER =    413
 *** TIME =   1.40900         TIME INC =  0.200000E-02  NEW TRIANG MATRIX
 *** AUTO STEP TIME:  NEXT TIME INC = 0.20000E-02  UNCHANGED

 *** LOAD STEP    26   SUBSTEP     7  COMPLETED.    CUM ITER =    414
 *** TIME =   1.41100         TIME INC =  0.200000E-02  NEW TRIANG MATRIX
 *** AUTO STEP TIME:  NEXT TIME INC = 0.20000E-02  UNCHANGED

 *** LOAD STEP    26   SUBSTEP     8  COMPLETED.    CUM ITER =    415
 *** TIME =   1.41300         TIME INC =  0.200000E-02  NEW TRIANG MATRIX
 *** AUTO STEP TIME:  NEXT TIME INC = 0.20000E-02  UNCHANGED

 *** LOAD STEP    26   SUBSTEP     9  COMPLETED.    CUM ITER =    416
 *** TIME =   1.41500         TIME INC =  0.200000E-02  NEW TRIANG MATRIX
 *** AUTO STEP TIME:  NEXT TIME INC = 0.20000E-02  UNCHANGED

 *** LOAD STEP    26   SUBSTEP    10  COMPLETED.    CUM ITER =    417
 *** TIME =   1.41700         TIME INC =  0.200000E-02  NEW TRIANG MATRIX
 *** AUTO STEP TIME:  NEXT TIME INC = 0.20000E-02  UNCHANGED

 *** LOAD STEP    26   SUBSTEP    11  COMPLETED.    CUM ITER =    418
 *** TIME =   1.41900         TIME INC =  0.200000E-02  NEW TRIANG MATRIX
 *** AUTO STEP TIME:  NEXT TIME INC = 0.20000E-02  UNCHANGED

 *** LOAD STEP    26   SUBSTEP    12  COMPLETED.    CUM ITER =    419
 *** TIME =   1.42100         TIME INC =  0.200000E-02  NEW TRIANG MATRIX
 *** AUTO STEP TIME:  NEXT TIME INC = 0.20000E-02  UNCHANGED

 *** LOAD STEP    26   SUBSTEP    13  COMPLETED.    CUM ITER =    420
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*** TIME =   1.42300         TIME INC =  0.200000E-02  NEW TRIANG MATRIX
*** AUTO STEP TIME:  NEXT TIME INC = 0.20000E-02  UNCHANGED

*** LOAD STEP    26   SUBSTEP    14  COMPLETED.    CUM ITER =    421
*** TIME =   1.42500         TIME INC =  0.200000E-02  NEW TRIANG MATRIX
*** AUTO STEP TIME:  NEXT TIME INC = 0.20000E-02  UNCHANGED

*** LOAD STEP    26   SUBSTEP    15  COMPLETED.    CUM ITER =    422
*** TIME =   1.42700         TIME INC =  0.200000E-02  NEW TRIANG MATRIX
*** AUTO STEP TIME:  NEXT TIME INC = 0.20000E-02  UNCHANGED

*** LOAD STEP    26   SUBSTEP    16  COMPLETED.    CUM ITER =    423
*** TIME =   1.42900         TIME INC =  0.200000E-02  NEW TRIANG MATRIX
*** AUTO STEP TIME:  NEXT TIME INC = 0.20000E-02  UNCHANGED

*** LOAD STEP    26   SUBSTEP    17  COMPLETED.    CUM ITER =    424
*** TIME =   1.43100         TIME INC =  0.200000E-02  NEW TRIANG MATRIX
*** AUTO STEP TIME:  NEXT TIME INC = 0.20000E-02  UNCHANGED

*** LOAD STEP    26   SUBSTEP    18  COMPLETED.    CUM ITER =    425
*** TIME =   1.43300         TIME INC =  0.200000E-02  NEW TRIANG MATRIX
*** AUTO STEP TIME:  NEXT TIME INC = 0.20000E-02  UNCHANGED

*** LOAD STEP    26   SUBSTEP    19  COMPLETED.    CUM ITER =    426
*** TIME =   1.43500         TIME INC =  0.200000E-02  NEW TRIANG MATRIX
*** AUTO STEP TIME:  NEXT TIME INC = 0.20000E-02  UNCHANGED

*** LOAD STEP    26   SUBSTEP    20  COMPLETED.    CUM ITER =    427
*** TIME =   1.43700         TIME INC =  0.200000E-02  NEW TRIANG MATRIX
*** AUTO STEP TIME:  NEXT TIME INC = 0.20000E-02  UNCHANGED

*** LOAD STEP    26   SUBSTEP    21  COMPLETED.    CUM ITER =    428
*** TIME =   1.43900         TIME INC =  0.200000E-02  NEW TRIANG MATRIX
*** AUTO STEP TIME:  NEXT TIME INC = 0.20000E-02  UNCHANGED

*** LOAD STEP    26   SUBSTEP    22  COMPLETED.    CUM ITER =    429
*** TIME =   1.44100         TIME INC =  0.200000E-02  NEW TRIANG MATRIX
*** AUTO STEP TIME:  NEXT TIME INC = 0.20000E-02  UNCHANGED

*** LOAD STEP    26   SUBSTEP    23  COMPLETED.    CUM ITER =    430
*** TIME =   1.44300         TIME INC =  0.200000E-02  NEW TRIANG MATRIX
*** AUTO STEP TIME:  NEXT TIME INC = 0.20000E-02  UNCHANGED

*** LOAD STEP    26   SUBSTEP    24  COMPLETED.    CUM ITER =    431
*** TIME =   1.44500         TIME INC =  0.200000E-02  NEW TRIANG MATRIX
*** AUTO STEP TIME:  NEXT TIME INC = 0.20000E-02  UNCHANGED

*** LOAD STEP    26   SUBSTEP    25  COMPLETED.    CUM ITER =    432
*** TIME =   1.44700         TIME INC =  0.200000E-02  NEW TRIANG MATRIX
*** AUTO STEP TIME:  NEXT TIME INC = 0.20000E-02  UNCHANGED

*** LOAD STEP    26   SUBSTEP    26  COMPLETED.    CUM ITER =    433
*** TIME =   1.44900         TIME INC =  0.200000E-02  NEW TRIANG MATRIX
*** AUTO STEP TIME:  NEXT TIME INC = 0.20000E-02  UNCHANGED

*** LOAD STEP    26   SUBSTEP    27  COMPLETED.    CUM ITER =    434
*** TIME =   1.45100         TIME INC =  0.200000E-02  NEW TRIANG MATRIX
*** AUTO STEP TIME:  NEXT TIME INC = 0.20000E-02  UNCHANGED

*** LOAD STEP    26   SUBSTEP    28  COMPLETED.    CUM ITER =    435
*** TIME =   1.45300         TIME INC =  0.200000E-02  NEW TRIANG MATRIX
*** AUTO STEP TIME:  NEXT TIME INC = 0.20000E-02  UNCHANGED

*** LOAD STEP    26   SUBSTEP    29  COMPLETED.    CUM ITER =    436
*** TIME =   1.45500         TIME INC =  0.200000E-02  NEW TRIANG MATRIX
*** AUTO STEP TIME:  NEXT TIME INC = 0.20000E-02  UNCHANGED

*** LOAD STEP    26   SUBSTEP    30  COMPLETED.    CUM ITER =    437
*** TIME =   1.45700         TIME INC =  0.200000E-02  NEW TRIANG MATRIX
*** AUTO STEP TIME:  NEXT TIME INC = 0.20000E-02  UNCHANGED
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*** LOAD STEP    26   SUBSTEP    31  COMPLETED.    CUM ITER =    438
*** TIME =   1.45900         TIME INC =  0.200000E-02  NEW TRIANG MATRIX
*** AUTO STEP TIME:  NEXT TIME INC = 0.20000E-02  UNCHANGED

*** LOAD STEP    26   SUBSTEP    32  COMPLETED.    CUM ITER =    439
*** TIME =   1.46100         TIME INC =  0.200000E-02  NEW TRIANG MATRIX
*** AUTO STEP TIME:  NEXT TIME INC = 0.20000E-02  UNCHANGED

*** LOAD STEP    26   SUBSTEP    33  COMPLETED.    CUM ITER =    440
*** TIME =   1.46300         TIME INC =  0.200000E-02  NEW TRIANG MATRIX
*** AUTO STEP TIME:  NEXT TIME INC = 0.20000E-02  UNCHANGED

*** LOAD STEP    26   SUBSTEP    34  COMPLETED.    CUM ITER =    441
*** TIME =   1.46500         TIME INC =  0.200000E-02  NEW TRIANG MATRIX
*** AUTO STEP TIME:  NEXT TIME INC = 0.20000E-02  UNCHANGED

*** LOAD STEP    26   SUBSTEP    35  COMPLETED.    CUM ITER =    442
*** TIME =   1.46700         TIME INC =  0.200000E-02  NEW TRIANG MATRIX
*** AUTO STEP TIME:  NEXT TIME INC = 0.20000E-02  UNCHANGED

*** LOAD STEP    26   SUBSTEP    36  COMPLETED.    CUM ITER =    443
*** TIME =   1.46900         TIME INC =  0.200000E-02  NEW TRIANG MATRIX
*** AUTO STEP TIME:  NEXT TIME INC = 0.20000E-02  UNCHANGED

*** LOAD STEP    26   SUBSTEP    37  COMPLETED.    CUM ITER =    444
*** TIME =   1.47100         TIME INC =  0.200000E-02  NEW TRIANG MATRIX
*** AUTO STEP TIME:  NEXT TIME INC = 0.20000E-02  UNCHANGED

*** LOAD STEP    26   SUBSTEP    38  COMPLETED.    CUM ITER =    445
*** TIME =   1.47300         TIME INC =  0.200000E-02  NEW TRIANG MATRIX
*** AUTO STEP TIME:  NEXT TIME INC = 0.20000E-02  UNCHANGED

*** LOAD STEP    26   SUBSTEP    39  COMPLETED.    CUM ITER =    446
*** TIME =   1.47500         TIME INC =  0.200000E-02  NEW TRIANG MATRIX
*** AUTO STEP TIME:  NEXT TIME INC = 0.20000E-02  UNCHANGED

*** LOAD STEP    26   SUBSTEP    40  COMPLETED.    CUM ITER =    447
*** TIME =   1.47700         TIME INC =  0.200000E-02  NEW TRIANG MATRIX
*** AUTO STEP TIME:  NEXT TIME INC = 0.20000E-02  UNCHANGED

*** LOAD STEP    26   SUBSTEP    41  COMPLETED.    CUM ITER =    448
*** TIME =   1.47900         TIME INC =  0.200000E-02  NEW TRIANG MATRIX
*** AUTO STEP TIME:  NEXT TIME INC = 0.20000E-02  UNCHANGED

*** LOAD STEP    26   SUBSTEP    42  COMPLETED.    CUM ITER =    449
*** TIME =   1.48100         TIME INC =  0.200000E-02  NEW TRIANG MATRIX
*** AUTO STEP TIME:  NEXT TIME INC = 0.20000E-02  UNCHANGED

*** LOAD STEP    26   SUBSTEP    43  COMPLETED.    CUM ITER =    450
*** TIME =   1.48300         TIME INC =  0.200000E-02  NEW TRIANG MATRIX
*** AUTO STEP TIME:  NEXT TIME INC = 0.20000E-02  UNCHANGED

*** LOAD STEP    26   SUBSTEP    44  COMPLETED.    CUM ITER =    451
*** TIME =   1.48500         TIME INC =  0.200000E-02  NEW TRIANG MATRIX
*** AUTO STEP TIME:  NEXT TIME INC = 0.20000E-02  UNCHANGED

*** LOAD STEP    26   SUBSTEP    45  COMPLETED.    CUM ITER =    452
*** TIME =   1.48700         TIME INC =  0.200000E-02  NEW TRIANG MATRIX
*** AUTO STEP TIME:  NEXT TIME INC = 0.20000E-02  UNCHANGED

*** LOAD STEP    26   SUBSTEP    46  COMPLETED.    CUM ITER =    453
*** TIME =   1.48900         TIME INC =  0.200000E-02  NEW TRIANG MATRIX
*** AUTO STEP TIME:  NEXT TIME INC = 0.20000E-02  UNCHANGED

*** LOAD STEP    26   SUBSTEP    47  COMPLETED.    CUM ITER =    454
*** TIME =   1.49100         TIME INC =  0.200000E-02  NEW TRIANG MATRIX
*** AUTO STEP TIME:  NEXT TIME INC = 0.20000E-02  UNCHANGED

*** LOAD STEP    26   SUBSTEP    48  COMPLETED.    CUM ITER =    455
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 *** TIME =   1.49300         TIME INC =  0.200000E-02  NEW TRIANG MATRIX
 *** AUTO STEP TIME:  NEXT TIME INC = 0.20000E-02  UNCHANGED

 *** LOAD STEP    26   SUBSTEP    49  COMPLETED.    CUM ITER =    456
 *** TIME =   1.49500         TIME INC =  0.200000E-02  NEW TRIANG MATRIX
 *** AUTO STEP TIME:  NEXT TIME INC = 0.20000E-02  UNCHANGED

 *** LOAD STEP    26   SUBSTEP    50  COMPLETED.    CUM ITER =    457
 *** TIME =   1.49700         TIME INC =  0.200000E-02  NEW TRIANG MATRIX
 *** AUTO STEP TIME:  NEXT TIME INC = 0.20000E-02  UNCHANGED

 *** LOAD STEP    26   SUBSTEP    51  COMPLETED.    CUM ITER =    458
 *** TIME =   1.49900         TIME INC =  0.200000E-02  NEW TRIANG MATRIX
 *** AUTO TIME STEP:  NEXT TIME INC = 0.10000E-02  DECREASED (FACTOR = 0.5000)

 *** LOAD STEP    26   SUBSTEP    52  COMPLETED.    CUM ITER =    459
 *** TIME =   1.50000         TIME INC =  0.100000E-02  NEW TRIANG MATRIX
 ************************************************
 *************** FINISHED SOLVE FOR LS 26 *************
 ************************************************
 ****************** SOLVE FOR LS 27 ****************

 SPECIFIED BODY FORCE HGEN FOR ALL PICKED ELEMENTS AT STARTING LOCATION      1
 IS SET ACCORDING TO TABLE PARAMETER = _LOADVARI202

 USE AUTOMATIC TIME STEPPING THIS LOAD STEP

 USE     100 SUBSTEPS INITIALLY THIS LOAD STEP FOR ALL  DEGREES OF FREEDOM
 FOR AUTOMATIC TIME STEPPING:
   USE   1000 SUBSTEPS AS A MAXIMUM
   USE     10 SUBSTEPS AS A MINIMUM

 TIME=  1.6000

 INCLUDE TRANSIENT EFFECTS FOR  ALL DEGREES OF FREEDOM THIS LOAD STEP

 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

 WRITE RSOL ITEMS TO THE DATABASE WITH A FREQUENCY OF ALL
   FOR ALL APPLICABLE ENTITIES

 WRITE FFLU ITEMS TO THE DATABASE WITH A FREQUENCY OF ALL
   FOR ALL APPLICABLE ENTITIES

 CONVERGENCE ON HEAT BASED ON THE NORM OF THE N-R LOAD
   WITH A TOLERANCE OF 0.1000E-02 AND A MINIMUM REFERENCE VALUE OF 0.1000E-02
   USING THE L2 NORM (CHECK THE SRSS VALUE)

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

 *** WARNING ***                          CP =    1319.391   TIME= 10:08:22
 Material number 4 (used by element 65408 ) should normally have at
 least one MP or one TB type command associated with it.  Output of
 energy by material may not be available.

 *** NOTE ***                            CP =    1319.688   TIME= 10:08:22
 The step data was checked and warning messages were found.
  Please review output or errors file ( D:\Daten\Ansys
 Simulation\_ProjectScratch\Scr8B73\file.err ) for these warning
 messages.
1

 ***** ANSYS - ENGINEERING ANALYSIS SYSTEM  RELEASE 12.1     *****
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 ANSYS Academic Teaching Advanced
 00000000          VERSION=WINDOWS x64   10:08:22  SEP 23, 2010 CP=   1320.375

 Schweißen Flachprobe--Thermisch-transient (E5)


                     L O A D   S T E P   O P T I O N S

   LOAD STEP NUMBER. . . . . . . . . . . . . . . .    27
   TIME AT END OF THE LOAD STEP. . . . . . . . . .  1.6000
   AUTOMATIC TIME STEPPING . . . . . . . . . . . .    ON
      INITIAL NUMBER OF SUBSTEPS . . . . . . . . .   100
      MAXIMUM NUMBER OF SUBSTEPS . . . . . . . . .  1000
      MINIMUM NUMBER OF SUBSTEPS . . . . . . . . .    10
   STEP CHANGE BOUNDARY CONDITIONS . . . . . . . .   YES
   TRANSIENT (INERTIA) EFFECTS
      THERMAL DOFS . . . . . . . . . . . . . . . .    ON
   TRANSIENT INTEGRATION PARAMETERS
      THETA. . . . . . . . . . . . . . . . . . . .  1.0000
      OSCILLATION LIMIT CRITERION. . . . . . . . . 0.50000
      TOLERANCE. . . . . . . . . . . . . . . . . .  0.0000
   PRINT OUTPUT CONTROLS . . . . . . . . . . . . .NO PRINTOUT
   DATABASE OUTPUT CONTROLS
      ITEM     FREQUENCY   COMPONENT
       ALL       NONE
      NSOL        ALL
      RSOL        ALL
      FFLU        ALL


 SOLUTION MONITORING INFO IS WRITTEN TO FILE=
file.mntr



 *** LOAD STEP    27   SUBSTEP     1  COMPLETED.    CUM ITER =    460
 *** TIME =   1.50100         TIME INC =  0.100000E-02  NEW TRIANG MATRIX
 *** AUTO STEP TIME:  NEXT TIME INC = 0.10000E-02  UNCHANGED

 *** LOAD STEP    27   SUBSTEP     2  COMPLETED.    CUM ITER =    461
 *** TIME =   1.50200         TIME INC =  0.100000E-02  NEW TRIANG MATRIX
 *** AUTO STEP TIME:  NEXT TIME INC = 0.10000E-02  UNCHANGED

 *** LOAD STEP    27   SUBSTEP     3  COMPLETED.    CUM ITER =    462
 *** TIME =   1.50300         TIME INC =  0.100000E-02  NEW TRIANG MATRIX
 *** AUTO TIME STEP:  NEXT TIME INC = 0.20000E-02  INCREASED (FACTOR = 2.0000)

 *** LOAD STEP    27   SUBSTEP     4  COMPLETED.    CUM ITER =    463
 *** TIME =   1.50500         TIME INC =  0.200000E-02  NEW TRIANG MATRIX
 *** AUTO STEP TIME:  NEXT TIME INC = 0.20000E-02  UNCHANGED

 *** LOAD STEP    27   SUBSTEP     5  COMPLETED.    CUM ITER =    464
 *** TIME =   1.50700         TIME INC =  0.200000E-02  NEW TRIANG MATRIX
 *** AUTO STEP TIME:  NEXT TIME INC = 0.20000E-02  UNCHANGED

 *** LOAD STEP    27   SUBSTEP     6  COMPLETED.    CUM ITER =    465
 *** TIME =   1.50900         TIME INC =  0.200000E-02  NEW TRIANG MATRIX
 *** AUTO STEP TIME:  NEXT TIME INC = 0.20000E-02  UNCHANGED

 *** LOAD STEP    27   SUBSTEP     7  COMPLETED.    CUM ITER =    466
 *** TIME =   1.51100         TIME INC =  0.200000E-02  NEW TRIANG MATRIX
 *** AUTO STEP TIME:  NEXT TIME INC = 0.20000E-02  UNCHANGED

 *** LOAD STEP    27   SUBSTEP     8  COMPLETED.    CUM ITER =    467
 *** TIME =   1.51300         TIME INC =  0.200000E-02  NEW TRIANG MATRIX
 *** AUTO STEP TIME:  NEXT TIME INC = 0.20000E-02  UNCHANGED

 *** LOAD STEP    27   SUBSTEP     9  COMPLETED.    CUM ITER =    468
 *** TIME =   1.51500         TIME INC =  0.200000E-02  NEW TRIANG MATRIX
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*** AUTO STEP TIME:  NEXT TIME INC = 0.20000E-02  UNCHANGED

*** LOAD STEP    27   SUBSTEP    10  COMPLETED.    CUM ITER =    469
*** TIME =   1.51700         TIME INC =  0.200000E-02  NEW TRIANG MATRIX
*** AUTO STEP TIME:  NEXT TIME INC = 0.20000E-02  UNCHANGED

*** LOAD STEP    27   SUBSTEP    11  COMPLETED.    CUM ITER =    470
*** TIME =   1.51900         TIME INC =  0.200000E-02  NEW TRIANG MATRIX
*** AUTO STEP TIME:  NEXT TIME INC = 0.20000E-02  UNCHANGED

*** LOAD STEP    27   SUBSTEP    12  COMPLETED.    CUM ITER =    471
*** TIME =   1.52100         TIME INC =  0.200000E-02  NEW TRIANG MATRIX
*** AUTO STEP TIME:  NEXT TIME INC = 0.20000E-02  UNCHANGED

*** LOAD STEP    27   SUBSTEP    13  COMPLETED.    CUM ITER =    472
*** TIME =   1.52300         TIME INC =  0.200000E-02  NEW TRIANG MATRIX
*** AUTO STEP TIME:  NEXT TIME INC = 0.20000E-02  UNCHANGED

*** LOAD STEP    27   SUBSTEP    14  COMPLETED.    CUM ITER =    473
*** TIME =   1.52500         TIME INC =  0.200000E-02  NEW TRIANG MATRIX
*** AUTO STEP TIME:  NEXT TIME INC = 0.20000E-02  UNCHANGED

*** LOAD STEP    27   SUBSTEP    15  COMPLETED.    CUM ITER =    474
*** TIME =   1.52700         TIME INC =  0.200000E-02  NEW TRIANG MATRIX
*** AUTO STEP TIME:  NEXT TIME INC = 0.20000E-02  UNCHANGED

*** LOAD STEP    27   SUBSTEP    16  COMPLETED.    CUM ITER =    475
*** TIME =   1.52900         TIME INC =  0.200000E-02  NEW TRIANG MATRIX
*** AUTO STEP TIME:  NEXT TIME INC = 0.20000E-02  UNCHANGED

*** LOAD STEP    27   SUBSTEP    17  COMPLETED.    CUM ITER =    476
*** TIME =   1.53100         TIME INC =  0.200000E-02  NEW TRIANG MATRIX
*** AUTO STEP TIME:  NEXT TIME INC = 0.20000E-02  UNCHANGED

*** LOAD STEP    27   SUBSTEP    18  COMPLETED.    CUM ITER =    477
*** TIME =   1.53300         TIME INC =  0.200000E-02  NEW TRIANG MATRIX
*** AUTO STEP TIME:  NEXT TIME INC = 0.20000E-02  UNCHANGED

*** LOAD STEP    27   SUBSTEP    19  COMPLETED.    CUM ITER =    478
*** TIME =   1.53500         TIME INC =  0.200000E-02  NEW TRIANG MATRIX
*** AUTO STEP TIME:  NEXT TIME INC = 0.20000E-02  UNCHANGED

*** LOAD STEP    27   SUBSTEP    20  COMPLETED.    CUM ITER =    479
*** TIME =   1.53700         TIME INC =  0.200000E-02  NEW TRIANG MATRIX
*** AUTO STEP TIME:  NEXT TIME INC = 0.20000E-02  UNCHANGED

*** LOAD STEP    27   SUBSTEP    21  COMPLETED.    CUM ITER =    480
*** TIME =   1.53900         TIME INC =  0.200000E-02  NEW TRIANG MATRIX
*** AUTO STEP TIME:  NEXT TIME INC = 0.20000E-02  UNCHANGED

*** LOAD STEP    27   SUBSTEP    22  COMPLETED.    CUM ITER =    481
*** TIME =   1.54100         TIME INC =  0.200000E-02  NEW TRIANG MATRIX
*** AUTO STEP TIME:  NEXT TIME INC = 0.20000E-02  UNCHANGED

*** LOAD STEP    27   SUBSTEP    23  COMPLETED.    CUM ITER =    482
*** TIME =   1.54300         TIME INC =  0.200000E-02  NEW TRIANG MATRIX
*** AUTO STEP TIME:  NEXT TIME INC = 0.20000E-02  UNCHANGED

*** LOAD STEP    27   SUBSTEP    24  COMPLETED.    CUM ITER =    483
*** TIME =   1.54500         TIME INC =  0.200000E-02  NEW TRIANG MATRIX
*** AUTO STEP TIME:  NEXT TIME INC = 0.20000E-02  UNCHANGED

*** LOAD STEP    27   SUBSTEP    25  COMPLETED.    CUM ITER =    484
*** TIME =   1.54700         TIME INC =  0.200000E-02  NEW TRIANG MATRIX
*** AUTO STEP TIME:  NEXT TIME INC = 0.20000E-02  UNCHANGED

*** LOAD STEP    27   SUBSTEP    26  COMPLETED.    CUM ITER =    485
*** TIME =   1.54900         TIME INC =  0.200000E-02  NEW TRIANG MATRIX
*** AUTO STEP TIME:  NEXT TIME INC = 0.20000E-02  UNCHANGED
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*** LOAD STEP    27   SUBSTEP    27  COMPLETED.    CUM ITER =    486
*** TIME =   1.55100         TIME INC =  0.200000E-02  NEW TRIANG MATRIX
*** AUTO STEP TIME:  NEXT TIME INC = 0.20000E-02  UNCHANGED

*** LOAD STEP    27   SUBSTEP    28  COMPLETED.    CUM ITER =    487
*** TIME =   1.55300         TIME INC =  0.200000E-02  NEW TRIANG MATRIX
*** AUTO STEP TIME:  NEXT TIME INC = 0.20000E-02  UNCHANGED

*** LOAD STEP    27   SUBSTEP    29  COMPLETED.    CUM ITER =    488
*** TIME =   1.55500         TIME INC =  0.200000E-02  NEW TRIANG MATRIX
*** AUTO STEP TIME:  NEXT TIME INC = 0.20000E-02  UNCHANGED

*** LOAD STEP    27   SUBSTEP    30  COMPLETED.    CUM ITER =    489
*** TIME =   1.55700         TIME INC =  0.200000E-02  NEW TRIANG MATRIX
*** AUTO STEP TIME:  NEXT TIME INC = 0.20000E-02  UNCHANGED

*** LOAD STEP    27   SUBSTEP    31  COMPLETED.    CUM ITER =    490
*** TIME =   1.55900         TIME INC =  0.200000E-02  NEW TRIANG MATRIX
*** AUTO STEP TIME:  NEXT TIME INC = 0.20000E-02  UNCHANGED

*** LOAD STEP    27   SUBSTEP    32  COMPLETED.    CUM ITER =    491
*** TIME =   1.56100         TIME INC =  0.200000E-02  NEW TRIANG MATRIX
*** AUTO STEP TIME:  NEXT TIME INC = 0.20000E-02  UNCHANGED

*** LOAD STEP    27   SUBSTEP    33  COMPLETED.    CUM ITER =    492
*** TIME =   1.56300         TIME INC =  0.200000E-02  NEW TRIANG MATRIX
*** AUTO STEP TIME:  NEXT TIME INC = 0.20000E-02  UNCHANGED

*** LOAD STEP    27   SUBSTEP    34  COMPLETED.    CUM ITER =    493
*** TIME =   1.56500         TIME INC =  0.200000E-02  NEW TRIANG MATRIX
*** AUTO STEP TIME:  NEXT TIME INC = 0.20000E-02  UNCHANGED

*** LOAD STEP    27   SUBSTEP    35  COMPLETED.    CUM ITER =    494
*** TIME =   1.56700         TIME INC =  0.200000E-02  NEW TRIANG MATRIX
*** AUTO STEP TIME:  NEXT TIME INC = 0.20000E-02  UNCHANGED

*** LOAD STEP    27   SUBSTEP    36  COMPLETED.    CUM ITER =    495
*** TIME =   1.56900         TIME INC =  0.200000E-02  NEW TRIANG MATRIX
*** AUTO STEP TIME:  NEXT TIME INC = 0.20000E-02  UNCHANGED

*** LOAD STEP    27   SUBSTEP    37  COMPLETED.    CUM ITER =    496
*** TIME =   1.57100         TIME INC =  0.200000E-02  NEW TRIANG MATRIX
*** AUTO STEP TIME:  NEXT TIME INC = 0.20000E-02  UNCHANGED

*** LOAD STEP    27   SUBSTEP    38  COMPLETED.    CUM ITER =    497
*** TIME =   1.57300         TIME INC =  0.200000E-02  NEW TRIANG MATRIX
*** AUTO STEP TIME:  NEXT TIME INC = 0.20000E-02  UNCHANGED

*** LOAD STEP    27   SUBSTEP    39  COMPLETED.    CUM ITER =    498
*** TIME =   1.57500         TIME INC =  0.200000E-02  NEW TRIANG MATRIX
*** AUTO STEP TIME:  NEXT TIME INC = 0.20000E-02  UNCHANGED

*** LOAD STEP    27   SUBSTEP    40  COMPLETED.    CUM ITER =    499
*** TIME =   1.57700         TIME INC =  0.200000E-02  NEW TRIANG MATRIX
*** AUTO STEP TIME:  NEXT TIME INC = 0.20000E-02  UNCHANGED

*** LOAD STEP    27   SUBSTEP    41  COMPLETED.    CUM ITER =    500
*** TIME =   1.57900         TIME INC =  0.200000E-02  NEW TRIANG MATRIX
*** AUTO STEP TIME:  NEXT TIME INC = 0.20000E-02  UNCHANGED

*** LOAD STEP    27   SUBSTEP    42  COMPLETED.    CUM ITER =    501
*** TIME =   1.58100         TIME INC =  0.200000E-02  NEW TRIANG MATRIX
*** AUTO STEP TIME:  NEXT TIME INC = 0.20000E-02  UNCHANGED

*** LOAD STEP    27   SUBSTEP    43  COMPLETED.    CUM ITER =    502
*** TIME =   1.58300         TIME INC =  0.200000E-02  NEW TRIANG MATRIX
*** AUTO STEP TIME:  NEXT TIME INC = 0.20000E-02  UNCHANGED

*** LOAD STEP    27   SUBSTEP    44  COMPLETED.    CUM ITER =    503
*** TIME =   1.58500         TIME INC =  0.200000E-02  NEW TRIANG MATRIX
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*** AUTO STEP TIME:  NEXT TIME INC = 0.20000E-02  UNCHANGED

*** LOAD STEP    27   SUBSTEP    45  COMPLETED.    CUM ITER =    504
*** TIME =   1.58700         TIME INC =  0.200000E-02  NEW TRIANG MATRIX
*** AUTO STEP TIME:  NEXT TIME INC = 0.20000E-02  UNCHANGED

*** LOAD STEP    27   SUBSTEP    46  COMPLETED.    CUM ITER =    505
*** TIME =   1.58900         TIME INC =  0.200000E-02  NEW TRIANG MATRIX
*** AUTO STEP TIME:  NEXT TIME INC = 0.20000E-02  UNCHANGED

*** LOAD STEP    27   SUBSTEP    47  COMPLETED.    CUM ITER =    506
*** TIME =   1.59100         TIME INC =  0.200000E-02  NEW TRIANG MATRIX
*** AUTO STEP TIME:  NEXT TIME INC = 0.20000E-02  UNCHANGED

*** LOAD STEP    27   SUBSTEP    48  COMPLETED.    CUM ITER =    507
*** TIME =   1.59300         TIME INC =  0.200000E-02  NEW TRIANG MATRIX
*** AUTO STEP TIME:  NEXT TIME INC = 0.20000E-02  UNCHANGED

*** LOAD STEP    27   SUBSTEP    49  COMPLETED.    CUM ITER =    508
*** TIME =   1.59500         TIME INC =  0.200000E-02  NEW TRIANG MATRIX
*** AUTO STEP TIME:  NEXT TIME INC = 0.20000E-02  UNCHANGED

*** LOAD STEP    27   SUBSTEP    50  COMPLETED.    CUM ITER =    509
*** TIME =   1.59700         TIME INC =  0.200000E-02  NEW TRIANG MATRIX
*** AUTO STEP TIME:  NEXT TIME INC = 0.20000E-02  UNCHANGED

*** LOAD STEP    27   SUBSTEP    51  COMPLETED.    CUM ITER =    510
*** TIME =   1.59900         TIME INC =  0.200000E-02  NEW TRIANG MATRIX
*** AUTO TIME STEP:  NEXT TIME INC = 0.10000E-02  DECREASED (FACTOR = 0.5000)

*** LOAD STEP    27   SUBSTEP    52  COMPLETED.    CUM ITER =    511
*** TIME =   1.60000         TIME INC =  0.100000E-02  NEW TRIANG MATRIX
************************************************
*************** FINISHED SOLVE FOR LS 27 *************
************************************************
****************** SOLVE FOR LS 28 ****************

SPECIFIED BODY FORCE HGEN FOR ALL PICKED ELEMENTS AT STARTING LOCATION      1
IS SET ACCORDING TO TABLE PARAMETER = _LOADVARI202

USE AUTOMATIC TIME STEPPING THIS LOAD STEP

USE     100 SUBSTEPS INITIALLY THIS LOAD STEP FOR ALL  DEGREES OF FREEDOM
FOR AUTOMATIC TIME STEPPING:
  USE   1000 SUBSTEPS AS A MAXIMUM
  USE     10 SUBSTEPS AS A MINIMUM

TIME=  1.7000

INCLUDE TRANSIENT EFFECTS FOR  ALL DEGREES OF FREEDOM THIS LOAD STEP

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

WRITE RSOL ITEMS TO THE DATABASE WITH A FREQUENCY OF ALL
  FOR ALL APPLICABLE ENTITIES

WRITE FFLU ITEMS TO THE DATABASE WITH A FREQUENCY OF ALL
  FOR ALL APPLICABLE ENTITIES

CONVERGENCE ON HEAT BASED ON THE NORM OF THE N-R LOAD
  WITH A TOLERANCE OF 0.1000E-02 AND A MINIMUM REFERENCE VALUE OF 0.1000E-02
  USING THE L2 NORM (CHECK THE SRSS VALUE)
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 *****  ANSYS SOLVE    COMMAND  *****

 *** WARNING ***                          CP =    1461.172   TIME= 10:09:42
 Material number 4 (used by element 65408 ) should normally have at
 least one MP or one TB type command associated with it.  Output of
 energy by material may not be available.

 *** NOTE ***                             CP =    1461.438   TIME= 10:09:42
 The step data was checked and warning messages were found.
  Please review output or errors file ( D:\Daten\Ansys
 Simulation\_ProjectScratch\Scr8B73\file.err ) for these warning
 messages.
1

 ***** ANSYS - ENGINEERING ANALYSIS SYSTEM  RELEASE 12.1     *****
 ANSYS Academic Teaching Advanced
 00000000          VERSION=WINDOWS x64   10:09:42  SEP 23, 2010 CP=   1462.125

 Schweißen Flachprobe--Thermisch-transient (E5)


                     L O A D   S T E P   O P T I O N S

   LOAD STEP NUMBER. . . . . . . . . . . . . . . .    28
   TIME AT END OF THE LOAD STEP. . . . . . . . . .  1.7000
   AUTOMATIC TIME STEPPING . . . . . . . . . . . .    ON
      INITIAL NUMBER OF SUBSTEPS . . . . . . . . .   100
      MAXIMUM NUMBER OF SUBSTEPS . . . . . . . . .  1000
      MINIMUM NUMBER OF SUBSTEPS . . . . . . . . .    10
   STEP CHANGE BOUNDARY CONDITIONS . . . . . . . .   YES
   TRANSIENT (INERTIA) EFFECTS
      THERMAL DOFS . . . . . . . . . . . . . . . .    ON
   TRANSIENT INTEGRATION PARAMETERS
      THETA. . . . . . . . . . . . . . . . . . . .  1.0000
      OSCILLATION LIMIT CRITERION. . . . . . . . . 0.50000
      TOLERANCE. . . . . . . . . . . . . . . . . .  0.0000
   PRINT OUTPUT CONTROLS . . . . . . . . . . . . .NO PRINTOUT
   DATABASE OUTPUT CONTROLS
      ITEM     FREQUENCY   COMPONENT
       ALL       NONE
      NSOL        ALL
      RSOL        ALL
      FFLU        ALL


 SOLUTION MONITORING INFO IS WRITTEN TO FILE=
file.mntr




 *** LOAD STEP    28   SUBSTEP     1  COMPLETED.    CUM ITER =    512
 *** TIME =   1.60100         TIME INC =  0.100000E-02  NEW TRIANG MATRIX
 *** AUTO STEP TIME:  NEXT TIME INC = 0.10000E-02  UNCHANGED

 *** LOAD STEP    28   SUBSTEP     2  COMPLETED.    CUM ITER =    513
 *** TIME =   1.60200         TIME INC =  0.100000E-02  NEW TRIANG MATRIX
 *** AUTO STEP TIME:  NEXT TIME INC = 0.10000E-02  UNCHANGED

 *** LOAD STEP    28   SUBSTEP     3  COMPLETED.    CUM ITER =    514
 *** TIME =   1.60300         TIME INC =  0.100000E-02  NEW TRIANG MATRIX
 *** AUTO TIME STEP:  NEXT TIME INC = 0.20000E-02  INCREASED (FACTOR = 2.0000)

 *** LOAD STEP    28   SUBSTEP     4  COMPLETED.    CUM ITER =    515
 *** TIME =   1.60500         TIME INC =  0.200000E-02  NEW TRIANG MATRIX
 *** AUTO STEP TIME:  NEXT TIME INC = 0.20000E-02  UNCHANGED

 *** LOAD STEP    28   SUBSTEP     5  COMPLETED.    CUM ITER =    516
 *** TIME =   1.60700         TIME INC =  0.200000E-02  NEW TRIANG MATRIX
 *** AUTO STEP TIME:  NEXT TIME INC = 0.20000E-02  UNCHANGED
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*** LOAD STEP    28   SUBSTEP     6  COMPLETED.    CUM ITER =    517
*** TIME =   1.60900         TIME INC =  0.200000E-02  NEW TRIANG MATRIX
*** AUTO STEP TIME:  NEXT TIME INC = 0.20000E-02  UNCHANGED

*** LOAD STEP    28   SUBSTEP     7  COMPLETED.    CUM ITER =    518
*** TIME =   1.61100         TIME INC =  0.200000E-02  NEW TRIANG MATRIX
*** AUTO STEP TIME:  NEXT TIME INC = 0.20000E-02  UNCHANGED

*** LOAD STEP    28   SUBSTEP     8  COMPLETED.    CUM ITER =    519
*** TIME =   1.61300         TIME INC =  0.200000E-02  NEW TRIANG MATRIX
*** AUTO STEP TIME:  NEXT TIME INC = 0.20000E-02  UNCHANGED

*** LOAD STEP    28   SUBSTEP     9  COMPLETED.    CUM ITER =    520
*** TIME =   1.61500         TIME INC =  0.200000E-02  NEW TRIANG MATRIX
*** AUTO STEP TIME:  NEXT TIME INC = 0.20000E-02  UNCHANGED

*** LOAD STEP    28   SUBSTEP    10  COMPLETED.    CUM ITER =    521
*** TIME =   1.61700         TIME INC =  0.200000E-02  NEW TRIANG MATRIX
*** AUTO STEP TIME:  NEXT TIME INC = 0.20000E-02  UNCHANGED

*** LOAD STEP    28   SUBSTEP    11  COMPLETED.    CUM ITER =    522
*** TIME =   1.61900         TIME INC =  0.200000E-02  NEW TRIANG MATRIX
*** AUTO STEP TIME:  NEXT TIME INC = 0.20000E-02  UNCHANGED

*** LOAD STEP    28   SUBSTEP    12  COMPLETED.    CUM ITER =    523
*** TIME =   1.62100         TIME INC =  0.200000E-02  NEW TRIANG MATRIX
*** AUTO STEP TIME:  NEXT TIME INC = 0.20000E-02  UNCHANGED

*** LOAD STEP    28   SUBSTEP    13  COMPLETED.    CUM ITER =    524
*** TIME =   1.62300         TIME INC =  0.200000E-02  NEW TRIANG MATRIX
*** AUTO STEP TIME:  NEXT TIME INC = 0.20000E-02  UNCHANGED

*** LOAD STEP    28   SUBSTEP    14  COMPLETED.    CUM ITER =    525
*** TIME =   1.62500         TIME INC =  0.200000E-02  NEW TRIANG MATRIX
*** AUTO STEP TIME:  NEXT TIME INC = 0.20000E-02  UNCHANGED

*** LOAD STEP    28   SUBSTEP    15  COMPLETED.    CUM ITER =    526
*** TIME =   1.62700         TIME INC =  0.200000E-02  NEW TRIANG MATRIX
*** AUTO STEP TIME:  NEXT TIME INC = 0.20000E-02  UNCHANGED

*** LOAD STEP    28   SUBSTEP    16  COMPLETED.    CUM ITER =    527
*** TIME =   1.62900         TIME INC =  0.200000E-02  NEW TRIANG MATRIX
*** AUTO STEP TIME:  NEXT TIME INC = 0.20000E-02  UNCHANGED

*** LOAD STEP    28   SUBSTEP    17  COMPLETED.    CUM ITER =    528
*** TIME =   1.63100         TIME INC =  0.200000E-02  NEW TRIANG MATRIX
*** AUTO STEP TIME:  NEXT TIME INC = 0.20000E-02  UNCHANGED

*** LOAD STEP    28   SUBSTEP    18  COMPLETED.    CUM ITER =    529
*** TIME =   1.63300         TIME INC =  0.200000E-02  NEW TRIANG MATRIX
*** AUTO STEP TIME:  NEXT TIME INC = 0.20000E-02  UNCHANGED

*** LOAD STEP    28   SUBSTEP    19  COMPLETED.    CUM ITER =    530
*** TIME =   1.63500         TIME INC =  0.200000E-02  NEW TRIANG MATRIX
*** AUTO STEP TIME:  NEXT TIME INC = 0.20000E-02  UNCHANGED

*** LOAD STEP    28   SUBSTEP    20  COMPLETED.    CUM ITER =    531
*** TIME =   1.63700         TIME INC =  0.200000E-02  NEW TRIANG MATRIX
*** AUTO STEP TIME:  NEXT TIME INC = 0.20000E-02  UNCHANGED

*** LOAD STEP    28   SUBSTEP    21  COMPLETED.    CUM ITER =    532
*** TIME =   1.63900         TIME INC =  0.200000E-02  NEW TRIANG MATRIX
*** AUTO STEP TIME:  NEXT TIME INC = 0.20000E-02  UNCHANGED

*** LOAD STEP    28   SUBSTEP    22  COMPLETED.    CUM ITER =    533
*** TIME =   1.64100         TIME INC =  0.200000E-02  NEW TRIANG MATRIX
*** AUTO STEP TIME:  NEXT TIME INC = 0.20000E-02  UNCHANGED

*** LOAD STEP    28   SUBSTEP    23  COMPLETED.    CUM ITER =    534
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*** TIME =   1.64300         TIME INC =  0.200000E-02  NEW TRIANG MATRIX
*** AUTO STEP TIME:  NEXT TIME INC = 0.20000E-02  UNCHANGED

*** LOAD STEP    28   SUBSTEP    24  COMPLETED.    CUM ITER =    535
*** TIME =   1.64500         TIME INC =  0.200000E-02  NEW TRIANG MATRIX
*** AUTO STEP TIME:  NEXT TIME INC = 0.20000E-02  UNCHANGED

*** LOAD STEP    28   SUBSTEP    25  COMPLETED.    CUM ITER =    536
*** TIME =   1.64700         TIME INC =  0.200000E-02  NEW TRIANG MATRIX
*** AUTO STEP TIME:  NEXT TIME INC = 0.20000E-02  UNCHANGED

*** LOAD STEP    28   SUBSTEP    26  COMPLETED.    CUM ITER =    537
*** TIME =   1.64900         TIME INC =  0.200000E-02  NEW TRIANG MATRIX
*** AUTO STEP TIME:  NEXT TIME INC = 0.20000E-02  UNCHANGED

*** LOAD STEP    28   SUBSTEP    27  COMPLETED.    CUM ITER =    538
*** TIME =   1.65100         TIME INC =  0.200000E-02  NEW TRIANG MATRIX
*** AUTO STEP TIME:  NEXT TIME INC = 0.20000E-02  UNCHANGED

*** LOAD STEP    28   SUBSTEP    28  COMPLETED.    CUM ITER =    539
*** TIME =   1.65300         TIME INC =  0.200000E-02  NEW TRIANG MATRIX
*** AUTO STEP TIME:  NEXT TIME INC = 0.20000E-02  UNCHANGED

*** LOAD STEP    28   SUBSTEP    29  COMPLETED.    CUM ITER =    540
*** TIME =   1.65500         TIME INC =  0.200000E-02  NEW TRIANG MATRIX
*** AUTO STEP TIME:  NEXT TIME INC = 0.20000E-02  UNCHANGED

*** LOAD STEP    28   SUBSTEP    30  COMPLETED.    CUM ITER =    541
*** TIME =   1.65700         TIME INC =  0.200000E-02  NEW TRIANG MATRIX
*** AUTO STEP TIME:  NEXT TIME INC = 0.20000E-02  UNCHANGED

*** LOAD STEP    28   SUBSTEP    31  COMPLETED.    CUM ITER =    542
*** TIME =   1.65900         TIME INC =  0.200000E-02  NEW TRIANG MATRIX
*** AUTO STEP TIME:  NEXT TIME INC = 0.20000E-02  UNCHANGED

*** LOAD STEP    28   SUBSTEP    32  COMPLETED.    CUM ITER =    543
*** TIME =   1.66100         TIME INC =  0.200000E-02  NEW TRIANG MATRIX
*** AUTO STEP TIME:  NEXT TIME INC = 0.20000E-02  UNCHANGED

*** LOAD STEP    28   SUBSTEP    33  COMPLETED.    CUM ITER =    544
*** TIME =   1.66300         TIME INC =  0.200000E-02  NEW TRIANG MATRIX
*** AUTO STEP TIME:  NEXT TIME INC = 0.20000E-02  UNCHANGED

*** LOAD STEP    28   SUBSTEP    34  COMPLETED.    CUM ITER =    545
*** TIME =   1.66500         TIME INC =  0.200000E-02  NEW TRIANG MATRIX
*** AUTO STEP TIME:  NEXT TIME INC = 0.20000E-02  UNCHANGED

*** LOAD STEP    28   SUBSTEP    35  COMPLETED.    CUM ITER =    546
*** TIME =   1.66700         TIME INC =  0.200000E-02  NEW TRIANG MATRIX
*** AUTO STEP TIME:  NEXT TIME INC = 0.20000E-02  UNCHANGED

*** LOAD STEP    28   SUBSTEP    36  COMPLETED.    CUM ITER =    547
*** TIME =   1.66900         TIME INC =  0.200000E-02  NEW TRIANG MATRIX
*** AUTO STEP TIME:  NEXT TIME INC = 0.20000E-02  UNCHANGED

*** LOAD STEP    28   SUBSTEP    37  COMPLETED.    CUM ITER =    548
*** TIME =   1.67100         TIME INC =  0.200000E-02  NEW TRIANG MATRIX
*** AUTO STEP TIME:  NEXT TIME INC = 0.20000E-02  UNCHANGED

*** LOAD STEP    28   SUBSTEP    38  COMPLETED.    CUM ITER =    549
*** TIME =   1.67300         TIME INC =  0.200000E-02  NEW TRIANG MATRIX
*** AUTO STEP TIME:  NEXT TIME INC = 0.20000E-02  UNCHANGED

*** LOAD STEP    28   SUBSTEP    39  COMPLETED.    CUM ITER =    550
*** TIME =   1.67500         TIME INC =  0.200000E-02  NEW TRIANG MATRIX
*** AUTO STEP TIME:  NEXT TIME INC = 0.20000E-02  UNCHANGED

*** LOAD STEP    28   SUBSTEP    40  COMPLETED.    CUM ITER =    551
*** TIME =   1.67700         TIME INC =  0.200000E-02  NEW TRIANG MATRIX
*** AUTO STEP TIME:  NEXT TIME INC = 0.20000E-02  UNCHANGED
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*** LOAD STEP    28   SUBSTEP    41  COMPLETED.    CUM ITER =    552
*** TIME =   1.67900         TIME INC =  0.200000E-02  NEW TRIANG MATRIX
*** AUTO STEP TIME:  NEXT TIME INC = 0.20000E-02  UNCHANGED

*** LOAD STEP    28   SUBSTEP    42  COMPLETED.    CUM ITER =    553
*** TIME =   1.68100         TIME INC =  0.200000E-02  NEW TRIANG MATRIX
*** AUTO STEP TIME:  NEXT TIME INC = 0.20000E-02  UNCHANGED

*** LOAD STEP    28   SUBSTEP    43  COMPLETED.    CUM ITER =    554
*** TIME =   1.68300         TIME INC =  0.200000E-02  NEW TRIANG MATRIX
*** AUTO STEP TIME:  NEXT TIME INC = 0.20000E-02  UNCHANGED

*** LOAD STEP    28   SUBSTEP    44  COMPLETED.    CUM ITER =    555
*** TIME =   1.68500         TIME INC =  0.200000E-02  NEW TRIANG MATRIX
*** AUTO STEP TIME:  NEXT TIME INC = 0.20000E-02  UNCHANGED

*** LOAD STEP    28   SUBSTEP    45  COMPLETED.    CUM ITER =    556
*** TIME =   1.68700         TIME INC =  0.200000E-02  NEW TRIANG MATRIX
*** AUTO STEP TIME:  NEXT TIME INC = 0.20000E-02  UNCHANGED

*** LOAD STEP    28   SUBSTEP    46  COMPLETED.    CUM ITER =    557
*** TIME =   1.68900         TIME INC =  0.200000E-02  NEW TRIANG MATRIX
*** AUTO STEP TIME:  NEXT TIME INC = 0.20000E-02  UNCHANGED

*** LOAD STEP    28   SUBSTEP    47  COMPLETED.    CUM ITER =    558
*** TIME =   1.69100         TIME INC =  0.200000E-02  NEW TRIANG MATRIX
*** AUTO STEP TIME:  NEXT TIME INC = 0.20000E-02  UNCHANGED

*** LOAD STEP    28   SUBSTEP    48  COMPLETED.    CUM ITER =    559
*** TIME =   1.69300         TIME INC =  0.200000E-02  NEW TRIANG MATRIX
*** AUTO STEP TIME:  NEXT TIME INC = 0.20000E-02  UNCHANGED

*** LOAD STEP    28   SUBSTEP    49  COMPLETED.    CUM ITER =    560
*** TIME =   1.69500         TIME INC =  0.200000E-02  NEW TRIANG MATRIX
*** AUTO STEP TIME:  NEXT TIME INC = 0.20000E-02  UNCHANGED

*** LOAD STEP    28   SUBSTEP    50  COMPLETED.    CUM ITER =    561
*** TIME =   1.69700         TIME INC =  0.200000E-02  NEW TRIANG MATRIX
*** AUTO STEP TIME:  NEXT TIME INC = 0.20000E-02  UNCHANGED

*** LOAD STEP    28   SUBSTEP    51  COMPLETED.    CUM ITER =    562
*** TIME =   1.69900         TIME INC =  0.200000E-02  NEW TRIANG MATRIX
*** AUTO TIME STEP:  NEXT TIME INC = 0.10000E-02  DECREASED (FACTOR = 0.5000)

*** LOAD STEP    28   SUBSTEP    52  COMPLETED.    CUM ITER =    563
*** TIME =   1.70000         TIME INC =  0.100000E-02  NEW TRIANG MATRIX
**************************************************
*************** FINISHED SOLVE FOR LS 28 *************
**************************************************
****************** SOLVE FOR LS 29 ****************

SPECIFIED BODY FORCE HGEN FOR ALL PICKED ELEMENTS AT STARTING LOCATION      1
IS SET ACCORDING TO TABLE PARAMETER = _LOADVARI202

USE AUTOMATIC TIME STEPPING THIS LOAD STEP

USE     100 SUBSTEPS INITIALLY THIS LOAD STEP FOR ALL  DEGREES OF FREEDOM
FOR AUTOMATIC TIME STEPPING:
  USE   1000 SUBSTEPS AS A MAXIMUM
  USE     10 SUBSTEPS AS A MINIMUM

TIME=  1.8000

INCLUDE TRANSIENT EFFECTS FOR  ALL DEGREES OF FREEDOM THIS LOAD STEP

ERASE THE CURRENT DATABASE OUTPUT CONTROL TABLE.


WRITE ALL  ITEMS TO THE DATABASE WITH A FREQUENCY OF NONE
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```
  FOR ALL APPLICABLE ENTITIES

 WRITE NSOL ITEMS TO THE DATABASE WITH A FREQUENCY OF ALL
  FOR ALL APPLICABLE ENTITIES

 WRITE RSOL ITEMS TO THE DATABASE WITH A FREQUENCY OF ALL
  FOR ALL APPLICABLE ENTITIES

 WRITE FFLU ITEMS TO THE DATABASE WITH A FREQUENCY OF ALL
  FOR ALL APPLICABLE ENTITIES

 CONVERGENCE ON HEAT BASED ON THE NORM OF THE N-R LOAD
  WITH A TOLERANCE OF 0.1000E-02 AND A MINIMUM REFERENCE VALUE OF 0.1000E-02
  USING THE L2 NORM (CHECK THE SRSS VALUE)

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

 *** WARNING ***                          CP =    1601.625   TIME= 10:11:01
 Material number 4 (used by element 65408 ) should normally have at
 least one MP or one TB type command associated with it.  Output of
 energy by material may not be available.

 *** NOTE ***                             CP =    1601.906   TIME= 10:11:01
 The step data was checked and warning messages were found.
  Please review output or errors file ( D:\Daten\Ansys
 Simulation\_ProjectScratch\Scr8B73\file.err ) for these warning
 messages.
1

 ***** ANSYS - ENGINEERING ANALYSIS SYSTEM  RELEASE 12.1     *****
 ANSYS Academic Teaching Advanced
 00000000          VERSION=WINDOWS x64   10:11:01  SEP 23, 2010 CP=   1602.625

 Schweißen Flachprobe--Thermisch-transient (E5)


                     L O A D   S T E P   O P T I O N S

   LOAD STEP NUMBER. . . . . . . . . . . . . . . .    29
   TIME AT END OF THE LOAD STEP. . . . . . . . . .  1.8000
   AUTOMATIC TIME STEPPING . . . . . . . . . . . .    ON
      INITIAL NUMBER OF SUBSTEPS . . . . . . . . .   100
      MAXIMUM NUMBER OF SUBSTEPS . . . . . . . . .  1000
      MINIMUM NUMBER OF SUBSTEPS . . . . . . . . .    10
   STEP CHANGE BOUNDARY CONDITIONS . . . . . . . .   YES
   TRANSIENT (INERTIA) EFFECTS
      THERMAL DOFS . . . . . . . . . . . . . . . .    ON
   TRANSIENT INTEGRATION PARAMETERS
      THETA. . . . . . . . . . . . . . . . . . . .  1.0000
      OSCILLATION LIMIT CRITERION. . . . . . . . . 0.50000
      TOLERANCE. . . . . . . . . . . . . . . . . .  0.0000
   PRINT OUTPUT CONTROLS . . . . . . . . . . . . .NO PRINTOUT
   DATABASE OUTPUT CONTROLS
      ITEM     FREQUENCY   COMPONENT
       ALL       NONE
      NSOL        ALL
      RSOL        ALL
      FFLU        ALL


 SOLUTION MONITORING INFO IS WRITTEN TO FILE=
file.mntr




 *** LOAD STEP    29   SUBSTEP     1  COMPLETED.    CUM ITER =    564
 *** TIME =   1.70100         TIME INC =  0.100000E-02  NEW TRIANG MATRIX
 *** AUTO STEP TIME:  NEXT TIME INC = 0.10000E-02  UNCHANGED
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*** LOAD STEP    29   SUBSTEP     2  COMPLETED.    CUM ITER =    565
*** TIME =   1.70200         TIME INC =  0.100000E-02  NEW TRIANG MATRIX
*** AUTO STEP TIME:  NEXT TIME INC = 0.10000E-02  UNCHANGED

*** LOAD STEP    29   SUBSTEP     3  COMPLETED.    CUM ITER =    566
*** TIME =   1.70300         TIME INC =  0.100000E-02  NEW TRIANG MATRIX
*** AUTO TIME STEP:  NEXT TIME INC = 0.20000E-02  INCREASED (FACTOR = 2.0000)

*** LOAD STEP    29   SUBSTEP     4  COMPLETED.    CUM ITER =    567
*** TIME =   1.70500         TIME INC =  0.200000E-02  NEW TRIANG MATRIX
*** AUTO STEP TIME:  NEXT TIME INC = 0.20000E-02  UNCHANGED

*** LOAD STEP    29   SUBSTEP     5  COMPLETED.    CUM ITER =    568
*** TIME =   1.70700         TIME INC =  0.200000E-02  NEW TRIANG MATRIX
*** AUTO STEP TIME:  NEXT TIME INC = 0.20000E-02  UNCHANGED

*** LOAD STEP    29   SUBSTEP     6  COMPLETED.    CUM ITER =    569
*** TIME =   1.70900         TIME INC =  0.200000E-02  NEW TRIANG MATRIX
*** AUTO STEP TIME:  NEXT TIME INC = 0.20000E-02  UNCHANGED

*** LOAD STEP    29   SUBSTEP     7  COMPLETED.    CUM ITER =    570
*** TIME =   1.71100         TIME INC =  0.200000E-02  NEW TRIANG MATRIX
*** AUTO STEP TIME:  NEXT TIME INC = 0.20000E-02  UNCHANGED

*** LOAD STEP    29   SUBSTEP     8  COMPLETED.    CUM ITER =    571
*** TIME =   1.71300         TIME INC =  0.200000E-02  NEW TRIANG MATRIX
*** AUTO STEP TIME:  NEXT TIME INC = 0.20000E-02  UNCHANGED

*** LOAD STEP    29   SUBSTEP     9  COMPLETED.    CUM ITER =    572
*** TIME =   1.71500         TIME INC =  0.200000E-02  NEW TRIANG MATRIX
*** AUTO STEP TIME:  NEXT TIME INC = 0.20000E-02  UNCHANGED

*** LOAD STEP    29   SUBSTEP    10  COMPLETED.    CUM ITER =    573
*** TIME =   1.71700         TIME INC =  0.200000E-02  NEW TRIANG MATRIX
*** AUTO STEP TIME:  NEXT TIME INC = 0.20000E-02  UNCHANGED

*** LOAD STEP    29   SUBSTEP    11  COMPLETED.    CUM ITER =    574
*** TIME =   1.71900         TIME INC =  0.200000E-02  NEW TRIANG MATRIX
*** AUTO STEP TIME:  NEXT TIME INC = 0.20000E-02  UNCHANGED

*** LOAD STEP    29   SUBSTEP    12  COMPLETED.    CUM ITER =    575
*** TIME =   1.72100         TIME INC =  0.200000E-02  NEW TRIANG MATRIX
*** AUTO STEP TIME:  NEXT TIME INC = 0.20000E-02  UNCHANGED

*** LOAD STEP    29   SUBSTEP    13  COMPLETED.    CUM ITER =    576
*** TIME =   1.72300         TIME INC =  0.200000E-02  NEW TRIANG MATRIX
*** AUTO STEP TIME:  NEXT TIME INC = 0.20000E-02  UNCHANGED

*** LOAD STEP    29   SUBSTEP    14  COMPLETED.    CUM ITER =    577
*** TIME =   1.72500         TIME INC =  0.200000E-02  NEW TRIANG MATRIX
*** AUTO STEP TIME:  NEXT TIME INC = 0.20000E-02  UNCHANGED

*** LOAD STEP    29   SUBSTEP    15  COMPLETED.    CUM ITER =    578
*** TIME =   1.72700         TIME INC =  0.200000E-02  NEW TRIANG MATRIX
*** AUTO STEP TIME:  NEXT TIME INC = 0.20000E-02  UNCHANGED

*** LOAD STEP    29   SUBSTEP    16  COMPLETED.    CUM ITER =    579
*** TIME =   1.72900         TIME INC =  0.200000E-02  NEW TRIANG MATRIX
*** AUTO STEP TIME:  NEXT TIME INC = 0.20000E-02  UNCHANGED

*** LOAD STEP    29   SUBSTEP    17  COMPLETED.    CUM ITER =    580
*** TIME =   1.73100         TIME INC =  0.200000E-02  NEW TRIANG MATRIX
*** AUTO STEP TIME:  NEXT TIME INC = 0.20000E-02  UNCHANGED

*** LOAD STEP    29   SUBSTEP    18  COMPLETED.    CUM ITER =    581
*** TIME =   1.73300         TIME INC =  0.200000E-02  NEW TRIANG MATRIX
*** AUTO STEP TIME:  NEXT TIME INC = 0.20000E-02  UNCHANGED

*** LOAD STEP    29   SUBSTEP    19  COMPLETED.    CUM ITER =    582
*** TIME =   1.73500         TIME INC =  0.200000E-02  NEW TRIANG MATRIX
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*** AUTO STEP TIME:  NEXT TIME INC = 0.20000E-02  UNCHANGED

*** LOAD STEP    29   SUBSTEP    20  COMPLETED.    CUM ITER =    583
*** TIME =   1.73700         TIME INC =  0.200000E-02  NEW TRIANG MATRIX
*** AUTO STEP TIME:  NEXT TIME INC = 0.20000E-02  UNCHANGED

*** LOAD STEP    29   SUBSTEP    21  COMPLETED.    CUM ITER =    584
*** TIME =   1.73900         TIME INC =  0.200000E-02  NEW TRIANG MATRIX
*** AUTO STEP TIME:  NEXT TIME INC = 0.20000E-02  UNCHANGED

*** LOAD STEP    29   SUBSTEP    22  COMPLETED.    CUM ITER =    585
*** TIME =   1.74100         TIME INC =  0.200000E-02  NEW TRIANG MATRIX
*** AUTO STEP TIME:  NEXT TIME INC = 0.20000E-02  UNCHANGED

*** LOAD STEP    29   SUBSTEP    23  COMPLETED.    CUM ITER =    586
*** TIME =   1.74300         TIME INC =  0.200000E-02  NEW TRIANG MATRIX
*** AUTO STEP TIME:  NEXT TIME INC = 0.20000E-02  UNCHANGED

*** LOAD STEP    29   SUBSTEP    24  COMPLETED.    CUM ITER =    587
*** TIME =   1.74500         TIME INC =  0.200000E-02  NEW TRIANG MATRIX
*** AUTO STEP TIME:  NEXT TIME INC = 0.20000E-02  UNCHANGED

*** LOAD STEP    29   SUBSTEP    25  COMPLETED.    CUM ITER =    588
*** TIME =   1.74700         TIME INC =  0.200000E-02  NEW TRIANG MATRIX
*** AUTO STEP TIME:  NEXT TIME INC = 0.20000E-02  UNCHANGED

*** LOAD STEP    29   SUBSTEP    26  COMPLETED.    CUM ITER =    589
*** TIME =   1.74900         TIME INC =  0.200000E-02  NEW TRIANG MATRIX
*** AUTO STEP TIME:  NEXT TIME INC = 0.20000E-02  UNCHANGED

*** LOAD STEP    29   SUBSTEP    27  COMPLETED.    CUM ITER =    590
*** TIME =   1.75100         TIME INC =  0.200000E-02  NEW TRIANG MATRIX
*** AUTO STEP TIME:  NEXT TIME INC = 0.20000E-02  UNCHANGED

*** LOAD STEP    29   SUBSTEP    28  COMPLETED.    CUM ITER =    591
*** TIME =   1.75300         TIME INC =  0.200000E-02  NEW TRIANG MATRIX
*** AUTO STEP TIME:  NEXT TIME INC = 0.20000E-02  UNCHANGED

*** LOAD STEP    29   SUBSTEP    29  COMPLETED.    CUM ITER =    592
*** TIME =   1.75500         TIME INC =  0.200000E-02  NEW TRIANG MATRIX
*** AUTO STEP TIME:  NEXT TIME INC = 0.20000E-02  UNCHANGED

*** LOAD STEP    29   SUBSTEP    30  COMPLETED.    CUM ITER =    593
*** TIME =   1.75700         TIME INC =  0.200000E-02  NEW TRIANG MATRIX
*** AUTO STEP TIME:  NEXT TIME INC = 0.20000E-02  UNCHANGED

*** LOAD STEP    29   SUBSTEP    31  COMPLETED.    CUM ITER =    594
*** TIME =   1.75900         TIME INC =  0.200000E-02  NEW TRIANG MATRIX
*** AUTO STEP TIME:  NEXT TIME INC = 0.20000E-02  UNCHANGED

*** LOAD STEP    29   SUBSTEP    32  COMPLETED.    CUM ITER =    595
*** TIME =   1.76100         TIME INC =  0.200000E-02  NEW TRIANG MATRIX
*** AUTO STEP TIME:  NEXT TIME INC = 0.20000E-02  UNCHANGED

*** LOAD STEP    29   SUBSTEP    33  COMPLETED.    CUM ITER =    596
*** TIME =   1.76300         TIME INC =  0.200000E-02  NEW TRIANG MATRIX
*** AUTO STEP TIME:  NEXT TIME INC = 0.20000E-02  UNCHANGED

*** LOAD STEP    29   SUBSTEP    34  COMPLETED.    CUM ITER =    597
*** TIME =   1.76500         TIME INC =  0.200000E-02  NEW TRIANG MATRIX
*** AUTO STEP TIME:  NEXT TIME INC = 0.20000E-02  UNCHANGED

*** LOAD STEP    29   SUBSTEP    35  COMPLETED.    CUM ITER =    598
*** TIME =   1.76700         TIME INC =  0.200000E-02  NEW TRIANG MATRIX
*** AUTO STEP TIME:  NEXT TIME INC = 0.20000E-02  UNCHANGED

*** LOAD STEP    29   SUBSTEP    36  COMPLETED.    CUM ITER =    599
*** TIME =   1.76900         TIME INC =  0.200000E-02  NEW TRIANG MATRIX
*** AUTO STEP TIME:  NEXT TIME INC = 0.20000E-02  UNCHANGED
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*** LOAD STEP    29   SUBSTEP    37  COMPLETED.    CUM ITER =    600
*** TIME =   1.77100         TIME INC =  0.200000E-02  NEW TRIANG MATRIX
*** AUTO STEP TIME:  NEXT TIME INC = 0.20000E-02  UNCHANGED

*** LOAD STEP    29   SUBSTEP    38  COMPLETED.    CUM ITER =    601
*** TIME =   1.77300         TIME INC =  0.200000E-02  NEW TRIANG MATRIX
*** AUTO STEP TIME:  NEXT TIME INC = 0.20000E-02  UNCHANGED

*** LOAD STEP    29   SUBSTEP    39  COMPLETED.    CUM ITER =    602
*** TIME =   1.77500         TIME INC =  0.200000E-02  NEW TRIANG MATRIX
*** AUTO STEP TIME:  NEXT TIME INC = 0.20000E-02  UNCHANGED

*** LOAD STEP    29   SUBSTEP    40  COMPLETED.    CUM ITER =    603
*** TIME =   1.77700         TIME INC =  0.200000E-02  NEW TRIANG MATRIX
*** AUTO STEP TIME:  NEXT TIME INC = 0.20000E-02  UNCHANGED

*** LOAD STEP    29   SUBSTEP    41  COMPLETED.    CUM ITER =    604
*** TIME =   1.77900         TIME INC =  0.200000E-02  NEW TRIANG MATRIX
*** AUTO STEP TIME:  NEXT TIME INC = 0.20000E-02  UNCHANGED

*** LOAD STEP    29   SUBSTEP    42  COMPLETED.    CUM ITER =    605
*** TIME =   1.78100         TIME INC =  0.200000E-02  NEW TRIANG MATRIX
*** AUTO STEP TIME:  NEXT TIME INC = 0.20000E-02  UNCHANGED

*** LOAD STEP    29   SUBSTEP    43  COMPLETED.    CUM ITER =    606
*** TIME =   1.78300         TIME INC =  0.200000E-02  NEW TRIANG MATRIX
*** AUTO STEP TIME:  NEXT TIME INC = 0.20000E-02  UNCHANGED

*** LOAD STEP    29   SUBSTEP    44  COMPLETED.    CUM ITER =    607
*** TIME =   1.78500         TIME INC =  0.200000E-02  NEW TRIANG MATRIX
*** AUTO STEP TIME:  NEXT TIME INC = 0.20000E-02  UNCHANGED

*** LOAD STEP    29   SUBSTEP    45  COMPLETED.    CUM ITER =    608
*** TIME =   1.78700         TIME INC =  0.200000E-02  NEW TRIANG MATRIX
*** AUTO STEP TIME:  NEXT TIME INC = 0.20000E-02  UNCHANGED

*** LOAD STEP    29   SUBSTEP    46  COMPLETED.    CUM ITER =    609
*** TIME =   1.78900         TIME INC =  0.200000E-02  NEW TRIANG MATRIX
*** AUTO STEP TIME:  NEXT TIME INC = 0.20000E-02  UNCHANGED

*** LOAD STEP    29   SUBSTEP    47  COMPLETED.    CUM ITER =    610
*** TIME =   1.79100         TIME INC =  0.200000E-02  NEW TRIANG MATRIX
*** AUTO STEP TIME:  NEXT TIME INC = 0.20000E-02  UNCHANGED

*** LOAD STEP    29   SUBSTEP    48  COMPLETED.    CUM ITER =    611
*** TIME =   1.79300         TIME INC =  0.200000E-02  NEW TRIANG MATRIX
*** AUTO STEP TIME:  NEXT TIME INC = 0.20000E-02  UNCHANGED

*** LOAD STEP    29   SUBSTEP    49  COMPLETED.    CUM ITER =    612
*** TIME =   1.79500         TIME INC =  0.200000E-02  NEW TRIANG MATRIX
*** AUTO STEP TIME:  NEXT TIME INC = 0.20000E-02  UNCHANGED

*** LOAD STEP    29   SUBSTEP    50  COMPLETED.    CUM ITER =    613
*** TIME =   1.79700         TIME INC =  0.200000E-02  NEW TRIANG MATRIX
*** AUTO STEP TIME:  NEXT TIME INC = 0.20000E-02  UNCHANGED

*** LOAD STEP    29   SUBSTEP    51  COMPLETED.    CUM ITER =    614
*** TIME =   1.79900         TIME INC =  0.200000E-02  NEW TRIANG MATRIX
*** AUTO TIME STEP:  NEXT TIME INC = 0.10000E-02  DECREASED (FACTOR = 0.5000)

*** LOAD STEP    29   SUBSTEP    52  COMPLETED.    CUM ITER =    615
*** TIME =   1.80000         TIME INC =  0.100000E-02  NEW TRIANG MATRIX
**************************************************
************** FINISHED SOLVE FOR LS 29 *************
**************************************************
****************** SOLVE FOR LS 30 ****************

SPECIFIED BODY FORCE HGEN FOR ALL PICKED ELEMENTS AT STARTING LOCATION      1
IS SET ACCORDING TO TABLE PARAMETER = _LOADVARI202
```

```
 USE AUTOMATIC TIME STEPPING THIS LOAD STEP

 USE     100 SUBSTEPS INITIALLY THIS LOAD STEP FOR ALL  DEGREES OF FREEDOM
 FOR AUTOMATIC TIME STEPPING:
   USE   1000 SUBSTEPS AS A MAXIMUM
   USE     10 SUBSTEPS AS A MINIMUM

 TIME=  1.9000

 INCLUDE TRANSIENT EFFECTS FOR  ALL DEGREES OF FREEDOM THIS LOAD STEP

 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

 WRITE RSOL ITEMS TO THE DATABASE WITH A FREQUENCY OF ALL
   FOR ALL APPLICABLE ENTITIES

 WRITE FFLU ITEMS TO THE DATABASE WITH A FREQUENCY OF ALL
   FOR ALL APPLICABLE ENTITIES

 CONVERGENCE ON HEAT BASED ON THE NORM OF THE N-R LOAD
   WITH A TOLERANCE OF 0.1000E-02 AND A MINIMUM REFERENCE VALUE OF 0.1000E-02
   USING THE L2 NORM (CHECK THE SRSS VALUE)

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

 *** WARNING ***                          CP =    1742.297   TIME= 10:12:20
 Material number 4 (used by element 65408 ) should normally have at
 least one MP or one TB type command associated with it.  Output of
 energy by material may not be available.

 *** NOTE ***                             CP =    1742.531   TIME= 10:12:21
 The step data was checked and warning messages were found.
  Please review output or errors file ( D:\Daten\Ansys
 Simulation\_ProjectScratch\Scr8B73\file.err ) for these warning
 messages.
1

 ***** ANSYS - ENGINEERING ANALYSIS SYSTEM  RELEASE 12.1     *****
 ANSYS Academic Teaching Advanced
 00000000          VERSION=WINDOWS x64   10:12:21  SEP 23, 2010 CP=   1743.156

 Schweißen Flachprobe--Thermisch-transient (E5)


                     L O A D   S T E P   O P T I O N S

   LOAD STEP NUMBER. . . . . . . . . . . . . . . .    30
   TIME AT END OF THE LOAD STEP. . . . . . . . . .  1.9000
   AUTOMATIC TIME STEPPING . . . . . . . . . . . .    ON
      INITIAL NUMBER OF SUBSTEPS . . . . . . . . .   100
      MAXIMUM NUMBER OF SUBSTEPS . . . . . . . . .  1000
      MINIMUM NUMBER OF SUBSTEPS . . . . . . . . .    10
   STEP CHANGE BOUNDARY CONDITIONS . . . . . . . .   YES
   TRANSIENT (INERTIA) EFFECTS
      THERMAL DOFS . . . . . . . . . . . . . . . .    ON
   TRANSIENT INTEGRATION PARAMETERS
      THETA. . . . . . . . . . . . . . . . . . . .  1.0000
      OSCILLATION LIMIT CRITERION. . . . . . . . . 0.50000
      TOLERANCE. . . . . . . . . . . . . . . . . .  0.0000
   PRINT OUTPUT CONTROLS . . . . . . . . . . . . .NO PRINTOUT
   DATABASE OUTPUT CONTROLS
      ITEM     FREQUENCY   COMPONENT
       ALL       NONE
```

```
      NSOL        ALL
      RSOL        ALL
      FFLU        ALL


 SOLUTION MONITORING INFO IS WRITTEN TO FILE=
file.mntr



 *** LOAD STEP    30   SUBSTEP     1  COMPLETED.    CUM ITER =    616
 *** TIME =   1.80100         TIME INC =  0.100000E-02  NEW TRIANG MATRIX
 *** AUTO STEP TIME:  NEXT TIME INC = 0.10000E-02  UNCHANGED

 *** LOAD STEP    30   SUBSTEP     2  COMPLETED.    CUM ITER =    617
 *** TIME =   1.80200         TIME INC =  0.100000E-02  NEW TRIANG MATRIX
 *** AUTO STEP TIME:  NEXT TIME INC = 0.10000E-02  UNCHANGED

 *** LOAD STEP    30   SUBSTEP     3  COMPLETED.    CUM ITER =    618
 *** TIME =   1.80300         TIME INC =  0.100000E-02  NEW TRIANG MATRIX
 *** AUTO TIME STEP:  NEXT TIME INC = 0.20000E-02  INCREASED (FACTOR = 2.0000)

 *** LOAD STEP    30   SUBSTEP     4  COMPLETED.    CUM ITER =    619
 *** TIME =   1.80500         TIME INC =  0.200000E-02  NEW TRIANG MATRIX
 *** AUTO STEP TIME:  NEXT TIME INC = 0.20000E-02  UNCHANGED

 *** LOAD STEP    30   SUBSTEP     5  COMPLETED.    CUM ITER =    620
 *** TIME =   1.80700         TIME INC =  0.200000E-02  NEW TRIANG MATRIX
 *** AUTO STEP TIME:  NEXT TIME INC = 0.20000E-02  UNCHANGED

 *** LOAD STEP    30   SUBSTEP     6  COMPLETED.    CUM ITER =    621
 *** TIME =   1.80900         TIME INC =  0.200000E-02  NEW TRIANG MATRIX
 *** AUTO STEP TIME:  NEXT TIME INC = 0.20000E-02  UNCHANGED

 *** LOAD STEP    30   SUBSTEP     7  COMPLETED.    CUM ITER =    622
 *** TIME =   1.81100         TIME INC =  0.200000E-02  NEW TRIANG MATRIX
 *** AUTO STEP TIME:  NEXT TIME INC = 0.20000E-02  UNCHANGED

 *** LOAD STEP    30   SUBSTEP     8  COMPLETED.    CUM ITER =    623
 *** TIME =   1.81300         TIME INC =  0.200000E-02  NEW TRIANG MATRIX
 *** AUTO STEP TIME:  NEXT TIME INC = 0.20000E-02  UNCHANGED

 *** LOAD STEP    30   SUBSTEP     9  COMPLETED.    CUM ITER =    624
 *** TIME =   1.81500         TIME INC =  0.200000E-02  NEW TRIANG MATRIX
 *** AUTO STEP TIME:  NEXT TIME INC = 0.20000E-02  UNCHANGED

 *** LOAD STEP    30   SUBSTEP    10  COMPLETED.    CUM ITER =    625
 *** TIME =   1.81700         TIME INC =  0.200000E-02  NEW TRIANG MATRIX
 *** AUTO STEP TIME:  NEXT TIME INC = 0.20000E-02  UNCHANGED

 *** LOAD STEP    30   SUBSTEP    11  COMPLETED.    CUM ITER =    626
 *** TIME =   1.81900         TIME INC =  0.200000E-02  NEW TRIANG MATRIX
 *** AUTO STEP TIME:  NEXT TIME INC = 0.20000E-02  UNCHANGED

 *** LOAD STEP    30   SUBSTEP    12  COMPLETED.    CUM ITER =    627
 *** TIME =   1.82100         TIME INC =  0.200000E-02  NEW TRIANG MATRIX
 *** AUTO STEP TIME:  NEXT TIME INC = 0.20000E-02  UNCHANGED

 *** LOAD STEP    30   SUBSTEP    13  COMPLETED.    CUM ITER =    628
 *** TIME =   1.82300         TIME INC =  0.200000E-02  NEW TRIANG MATRIX
 *** AUTO STEP TIME:  NEXT TIME INC = 0.20000E-02  UNCHANGED

 *** LOAD STEP    30   SUBSTEP    14  COMPLETED.    CUM ITER =    629
 *** TIME =   1.82500         TIME INC =  0.200000E-02  NEW TRIANG MATRIX
 *** AUTO STEP TIME:  NEXT TIME INC = 0.20000E-02  UNCHANGED

 *** LOAD STEP    30   SUBSTEP    15  COMPLETED.    CUM ITER =    630
 *** TIME =   1.82700         TIME INC =  0.200000E-02  NEW TRIANG MATRIX
 *** AUTO STEP TIME:  NEXT TIME INC = 0.20000E-02  UNCHANGED
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*** LOAD STEP    30   SUBSTEP    16  COMPLETED.    CUM ITER =    631
*** TIME =   1.82900         TIME INC =  0.200000E-02  NEW TRIANG MATRIX
*** AUTO STEP TIME:  NEXT TIME INC = 0.20000E-02  UNCHANGED

*** LOAD STEP    30   SUBSTEP    17  COMPLETED.    CUM ITER =    632
*** TIME =   1.83100         TIME INC =  0.200000E-02  NEW TRIANG MATRIX
*** AUTO STEP TIME:  NEXT TIME INC = 0.20000E-02  UNCHANGED

*** LOAD STEP    30   SUBSTEP    18  COMPLETED.    CUM ITER =    633
*** TIME =   1.83300         TIME INC =  0.200000E-02  NEW TRIANG MATRIX
*** AUTO STEP TIME:  NEXT TIME INC = 0.20000E-02  UNCHANGED

*** LOAD STEP    30   SUBSTEP    19  COMPLETED.    CUM ITER =    634
*** TIME =   1.83500         TIME INC =  0.200000E-02  NEW TRIANG MATRIX
*** AUTO STEP TIME:  NEXT TIME INC = 0.20000E-02  UNCHANGED

*** LOAD STEP    30   SUBSTEP    20  COMPLETED.    CUM ITER =    635
*** TIME =   1.83700         TIME INC =  0.200000E-02  NEW TRIANG MATRIX
*** AUTO STEP TIME:  NEXT TIME INC = 0.20000E-02  UNCHANGED

*** LOAD STEP    30   SUBSTEP    21  COMPLETED.    CUM ITER =    636
*** TIME =   1.83900         TIME INC =  0.200000E-02  NEW TRIANG MATRIX
*** AUTO STEP TIME:  NEXT TIME INC = 0.20000E-02  UNCHANGED

*** LOAD STEP    30   SUBSTEP    22  COMPLETED.    CUM ITER =    637
*** TIME =   1.84100         TIME INC =  0.200000E-02  NEW TRIANG MATRIX
*** AUTO STEP TIME:  NEXT TIME INC = 0.20000E-02  UNCHANGED

*** LOAD STEP    30   SUBSTEP    23  COMPLETED.    CUM ITER =    638
*** TIME =   1.84300         TIME INC =  0.200000E-02  NEW TRIANG MATRIX
*** AUTO STEP TIME:  NEXT TIME INC = 0.20000E-02  UNCHANGED

*** LOAD STEP    30   SUBSTEP    24  COMPLETED.    CUM ITER =    639
*** TIME =   1.84500         TIME INC =  0.200000E-02  NEW TRIANG MATRIX
*** AUTO STEP TIME:  NEXT TIME INC = 0.20000E-02  UNCHANGED

*** LOAD STEP    30   SUBSTEP    25  COMPLETED.    CUM ITER =    640
*** TIME =   1.84700         TIME INC =  0.200000E-02  NEW TRIANG MATRIX
*** AUTO STEP TIME:  NEXT TIME INC = 0.20000E-02  UNCHANGED

*** LOAD STEP    30   SUBSTEP    26  COMPLETED.    CUM ITER =    641
*** TIME =   1.84900         TIME INC =  0.200000E-02  NEW TRIANG MATRIX
*** AUTO STEP TIME:  NEXT TIME INC = 0.20000E-02  UNCHANGED

*** LOAD STEP    30   SUBSTEP    27  COMPLETED.    CUM ITER =    642
*** TIME =   1.85100         TIME INC =  0.200000E-02  NEW TRIANG MATRIX
*** AUTO STEP TIME:  NEXT TIME INC = 0.20000E-02  UNCHANGED

*** LOAD STEP    30   SUBSTEP    28  COMPLETED.    CUM ITER =    643
*** TIME =   1.85300         TIME INC =  0.200000E-02  NEW TRIANG MATRIX
*** AUTO STEP TIME:  NEXT TIME INC = 0.20000E-02  UNCHANGED

*** LOAD STEP    30   SUBSTEP    29  COMPLETED.    CUM ITER =    644
*** TIME =   1.85500         TIME INC =  0.200000E-02  NEW TRIANG MATRIX
*** AUTO STEP TIME:  NEXT TIME INC = 0.20000E-02  UNCHANGED

*** LOAD STEP    30   SUBSTEP    30  COMPLETED.    CUM ITER =    645
*** TIME =   1.85700         TIME INC =  0.200000E-02  NEW TRIANG MATRIX
*** AUTO STEP TIME:  NEXT TIME INC = 0.20000E-02  UNCHANGED

*** LOAD STEP    30   SUBSTEP    31  COMPLETED.    CUM ITER =    646
*** TIME =   1.85900         TIME INC =  0.200000E-02  NEW TRIANG MATRIX
*** AUTO STEP TIME:  NEXT TIME INC = 0.20000E-02  UNCHANGED

*** LOAD STEP    30   SUBSTEP    32  COMPLETED.    CUM ITER =    647
*** TIME =   1.86100         TIME INC =  0.200000E-02  NEW TRIANG MATRIX
*** AUTO STEP TIME:  NEXT TIME INC = 0.20000E-02  UNCHANGED

*** LOAD STEP    30   SUBSTEP    33  COMPLETED.    CUM ITER =    648
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*** TIME =   1.86300         TIME INC =  0.200000E-02  NEW TRIANG MATRIX
*** AUTO STEP TIME:  NEXT TIME INC = 0.20000E-02  UNCHANGED

*** LOAD STEP    30   SUBSTEP    34  COMPLETED.    CUM ITER =    649
*** TIME =   1.86500         TIME INC =  0.200000E-02  NEW TRIANG MATRIX
*** AUTO STEP TIME:  NEXT TIME INC = 0.20000E-02  UNCHANGED

*** LOAD STEP    30   SUBSTEP    35  COMPLETED.    CUM ITER =    650
*** TIME =   1.86700         TIME INC =  0.200000E-02  NEW TRIANG MATRIX
*** AUTO STEP TIME:  NEXT TIME INC = 0.20000E-02  UNCHANGED

*** LOAD STEP    30   SUBSTEP    36  COMPLETED.    CUM ITER =    651
*** TIME =   1.86900         TIME INC =  0.200000E-02  NEW TRIANG MATRIX
*** AUTO STEP TIME:  NEXT TIME INC = 0.20000E-02  UNCHANGED

*** LOAD STEP    30   SUBSTEP    37  COMPLETED.    CUM ITER =    652
*** TIME =   1.87100         TIME INC =  0.200000E-02  NEW TRIANG MATRIX
*** AUTO STEP TIME:  NEXT TIME INC = 0.20000E-02  UNCHANGED

*** LOAD STEP    30   SUBSTEP    38  COMPLETED.    CUM ITER =    653
*** TIME =   1.87300         TIME INC =  0.200000E-02  NEW TRIANG MATRIX
*** AUTO STEP TIME:  NEXT TIME INC = 0.20000E-02  UNCHANGED

*** LOAD STEP    30   SUBSTEP    39  COMPLETED.    CUM ITER =    654
*** TIME =   1.87500         TIME INC =  0.200000E-02  NEW TRIANG MATRIX
*** AUTO STEP TIME:  NEXT TIME INC = 0.20000E-02  UNCHANGED

*** LOAD STEP    30   SUBSTEP    40  COMPLETED.    CUM ITER =    655
*** TIME =   1.87700         TIME INC =  0.200000E-02  NEW TRIANG MATRIX
*** AUTO STEP TIME:  NEXT TIME INC = 0.20000E-02  UNCHANGED

*** LOAD STEP    30   SUBSTEP    41  COMPLETED.    CUM ITER =    656
*** TIME =   1.87900         TIME INC =  0.200000E-02  NEW TRIANG MATRIX
*** AUTO STEP TIME:  NEXT TIME INC = 0.20000E-02  UNCHANGED

*** LOAD STEP    30   SUBSTEP    42  COMPLETED.    CUM ITER =    657
*** TIME =   1.88100         TIME INC =  0.200000E-02  NEW TRIANG MATRIX
*** AUTO STEP TIME:  NEXT TIME INC = 0.20000E-02  UNCHANGED

*** LOAD STEP    30   SUBSTEP    43  COMPLETED.    CUM ITER =    658
*** TIME =   1.88300         TIME INC =  0.200000E-02  NEW TRIANG MATRIX
*** AUTO STEP TIME:  NEXT TIME INC = 0.20000E-02  UNCHANGED

*** LOAD STEP    30   SUBSTEP    44  COMPLETED.    CUM ITER =    659
*** TIME =   1.88500         TIME INC =  0.200000E-02  NEW TRIANG MATRIX
*** AUTO STEP TIME:  NEXT TIME INC = 0.20000E-02  UNCHANGED

*** LOAD STEP    30   SUBSTEP    45  COMPLETED.    CUM ITER =    660
*** TIME =   1.88700         TIME INC =  0.200000E-02  NEW TRIANG MATRIX
*** AUTO STEP TIME:  NEXT TIME INC = 0.20000E-02  UNCHANGED

*** LOAD STEP    30   SUBSTEP    46  COMPLETED.    CUM ITER =    661
*** TIME =   1.88900         TIME INC =  0.200000E-02  NEW TRIANG MATRIX
*** AUTO STEP TIME:  NEXT TIME INC = 0.20000E-02  UNCHANGED

*** LOAD STEP    30   SUBSTEP    47  COMPLETED.    CUM ITER =    662
*** TIME =   1.89100         TIME INC =  0.200000E-02  NEW TRIANG MATRIX
*** AUTO STEP TIME:  NEXT TIME INC = 0.20000E-02  UNCHANGED

*** LOAD STEP    30   SUBSTEP    48  COMPLETED.    CUM ITER =    663
*** TIME =   1.89300         TIME INC =  0.200000E-02  NEW TRIANG MATRIX
*** AUTO STEP TIME:  NEXT TIME INC = 0.20000E-02  UNCHANGED

*** LOAD STEP    30   SUBSTEP    49  COMPLETED.    CUM ITER =    664
*** TIME =   1.89500         TIME INC =  0.200000E-02  NEW TRIANG MATRIX
*** AUTO STEP TIME:  NEXT TIME INC = 0.20000E-02  UNCHANGED

*** LOAD STEP    30   SUBSTEP    50  COMPLETED.    CUM ITER =    665
*** TIME =   1.89700         TIME INC =  0.200000E-02  NEW TRIANG MATRIX
*** AUTO STEP TIME:  NEXT TIME INC = 0.20000E-02  UNCHANGED
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 *** LOAD STEP    30   SUBSTEP    51  COMPLETED.    CUM ITER =    666
 *** TIME =   1.89900         TIME INC =  0.200000E-02  NEW TRIANG MATRIX
 *** AUTO TIME STEP:  NEXT TIME INC = 0.10000E-02  DECREASED (FACTOR = 0.5000)

 *** LOAD STEP    30   SUBSTEP    52  COMPLETED.    CUM ITER =    667
 *** TIME =   1.90000         TIME INC =  0.100000E-02  NEW TRIANG MATRIX
 ************************************************
 ************** FINISHED SOLVE FOR LS 30 *************
 ************************************************
 ****************** SOLVE FOR LS 31 ****************

 SPECIFIED BODY FORCE HGEN FOR ALL PICKED ELEMENTS AT STARTING LOCATION      1
 IS SET ACCORDING TO TABLE PARAMETER = _LOADVARI202

 USE AUTOMATIC TIME STEPPING THIS LOAD STEP

 USE     100 SUBSTEPS INITIALLY THIS LOAD STEP FOR ALL  DEGREES OF FREEDOM
 FOR AUTOMATIC TIME STEPPING:
   USE   1000 SUBSTEPS AS A MAXIMUM
   USE     10 SUBSTEPS AS A MINIMUM

 TIME=  2.0000

 INCLUDE TRANSIENT EFFECTS FOR  ALL DEGREES OF FREEDOM THIS LOAD STEP

 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

 WRITE RSOL ITEMS TO THE DATABASE WITH A FREQUENCY OF ALL
   FOR ALL APPLICABLE ENTITIES

 WRITE FFLU ITEMS TO THE DATABASE WITH A FREQUENCY OF ALL
   FOR ALL APPLICABLE ENTITIES

 CONVERGENCE ON HEAT BASED ON THE NORM OF THE N-R LOAD
   WITH A TOLERANCE OF 0.1000E-02 AND A MINIMUM REFERENCE VALUE OF 0.1000E-02
   USING THE L2 NORM (CHECK THE SRSS VALUE)

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

 *** WARNING ***                         CP =    1881.594   TIME= 10:13:41
 Material number 4 (used by element 65408 ) should normally have at
 least one MP or one TB type command associated with it.  Output of
 energy by material may not be available.

 *** NOTE ***                            CP =    1881.828   TIME= 10:13:41
 The step data was checked and warning messages were found.
  Please review output or errors file ( D:\Daten\Ansys
 Simulation\_ProjectScratch\Scr8B73\file.err ) for these warning
 messages.
1

 ***** ANSYS - ENGINEERING ANALYSIS SYSTEM  RELEASE 12.1     *****
 ANSYS Academic Teaching Advanced
 00000000          VERSION=WINDOWS x64   10:13:42  SEP 23, 2010 CP=   1882.469

 Schweißen Flachprobe--Thermisch-transient (E5)


                     L O A D   S T E P   O P T I O N S

   LOAD STEP NUMBER. . . . . . . . . . . . . . . .    31
   TIME AT END OF THE LOAD STEP. . . . . . . . . .  2.0000
```

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  AUTOMATIC TIME STEPPING . . . . . .    ON
     INITIAL NUMBER OF SUBSTEPS . . . . . .   100
     MAXIMUM NUMBER OF SUBSTEPS . . . . . .  1000
     MINIMUM NUMBER OF SUBSTEPS . . . . . .    10
  STEP CHANGE BOUNDARY CONDITIONS . . . . . .   YES
  TRANSIENT (INERTIA) EFFECTS
     THERMAL DOFS . . . . . .    ON
  TRANSIENT INTEGRATION PARAMETERS
     THETA. . . . . .  1.0000
     OSCILLATION LIMIT CRITERION. . . . . 0.50000
     TOLERANCE. . . . . .  0.0000
  PRINT OUTPUT CONTROLS . . . . . .NO PRINTOUT
  DATABASE OUTPUT CONTROLS
     ITEM     FREQUENCY   COMPONENT
      ALL       NONE
     NSOL        ALL
     RSOL        ALL
     FFLU        ALL


 SOLUTION MONITORING INFO IS WRITTEN TO FILE=
file.mntr



 *** LOAD STEP    31   SUBSTEP     1  COMPLETED.    CUM ITER =    668
 *** TIME =   1.90100         TIME INC =  0.100000E-02  NEW TRIANG MATRIX
 *** AUTO STEP TIME:  NEXT TIME INC = 0.10000E-02  UNCHANGED

 *** LOAD STEP    31   SUBSTEP     2  COMPLETED.    CUM ITER =    669
 *** TIME =   1.90200         TIME INC =  0.100000E-02  NEW TRIANG MATRIX
 *** AUTO STEP TIME:  NEXT TIME INC = 0.10000E-02  UNCHANGED

 *** LOAD STEP    31   SUBSTEP     3  COMPLETED.    CUM ITER =    670
 *** TIME =   1.90300         TIME INC =  0.100000E-02  NEW TRIANG MATRIX
 *** AUTO STEP TIME:  NEXT TIME INC = 0.10000E-02  UNCHANGED

 *** LOAD STEP    31   SUBSTEP     4  COMPLETED.    CUM ITER =    671
 *** TIME =   1.90400         TIME INC =  0.100000E-02  NEW TRIANG MATRIX
 *** AUTO STEP TIME:  NEXT TIME INC = 0.10000E-02  UNCHANGED

 *** LOAD STEP    31   SUBSTEP     5  COMPLETED.    CUM ITER =    672
 *** TIME =   1.90500         TIME INC =  0.100000E-02  NEW TRIANG MATRIX
 *** AUTO STEP TIME:  NEXT TIME INC = 0.10000E-02  UNCHANGED

 *** LOAD STEP    31   SUBSTEP     6  COMPLETED.    CUM ITER =    673
 *** TIME =   1.90600         TIME INC =  0.100000E-02  NEW TRIANG MATRIX
 *** AUTO STEP TIME:  NEXT TIME INC = 0.10000E-02  UNCHANGED

 *** LOAD STEP    31   SUBSTEP     7  COMPLETED.    CUM ITER =    674
 *** TIME =   1.90700         TIME INC =  0.100000E-02  NEW TRIANG MATRIX
 *** AUTO STEP TIME:  NEXT TIME INC = 0.10000E-02  UNCHANGED

 *** LOAD STEP    31   SUBSTEP     8  COMPLETED.    CUM ITER =    675
 *** TIME =   1.90800         TIME INC =  0.100000E-02  NEW TRIANG MATRIX
 *** AUTO STEP TIME:  NEXT TIME INC = 0.10000E-02  UNCHANGED

 *** LOAD STEP    31   SUBSTEP     9  COMPLETED.    CUM ITER =    676
 *** TIME =   1.90900         TIME INC =  0.100000E-02  NEW TRIANG MATRIX
 *** RESPONSE EIGENVALUE =  287.6       OSCILLATION LIMIT = 0.2876
 *** AUTO TIME STEP:  NEXT TIME INC = 0.17385E-02  INCREASED (FACTOR = 1.7385)

 *** LOAD STEP    31   SUBSTEP    10  COMPLETED.    CUM ITER =    677
 *** TIME =   1.91074         TIME INC =  0.173849E-02  NEW TRIANG MATRIX
 *** RESPONSE EIGENVALUE =  272.9       OSCILLATION LIMIT = 0.4745
 *** AUTO TIME STEP:  NEXT TIME INC = 0.18321E-02  INCREASED (FACTOR = 1.0538)

 *** LOAD STEP    31   SUBSTEP    11  COMPLETED.    CUM ITER =    678
 *** TIME =   1.91257         TIME INC =  0.183208E-02  NEW TRIANG MATRIX
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*** RESPONSE EIGENVALUE =  258.7       OSCILLATION LIMIT = 0.4740
*** AUTO TIME STEP:  NEXT TIME INC = 0.19324E-02  INCREASED (FACTOR = 1.0548)

*** LOAD STEP    31   SUBSTEP    12  COMPLETED.    CUM ITER =    679
*** TIME =   1.91450         TIME INC =  0.193241E-02  NEW TRIANG MATRIX
*** RESPONSE EIGENVALUE =  245.2       OSCILLATION LIMIT = 0.4738
*** AUTO TIME STEP:  NEXT TIME INC = 0.20394E-02  INCREASED (FACTOR = 1.0554)

*** LOAD STEP    31   SUBSTEP    13  COMPLETED.    CUM ITER =    680
*** TIME =   1.91654         TIME INC =  0.203938E-02  NEW TRIANG MATRIX
*** RESPONSE EIGENVALUE =  232.2       OSCILLATION LIMIT = 0.4736
*** AUTO TIME STEP:  NEXT TIME INC = 0.21531E-02  INCREASED (FACTOR = 1.0558)

*** LOAD STEP    31   SUBSTEP    14  COMPLETED.    CUM ITER =    681
*** TIME =   1.91870         TIME INC =  0.215312E-02  NEW TRIANG MATRIX
*** RESPONSE EIGENVALUE =  219.9       OSCILLATION LIMIT = 0.4734
*** AUTO TIME STEP:  NEXT TIME INC = 0.22740E-02  INCREASED (FACTOR = 1.0561)

*** LOAD STEP    31   SUBSTEP    15  COMPLETED.    CUM ITER =    682
*** TIME =   1.92097         TIME INC =  0.227396E-02  NEW TRIANG MATRIX
*** RESPONSE EIGENVALUE =  208.1       OSCILLATION LIMIT = 0.4733
*** AUTO TIME STEP:  NEXT TIME INC = 0.24022E-02  INCREASED (FACTOR = 1.0564)

*** LOAD STEP    31   SUBSTEP    16  COMPLETED.    CUM ITER =    683
*** TIME =   1.92337         TIME INC =  0.240217E-02  NEW TRIANG MATRIX
*** RESPONSE EIGENVALUE =  197.0       OSCILLATION LIMIT = 0.4732
*** AUTO TIME STEP:  NEXT TIME INC = 0.25381E-02  INCREASED (FACTOR = 1.0566)

*** LOAD STEP    31   SUBSTEP    17  COMPLETED.    CUM ITER =    684
*** TIME =   1.92591         TIME INC =  0.253810E-02  NEW TRIANG MATRIX
*** RESPONSE EIGENVALUE =  186.4       OSCILLATION LIMIT = 0.4732
*** AUTO TIME STEP:  NEXT TIME INC = 0.26821E-02  INCREASED (FACTOR = 1.0567)

*** LOAD STEP    31   SUBSTEP    18  COMPLETED.    CUM ITER =    685
*** TIME =   1.92859         TIME INC =  0.268207E-02  NEW TRIANG MATRIX
*** RESPONSE EIGENVALUE =  176.4       OSCILLATION LIMIT = 0.4731
*** AUTO TIME STEP:  NEXT TIME INC = 0.28344E-02  INCREASED (FACTOR = 1.0568)

*** LOAD STEP    31   SUBSTEP    19  COMPLETED.    CUM ITER =    686
*** TIME =   1.93143         TIME INC =  0.283442E-02  NEW TRIANG MATRIX
*** RESPONSE EIGENVALUE =  166.9       OSCILLATION LIMIT = 0.4731
*** AUTO TIME STEP:  NEXT TIME INC = 0.29955E-02  INCREASED (FACTOR = 1.0568)

*** LOAD STEP    31   SUBSTEP    20  COMPLETED.    CUM ITER =    687
*** TIME =   1.93442         TIME INC =  0.299552E-02  NEW TRIANG MATRIX
*** RESPONSE EIGENVALUE =  157.9       OSCILLATION LIMIT = 0.4731
*** AUTO TIME STEP:  NEXT TIME INC = 0.31657E-02  INCREASED (FACTOR = 1.0568)

*** LOAD STEP    31   SUBSTEP    21  COMPLETED.    CUM ITER =    688
*** TIME =   1.93759         TIME INC =  0.316573E-02  NEW TRIANG MATRIX
*** RESPONSE EIGENVALUE =  149.5       OSCILLATION LIMIT = 0.4731
*** AUTO TIME STEP:  NEXT TIME INC = 0.33454E-02  INCREASED (FACTOR = 1.0568)

*** LOAD STEP    31   SUBSTEP    22  COMPLETED.    CUM ITER =    689
*** TIME =   1.94093         TIME INC =  0.334544E-02  NEW TRIANG MATRIX
*** RESPONSE EIGENVALUE =  141.4       OSCILLATION LIMIT = 0.4732
*** AUTO TIME STEP:  NEXT TIME INC = 0.35350E-02  INCREASED (FACTOR = 1.0567)

*** LOAD STEP    31   SUBSTEP    23  COMPLETED.    CUM ITER =    690
*** TIME =   1.94447         TIME INC =  0.353503E-02  NEW TRIANG MATRIX
*** RESPONSE EIGENVALUE =  133.9       OSCILLATION LIMIT = 0.4732
*** AUTO TIME STEP:  NEXT TIME INC = 0.37349E-02  INCREASED (FACTOR = 1.0566)

*** LOAD STEP    31   SUBSTEP    24  COMPLETED.    CUM ITER =    691
*** TIME =   1.94820         TIME INC =  0.373494E-02  NEW TRIANG MATRIX
*** RESPONSE EIGENVALUE =  126.7       OSCILLATION LIMIT = 0.4733
*** AUTO TIME STEP:  NEXT TIME INC = 0.39456E-02  INCREASED (FACTOR = 1.0564)

*** LOAD STEP    31   SUBSTEP    25  COMPLETED.    CUM ITER =    692
*** TIME =   1.95215         TIME INC =  0.394562E-02  NEW TRIANG MATRIX
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*** RESPONSE EIGENVALUE =  120.0       OSCILLATION LIMIT = 0.4734
*** AUTO TIME STEP:  NEXT TIME INC = 0.41675E-02  INCREASED (FACTOR = 1.0562)

*** LOAD STEP    31   SUBSTEP    26  COMPLETED.    CUM ITER =    693
*** TIME =   1.95632         TIME INC =  0.416752E-02  NEW TRIANG MATRIX
*** RESPONSE EIGENVALUE =  113.6       OSCILLATION LIMIT = 0.4735
*** AUTO TIME STEP:  NEXT TIME INC = 0.44011E-02  INCREASED (FACTOR = 1.0561)

*** LOAD STEP    31   SUBSTEP    27  COMPLETED.    CUM ITER =    694
*** TIME =   1.96072         TIME INC =  0.440115E-02  NEW TRIANG MATRIX
*** RESPONSE EIGENVALUE =  107.6       OSCILLATION LIMIT = 0.4735
*** AUTO TIME STEP:  NEXT TIME INC = 0.46470E-02  INCREASED (FACTOR = 1.0559)

*** LOAD STEP    31   SUBSTEP    28  COMPLETED.    CUM ITER =    695
*** TIME =   1.96536         TIME INC =  0.464702E-02  NEW TRIANG MATRIX
*** RESPONSE EIGENVALUE =  101.9       OSCILLATION LIMIT = 0.4736
*** AUTO TIME STEP:  NEXT TIME INC = 0.49057E-02  INCREASED (FACTOR = 1.0557)

*** LOAD STEP    31   SUBSTEP    29  COMPLETED.    CUM ITER =    696
*** TIME =   1.97027         TIME INC =  0.490567E-02  NEW TRIANG MATRIX
*** RESPONSE EIGENVALUE =  96.57       OSCILLATION LIMIT = 0.4737
*** AUTO TIME STEP:  NEXT TIME INC = 0.51777E-02  INCREASED (FACTOR = 1.0554)

*** LOAD STEP    31   SUBSTEP    30  COMPLETED.    CUM ITER =    697
*** TIME =   1.97545         TIME INC =  0.517767E-02  NEW TRIANG MATRIX
*** RESPONSE EIGENVALUE =  91.51       OSCILLATION LIMIT = 0.4738
*** AUTO TIME STEP:  NEXT TIME INC = 0.54636E-02  INCREASED (FACTOR = 1.0552)

*** LOAD STEP    31   SUBSTEP    31  COMPLETED.    CUM ITER =    698
*** TIME =   1.98091         TIME INC =  0.546361E-02  NEW TRIANG MATRIX
*** RESPONSE EIGENVALUE =  86.74       OSCILLATION LIMIT = 0.4739
*** AUTO TIME STEP:  NEXT TIME INC = 0.57641E-02  INCREASED (FACTOR = 1.0550)

*** LOAD STEP    31   SUBSTEP    32  COMPLETED.    CUM ITER =    699
*** TIME =   1.98668         TIME INC =  0.576412E-02  NEW TRIANG MATRIX
*** RESPONSE EIGENVALUE =  82.24       OSCILLATION LIMIT = 0.4740
*** AUTO TIME STEP:  NEXT TIME INC = 0.60798E-02  INCREASED (FACTOR = 1.0548)

*** LOAD STEP    31   SUBSTEP    33  COMPLETED.    CUM ITER =    700
*** TIME =   1.99276         TIME INC =  0.607983E-02  NEW TRIANG MATRIX
*** RESPONSE EIGENVALUE =  77.99       OSCILLATION LIMIT = 0.4741
*** AUTO TIME STEP:  NEXT TIME INC = 0.36225E-02  DECREASED (FACTOR = 0.5958)

*** LOAD STEP    31   SUBSTEP    34  COMPLETED.    CUM ITER =    701
*** TIME =   1.99638         TIME INC =  0.362247E-02  NEW TRIANG MATRIX
*** RESPONSE EIGENVALUE =  75.64       OSCILLATION LIMIT = 0.2740
*** AUTO STEP TIME:  NEXT TIME INC = 0.36225E-02  UNCHANGED

*** LOAD STEP    31   SUBSTEP    35  COMPLETED.    CUM ITER =    702
*** TIME =   2.00000         TIME INC =  0.362247E-02  NEW TRIANG MATRIX
*** RESPONSE EIGENVALUE =  73.44       OSCILLATION LIMIT = 0.2660
************************************************
*************** FINISHED SOLVE FOR LS 31 *************
************************************************
****************** SOLVE FOR LS 32 ****************

SPECIFIED BODY FORCE HGEN FOR ALL PICKED ELEMENTS AT STARTING LOCATION      1
IS SET ACCORDING TO TABLE PARAMETER = _LOADVARI202

USE AUTOMATIC TIME STEPPING THIS LOAD STEP

USE     100 SUBSTEPS INITIALLY THIS LOAD STEP FOR ALL  DEGREES OF FREEDOM
FOR AUTOMATIC TIME STEPPING:
  USE   1000 SUBSTEPS AS A MAXIMUM
  USE     10 SUBSTEPS AS A MINIMUM

TIME=  2.0100

INCLUDE TRANSIENT EFFECTS FOR  ALL DEGREES OF FREEDOM THIS LOAD STEP
```

```
 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

 WRITE RSOL ITEMS TO THE DATABASE WITH A FREQUENCY OF ALL
   FOR ALL APPLICABLE ENTITIES

 WRITE FFLU ITEMS TO THE DATABASE WITH A FREQUENCY OF ALL
   FOR ALL APPLICABLE ENTITIES

 CONVERGENCE ON HEAT BASED ON THE NORM OF THE N-R LOAD
   WITH A TOLERANCE OF 0.1000E-02 AND A MINIMUM REFERENCE VALUE OF 0.1000E-02
   USING THE L2 NORM (CHECK THE SRSS VALUE)

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

 *** WARNING ***                          CP =    1980.484   TIME= 10:14:39
 Material number 4 (used by element 65408 ) should normally have at
 least one MP or one TB type command associated with it.  Output of
 energy by material may not be available.

 *** NOTE ***                            CP =    1980.766   TIME= 10:14:39
 The step data was checked and warning messages were found.
  Please review output or errors file ( D:\Daten\Ansys
 Simulation\_ProjectScratch\Scr8B73\file.err ) for these warning
 messages.
1

 ***** ANSYS - ENGINEERING ANALYSIS SYSTEM  RELEASE 12.1     *****
 ANSYS Academic Teaching Advanced
 00000000          VERSION=WINDOWS x64   10:14:40  SEP 23, 2010 CP=   1981.406

 Schweißen Flachprobe--Thermisch-transient (E5)


                     L O A D   S T E P   O P T I O N S

   LOAD STEP NUMBER. . . . . . . . . . . . . . . .    32
   TIME AT END OF THE LOAD STEP. . . . . . . . . .  2.0100
   AUTOMATIC TIME STEPPING . . . . . . . . . . . .    ON
      INITIAL NUMBER OF SUBSTEPS . . . . . . . . .   100
      MAXIMUM NUMBER OF SUBSTEPS . . . . . . . . .  1000
      MINIMUM NUMBER OF SUBSTEPS . . . . . . . . .    10
   STEP CHANGE BOUNDARY CONDITIONS . . . . . . . .   YES
   TRANSIENT (INERTIA) EFFECTS
      THERMAL DOFS . . . . . . . . . . . . . . . .    ON
   TRANSIENT INTEGRATION PARAMETERS
      THETA. . . . . . . . . . . . . . . . . . . .  1.0000
      OSCILLATION LIMIT CRITERION. . . . . . . . . 0.50000
      TOLERANCE. . . . . . . . . . . . . . . . . .  0.0000
   PRINT OUTPUT CONTROLS . . . . . . . . . . . . .NO PRINTOUT
   DATABASE OUTPUT CONTROLS
      ITEM     FREQUENCY   COMPONENT
       ALL       NONE
      NSOL        ALL
      RSOL        ALL
      FFLU        ALL


 SOLUTION MONITORING INFO IS WRITTEN TO FILE=
file.mntr
```

```
*** LOAD STEP    32   SUBSTEP     1  COMPLETED.    CUM ITER =    703
*** TIME =   2.00010         TIME INC =  0.100000E-03  NEW TRIANG MATRIX
*** RESPONSE EIGENVALUE =  60.32       OSCILLATION LIMIT = 0.6032E-02
*** AUTO STEP TIME:  NEXT TIME INC = 0.10000E-03  UNCHANGED

*** LOAD STEP    32   SUBSTEP     2  COMPLETED.    CUM ITER =    704
*** TIME =   2.00020         TIME INC =  0.100000E-03  NEW TRIANG MATRIX
*** RESPONSE EIGENVALUE =  53.33       OSCILLATION LIMIT = 0.5333E-02
*** AUTO TIME STEP:  NEXT TIME INC = 0.30000E-03  INCREASED (FACTOR = 3.0000)

*** LOAD STEP    32   SUBSTEP     3  COMPLETED.    CUM ITER =    705
*** TIME =   2.00050         TIME INC =  0.300000E-03  NEW TRIANG MATRIX
*** RESPONSE EIGENVALUE =  43.18       OSCILLATION LIMIT = 0.1295E-01
*** AUTO TIME STEP:  NEXT TIME INC = 0.90000E-03  INCREASED (FACTOR = 3.0000)

*** LOAD STEP    32   SUBSTEP     4  COMPLETED.    CUM ITER =    706
*** TIME =   2.00140         TIME INC =  0.900000E-03  NEW TRIANG MATRIX
*** RESPONSE EIGENVALUE =  31.26       OSCILLATION LIMIT = 0.2813E-01
*** AUTO TIME STEP:  NEXT TIME INC = 0.10000E-02  INCREASED (FACTOR = 1.1111)

*** LOAD STEP    32   SUBSTEP     5  COMPLETED.    CUM ITER =    707
*** TIME =   2.00240         TIME INC =  0.100000E-02  NEW TRIANG MATRIX
*** RESPONSE EIGENVALUE =  24.99       OSCILLATION LIMIT = 0.2499E-01
*** AUTO STEP TIME:  NEXT TIME INC = 0.10000E-02  UNCHANGED

*** LOAD STEP    32   SUBSTEP     6  COMPLETED.    CUM ITER =    708
*** TIME =   2.00340         TIME INC =  0.100000E-02  NEW TRIANG MATRIX
*** RESPONSE EIGENVALUE =  21.34       OSCILLATION LIMIT = 0.2134E-01
*** AUTO STEP TIME:  NEXT TIME INC = 0.10000E-02  UNCHANGED

*** LOAD STEP    32   SUBSTEP     7  COMPLETED.    CUM ITER =    709
*** TIME =   2.00440         TIME INC =  0.100000E-02  NEW TRIANG MATRIX
*** RESPONSE EIGENVALUE =  18.94       OSCILLATION LIMIT = 0.1894E-01
*** AUTO STEP TIME:  NEXT TIME INC = 0.10000E-02  UNCHANGED

*** LOAD STEP    32   SUBSTEP     8  COMPLETED.    CUM ITER =    710
*** TIME =   2.00540         TIME INC =  0.100000E-02  NEW TRIANG MATRIX
*** RESPONSE EIGENVALUE =  17.24       OSCILLATION LIMIT = 0.1724E-01
*** AUTO STEP TIME:  NEXT TIME INC = 0.10000E-02  UNCHANGED

*** LOAD STEP    32   SUBSTEP     9  COMPLETED.    CUM ITER =    711
*** TIME =   2.00640         TIME INC =  0.100000E-02  NEW TRIANG MATRIX
*** RESPONSE EIGENVALUE =  15.96       OSCILLATION LIMIT = 0.1596E-01
*** AUTO STEP TIME:  NEXT TIME INC = 0.10000E-02  UNCHANGED

*** LOAD STEP    32   SUBSTEP    10  COMPLETED.    CUM ITER =    712
*** TIME =   2.00740         TIME INC =  0.100000E-02  NEW TRIANG MATRIX
*** RESPONSE EIGENVALUE =  14.96       OSCILLATION LIMIT = 0.1496E-01
*** AUTO STEP TIME:  NEXT TIME INC = 0.10000E-02  UNCHANGED

*** LOAD STEP    32   SUBSTEP    11  COMPLETED.    CUM ITER =    713
*** TIME =   2.00840         TIME INC =  0.100000E-02  NEW TRIANG MATRIX
*** RESPONSE EIGENVALUE =  14.16       OSCILLATION LIMIT = 0.1416E-01
*** AUTO STEP TIME:  NEXT TIME INC = 0.10000E-02  UNCHANGED

*** LOAD STEP    32   SUBSTEP    12  COMPLETED.    CUM ITER =    714
*** TIME =   2.00940         TIME INC =  0.100000E-02  NEW TRIANG MATRIX
*** RESPONSE EIGENVALUE =  13.49       OSCILLATION LIMIT = 0.1349E-01
*** AUTO TIME STEP:  NEXT TIME INC = 0.60000E-03  DECREASED (FACTOR = 0.6000)

*** LOAD STEP    32   SUBSTEP    13  COMPLETED.    CUM ITER =    715
*** TIME =   2.01000         TIME INC =  0.600000E-03  NEW TRIANG MATRIX
*** RESPONSE EIGENVALUE =  13.13       OSCILLATION LIMIT = 0.7878E-02
************************************************
************** FINISHED SOLVE FOR LS 32 *************
************************************************
****************** SOLVE FOR LS 33 ****************

SPECIFIED BODY FORCE HGEN FOR ALL PICKED ELEMENTS AT STARTING LOCATION      1
IS SET ACCORDING TO TABLE PARAMETER = _LOADVARI202
```

```
 USE AUTOMATIC TIME STEPPING THIS LOAD STEP

 USE     100 SUBSTEPS INITIALLY THIS LOAD STEP FOR ALL  DEGREES OF FREEDOM
 FOR AUTOMATIC TIME STEPPING:
   USE   1000 SUBSTEPS AS A MAXIMUM
   USE     10 SUBSTEPS AS A MINIMUM

 TIME=  2.0200

 INCLUDE TRANSIENT EFFECTS FOR  ALL DEGREES OF FREEDOM THIS LOAD STEP

 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

 WRITE RSOL ITEMS TO THE DATABASE WITH A FREQUENCY OF ALL
   FOR ALL APPLICABLE ENTITIES

 WRITE FFLU ITEMS TO THE DATABASE WITH A FREQUENCY OF ALL
   FOR ALL APPLICABLE ENTITIES

 CONVERGENCE ON HEAT BASED ON THE NORM OF THE N-R LOAD
   WITH A TOLERANCE OF 0.1000E-02 AND A MINIMUM REFERENCE VALUE OF 0.1000E-02
   USING THE L2 NORM (CHECK THE SRSS VALUE)

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

 *** WARNING ***                          CP =    2018.688   TIME= 10:15:01
 Material number 4 (used by element 65408 ) should normally have at
 least one MP or one TB type command associated with it.  Output of
 energy by material may not be available.

 *** NOTE ***                             CP =    2018.984   TIME= 10:15:01
 The step data was checked and warning messages were found.
  Please review output or errors file ( D:\Daten\Ansys
 Simulation\_ProjectScratch\Scr8B73\file.err ) for these warning
 messages.
1

 ***** ANSYS - ENGINEERING ANALYSIS SYSTEM  RELEASE 12.1     *****
 ANSYS Academic Teaching Advanced
 00000000          VERSION=WINDOWS x64   10:15:02  SEP 23, 2010 CP=   2019.609

 Schweißen Flachprobe--Thermisch-transient (E5)


                     L O A D   S T E P   O P T I O N S

   LOAD STEP NUMBER. . . . . . . . . . . . . . . .    33
   TIME AT END OF THE LOAD STEP. . . . . . . . . .  2.0200
   AUTOMATIC TIME STEPPING . . . . . . . . . . . .    ON
      INITIAL NUMBER OF SUBSTEPS . . . . . . . . .   100
      MAXIMUM NUMBER OF SUBSTEPS . . . . . . . . .  1000
      MINIMUM NUMBER OF SUBSTEPS . . . . . . . . .    10
   STEP CHANGE BOUNDARY CONDITIONS . . . . . . . .   YES
   TRANSIENT (INERTIA) EFFECTS
      THERMAL DOFS . . . . . . . . . . . . . . . .    ON
   TRANSIENT INTEGRATION PARAMETERS
      THETA. . . . . . . . . . . . . . . . . . . .  1.0000
      OSCILLATION LIMIT CRITERION. . . . . . . . . 0.50000
      TOLERANCE. . . . . . . . . . . . . . . . . .  0.0000
   PRINT OUTPUT CONTROLS . . . . . . . . . . . . .NO PRINTOUT
   DATABASE OUTPUT CONTROLS
      ITEM     FREQUENCY   COMPONENT
```

```
       ALL       NONE
      NSOL        ALL
      RSOL        ALL
      FFLU        ALL


 SOLUTION MONITORING INFO IS WRITTEN TO FILE=
file.mntr



 *** LOAD STEP    33   SUBSTEP     1  COMPLETED.    CUM ITER =    716
 *** TIME =   2.01010         TIME INC =  0.100000E-03  NEW TRIANG MATRIX
 *** RESPONSE EIGENVALUE =  13.08       OSCILLATION LIMIT = 0.1308E-02
 *** AUTO STEP TIME:  NEXT TIME INC = 0.10000E-03  UNCHANGED

 *** LOAD STEP    33   SUBSTEP     2  COMPLETED.    CUM ITER =    717
 *** TIME =   2.01020         TIME INC =  0.100000E-03  NEW TRIANG MATRIX
 *** RESPONSE EIGENVALUE =  13.02       OSCILLATION LIMIT = 0.1302E-02
 *** AUTO TIME STEP:  NEXT TIME INC = 0.30000E-03  INCREASED (FACTOR = 3.0000)

 *** LOAD STEP    33   SUBSTEP     3  COMPLETED.    CUM ITER =    718
 *** TIME =   2.01050         TIME INC =  0.300000E-03  NEW TRIANG MATRIX
 *** RESPONSE EIGENVALUE =  12.85       OSCILLATION LIMIT = 0.3856E-02
 *** AUTO TIME STEP:  NEXT TIME INC = 0.90000E-03  INCREASED (FACTOR = 3.0000)

 *** LOAD STEP    33   SUBSTEP     4  COMPLETED.    CUM ITER =    719
 *** TIME =   2.01140         TIME INC =  0.900000E-03  NEW TRIANG MATRIX
 *** RESPONSE EIGENVALUE =  12.41       OSCILLATION LIMIT = 0.1117E-01
 *** AUTO TIME STEP:  NEXT TIME INC = 0.10000E-02  INCREASED (FACTOR = 1.1111)

 *** LOAD STEP    33   SUBSTEP     5  COMPLETED.    CUM ITER =    720
 *** TIME =   2.01240         TIME INC =  0.100000E-02  NEW TRIANG MATRIX
 *** RESPONSE EIGENVALUE =  11.98       OSCILLATION LIMIT = 0.1198E-01
 *** AUTO STEP TIME:  NEXT TIME INC = 0.10000E-02  UNCHANGED

 *** LOAD STEP    33   SUBSTEP     6  COMPLETED.    CUM ITER =    721
 *** TIME =   2.01340         TIME INC =  0.100000E-02  NEW TRIANG MATRIX
 *** RESPONSE EIGENVALUE =  11.60       OSCILLATION LIMIT = 0.1160E-01
 *** AUTO STEP TIME:  NEXT TIME INC = 0.10000E-02  UNCHANGED

 *** LOAD STEP    33   SUBSTEP     7  COMPLETED.    CUM ITER =    722
 *** TIME =   2.01440         TIME INC =  0.100000E-02  NEW TRIANG MATRIX
 *** RESPONSE EIGENVALUE =  11.25       OSCILLATION LIMIT = 0.1125E-01
 *** AUTO STEP TIME:  NEXT TIME INC = 0.10000E-02  UNCHANGED

 *** LOAD STEP    33   SUBSTEP     8  COMPLETED.    CUM ITER =    723
 *** TIME =   2.01540         TIME INC =  0.100000E-02  NEW TRIANG MATRIX
 *** RESPONSE EIGENVALUE =  10.93       OSCILLATION LIMIT = 0.1093E-01
 *** AUTO STEP TIME:  NEXT TIME INC = 0.10000E-02  UNCHANGED

 *** LOAD STEP    33   SUBSTEP     9  COMPLETED.    CUM ITER =    724
 *** TIME =   2.01640         TIME INC =  0.100000E-02  NEW TRIANG MATRIX
 *** RESPONSE EIGENVALUE =  10.64       OSCILLATION LIMIT = 0.1064E-01
 *** AUTO STEP TIME:  NEXT TIME INC = 0.10000E-02  UNCHANGED

 *** LOAD STEP    33   SUBSTEP    10  COMPLETED.    CUM ITER =    725
 *** TIME =   2.01740         TIME INC =  0.100000E-02  NEW TRIANG MATRIX
 *** RESPONSE EIGENVALUE =  10.37       OSCILLATION LIMIT = 0.1037E-01
 *** AUTO STEP TIME:  NEXT TIME INC = 0.10000E-02  UNCHANGED

 *** LOAD STEP    33   SUBSTEP    11  COMPLETED.    CUM ITER =    726
 *** TIME =   2.01840         TIME INC =  0.100000E-02  NEW TRIANG MATRIX
 *** RESPONSE EIGENVALUE =  10.12       OSCILLATION LIMIT = 0.1012E-01
 *** AUTO STEP TIME:  NEXT TIME INC = 0.10000E-02  UNCHANGED

 *** LOAD STEP    33   SUBSTEP    12  COMPLETED.    CUM ITER =    727
 *** TIME =   2.01940         TIME INC =  0.100000E-02  NEW TRIANG MATRIX
 *** RESPONSE EIGENVALUE =  9.889       OSCILLATION LIMIT = 0.9889E-02
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```
 *** AUTO TIME STEP:  NEXT TIME INC = 0.60000E-03  DECREASED (FACTOR = 0.6000)

 *** LOAD STEP    33   SUBSTEP    13  COMPLETED.    CUM ITER =    728
 *** TIME =   2.02000         TIME INC =  0.600000E-03  NEW TRIANG MATRIX
 *** RESPONSE EIGENVALUE =  9.755       OSCILLATION LIMIT = 0.5853E-02
 ************************************************
 ************** FINISHED SOLVE FOR LS 33 *************
 ************************************************
 ****************** SOLVE FOR LS 34 ****************

 SPECIFIED BODY FORCE HGEN FOR ALL PICKED ELEMENTS AT STARTING LOCATION      1
 IS SET ACCORDING TO TABLE PARAMETER = _LOADVARI202

 USE AUTOMATIC TIME STEPPING THIS LOAD STEP

 USE     100 SUBSTEPS INITIALLY THIS LOAD STEP FOR ALL  DEGREES OF FREEDOM
 FOR AUTOMATIC TIME STEPPING:
   USE   1000 SUBSTEPS AS A MAXIMUM
   USE     10 SUBSTEPS AS A MINIMUM

 TIME=  2.0500

 INCLUDE TRANSIENT EFFECTS FOR  ALL DEGREES OF FREEDOM THIS LOAD STEP

 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

 WRITE RSOL ITEMS TO THE DATABASE WITH A FREQUENCY OF ALL
   FOR ALL APPLICABLE ENTITIES

 WRITE FFLU ITEMS TO THE DATABASE WITH A FREQUENCY OF ALL
   FOR ALL APPLICABLE ENTITIES

 CONVERGENCE ON HEAT BASED ON THE NORM OF THE N-R LOAD
   WITH A TOLERANCE OF 0.1000E-02 AND A MINIMUM REFERENCE VALUE OF 0.1000E-02
   USING THE L2 NORM (CHECK THE SRSS VALUE)

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

 *** WARNING ***                         CP =    2055.859   TIME= 10:15:23
 Material number 4 (used by element 65408 ) should normally have at
 least one MP or one TB type command associated with it.  Output of
 energy by material may not be available.

 *** NOTE ***                            CP =    2056.047   TIME= 10:15:23
 The step data was checked and warning messages were found.
  Please review output or errors file ( D:\Daten\Ansys
 Simulation\_ProjectScratch\Scr8B73\file.err ) for these warning
 messages.
1

 ***** ANSYS - ENGINEERING ANALYSIS SYSTEM  RELEASE 12.1     *****
 ANSYS Academic Teaching Advanced
 00000000          VERSION=WINDOWS x64   10:15:24  SEP 23, 2010 CP=   2056.844

 Schweißen Flachprobe--Thermisch-transient (E5)


                     L O A D   S T E P   O P T I O N S

   LOAD STEP NUMBER. . . . . . . . . . . . . . . .    34
   TIME AT END OF THE LOAD STEP. . . . . . . . . .  2.0500
   AUTOMATIC TIME STEPPING . . . . . . . . . . . .    ON
      INITIAL NUMBER OF SUBSTEPS . . . . . . . . .   100
```

```
     MAXIMUM NUMBER OF SUBSTEPS . . . . . .  1000
     MINIMUM NUMBER OF SUBSTEPS . . . . . .    10
  STEP CHANGE BOUNDARY CONDITIONS . . . . . .   YES
  TRANSIENT (INERTIA) EFFECTS
     THERMAL DOFS . . . . . .    ON
  TRANSIENT INTEGRATION PARAMETERS
     THETA. . . . . .  1.0000
     OSCILLATION LIMIT CRITERION. . . . . 0.50000
     TOLERANCE. . . . . .  0.0000
  PRINT OUTPUT CONTROLS . . . . . .NO PRINTOUT
  DATABASE OUTPUT CONTROLS
     ITEM     FREQUENCY   COMPONENT
      ALL       NONE
     NSOL        ALL
     RSOL        ALL
     FFLU        ALL


 SOLUTION MONITORING INFO IS WRITTEN TO FILE=
file.mntr



 *** LOAD STEP    34   SUBSTEP     1  COMPLETED.    CUM ITER =    729
 *** TIME =   2.02030         TIME INC =  0.300000E-03  NEW TRIANG MATRIX
 *** RESPONSE EIGENVALUE =  9.690       OSCILLATION LIMIT = 0.2907E-02
 *** AUTO STEP TIME:  NEXT TIME INC = 0.30000E-03  UNCHANGED

 *** LOAD STEP    34   SUBSTEP     2  COMPLETED.    CUM ITER =    730
 *** TIME =   2.02060         TIME INC =  0.300000E-03  NEW TRIANG MATRIX
 *** RESPONSE EIGENVALUE =  9.625       OSCILLATION LIMIT = 0.2888E-02
 *** AUTO TIME STEP:  NEXT TIME INC = 0.90000E-03  INCREASED (FACTOR = 3.0000)

 *** LOAD STEP    34   SUBSTEP     3  COMPLETED.    CUM ITER =    731
 *** TIME =   2.02150         TIME INC =  0.900000E-03  NEW TRIANG MATRIX
 *** RESPONSE EIGENVALUE =  9.441       OSCILLATION LIMIT = 0.8497E-02
 *** AUTO TIME STEP:  NEXT TIME INC = 0.27000E-02  INCREASED (FACTOR = 3.0000)

 *** LOAD STEP    34   SUBSTEP     4  COMPLETED.    CUM ITER =    732
 *** TIME =   2.02420         TIME INC =  0.270000E-02  NEW TRIANG MATRIX
 *** RESPONSE EIGENVALUE =  8.960       OSCILLATION LIMIT = 0.2419E-01
 *** AUTO TIME STEP:  NEXT TIME INC = 0.30000E-02  INCREASED (FACTOR = 1.1111)

 *** LOAD STEP    34   SUBSTEP     5  COMPLETED.    CUM ITER =    733
 *** TIME =   2.02720         TIME INC =  0.300000E-02  NEW TRIANG MATRIX
 *** RESPONSE EIGENVALUE =  8.496       OSCILLATION LIMIT = 0.2549E-01
 *** AUTO STEP TIME:  NEXT TIME INC = 0.30000E-02  UNCHANGED

 *** LOAD STEP    34   SUBSTEP     6  COMPLETED.    CUM ITER =    734
 *** TIME =   2.03020         TIME INC =  0.300000E-02  NEW TRIANG MATRIX
 *** RESPONSE EIGENVALUE =  8.088       OSCILLATION LIMIT = 0.2426E-01
 *** AUTO STEP TIME:  NEXT TIME INC = 0.30000E-02  UNCHANGED

 *** LOAD STEP    34   SUBSTEP     7  COMPLETED.    CUM ITER =    735
 *** TIME =   2.03320         TIME INC =  0.300000E-02  NEW TRIANG MATRIX
 *** RESPONSE EIGENVALUE =  7.726       OSCILLATION LIMIT = 0.2318E-01
 *** AUTO STEP TIME:  NEXT TIME INC = 0.30000E-02  UNCHANGED

 *** LOAD STEP    34   SUBSTEP     8  COMPLETED.    CUM ITER =    736
 *** TIME =   2.03620         TIME INC =  0.300000E-02  NEW TRIANG MATRIX
 *** RESPONSE EIGENVALUE =  7.402       OSCILLATION LIMIT = 0.2221E-01
 *** AUTO STEP TIME:  NEXT TIME INC = 0.30000E-02  UNCHANGED

 *** LOAD STEP    34   SUBSTEP     9  COMPLETED.    CUM ITER =    737
 *** TIME =   2.03920         TIME INC =  0.300000E-02  NEW TRIANG MATRIX
 *** RESPONSE EIGENVALUE =  7.110       OSCILLATION LIMIT = 0.2133E-01
 *** AUTO STEP TIME:  NEXT TIME INC = 0.30000E-02  UNCHANGED

 *** LOAD STEP    34   SUBSTEP    10  COMPLETED.    CUM ITER =    738
```

```
 *** TIME =   2.04220         TIME INC =  0.300000E-02  NEW TRIANG MATRIX
 *** RESPONSE EIGENVALUE =  6.845       OSCILLATION LIMIT = 0.2053E-01
 *** AUTO STEP TIME:  NEXT TIME INC = 0.30000E-02  UNCHANGED

 *** LOAD STEP    34   SUBSTEP    11  COMPLETED.    CUM ITER =    739
 *** TIME =   2.04520         TIME INC =  0.300000E-02  NEW TRIANG MATRIX
 *** RESPONSE EIGENVALUE =  6.603       OSCILLATION LIMIT = 0.1981E-01
 *** AUTO STEP TIME:  NEXT TIME INC = 0.30000E-02  UNCHANGED

 *** LOAD STEP    34   SUBSTEP    12  COMPLETED.    CUM ITER =    740
 *** TIME =   2.04820         TIME INC =  0.300000E-02  NEW TRIANG MATRIX
 *** RESPONSE EIGENVALUE =  6.380       OSCILLATION LIMIT = 0.1914E-01
 *** AUTO TIME STEP:  NEXT TIME INC = 0.18000E-02  DECREASED (FACTOR = 0.6000)

 *** LOAD STEP    34   SUBSTEP    13  COMPLETED.    CUM ITER =    741
 *** TIME =   2.05000         TIME INC =  0.180000E-02  NEW TRIANG MATRIX
 *** RESPONSE EIGENVALUE =  6.254       OSCILLATION LIMIT = 0.1126E-01
 ************************************************
 *************** FINISHED SOLVE FOR LS 34 *************
 ************************************************
 ****************** SOLVE FOR LS 35 ****************

 SPECIFIED BODY FORCE HGEN FOR ALL PICKED ELEMENTS AT STARTING LOCATION      1
 IS SET ACCORDING TO TABLE PARAMETER = _LOADVARI202

 USE AUTOMATIC TIME STEPPING THIS LOAD STEP

 USE     100 SUBSTEPS INITIALLY THIS LOAD STEP FOR ALL  DEGREES OF FREEDOM
 FOR AUTOMATIC TIME STEPPING:
   USE   1000 SUBSTEPS AS A MAXIMUM
   USE     10 SUBSTEPS AS A MINIMUM

 TIME=  2.1400

 INCLUDE TRANSIENT EFFECTS FOR  ALL DEGREES OF FREEDOM THIS LOAD STEP

 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

 WRITE RSOL ITEMS TO THE DATABASE WITH A FREQUENCY OF ALL
   FOR ALL APPLICABLE ENTITIES

 WRITE FFLU ITEMS TO THE DATABASE WITH A FREQUENCY OF ALL
   FOR ALL APPLICABLE ENTITIES

 CONVERGENCE ON HEAT BASED ON THE NORM OF THE N-R LOAD
   WITH A TOLERANCE OF 0.1000E-02 AND A MINIMUM REFERENCE VALUE OF 0.1000E-02
   USING THE L2 NORM (CHECK THE SRSS VALUE)

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

 *** WARNING ***                         CP =    2094.469   TIME= 10:15:45
 Material number 4 (used by element 65408 ) should normally have at
 least one MP or one TB type command associated with it.  Output of
 energy by material may not be available.

 *** NOTE ***                            CP =    2094.703   TIME= 10:15:45
 The step data was checked and warning messages were found.
  Please review output or errors file ( D:\Daten\Ansys
 Simulation\_ProjectScratch\Scr8B73\file.err ) for these warning
 messages.
1

 ***** ANSYS - ENGINEERING ANALYSIS SYSTEM  RELEASE 12.1     *****
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 ANSYS Academic Teaching Advanced
 00000000          VERSION=WINDOWS x64   10:15:46  SEP 23, 2010 CP=   2095.344

 Schweißen Flachprobe--Thermisch-transient (E5)


                     L O A D   S T E P   O P T I O N S

   LOAD STEP NUMBER. . . . . . . . . . . . . . . .    35
   TIME AT END OF THE LOAD STEP. . . . . . . . . .  2.1400
   AUTOMATIC TIME STEPPING . . . . . . . . . . . .    ON
      INITIAL NUMBER OF SUBSTEPS . . . . . . . . .   100
      MAXIMUM NUMBER OF SUBSTEPS . . . . . . . . .  1000
      MINIMUM NUMBER OF SUBSTEPS . . . . . . . . .    10
   STEP CHANGE BOUNDARY CONDITIONS . . . . . . . .   YES
   TRANSIENT (INERTIA) EFFECTS
      THERMAL DOFS . . . . . . . . . . . . . . . .    ON
   TRANSIENT INTEGRATION PARAMETERS
      THETA. . . . . . . . . . . . . . . . . . . .  1.0000
      OSCILLATION LIMIT CRITERION. . . . . . . . . 0.50000
      TOLERANCE. . . . . . . . . . . . . . . . . .  0.0000
   PRINT OUTPUT CONTROLS . . . . . . . . . . . . .NO PRINTOUT
   DATABASE OUTPUT CONTROLS
      ITEM     FREQUENCY   COMPONENT
       ALL       NONE
      NSOL        ALL
      RSOL        ALL
      FFLU        ALL


 SOLUTION MONITORING INFO IS WRITTEN TO FILE=
file.mntr



 *** LOAD STEP    35   SUBSTEP     1  COMPLETED.    CUM ITER =    742
 *** TIME =   2.05090         TIME INC =  0.900000E-03  NEW TRIANG MATRIX
 *** RESPONSE EIGENVALUE =  6.192       OSCILLATION LIMIT = 0.5573E-02
 *** AUTO STEP TIME:  NEXT TIME INC = 0.90000E-03  UNCHANGED

 *** LOAD STEP    35   SUBSTEP     2  COMPLETED.    CUM ITER =    743
 *** TIME =   2.05180         TIME INC =  0.900000E-03  NEW TRIANG MATRIX
 *** RESPONSE EIGENVALUE =  6.132       OSCILLATION LIMIT = 0.5519E-02
 *** AUTO TIME STEP:  NEXT TIME INC = 0.27000E-02  INCREASED (FACTOR = 3.0000)

 *** LOAD STEP    35   SUBSTEP     3  COMPLETED.    CUM ITER =    744
 *** TIME =   2.05450         TIME INC =  0.270000E-02  NEW TRIANG MATRIX
 *** RESPONSE EIGENVALUE =  5.963       OSCILLATION LIMIT = 0.1610E-01
 *** AUTO TIME STEP:  NEXT TIME INC = 0.81000E-02  INCREASED (FACTOR = 3.0000)

 *** LOAD STEP    35   SUBSTEP     4  COMPLETED.    CUM ITER =    745
 *** TIME =   2.06260         TIME INC =  0.810000E-02  NEW TRIANG MATRIX
 *** RESPONSE EIGENVALUE =  5.539       OSCILLATION LIMIT = 0.4487E-01
 *** AUTO TIME STEP:  NEXT TIME INC = 0.90000E-02  INCREASED (FACTOR = 1.1111)

 *** LOAD STEP    35   SUBSTEP     5  COMPLETED.    CUM ITER =    746
 *** TIME =   2.07160         TIME INC =  0.900000E-02  NEW TRIANG MATRIX
 *** RESPONSE EIGENVALUE =  5.145       OSCILLATION LIMIT = 0.4631E-01
 *** AUTO STEP TIME:  NEXT TIME INC = 0.90000E-02  UNCHANGED

 *** LOAD STEP    35   SUBSTEP     6  COMPLETED.    CUM ITER =    747
 *** TIME =   2.08060         TIME INC =  0.900000E-02  NEW TRIANG MATRIX
 *** RESPONSE EIGENVALUE =  4.809       OSCILLATION LIMIT = 0.4328E-01
 *** AUTO STEP TIME:  NEXT TIME INC = 0.90000E-02  UNCHANGED

 *** LOAD STEP    35   SUBSTEP     7  COMPLETED.    CUM ITER =    748
 *** TIME =   2.08960         TIME INC =  0.900000E-02  NEW TRIANG MATRIX
 *** RESPONSE EIGENVALUE =  4.519       OSCILLATION LIMIT = 0.4067E-01
 *** AUTO STEP TIME:  NEXT TIME INC = 0.90000E-02  UNCHANGED
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*** LOAD STEP    35   SUBSTEP     8  COMPLETED.    CUM ITER =    749
*** TIME =   2.09860         TIME INC =  0.900000E-02  NEW TRIANG MATRIX
*** RESPONSE EIGENVALUE =  4.266       OSCILLATION LIMIT = 0.3839E-01
*** AUTO STEP TIME:  NEXT TIME INC = 0.90000E-02  UNCHANGED

*** LOAD STEP    35   SUBSTEP     9  COMPLETED.    CUM ITER =    750
*** TIME =   2.10760         TIME INC =  0.900000E-02  NEW TRIANG MATRIX
*** RESPONSE EIGENVALUE =  4.041       OSCILLATION LIMIT = 0.3637E-01
*** AUTO STEP TIME:  NEXT TIME INC = 0.90000E-02  UNCHANGED

*** LOAD STEP    35   SUBSTEP    10  COMPLETED.    CUM ITER =    751
*** TIME =   2.11660         TIME INC =  0.900000E-02  NEW TRIANG MATRIX
*** RESPONSE EIGENVALUE =  3.841       OSCILLATION LIMIT = 0.3457E-01
*** AUTO STEP TIME:  NEXT TIME INC = 0.90000E-02  UNCHANGED

*** LOAD STEP    35   SUBSTEP    11  COMPLETED.    CUM ITER =    752
*** TIME =   2.12560         TIME INC =  0.900000E-02  NEW TRIANG MATRIX
*** AUTO STEP TIME:  NEXT TIME INC = 0.90000E-02  UNCHANGED

*** LOAD STEP    35   SUBSTEP    12  COMPLETED.    CUM ITER =    753
*** TIME =   2.13460         TIME INC =  0.900000E-02  NEW TRIANG MATRIX
*** AUTO TIME STEP:  NEXT TIME INC = 0.54000E-02  DECREASED (FACTOR = 0.6000)

*** LOAD STEP    35   SUBSTEP    13  COMPLETED.    CUM ITER =    754
*** TIME =   2.14000         TIME INC =  0.540000E-02  NEW TRIANG MATRIX
**************************************************
*************** FINISHED SOLVE FOR LS 35 *************
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****************** SOLVE FOR LS 36 ****************

SPECIFIED BODY FORCE HGEN FOR ALL PICKED ELEMENTS AT STARTING LOCATION      1
IS SET ACCORDING TO TABLE PARAMETER = _LOADVARI202

USE AUTOMATIC TIME STEPPING THIS LOAD STEP

USE     100 SUBSTEPS INITIALLY THIS LOAD STEP FOR ALL  DEGREES OF FREEDOM
FOR AUTOMATIC TIME STEPPING:
  USE   1000 SUBSTEPS AS A MAXIMUM
  USE     10 SUBSTEPS AS A MINIMUM

TIME=  2.2400

INCLUDE TRANSIENT EFFECTS FOR  ALL DEGREES OF FREEDOM THIS LOAD STEP

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

WRITE RSOL ITEMS TO THE DATABASE WITH A FREQUENCY OF ALL
  FOR ALL APPLICABLE ENTITIES

WRITE FFLU ITEMS TO THE DATABASE WITH A FREQUENCY OF ALL
  FOR ALL APPLICABLE ENTITIES

CONVERGENCE ON HEAT BASED ON THE NORM OF THE N-R LOAD
  WITH A TOLERANCE OF 0.1000E-02 AND A MINIMUM REFERENCE VALUE OF 0.1000E-02
  USING THE L2 NORM (CHECK THE SRSS VALUE)

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

*** WARNING ***                         CP =    2134.016   TIME= 10:16:08
Material number 4 (used by element 65408 ) should normally have at
least one MP or one TB type command associated with it.  Output of
energy by material may not be available.
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 *** NOTE ***                            CP =    2134.297   TIME= 10:16:08
 The step data was checked and warning messages were found.
  Please review output or errors file ( D:\Daten\Ansys
 Simulation\_ProjectScratch\Scr8B73\file.err ) for these warning
 messages.
1

 ***** ANSYS - ENGINEERING ANALYSIS SYSTEM  RELEASE 12.1     *****
 ANSYS Academic Teaching Advanced
 00000000          VERSION=WINDOWS x64   10:16:09  SEP 23, 2010 CP=   2135.094

 Schweißen Flachprobe--Thermisch-transient (E5)


                     L O A D   S T E P   O P T I O N S

   LOAD STEP NUMBER. . . . . . . . . . . . . . . .    36
   TIME AT END OF THE LOAD STEP. . . . . . . . . .  2.2400
   AUTOMATIC TIME STEPPING . . . . . . . . . . . .    ON
      INITIAL NUMBER OF SUBSTEPS . . . . . . . . .   100
      MAXIMUM NUMBER OF SUBSTEPS . . . . . . . . .  1000
      MINIMUM NUMBER OF SUBSTEPS . . . . . . . . .    10
   STEP CHANGE BOUNDARY CONDITIONS . . . . . . . .   YES
   TRANSIENT (INERTIA) EFFECTS
      THERMAL DOFS . . . . . . . . . . . . . . . .    ON
   TRANSIENT INTEGRATION PARAMETERS
      THETA. . . . . . . . . . . . . . . . . . . .  1.0000
      OSCILLATION LIMIT CRITERION. . . . . . . . . 0.50000
      TOLERANCE. . . . . . . . . . . . . . . . . .  0.0000
   PRINT OUTPUT CONTROLS . . . . . . . . . . . . .NO PRINTOUT
   DATABASE OUTPUT CONTROLS
      ITEM     FREQUENCY   COMPONENT
       ALL       NONE
      NSOL        ALL
      RSOL        ALL
      FFLU        ALL


 SOLUTION MONITORING INFO IS WRITTEN TO FILE=
file.mntr



 *** LOAD STEP    36   SUBSTEP     1  COMPLETED.    CUM ITER =    755
 *** TIME =   2.14100         TIME INC =  0.100000E-02  NEW TRIANG MATRIX
 *** AUTO STEP TIME:  NEXT TIME INC = 0.10000E-02  UNCHANGED

 *** LOAD STEP    36   SUBSTEP     2  COMPLETED.    CUM ITER =    756
 *** TIME =   2.14200         TIME INC =  0.100000E-02  NEW TRIANG MATRIX
 *** AUTO STEP TIME:  NEXT TIME INC = 0.10000E-02  UNCHANGED

 *** LOAD STEP    36   SUBSTEP     3  COMPLETED.    CUM ITER =    757
 *** TIME =   2.14300         TIME INC =  0.100000E-02  NEW TRIANG MATRIX
 *** AUTO STEP TIME:  NEXT TIME INC = 0.10000E-02  UNCHANGED

 *** LOAD STEP    36   SUBSTEP     4  COMPLETED.    CUM ITER =    758
 *** TIME =   2.14400         TIME INC =  0.100000E-02  NEW TRIANG MATRIX
 *** AUTO STEP TIME:  NEXT TIME INC = 0.10000E-02  UNCHANGED

 *** LOAD STEP    36   SUBSTEP     5  COMPLETED.    CUM ITER =    759
 *** TIME =   2.14500         TIME INC =  0.100000E-02  NEW TRIANG MATRIX
 *** AUTO STEP TIME:  NEXT TIME INC = 0.10000E-02  UNCHANGED

 *** LOAD STEP    36   SUBSTEP     6  COMPLETED.    CUM ITER =    760
 *** TIME =   2.14600         TIME INC =  0.100000E-02  NEW TRIANG MATRIX
 *** AUTO STEP TIME:  NEXT TIME INC = 0.10000E-02  UNCHANGED

 *** LOAD STEP    36   SUBSTEP     7  COMPLETED.    CUM ITER =    761
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*** TIME =   2.14700         TIME INC =  0.100000E-02  NEW TRIANG MATRIX
*** AUTO STEP TIME:  NEXT TIME INC = 0.10000E-02  UNCHANGED

*** LOAD STEP    36   SUBSTEP     8  COMPLETED.    CUM ITER =    762
*** TIME =   2.14800         TIME INC =  0.100000E-02  NEW TRIANG MATRIX
*** AUTO STEP TIME:  NEXT TIME INC = 0.10000E-02  UNCHANGED

*** LOAD STEP    36   SUBSTEP     9  COMPLETED.    CUM ITER =    763
*** TIME =   2.14900         TIME INC =  0.100000E-02  NEW TRIANG MATRIX
*** AUTO STEP TIME:  NEXT TIME INC = 0.10000E-02  UNCHANGED

*** LOAD STEP    36   SUBSTEP    10  COMPLETED.    CUM ITER =    764
*** TIME =   2.15000         TIME INC =  0.100000E-02  NEW TRIANG MATRIX
*** AUTO STEP TIME:  NEXT TIME INC = 0.10000E-02  UNCHANGED

*** LOAD STEP    36   SUBSTEP    11  COMPLETED.    CUM ITER =    765
*** TIME =   2.15100         TIME INC =  0.100000E-02  NEW TRIANG MATRIX
*** AUTO STEP TIME:  NEXT TIME INC = 0.10000E-02  UNCHANGED

*** LOAD STEP    36   SUBSTEP    12  COMPLETED.    CUM ITER =    766
*** TIME =   2.15200         TIME INC =  0.100000E-02  NEW TRIANG MATRIX
*** AUTO STEP TIME:  NEXT TIME INC = 0.10000E-02  UNCHANGED

*** LOAD STEP    36   SUBSTEP    13  COMPLETED.    CUM ITER =    767
*** TIME =   2.15300         TIME INC =  0.100000E-02  NEW TRIANG MATRIX
*** AUTO STEP TIME:  NEXT TIME INC = 0.10000E-02  UNCHANGED

*** LOAD STEP    36   SUBSTEP    14  COMPLETED.    CUM ITER =    768
*** TIME =   2.15400         TIME INC =  0.100000E-02  NEW TRIANG MATRIX
*** AUTO STEP TIME:  NEXT TIME INC = 0.10000E-02  UNCHANGED

*** LOAD STEP    36   SUBSTEP    15  COMPLETED.    CUM ITER =    769
*** TIME =   2.15500         TIME INC =  0.100000E-02  NEW TRIANG MATRIX
*** AUTO STEP TIME:  NEXT TIME INC = 0.10000E-02  UNCHANGED

*** LOAD STEP    36   SUBSTEP    16  COMPLETED.    CUM ITER =    770
*** TIME =   2.15600         TIME INC =  0.100000E-02  NEW TRIANG MATRIX
*** AUTO STEP TIME:  NEXT TIME INC = 0.10000E-02  UNCHANGED

*** LOAD STEP    36   SUBSTEP    17  COMPLETED.    CUM ITER =    771
*** TIME =   2.15700         TIME INC =  0.100000E-02  NEW TRIANG MATRIX
*** AUTO STEP TIME:  NEXT TIME INC = 0.10000E-02  UNCHANGED

*** LOAD STEP    36   SUBSTEP    18  COMPLETED.    CUM ITER =    772
*** TIME =   2.15800         TIME INC =  0.100000E-02  NEW TRIANG MATRIX
*** AUTO STEP TIME:  NEXT TIME INC = 0.10000E-02  UNCHANGED

*** LOAD STEP    36   SUBSTEP    19  COMPLETED.    CUM ITER =    773
*** TIME =   2.15900         TIME INC =  0.100000E-02  NEW TRIANG MATRIX
*** AUTO STEP TIME:  NEXT TIME INC = 0.10000E-02  UNCHANGED

*** LOAD STEP    36   SUBSTEP    20  COMPLETED.    CUM ITER =    774
*** TIME =   2.16000         TIME INC =  0.100000E-02  NEW TRIANG MATRIX
*** AUTO STEP TIME:  NEXT TIME INC = 0.10000E-02  UNCHANGED

*** LOAD STEP    36   SUBSTEP    21  COMPLETED.    CUM ITER =    775
*** TIME =   2.16100         TIME INC =  0.100000E-02  NEW TRIANG MATRIX
*** AUTO STEP TIME:  NEXT TIME INC = 0.10000E-02  UNCHANGED

*** LOAD STEP    36   SUBSTEP    22  COMPLETED.    CUM ITER =    776
*** TIME =   2.16200         TIME INC =  0.100000E-02  NEW TRIANG MATRIX
*** AUTO STEP TIME:  NEXT TIME INC = 0.10000E-02  UNCHANGED

*** LOAD STEP    36   SUBSTEP    23  COMPLETED.    CUM ITER =    777
*** TIME =   2.16300         TIME INC =  0.100000E-02  NEW TRIANG MATRIX
*** AUTO STEP TIME:  NEXT TIME INC = 0.10000E-02  UNCHANGED

*** LOAD STEP    36   SUBSTEP    24  COMPLETED.    CUM ITER =    778
*** TIME =   2.16400         TIME INC =  0.100000E-02  NEW TRIANG MATRIX
*** AUTO STEP TIME:  NEXT TIME INC = 0.10000E-02  UNCHANGED
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*** LOAD STEP    36   SUBSTEP    25  COMPLETED.    CUM ITER =    779
*** TIME =   2.16500         TIME INC =  0.100000E-02  NEW TRIANG MATRIX
*** AUTO STEP TIME:  NEXT TIME INC = 0.10000E-02  UNCHANGED

*** LOAD STEP    36   SUBSTEP    26  COMPLETED.    CUM ITER =    780
*** TIME =   2.16600         TIME INC =  0.100000E-02  NEW TRIANG MATRIX
*** AUTO STEP TIME:  NEXT TIME INC = 0.10000E-02  UNCHANGED

*** LOAD STEP    36   SUBSTEP    27  COMPLETED.    CUM ITER =    781
*** TIME =   2.16700         TIME INC =  0.100000E-02  NEW TRIANG MATRIX
*** AUTO STEP TIME:  NEXT TIME INC = 0.10000E-02  UNCHANGED

*** LOAD STEP    36   SUBSTEP    28  COMPLETED.    CUM ITER =    782
*** TIME =   2.16800         TIME INC =  0.100000E-02  NEW TRIANG MATRIX
*** AUTO STEP TIME:  NEXT TIME INC = 0.10000E-02  UNCHANGED

*** LOAD STEP    36   SUBSTEP    29  COMPLETED.    CUM ITER =    783
*** TIME =   2.16900         TIME INC =  0.100000E-02  NEW TRIANG MATRIX
*** AUTO STEP TIME:  NEXT TIME INC = 0.10000E-02  UNCHANGED

*** LOAD STEP    36   SUBSTEP    30  COMPLETED.    CUM ITER =    784
*** TIME =   2.17000         TIME INC =  0.100000E-02  NEW TRIANG MATRIX
*** AUTO STEP TIME:  NEXT TIME INC = 0.10000E-02  UNCHANGED

*** LOAD STEP    36   SUBSTEP    31  COMPLETED.    CUM ITER =    785
*** TIME =   2.17100         TIME INC =  0.100000E-02  NEW TRIANG MATRIX
*** AUTO STEP TIME:  NEXT TIME INC = 0.10000E-02  UNCHANGED

*** LOAD STEP    36   SUBSTEP    32  COMPLETED.    CUM ITER =    786
*** TIME =   2.17200         TIME INC =  0.100000E-02  NEW TRIANG MATRIX
*** AUTO STEP TIME:  NEXT TIME INC = 0.10000E-02  UNCHANGED

*** LOAD STEP    36   SUBSTEP    33  COMPLETED.    CUM ITER =    787
*** TIME =   2.17300         TIME INC =  0.100000E-02  NEW TRIANG MATRIX
*** AUTO STEP TIME:  NEXT TIME INC = 0.10000E-02  UNCHANGED

*** LOAD STEP    36   SUBSTEP    34  COMPLETED.    CUM ITER =    788
*** TIME =   2.17400         TIME INC =  0.100000E-02  NEW TRIANG MATRIX
*** AUTO STEP TIME:  NEXT TIME INC = 0.10000E-02  UNCHANGED

*** LOAD STEP    36   SUBSTEP    35  COMPLETED.    CUM ITER =    789
*** TIME =   2.17500         TIME INC =  0.100000E-02  NEW TRIANG MATRIX
*** AUTO STEP TIME:  NEXT TIME INC = 0.10000E-02  UNCHANGED

*** LOAD STEP    36   SUBSTEP    36  COMPLETED.    CUM ITER =    790
*** TIME =   2.17600         TIME INC =  0.100000E-02  NEW TRIANG MATRIX
*** AUTO STEP TIME:  NEXT TIME INC = 0.10000E-02  UNCHANGED

*** LOAD STEP    36   SUBSTEP    37  COMPLETED.    CUM ITER =    791
*** TIME =   2.17700         TIME INC =  0.100000E-02  NEW TRIANG MATRIX
*** AUTO STEP TIME:  NEXT TIME INC = 0.10000E-02  UNCHANGED

*** LOAD STEP    36   SUBSTEP    38  COMPLETED.    CUM ITER =    792
*** TIME =   2.17800         TIME INC =  0.100000E-02  NEW TRIANG MATRIX
*** AUTO STEP TIME:  NEXT TIME INC = 0.10000E-02  UNCHANGED

*** LOAD STEP    36   SUBSTEP    39  COMPLETED.    CUM ITER =    793
*** TIME =   2.17900         TIME INC =  0.100000E-02  NEW TRIANG MATRIX
*** AUTO STEP TIME:  NEXT TIME INC = 0.10000E-02  UNCHANGED

*** LOAD STEP    36   SUBSTEP    40  COMPLETED.    CUM ITER =    794
*** TIME =   2.18000         TIME INC =  0.100000E-02  NEW TRIANG MATRIX
*** AUTO STEP TIME:  NEXT TIME INC = 0.10000E-02  UNCHANGED

*** LOAD STEP    36   SUBSTEP    41  COMPLETED.    CUM ITER =    795
*** TIME =   2.18100         TIME INC =  0.100000E-02  NEW TRIANG MATRIX
*** AUTO STEP TIME:  NEXT TIME INC = 0.10000E-02  UNCHANGED

*** LOAD STEP    36   SUBSTEP    42  COMPLETED.    CUM ITER =    796
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*** TIME =   2.18200         TIME INC =  0.100000E-02  NEW TRIANG MATRIX
*** AUTO STEP TIME:  NEXT TIME INC = 0.10000E-02  UNCHANGED

*** LOAD STEP    36   SUBSTEP    43  COMPLETED.    CUM ITER =    797
*** TIME =   2.18300         TIME INC =  0.100000E-02  NEW TRIANG MATRIX
*** AUTO STEP TIME:  NEXT TIME INC = 0.10000E-02  UNCHANGED

*** LOAD STEP    36   SUBSTEP    44  COMPLETED.    CUM ITER =    798
*** TIME =   2.18400         TIME INC =  0.100000E-02  NEW TRIANG MATRIX
*** AUTO STEP TIME:  NEXT TIME INC = 0.10000E-02  UNCHANGED

*** LOAD STEP    36   SUBSTEP    45  COMPLETED.    CUM ITER =    799
*** TIME =   2.18500         TIME INC =  0.100000E-02  NEW TRIANG MATRIX
*** AUTO STEP TIME:  NEXT TIME INC = 0.10000E-02  UNCHANGED

*** LOAD STEP    36   SUBSTEP    46  COMPLETED.    CUM ITER =    800
*** TIME =   2.18600         TIME INC =  0.100000E-02  NEW TRIANG MATRIX
*** AUTO STEP TIME:  NEXT TIME INC = 0.10000E-02  UNCHANGED

*** LOAD STEP    36   SUBSTEP    47  COMPLETED.    CUM ITER =    801
*** TIME =   2.18700         TIME INC =  0.100000E-02  NEW TRIANG MATRIX
*** AUTO STEP TIME:  NEXT TIME INC = 0.10000E-02  UNCHANGED

*** LOAD STEP    36   SUBSTEP    48  COMPLETED.    CUM ITER =    802
*** TIME =   2.18800         TIME INC =  0.100000E-02  NEW TRIANG MATRIX
*** AUTO STEP TIME:  NEXT TIME INC = 0.10000E-02  UNCHANGED

*** LOAD STEP    36   SUBSTEP    49  COMPLETED.    CUM ITER =    803
*** TIME =   2.18900         TIME INC =  0.100000E-02  NEW TRIANG MATRIX
*** AUTO STEP TIME:  NEXT TIME INC = 0.10000E-02  UNCHANGED

*** LOAD STEP    36   SUBSTEP    50  COMPLETED.    CUM ITER =    804
*** TIME =   2.19000         TIME INC =  0.100000E-02  NEW TRIANG MATRIX
*** AUTO STEP TIME:  NEXT TIME INC = 0.10000E-02  UNCHANGED

*** LOAD STEP    36   SUBSTEP    51  COMPLETED.    CUM ITER =    805
*** TIME =   2.19100         TIME INC =  0.100000E-02  NEW TRIANG MATRIX
*** AUTO STEP TIME:  NEXT TIME INC = 0.10000E-02  UNCHANGED

*** LOAD STEP    36   SUBSTEP    52  COMPLETED.    CUM ITER =    806
*** TIME =   2.19200         TIME INC =  0.100000E-02  NEW TRIANG MATRIX
*** AUTO STEP TIME:  NEXT TIME INC = 0.10000E-02  UNCHANGED

*** LOAD STEP    36   SUBSTEP    53  COMPLETED.    CUM ITER =    807
*** TIME =   2.19300         TIME INC =  0.100000E-02  NEW TRIANG MATRIX
*** AUTO STEP TIME:  NEXT TIME INC = 0.10000E-02  UNCHANGED

*** LOAD STEP    36   SUBSTEP    54  COMPLETED.    CUM ITER =    808
*** TIME =   2.19400         TIME INC =  0.100000E-02  NEW TRIANG MATRIX
*** AUTO STEP TIME:  NEXT TIME INC = 0.10000E-02  UNCHANGED

*** LOAD STEP    36   SUBSTEP    55  COMPLETED.    CUM ITER =    809
*** TIME =   2.19500         TIME INC =  0.100000E-02  NEW TRIANG MATRIX
*** AUTO STEP TIME:  NEXT TIME INC = 0.10000E-02  UNCHANGED

*** LOAD STEP    36   SUBSTEP    56  COMPLETED.    CUM ITER =    810
*** TIME =   2.19600         TIME INC =  0.100000E-02  NEW TRIANG MATRIX
*** AUTO STEP TIME:  NEXT TIME INC = 0.10000E-02  UNCHANGED

*** LOAD STEP    36   SUBSTEP    57  COMPLETED.    CUM ITER =    811
*** TIME =   2.19700         TIME INC =  0.100000E-02  NEW TRIANG MATRIX
*** AUTO STEP TIME:  NEXT TIME INC = 0.10000E-02  UNCHANGED

*** LOAD STEP    36   SUBSTEP    58  COMPLETED.    CUM ITER =    812
*** TIME =   2.19800         TIME INC =  0.100000E-02  NEW TRIANG MATRIX
*** AUTO STEP TIME:  NEXT TIME INC = 0.10000E-02  UNCHANGED

*** LOAD STEP    36   SUBSTEP    59  COMPLETED.    CUM ITER =    813
*** TIME =   2.19900         TIME INC =  0.100000E-02  NEW TRIANG MATRIX
*** AUTO STEP TIME:  NEXT TIME INC = 0.10000E-02  UNCHANGED
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*** LOAD STEP    36   SUBSTEP    60  COMPLETED.    CUM ITER =    814
*** TIME =   2.20000         TIME INC =  0.100000E-02  NEW TRIANG MATRIX
*** AUTO STEP TIME:  NEXT TIME INC = 0.10000E-02  UNCHANGED

*** LOAD STEP    36   SUBSTEP    61  COMPLETED.    CUM ITER =    815
*** TIME =   2.20100         TIME INC =  0.100000E-02  NEW TRIANG MATRIX
*** AUTO STEP TIME:  NEXT TIME INC = 0.10000E-02  UNCHANGED

*** LOAD STEP    36   SUBSTEP    62  COMPLETED.    CUM ITER =    816
*** TIME =   2.20200         TIME INC =  0.100000E-02  NEW TRIANG MATRIX
*** AUTO STEP TIME:  NEXT TIME INC = 0.10000E-02  UNCHANGED

*** LOAD STEP    36   SUBSTEP    63  COMPLETED.    CUM ITER =    817
*** TIME =   2.20300         TIME INC =  0.100000E-02  NEW TRIANG MATRIX
*** AUTO STEP TIME:  NEXT TIME INC = 0.10000E-02  UNCHANGED

*** LOAD STEP    36   SUBSTEP    64  COMPLETED.    CUM ITER =    818
*** TIME =   2.20400         TIME INC =  0.100000E-02  NEW TRIANG MATRIX
*** AUTO STEP TIME:  NEXT TIME INC = 0.10000E-02  UNCHANGED

*** LOAD STEP    36   SUBSTEP    65  COMPLETED.    CUM ITER =    819
*** TIME =   2.20500         TIME INC =  0.100000E-02  NEW TRIANG MATRIX
*** AUTO STEP TIME:  NEXT TIME INC = 0.10000E-02  UNCHANGED

*** LOAD STEP    36   SUBSTEP    66  COMPLETED.    CUM ITER =    820
*** TIME =   2.20600         TIME INC =  0.100000E-02  NEW TRIANG MATRIX
*** AUTO STEP TIME:  NEXT TIME INC = 0.10000E-02  UNCHANGED

*** LOAD STEP    36   SUBSTEP    67  COMPLETED.    CUM ITER =    821
*** TIME =   2.20700         TIME INC =  0.100000E-02  NEW TRIANG MATRIX
*** AUTO STEP TIME:  NEXT TIME INC = 0.10000E-02  UNCHANGED

*** LOAD STEP    36   SUBSTEP    68  COMPLETED.    CUM ITER =    822
*** TIME =   2.20800         TIME INC =  0.100000E-02  NEW TRIANG MATRIX
*** AUTO STEP TIME:  NEXT TIME INC = 0.10000E-02  UNCHANGED

*** LOAD STEP    36   SUBSTEP    69  COMPLETED.    CUM ITER =    823
*** TIME =   2.20900         TIME INC =  0.100000E-02  NEW TRIANG MATRIX
*** AUTO STEP TIME:  NEXT TIME INC = 0.10000E-02  UNCHANGED

*** LOAD STEP    36   SUBSTEP    70  COMPLETED.    CUM ITER =    824
*** TIME =   2.21000         TIME INC =  0.100000E-02  NEW TRIANG MATRIX
*** AUTO STEP TIME:  NEXT TIME INC = 0.10000E-02  UNCHANGED

*** LOAD STEP    36   SUBSTEP    71  COMPLETED.    CUM ITER =    825
*** TIME =   2.21100         TIME INC =  0.100000E-02  NEW TRIANG MATRIX
*** AUTO STEP TIME:  NEXT TIME INC = 0.10000E-02  UNCHANGED

*** LOAD STEP    36   SUBSTEP    72  COMPLETED.    CUM ITER =    826
*** TIME =   2.21200         TIME INC =  0.100000E-02  NEW TRIANG MATRIX
*** AUTO STEP TIME:  NEXT TIME INC = 0.10000E-02  UNCHANGED

*** LOAD STEP    36   SUBSTEP    73  COMPLETED.    CUM ITER =    827
*** TIME =   2.21300         TIME INC =  0.100000E-02  NEW TRIANG MATRIX
*** AUTO STEP TIME:  NEXT TIME INC = 0.10000E-02  UNCHANGED

*** LOAD STEP    36   SUBSTEP    74  COMPLETED.    CUM ITER =    828
*** TIME =   2.21400         TIME INC =  0.100000E-02  NEW TRIANG MATRIX
*** AUTO STEP TIME:  NEXT TIME INC = 0.10000E-02  UNCHANGED

*** LOAD STEP    36   SUBSTEP    75  COMPLETED.    CUM ITER =    829
*** TIME =   2.21500         TIME INC =  0.100000E-02  NEW TRIANG MATRIX
*** AUTO STEP TIME:  NEXT TIME INC = 0.10000E-02  UNCHANGED

*** LOAD STEP    36   SUBSTEP    76  COMPLETED.    CUM ITER =    830
*** TIME =   2.21600         TIME INC =  0.100000E-02  NEW TRIANG MATRIX
*** AUTO STEP TIME:  NEXT TIME INC = 0.10000E-02  UNCHANGED

*** LOAD STEP    36   SUBSTEP    77  COMPLETED.    CUM ITER =    831
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*** TIME =   2.21700         TIME INC =  0.100000E-02  NEW TRIANG MATRIX
*** AUTO STEP TIME:  NEXT TIME INC = 0.10000E-02  UNCHANGED

*** LOAD STEP    36   SUBSTEP    78  COMPLETED.    CUM ITER =    832
*** TIME =   2.21800         TIME INC =  0.100000E-02  NEW TRIANG MATRIX
*** AUTO STEP TIME:  NEXT TIME INC = 0.10000E-02  UNCHANGED

*** LOAD STEP    36   SUBSTEP    79  COMPLETED.    CUM ITER =    833
*** TIME =   2.21900         TIME INC =  0.100000E-02  NEW TRIANG MATRIX
*** AUTO STEP TIME:  NEXT TIME INC = 0.10000E-02  UNCHANGED

*** LOAD STEP    36   SUBSTEP    80  COMPLETED.    CUM ITER =    834
*** TIME =   2.22000         TIME INC =  0.100000E-02  NEW TRIANG MATRIX
*** AUTO STEP TIME:  NEXT TIME INC = 0.10000E-02  UNCHANGED

*** LOAD STEP    36   SUBSTEP    81  COMPLETED.    CUM ITER =    835
*** TIME =   2.22100         TIME INC =  0.100000E-02  NEW TRIANG MATRIX
*** AUTO STEP TIME:  NEXT TIME INC = 0.10000E-02  UNCHANGED

*** LOAD STEP    36   SUBSTEP    82  COMPLETED.    CUM ITER =    836
*** TIME =   2.22200         TIME INC =  0.100000E-02  NEW TRIANG MATRIX
*** AUTO STEP TIME:  NEXT TIME INC = 0.10000E-02  UNCHANGED

*** LOAD STEP    36   SUBSTEP    83  COMPLETED.    CUM ITER =    837
*** TIME =   2.22300         TIME INC =  0.100000E-02  NEW TRIANG MATRIX
*** AUTO STEP TIME:  NEXT TIME INC = 0.10000E-02  UNCHANGED

*** LOAD STEP    36   SUBSTEP    84  COMPLETED.    CUM ITER =    838
*** TIME =   2.22400         TIME INC =  0.100000E-02  NEW TRIANG MATRIX
*** AUTO STEP TIME:  NEXT TIME INC = 0.10000E-02  UNCHANGED

*** LOAD STEP    36   SUBSTEP    85  COMPLETED.    CUM ITER =    839
*** TIME =   2.22500         TIME INC =  0.100000E-02  NEW TRIANG MATRIX
*** AUTO STEP TIME:  NEXT TIME INC = 0.10000E-02  UNCHANGED

*** LOAD STEP    36   SUBSTEP    86  COMPLETED.    CUM ITER =    840
*** TIME =   2.22600         TIME INC =  0.100000E-02  NEW TRIANG MATRIX
*** AUTO STEP TIME:  NEXT TIME INC = 0.10000E-02  UNCHANGED

*** LOAD STEP    36   SUBSTEP    87  COMPLETED.    CUM ITER =    841
*** TIME =   2.22700         TIME INC =  0.100000E-02  NEW TRIANG MATRIX
*** AUTO STEP TIME:  NEXT TIME INC = 0.10000E-02  UNCHANGED

*** LOAD STEP    36   SUBSTEP    88  COMPLETED.    CUM ITER =    842
*** TIME =   2.22800         TIME INC =  0.100000E-02  NEW TRIANG MATRIX
*** AUTO STEP TIME:  NEXT TIME INC = 0.10000E-02  UNCHANGED

*** LOAD STEP    36   SUBSTEP    89  COMPLETED.    CUM ITER =    843
*** TIME =   2.22900         TIME INC =  0.100000E-02  NEW TRIANG MATRIX
*** AUTO STEP TIME:  NEXT TIME INC = 0.10000E-02  UNCHANGED

*** LOAD STEP    36   SUBSTEP    90  COMPLETED.    CUM ITER =    844
*** TIME =   2.23000         TIME INC =  0.100000E-02  NEW TRIANG MATRIX
*** AUTO STEP TIME:  NEXT TIME INC = 0.10000E-02  UNCHANGED

*** LOAD STEP    36   SUBSTEP    91  COMPLETED.    CUM ITER =    845
*** TIME =   2.23100         TIME INC =  0.100000E-02  NEW TRIANG MATRIX
*** AUTO STEP TIME:  NEXT TIME INC = 0.10000E-02  UNCHANGED

*** LOAD STEP    36   SUBSTEP    92  COMPLETED.    CUM ITER =    846
*** TIME =   2.23200         TIME INC =  0.100000E-02  NEW TRIANG MATRIX
*** AUTO STEP TIME:  NEXT TIME INC = 0.10000E-02  UNCHANGED

*** LOAD STEP    36   SUBSTEP    93  COMPLETED.    CUM ITER =    847
*** TIME =   2.23300         TIME INC =  0.100000E-02  NEW TRIANG MATRIX
*** AUTO STEP TIME:  NEXT TIME INC = 0.10000E-02  UNCHANGED

*** LOAD STEP    36   SUBSTEP    94  COMPLETED.    CUM ITER =    848
*** TIME =   2.23400         TIME INC =  0.100000E-02  NEW TRIANG MATRIX
*** AUTO STEP TIME:  NEXT TIME INC = 0.10000E-02  UNCHANGED
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*** LOAD STEP    36   SUBSTEP    95  COMPLETED.    CUM ITER =    849
*** TIME =   2.23500         TIME INC =  0.100000E-02  NEW TRIANG MATRIX
*** AUTO STEP TIME:  NEXT TIME INC = 0.10000E-02  UNCHANGED

*** LOAD STEP    36   SUBSTEP    96  COMPLETED.    CUM ITER =    850
*** TIME =   2.23600         TIME INC =  0.100000E-02  NEW TRIANG MATRIX
*** AUTO STEP TIME:  NEXT TIME INC = 0.10000E-02  UNCHANGED

*** LOAD STEP    36   SUBSTEP    97  COMPLETED.    CUM ITER =    851
*** TIME =   2.23700         TIME INC =  0.100000E-02  NEW TRIANG MATRIX
*** AUTO STEP TIME:  NEXT TIME INC = 0.10000E-02  UNCHANGED

*** LOAD STEP    36   SUBSTEP    98  COMPLETED.    CUM ITER =    852
*** TIME =   2.23800         TIME INC =  0.100000E-02  NEW TRIANG MATRIX
*** AUTO STEP TIME:  NEXT TIME INC = 0.10000E-02  UNCHANGED

*** LOAD STEP    36   SUBSTEP    99  COMPLETED.    CUM ITER =    853
*** TIME =   2.23900         TIME INC =  0.100000E-02  NEW TRIANG MATRIX
*** AUTO STEP TIME:  NEXT TIME INC = 0.10000E-02  UNCHANGED

*** LOAD STEP    36   SUBSTEP   100  COMPLETED.    CUM ITER =    854
*** TIME =   2.24000         TIME INC =  0.100000E-02  NEW TRIANG MATRIX
**************************************************
*************** FINISHED SOLVE FOR LS 36 *************
**************************************************
****************** SOLVE FOR LS 37 ****************

SPECIFIED BODY FORCE HGEN FOR ALL PICKED ELEMENTS AT STARTING LOCATION      1
IS SET ACCORDING TO TABLE PARAMETER = _LOADVARI202

USE AUTOMATIC TIME STEPPING THIS LOAD STEP

USE     100 SUBSTEPS INITIALLY THIS LOAD STEP FOR ALL  DEGREES OF FREEDOM
FOR AUTOMATIC TIME STEPPING:
  USE   1000 SUBSTEPS AS A MAXIMUM
  USE     10 SUBSTEPS AS A MINIMUM

TIME=  2.3400

INCLUDE TRANSIENT EFFECTS FOR  ALL DEGREES OF FREEDOM THIS LOAD STEP

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

WRITE RSOL ITEMS TO THE DATABASE WITH A FREQUENCY OF ALL
  FOR ALL APPLICABLE ENTITIES

WRITE FFLU ITEMS TO THE DATABASE WITH A FREQUENCY OF ALL
  FOR ALL APPLICABLE ENTITIES

CONVERGENCE ON HEAT BASED ON THE NORM OF THE N-R LOAD
  WITH A TOLERANCE OF 0.1000E-02 AND A MINIMUM REFERENCE VALUE OF 0.1000E-02
  USING THE L2 NORM (CHECK THE SRSS VALUE)

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

*** WARNING ***                         CP =    2396.156   TIME= 10:18:38
Material number 4 (used by element 65408 ) should normally have at
least one MP or one TB type command associated with it.  Output of
energy by material may not be available.

*** NOTE ***                            CP =    2396.359   TIME= 10:18:38
The step data was checked and warning messages were found.
```

```
 Please review output or errors file ( D:\Daten\Ansys
Simulation\_ProjectScratch\Scr8B73\file.err ) for these warning
messages.
1

***** ANSYS - ENGINEERING ANALYSIS SYSTEM  RELEASE 12.1     *****
ANSYS Academic Teaching Advanced
00000000          VERSION=WINDOWS x64   10:18:38  SEP 23, 2010 CP=   2397.078

Schweißen Flachprobe--Thermisch-transient (E5)


                    L O A D   S T E P   O P T I O N S

   LOAD STEP NUMBER. . . . . . . . . . . . . . . .    37
   TIME AT END OF THE LOAD STEP. . . . . . . . . .  2.3400
   AUTOMATIC TIME STEPPING . . . . . . . . . . . .    ON
      INITIAL NUMBER OF SUBSTEPS . . . . . . . . .   100
      MAXIMUM NUMBER OF SUBSTEPS . . . . . . . . .  1000
      MINIMUM NUMBER OF SUBSTEPS . . . . . . . . .    10
   STEP CHANGE BOUNDARY CONDITIONS . . . . . . . .   YES
   TRANSIENT (INERTIA) EFFECTS
      THERMAL DOFS . . . . . . . . . . . . . . . .    ON
   TRANSIENT INTEGRATION PARAMETERS
      THETA. . . . . . . . . . . . . . . . . . . .  1.0000
      OSCILLATION LIMIT CRITERION. . . . . . . . . 0.50000
      TOLERANCE. . . . . . . . . . . . . . . . . .  0.0000
   PRINT OUTPUT CONTROLS . . . . . . . . . . . . .NO PRINTOUT
   DATABASE OUTPUT CONTROLS
      ITEM     FREQUENCY   COMPONENT
       ALL       NONE
      NSOL        ALL
      RSOL        ALL
      FFLU        ALL


 SOLUTION MONITORING INFO IS WRITTEN TO FILE=
file.mntr



 *** LOAD STEP    37   SUBSTEP     1  COMPLETED.    CUM ITER =    855
 *** TIME =   2.24100         TIME INC =  0.100000E-02  NEW TRIANG MATRIX
 *** AUTO STEP TIME:  NEXT TIME INC = 0.10000E-02  UNCHANGED

 *** LOAD STEP    37   SUBSTEP     2  COMPLETED.    CUM ITER =    856
 *** TIME =   2.24200         TIME INC =  0.100000E-02  NEW TRIANG MATRIX
 *** AUTO STEP TIME:  NEXT TIME INC = 0.10000E-02  UNCHANGED

 *** LOAD STEP    37   SUBSTEP     3  COMPLETED.    CUM ITER =    857
 *** TIME =   2.24300         TIME INC =  0.100000E-02  NEW TRIANG MATRIX
 *** AUTO STEP TIME:  NEXT TIME INC = 0.10000E-02  UNCHANGED

 *** LOAD STEP    37   SUBSTEP     4  COMPLETED.    CUM ITER =    858
 *** TIME =   2.24400         TIME INC =  0.100000E-02  NEW TRIANG MATRIX
 *** AUTO STEP TIME:  NEXT TIME INC = 0.10000E-02  UNCHANGED

 *** LOAD STEP    37   SUBSTEP     5  COMPLETED.    CUM ITER =    859
 *** TIME =   2.24500         TIME INC =  0.100000E-02  NEW TRIANG MATRIX
 *** AUTO STEP TIME:  NEXT TIME INC = 0.10000E-02  UNCHANGED

 *** LOAD STEP    37   SUBSTEP     6  COMPLETED.    CUM ITER =    860
 *** TIME =   2.24600         TIME INC =  0.100000E-02  NEW TRIANG MATRIX
 *** AUTO STEP TIME:  NEXT TIME INC = 0.10000E-02  UNCHANGED

 *** LOAD STEP    37   SUBSTEP     7  COMPLETED.    CUM ITER =    861
 *** TIME =   2.24700         TIME INC =  0.100000E-02  NEW TRIANG MATRIX
 *** AUTO STEP TIME:  NEXT TIME INC = 0.10000E-02  UNCHANGED
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*** LOAD STEP    37   SUBSTEP     8  COMPLETED.    CUM ITER =    862
*** TIME =   2.24800         TIME INC =  0.100000E-02  NEW TRIANG MATRIX
*** AUTO STEP TIME:  NEXT TIME INC = 0.10000E-02  UNCHANGED

*** LOAD STEP    37   SUBSTEP     9  COMPLETED.    CUM ITER =    863
*** TIME =   2.24900         TIME INC =  0.100000E-02  NEW TRIANG MATRIX
*** AUTO STEP TIME:  NEXT TIME INC = 0.10000E-02  UNCHANGED

*** LOAD STEP    37   SUBSTEP    10  COMPLETED.    CUM ITER =    864
*** TIME =   2.25000         TIME INC =  0.100000E-02  NEW TRIANG MATRIX
*** AUTO STEP TIME:  NEXT TIME INC = 0.10000E-02  UNCHANGED

*** LOAD STEP    37   SUBSTEP    11  COMPLETED.    CUM ITER =    865
*** TIME =   2.25100         TIME INC =  0.100000E-02  NEW TRIANG MATRIX
*** AUTO STEP TIME:  NEXT TIME INC = 0.10000E-02  UNCHANGED

*** LOAD STEP    37   SUBSTEP    12  COMPLETED.    CUM ITER =    866
*** TIME =   2.25200         TIME INC =  0.100000E-02  NEW TRIANG MATRIX
*** AUTO STEP TIME:  NEXT TIME INC = 0.10000E-02  UNCHANGED

*** LOAD STEP    37   SUBSTEP    13  COMPLETED.    CUM ITER =    867
*** TIME =   2.25300         TIME INC =  0.100000E-02  NEW TRIANG MATRIX
*** AUTO STEP TIME:  NEXT TIME INC = 0.10000E-02  UNCHANGED

*** LOAD STEP    37   SUBSTEP    14  COMPLETED.    CUM ITER =    868
*** TIME =   2.25400         TIME INC =  0.100000E-02  NEW TRIANG MATRIX
*** AUTO STEP TIME:  NEXT TIME INC = 0.10000E-02  UNCHANGED

*** LOAD STEP    37   SUBSTEP    15  COMPLETED.    CUM ITER =    869
*** TIME =   2.25500         TIME INC =  0.100000E-02  NEW TRIANG MATRIX
*** AUTO STEP TIME:  NEXT TIME INC = 0.10000E-02  UNCHANGED

*** LOAD STEP    37   SUBSTEP    16  COMPLETED.    CUM ITER =    870
*** TIME =   2.25600         TIME INC =  0.100000E-02  NEW TRIANG MATRIX
*** AUTO STEP TIME:  NEXT TIME INC = 0.10000E-02  UNCHANGED

*** LOAD STEP    37   SUBSTEP    17  COMPLETED.    CUM ITER =    871
*** TIME =   2.25700         TIME INC =  0.100000E-02  NEW TRIANG MATRIX
*** AUTO STEP TIME:  NEXT TIME INC = 0.10000E-02  UNCHANGED

*** LOAD STEP    37   SUBSTEP    18  COMPLETED.    CUM ITER =    872
*** TIME =   2.25800         TIME INC =  0.100000E-02  NEW TRIANG MATRIX
*** AUTO STEP TIME:  NEXT TIME INC = 0.10000E-02  UNCHANGED

*** LOAD STEP    37   SUBSTEP    19  COMPLETED.    CUM ITER =    873
*** TIME =   2.25900         TIME INC =  0.100000E-02  NEW TRIANG MATRIX
*** AUTO STEP TIME:  NEXT TIME INC = 0.10000E-02  UNCHANGED

*** LOAD STEP    37   SUBSTEP    20  COMPLETED.    CUM ITER =    874
*** TIME =   2.26000         TIME INC =  0.100000E-02  NEW TRIANG MATRIX
*** AUTO STEP TIME:  NEXT TIME INC = 0.10000E-02  UNCHANGED

*** LOAD STEP    37   SUBSTEP    21  COMPLETED.    CUM ITER =    875
*** TIME =   2.26100         TIME INC =  0.100000E-02  NEW TRIANG MATRIX
*** AUTO STEP TIME:  NEXT TIME INC = 0.10000E-02  UNCHANGED

*** LOAD STEP    37   SUBSTEP    22  COMPLETED.    CUM ITER =    876
*** TIME =   2.26200         TIME INC =  0.100000E-02  NEW TRIANG MATRIX
*** AUTO STEP TIME:  NEXT TIME INC = 0.10000E-02  UNCHANGED

*** LOAD STEP    37   SUBSTEP    23  COMPLETED.    CUM ITER =    877
*** TIME =   2.26300         TIME INC =  0.100000E-02  NEW TRIANG MATRIX
*** AUTO STEP TIME:  NEXT TIME INC = 0.10000E-02  UNCHANGED

*** LOAD STEP    37   SUBSTEP    24  COMPLETED.    CUM ITER =    878
*** TIME =   2.26400         TIME INC =  0.100000E-02  NEW TRIANG MATRIX
*** AUTO STEP TIME:  NEXT TIME INC = 0.10000E-02  UNCHANGED

*** LOAD STEP    37   SUBSTEP    25  COMPLETED.    CUM ITER =    879
*** TIME =   2.26500         TIME INC =  0.100000E-02  NEW TRIANG MATRIX
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*** AUTO STEP TIME:  NEXT TIME INC = 0.10000E-02  UNCHANGED

*** LOAD STEP    37   SUBSTEP    26  COMPLETED.    CUM ITER =    880
*** TIME =   2.26600         TIME INC =  0.100000E-02  NEW TRIANG MATRIX
*** AUTO STEP TIME:  NEXT TIME INC = 0.10000E-02  UNCHANGED

*** LOAD STEP    37   SUBSTEP    27  COMPLETED.    CUM ITER =    881
*** TIME =   2.26700         TIME INC =  0.100000E-02  NEW TRIANG MATRIX
*** AUTO STEP TIME:  NEXT TIME INC = 0.10000E-02  UNCHANGED

*** LOAD STEP    37   SUBSTEP    28  COMPLETED.    CUM ITER =    882
*** TIME =   2.26800         TIME INC =  0.100000E-02  NEW TRIANG MATRIX
*** AUTO STEP TIME:  NEXT TIME INC = 0.10000E-02  UNCHANGED

*** LOAD STEP    37   SUBSTEP    29  COMPLETED.    CUM ITER =    883
*** TIME =   2.26900         TIME INC =  0.100000E-02  NEW TRIANG MATRIX
*** AUTO STEP TIME:  NEXT TIME INC = 0.10000E-02  UNCHANGED

*** LOAD STEP    37   SUBSTEP    30  COMPLETED.    CUM ITER =    884
*** TIME =   2.27000         TIME INC =  0.100000E-02  NEW TRIANG MATRIX
*** AUTO STEP TIME:  NEXT TIME INC = 0.10000E-02  UNCHANGED

*** LOAD STEP    37   SUBSTEP    31  COMPLETED.    CUM ITER =    885
*** TIME =   2.27100         TIME INC =  0.100000E-02  NEW TRIANG MATRIX
*** AUTO STEP TIME:  NEXT TIME INC = 0.10000E-02  UNCHANGED

*** LOAD STEP    37   SUBSTEP    32  COMPLETED.    CUM ITER =    886
*** TIME =   2.27200         TIME INC =  0.100000E-02  NEW TRIANG MATRIX
*** AUTO STEP TIME:  NEXT TIME INC = 0.10000E-02  UNCHANGED

*** LOAD STEP    37   SUBSTEP    33  COMPLETED.    CUM ITER =    887
*** TIME =   2.27300         TIME INC =  0.100000E-02  NEW TRIANG MATRIX
*** AUTO STEP TIME:  NEXT TIME INC = 0.10000E-02  UNCHANGED

*** LOAD STEP    37   SUBSTEP    34  COMPLETED.    CUM ITER =    888
*** TIME =   2.27400         TIME INC =  0.100000E-02  NEW TRIANG MATRIX
*** AUTO STEP TIME:  NEXT TIME INC = 0.10000E-02  UNCHANGED

*** LOAD STEP    37   SUBSTEP    35  COMPLETED.    CUM ITER =    889
*** TIME =   2.27500         TIME INC =  0.100000E-02  NEW TRIANG MATRIX
*** AUTO STEP TIME:  NEXT TIME INC = 0.10000E-02  UNCHANGED

*** LOAD STEP    37   SUBSTEP    36  COMPLETED.    CUM ITER =    890
*** TIME =   2.27600         TIME INC =  0.100000E-02  NEW TRIANG MATRIX
*** AUTO STEP TIME:  NEXT TIME INC = 0.10000E-02  UNCHANGED

*** LOAD STEP    37   SUBSTEP    37  COMPLETED.    CUM ITER =    891
*** TIME =   2.27700         TIME INC =  0.100000E-02  NEW TRIANG MATRIX
*** AUTO STEP TIME:  NEXT TIME INC = 0.10000E-02  UNCHANGED

*** LOAD STEP    37   SUBSTEP    38  COMPLETED.    CUM ITER =    892
*** TIME =   2.27800         TIME INC =  0.100000E-02  NEW TRIANG MATRIX
*** AUTO STEP TIME:  NEXT TIME INC = 0.10000E-02  UNCHANGED

*** LOAD STEP    37   SUBSTEP    39  COMPLETED.    CUM ITER =    893
*** TIME =   2.27900         TIME INC =  0.100000E-02  NEW TRIANG MATRIX
*** AUTO STEP TIME:  NEXT TIME INC = 0.10000E-02  UNCHANGED

*** LOAD STEP    37   SUBSTEP    40  COMPLETED.    CUM ITER =    894
*** TIME =   2.28000         TIME INC =  0.100000E-02  NEW TRIANG MATRIX
*** AUTO STEP TIME:  NEXT TIME INC = 0.10000E-02  UNCHANGED

*** LOAD STEP    37   SUBSTEP    41  COMPLETED.    CUM ITER =    895
*** TIME =   2.28100         TIME INC =  0.100000E-02  NEW TRIANG MATRIX
*** AUTO STEP TIME:  NEXT TIME INC = 0.10000E-02  UNCHANGED

*** LOAD STEP    37   SUBSTEP    42  COMPLETED.    CUM ITER =    896
*** TIME =   2.28200         TIME INC =  0.100000E-02  NEW TRIANG MATRIX
*** AUTO STEP TIME:  NEXT TIME INC = 0.10000E-02  UNCHANGED
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*** LOAD STEP    37   SUBSTEP    43  COMPLETED.    CUM ITER =    897
*** TIME =   2.28300         TIME INC =  0.100000E-02  NEW TRIANG MATRIX
*** AUTO STEP TIME:  NEXT TIME INC = 0.10000E-02  UNCHANGED

*** LOAD STEP    37   SUBSTEP    44  COMPLETED.    CUM ITER =    898
*** TIME =   2.28400         TIME INC =  0.100000E-02  NEW TRIANG MATRIX
*** AUTO STEP TIME:  NEXT TIME INC = 0.10000E-02  UNCHANGED

*** LOAD STEP    37   SUBSTEP    45  COMPLETED.    CUM ITER =    899
*** TIME =   2.28500         TIME INC =  0.100000E-02  NEW TRIANG MATRIX
*** AUTO STEP TIME:  NEXT TIME INC = 0.10000E-02  UNCHANGED

*** LOAD STEP    37   SUBSTEP    46  COMPLETED.    CUM ITER =    900
*** TIME =   2.28600         TIME INC =  0.100000E-02  NEW TRIANG MATRIX
*** AUTO STEP TIME:  NEXT TIME INC = 0.10000E-02  UNCHANGED

*** LOAD STEP    37   SUBSTEP    47  COMPLETED.    CUM ITER =    901
*** TIME =   2.28700         TIME INC =  0.100000E-02  NEW TRIANG MATRIX
*** AUTO STEP TIME:  NEXT TIME INC = 0.10000E-02  UNCHANGED

*** LOAD STEP    37   SUBSTEP    48  COMPLETED.    CUM ITER =    902
*** TIME =   2.28800         TIME INC =  0.100000E-02  NEW TRIANG MATRIX
*** AUTO STEP TIME:  NEXT TIME INC = 0.10000E-02  UNCHANGED

*** LOAD STEP    37   SUBSTEP    49  COMPLETED.    CUM ITER =    903
*** TIME =   2.28900         TIME INC =  0.100000E-02  NEW TRIANG MATRIX
*** AUTO STEP TIME:  NEXT TIME INC = 0.10000E-02  UNCHANGED

*** LOAD STEP    37   SUBSTEP    50  COMPLETED.    CUM ITER =    904
*** TIME =   2.29000         TIME INC =  0.100000E-02  NEW TRIANG MATRIX
*** AUTO STEP TIME:  NEXT TIME INC = 0.10000E-02  UNCHANGED

*** LOAD STEP    37   SUBSTEP    51  COMPLETED.    CUM ITER =    905
*** TIME =   2.29100         TIME INC =  0.100000E-02  NEW TRIANG MATRIX
*** AUTO STEP TIME:  NEXT TIME INC = 0.10000E-02  UNCHANGED

*** LOAD STEP    37   SUBSTEP    52  COMPLETED.    CUM ITER =    906
*** TIME =   2.29200         TIME INC =  0.100000E-02  NEW TRIANG MATRIX
*** AUTO STEP TIME:  NEXT TIME INC = 0.10000E-02  UNCHANGED

*** LOAD STEP    37   SUBSTEP    53  COMPLETED.    CUM ITER =    907
*** TIME =   2.29300         TIME INC =  0.100000E-02  NEW TRIANG MATRIX
*** AUTO STEP TIME:  NEXT TIME INC = 0.10000E-02  UNCHANGED

*** LOAD STEP    37   SUBSTEP    54  COMPLETED.    CUM ITER =    908
*** TIME =   2.29400         TIME INC =  0.100000E-02  NEW TRIANG MATRIX
*** AUTO STEP TIME:  NEXT TIME INC = 0.10000E-02  UNCHANGED

*** LOAD STEP    37   SUBSTEP    55  COMPLETED.    CUM ITER =    909
*** TIME =   2.29500         TIME INC =  0.100000E-02  NEW TRIANG MATRIX
*** AUTO STEP TIME:  NEXT TIME INC = 0.10000E-02  UNCHANGED

*** LOAD STEP    37   SUBSTEP    56  COMPLETED.    CUM ITER =    910
*** TIME =   2.29600         TIME INC =  0.100000E-02  NEW TRIANG MATRIX
*** AUTO STEP TIME:  NEXT TIME INC = 0.10000E-02  UNCHANGED

*** LOAD STEP    37   SUBSTEP    57  COMPLETED.    CUM ITER =    911
*** TIME =   2.29700         TIME INC =  0.100000E-02  NEW TRIANG MATRIX
*** AUTO STEP TIME:  NEXT TIME INC = 0.10000E-02  UNCHANGED

*** LOAD STEP    37   SUBSTEP    58  COMPLETED.    CUM ITER =    912
*** TIME =   2.29800         TIME INC =  0.100000E-02  NEW TRIANG MATRIX
*** AUTO STEP TIME:  NEXT TIME INC = 0.10000E-02  UNCHANGED

*** LOAD STEP    37   SUBSTEP    59  COMPLETED.    CUM ITER =    913
*** TIME =   2.29900         TIME INC =  0.100000E-02  NEW TRIANG MATRIX
*** AUTO STEP TIME:  NEXT TIME INC = 0.10000E-02  UNCHANGED

*** LOAD STEP    37   SUBSTEP    60  COMPLETED.    CUM ITER =    914
*** TIME =   2.30000         TIME INC =  0.100000E-02  NEW TRIANG MATRIX
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*** AUTO STEP TIME:  NEXT TIME INC = 0.10000E-02  UNCHANGED

*** LOAD STEP    37   SUBSTEP    61  COMPLETED.    CUM ITER =    915
*** TIME =   2.30100         TIME INC =  0.100000E-02  NEW TRIANG MATRIX
*** AUTO STEP TIME:  NEXT TIME INC = 0.10000E-02  UNCHANGED

*** LOAD STEP    37   SUBSTEP    62  COMPLETED.    CUM ITER =    916
*** TIME =   2.30200         TIME INC =  0.100000E-02  NEW TRIANG MATRIX
*** AUTO STEP TIME:  NEXT TIME INC = 0.10000E-02  UNCHANGED

*** LOAD STEP    37   SUBSTEP    63  COMPLETED.    CUM ITER =    917
*** TIME =   2.30300         TIME INC =  0.100000E-02  NEW TRIANG MATRIX
*** AUTO STEP TIME:  NEXT TIME INC = 0.10000E-02  UNCHANGED

*** LOAD STEP    37   SUBSTEP    64  COMPLETED.    CUM ITER =    918
*** TIME =   2.30400         TIME INC =  0.100000E-02  NEW TRIANG MATRIX
*** AUTO STEP TIME:  NEXT TIME INC = 0.10000E-02  UNCHANGED

*** LOAD STEP    37   SUBSTEP    65  COMPLETED.    CUM ITER =    919
*** TIME =   2.30500         TIME INC =  0.100000E-02  NEW TRIANG MATRIX
*** AUTO STEP TIME:  NEXT TIME INC = 0.10000E-02  UNCHANGED

*** LOAD STEP    37   SUBSTEP    66  COMPLETED.    CUM ITER =    920
*** TIME =   2.30600         TIME INC =  0.100000E-02  NEW TRIANG MATRIX
*** AUTO STEP TIME:  NEXT TIME INC = 0.10000E-02  UNCHANGED

*** LOAD STEP    37   SUBSTEP    67  COMPLETED.    CUM ITER =    921
*** TIME =   2.30700         TIME INC =  0.100000E-02  NEW TRIANG MATRIX
*** AUTO STEP TIME:  NEXT TIME INC = 0.10000E-02  UNCHANGED

*** LOAD STEP    37   SUBSTEP    68  COMPLETED.    CUM ITER =    922
*** TIME =   2.30800         TIME INC =  0.100000E-02  NEW TRIANG MATRIX
*** AUTO STEP TIME:  NEXT TIME INC = 0.10000E-02  UNCHANGED

*** LOAD STEP    37   SUBSTEP    69  COMPLETED.    CUM ITER =    923
*** TIME =   2.30900         TIME INC =  0.100000E-02  NEW TRIANG MATRIX
*** AUTO STEP TIME:  NEXT TIME INC = 0.10000E-02  UNCHANGED

*** LOAD STEP    37   SUBSTEP    70  COMPLETED.    CUM ITER =    924
*** TIME =   2.31000         TIME INC =  0.100000E-02  NEW TRIANG MATRIX
*** AUTO STEP TIME:  NEXT TIME INC = 0.10000E-02  UNCHANGED

*** LOAD STEP    37   SUBSTEP    71  COMPLETED.    CUM ITER =    925
*** TIME =   2.31100         TIME INC =  0.100000E-02  NEW TRIANG MATRIX
*** AUTO STEP TIME:  NEXT TIME INC = 0.10000E-02  UNCHANGED

*** LOAD STEP    37   SUBSTEP    72  COMPLETED.    CUM ITER =    926
*** TIME =   2.31200         TIME INC =  0.100000E-02  NEW TRIANG MATRIX
*** AUTO STEP TIME:  NEXT TIME INC = 0.10000E-02  UNCHANGED

*** LOAD STEP    37   SUBSTEP    73  COMPLETED.    CUM ITER =    927
*** TIME =   2.31300         TIME INC =  0.100000E-02  NEW TRIANG MATRIX
*** AUTO STEP TIME:  NEXT TIME INC = 0.10000E-02  UNCHANGED

*** LOAD STEP    37   SUBSTEP    74  COMPLETED.    CUM ITER =    928
*** TIME =   2.31400         TIME INC =  0.100000E-02  NEW TRIANG MATRIX
*** AUTO STEP TIME:  NEXT TIME INC = 0.10000E-02  UNCHANGED

*** LOAD STEP    37   SUBSTEP    75  COMPLETED.    CUM ITER =    929
*** TIME =   2.31500         TIME INC =  0.100000E-02  NEW TRIANG MATRIX
*** AUTO STEP TIME:  NEXT TIME INC = 0.10000E-02  UNCHANGED

*** LOAD STEP    37   SUBSTEP    76  COMPLETED.    CUM ITER =    930
*** TIME =   2.31600         TIME INC =  0.100000E-02  NEW TRIANG MATRIX
*** AUTO STEP TIME:  NEXT TIME INC = 0.10000E-02  UNCHANGED

*** LOAD STEP    37   SUBSTEP    77  COMPLETED.    CUM ITER =    931
*** TIME =   2.31700         TIME INC =  0.100000E-02  NEW TRIANG MATRIX
*** AUTO STEP TIME:  NEXT TIME INC = 0.10000E-02  UNCHANGED
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*** LOAD STEP    37   SUBSTEP    78  COMPLETED.    CUM ITER =    932
*** TIME =   2.31800         TIME INC =  0.100000E-02  NEW TRIANG MATRIX
*** AUTO STEP TIME:  NEXT TIME INC = 0.10000E-02  UNCHANGED

*** LOAD STEP    37   SUBSTEP    79  COMPLETED.    CUM ITER =    933
*** TIME =   2.31900         TIME INC =  0.100000E-02  NEW TRIANG MATRIX
*** AUTO STEP TIME:  NEXT TIME INC = 0.10000E-02  UNCHANGED

*** LOAD STEP    37   SUBSTEP    80  COMPLETED.    CUM ITER =    934
*** TIME =   2.32000         TIME INC =  0.100000E-02  NEW TRIANG MATRIX
*** AUTO STEP TIME:  NEXT TIME INC = 0.10000E-02  UNCHANGED

*** LOAD STEP    37   SUBSTEP    81  COMPLETED.    CUM ITER =    935
*** TIME =   2.32100         TIME INC =  0.100000E-02  NEW TRIANG MATRIX
*** AUTO STEP TIME:  NEXT TIME INC = 0.10000E-02  UNCHANGED

*** LOAD STEP    37   SUBSTEP    82  COMPLETED.    CUM ITER =    936
*** TIME =   2.32200         TIME INC =  0.100000E-02  NEW TRIANG MATRIX
*** AUTO STEP TIME:  NEXT TIME INC = 0.10000E-02  UNCHANGED

*** LOAD STEP    37   SUBSTEP    83  COMPLETED.    CUM ITER =    937
*** TIME =   2.32300         TIME INC =  0.100000E-02  NEW TRIANG MATRIX
*** AUTO STEP TIME:  NEXT TIME INC = 0.10000E-02  UNCHANGED

*** LOAD STEP    37   SUBSTEP    84  COMPLETED.    CUM ITER =    938
*** TIME =   2.32400         TIME INC =  0.100000E-02  NEW TRIANG MATRIX
*** AUTO STEP TIME:  NEXT TIME INC = 0.10000E-02  UNCHANGED

*** LOAD STEP    37   SUBSTEP    85  COMPLETED.    CUM ITER =    939
*** TIME =   2.32500         TIME INC =  0.100000E-02  NEW TRIANG MATRIX
*** AUTO STEP TIME:  NEXT TIME INC = 0.10000E-02  UNCHANGED

*** LOAD STEP    37   SUBSTEP    86  COMPLETED.    CUM ITER =    940
*** TIME =   2.32600         TIME INC =  0.100000E-02  NEW TRIANG MATRIX
*** AUTO STEP TIME:  NEXT TIME INC = 0.10000E-02  UNCHANGED

*** LOAD STEP    37   SUBSTEP    87  COMPLETED.    CUM ITER =    941
*** TIME =   2.32700         TIME INC =  0.100000E-02  NEW TRIANG MATRIX
*** AUTO STEP TIME:  NEXT TIME INC = 0.10000E-02  UNCHANGED

*** LOAD STEP    37   SUBSTEP    88  COMPLETED.    CUM ITER =    942
*** TIME =   2.32800         TIME INC =  0.100000E-02  NEW TRIANG MATRIX
*** AUTO STEP TIME:  NEXT TIME INC = 0.10000E-02  UNCHANGED

*** LOAD STEP    37   SUBSTEP    89  COMPLETED.    CUM ITER =    943
*** TIME =   2.32900         TIME INC =  0.100000E-02  NEW TRIANG MATRIX
*** AUTO STEP TIME:  NEXT TIME INC = 0.10000E-02  UNCHANGED

*** LOAD STEP    37   SUBSTEP    90  COMPLETED.    CUM ITER =    944
*** TIME =   2.33000         TIME INC =  0.100000E-02  NEW TRIANG MATRIX
*** AUTO STEP TIME:  NEXT TIME INC = 0.10000E-02  UNCHANGED

*** LOAD STEP    37   SUBSTEP    91  COMPLETED.    CUM ITER =    945
*** TIME =   2.33100         TIME INC =  0.100000E-02  NEW TRIANG MATRIX
*** AUTO STEP TIME:  NEXT TIME INC = 0.10000E-02  UNCHANGED

*** LOAD STEP    37   SUBSTEP    92  COMPLETED.    CUM ITER =    946
*** TIME =   2.33200         TIME INC =  0.100000E-02  NEW TRIANG MATRIX
*** AUTO STEP TIME:  NEXT TIME INC = 0.10000E-02  UNCHANGED

*** LOAD STEP    37   SUBSTEP    93  COMPLETED.    CUM ITER =    947
*** TIME =   2.33300         TIME INC =  0.100000E-02  NEW TRIANG MATRIX
*** AUTO STEP TIME:  NEXT TIME INC = 0.10000E-02  UNCHANGED

*** LOAD STEP    37   SUBSTEP    94  COMPLETED.    CUM ITER =    948
*** TIME =   2.33400         TIME INC =  0.100000E-02  NEW TRIANG MATRIX
*** AUTO STEP TIME:  NEXT TIME INC = 0.10000E-02  UNCHANGED

*** LOAD STEP    37   SUBSTEP    95  COMPLETED.    CUM ITER =    949
*** TIME =   2.33500         TIME INC =  0.100000E-02  NEW TRIANG MATRIX
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*** AUTO STEP TIME:  NEXT TIME INC = 0.10000E-02  UNCHANGED

*** LOAD STEP    37   SUBSTEP    96  COMPLETED.    CUM ITER =    950
*** TIME =   2.33600         TIME INC =  0.100000E-02  NEW TRIANG MATRIX
*** AUTO STEP TIME:  NEXT TIME INC = 0.10000E-02  UNCHANGED

*** LOAD STEP    37   SUBSTEP    97  COMPLETED.    CUM ITER =    951
*** TIME =   2.33700         TIME INC =  0.100000E-02  NEW TRIANG MATRIX
*** AUTO STEP TIME:  NEXT TIME INC = 0.10000E-02  UNCHANGED

*** LOAD STEP    37   SUBSTEP    98  COMPLETED.    CUM ITER =    952
*** TIME =   2.33800         TIME INC =  0.100000E-02  NEW TRIANG MATRIX
*** AUTO STEP TIME:  NEXT TIME INC = 0.10000E-02  UNCHANGED

*** LOAD STEP    37   SUBSTEP    99  COMPLETED.    CUM ITER =    953
*** TIME =   2.33900         TIME INC =  0.100000E-02  NEW TRIANG MATRIX
*** AUTO STEP TIME:  NEXT TIME INC = 0.10000E-02  UNCHANGED

*** LOAD STEP    37   SUBSTEP   100  COMPLETED.    CUM ITER =    954
*** TIME =   2.34000         TIME INC =  0.100000E-02  NEW TRIANG MATRIX
************************************************
*************** FINISHED SOLVE FOR LS 37 *************
************************************************
****************** SOLVE FOR LS 38 ****************

SPECIFIED BODY FORCE HGEN FOR ALL PICKED ELEMENTS AT STARTING LOCATION      1
IS SET ACCORDING TO TABLE PARAMETER = _LOADVARI202

USE AUTOMATIC TIME STEPPING THIS LOAD STEP

USE     100 SUBSTEPS INITIALLY THIS LOAD STEP FOR ALL  DEGREES OF FREEDOM
FOR AUTOMATIC TIME STEPPING:
  USE   1000 SUBSTEPS AS A MAXIMUM
  USE     10 SUBSTEPS AS A MINIMUM

TIME=  2.4400

INCLUDE TRANSIENT EFFECTS FOR  ALL DEGREES OF FREEDOM THIS LOAD STEP

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

WRITE RSOL ITEMS TO THE DATABASE WITH A FREQUENCY OF ALL
  FOR ALL APPLICABLE ENTITIES

WRITE FFLU ITEMS TO THE DATABASE WITH A FREQUENCY OF ALL
  FOR ALL APPLICABLE ENTITIES

CONVERGENCE ON HEAT BASED ON THE NORM OF THE N-R LOAD
  WITH A TOLERANCE OF 0.1000E-02 AND A MINIMUM REFERENCE VALUE OF 0.1000E-02
  USING THE L2 NORM (CHECK THE SRSS VALUE)

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

*** WARNING ***                         CP =    2659.750   TIME= 10:21:08
Material number 4 (used by element 65408 ) should normally have at
least one MP or one TB type command associated with it.  Output of
energy by material may not be available.

*** NOTE ***                            CP =    2660.047   TIME= 10:21:08
The step data was checked and warning messages were found.
 Please review output or errors file ( D:\Daten\Ansys
Simulation\_ProjectScratch\Scr8B73\file.err ) for these warning
messages.
```

1

 ***** ANSYS - ENGINEERING ANALYSIS SYSTEM RELEASE 12.1   *****
 ANSYS Academic Teaching Advanced
 00000000   VERSION=WINDOWS x64   10:21:08 SEP 23, 2010 CP=   2660.750

 Schweißen Flachprobe--Thermisch-transient (E5)

                     L O A D   S T E P   O P T I O N S

   LOAD STEP NUMBER.   38
   TIME AT END OF THE LOAD STEP. 2.4400
   AUTOMATIC TIME STEPPING . . . .   ON
      INITIAL NUMBER OF SUBSTEPS   100
      MAXIMUM NUMBER OF SUBSTEPS 1000
      MINIMUM NUMBER OF SUBSTEPS   10
   STEP CHANGE BOUNDARY CONDITIONS . . . .   YES
   TRANSIENT (INERTIA) EFFECTS
      THERMAL DOFS . . . .   ON
   TRANSIENT INTEGRATION PARAMETERS
      THETA. 1.0000
      OSCILLATION LIMIT CRITERION. 0.50000
      TOLERANCE. 0.0000
   PRINT OUTPUT CONTROLS . . . . .NO PRINTOUT
   DATABASE OUTPUT CONTROLS
      ITEM   FREQUENCY   COMPONENT
       ALL   NONE
      NSOL   ALL
      RSOL   ALL
      FFLU   ALL

 SOLUTION MONITORING INFO IS WRITTEN TO FILE=
file.mntr

 *** LOAD STEP   38   SUBSTEP   1 COMPLETED.   CUM ITER =   955
 *** TIME =   2.34100   TIME INC = 0.100000E-02 NEW TRIANG MATRIX
 *** AUTO STEP TIME: NEXT TIME INC = 0.10000E-02 UNCHANGED

 *** LOAD STEP   38   SUBSTEP   2 COMPLETED.   CUM ITER =   956
 *** TIME =   2.34200   TIME INC = 0.100000E-02 NEW TRIANG MATRIX
 *** AUTO STEP TIME: NEXT TIME INC = 0.10000E-02 UNCHANGED

 *** LOAD STEP   38   SUBSTEP   3 COMPLETED.   CUM ITER =   957
 *** TIME =   2.34300   TIME INC = 0.100000E-02 NEW TRIANG MATRIX
 *** AUTO STEP TIME: NEXT TIME INC = 0.10000E-02 UNCHANGED

 *** LOAD STEP   38   SUBSTEP   4 COMPLETED.   CUM ITER =   958
 *** TIME =   2.34400   TIME INC = 0.100000E-02 NEW TRIANG MATRIX
 *** AUTO STEP TIME: NEXT TIME INC = 0.10000E-02 UNCHANGED

 *** LOAD STEP   38   SUBSTEP   5 COMPLETED.   CUM ITER =   959
 *** TIME =   2.34500   TIME INC = 0.100000E-02 NEW TRIANG MATRIX
 *** AUTO STEP TIME: NEXT TIME INC = 0.10000E-02 UNCHANGED

 *** LOAD STEP   38   SUBSTEP   6 COMPLETED.   CUM ITER =   960
 *** TIME =   2.34600   TIME INC = 0.100000E-02 NEW TRIANG MATRIX
 *** AUTO STEP TIME: NEXT TIME INC = 0.10000E-02 UNCHANGED

 *** LOAD STEP   38   SUBSTEP   7 COMPLETED.   CUM ITER =   961
 *** TIME =   2.34700   TIME INC = 0.100000E-02 NEW TRIANG MATRIX
 *** AUTO STEP TIME: NEXT TIME INC = 0.10000E-02 UNCHANGED

 *** LOAD STEP   38   SUBSTEP   8 COMPLETED.   CUM ITER =   962
 *** TIME =   2.34800   TIME INC = 0.100000E-02 NEW TRIANG MATRIX
 *** AUTO STEP TIME: NEXT TIME INC = 0.10000E-02 UNCHANGED

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*** LOAD STEP    38   SUBSTEP     9  COMPLETED.    CUM ITER =    963
*** TIME =   2.34900         TIME INC =  0.100000E-02  NEW TRIANG MATRIX
*** AUTO STEP TIME:  NEXT TIME INC = 0.10000E-02  UNCHANGED

*** LOAD STEP    38   SUBSTEP    10  COMPLETED.    CUM ITER =    964
*** TIME =   2.35000         TIME INC =  0.100000E-02  NEW TRIANG MATRIX
*** AUTO STEP TIME:  NEXT TIME INC = 0.10000E-02  UNCHANGED

*** LOAD STEP    38   SUBSTEP    11  COMPLETED.    CUM ITER =    965
*** TIME =   2.35100         TIME INC =  0.100000E-02  NEW TRIANG MATRIX
*** AUTO STEP TIME:  NEXT TIME INC = 0.10000E-02  UNCHANGED

*** LOAD STEP    38   SUBSTEP    12  COMPLETED.    CUM ITER =    966
*** TIME =   2.35200         TIME INC =  0.100000E-02  NEW TRIANG MATRIX
*** AUTO STEP TIME:  NEXT TIME INC = 0.10000E-02  UNCHANGED

*** LOAD STEP    38   SUBSTEP    13  COMPLETED.    CUM ITER =    967
*** TIME =   2.35300         TIME INC =  0.100000E-02  NEW TRIANG MATRIX
*** AUTO STEP TIME:  NEXT TIME INC = 0.10000E-02  UNCHANGED

*** LOAD STEP    38   SUBSTEP    14  COMPLETED.    CUM ITER =    968
*** TIME =   2.35400         TIME INC =  0.100000E-02  NEW TRIANG MATRIX
*** AUTO STEP TIME:  NEXT TIME INC = 0.10000E-02  UNCHANGED

*** LOAD STEP    38   SUBSTEP    15  COMPLETED.    CUM ITER =    969
*** TIME =   2.35500         TIME INC =  0.100000E-02  NEW TRIANG MATRIX
*** AUTO STEP TIME:  NEXT TIME INC = 0.10000E-02  UNCHANGED

*** LOAD STEP    38   SUBSTEP    16  COMPLETED.    CUM ITER =    970
*** TIME =   2.35600         TIME INC =  0.100000E-02  NEW TRIANG MATRIX
*** AUTO STEP TIME:  NEXT TIME INC = 0.10000E-02  UNCHANGED

*** LOAD STEP    38   SUBSTEP    17  COMPLETED.    CUM ITER =    971
*** TIME =   2.35700         TIME INC =  0.100000E-02  NEW TRIANG MATRIX
*** AUTO STEP TIME:  NEXT TIME INC = 0.10000E-02  UNCHANGED

*** LOAD STEP    38   SUBSTEP    18  COMPLETED.    CUM ITER =    972
*** TIME =   2.35800         TIME INC =  0.100000E-02  NEW TRIANG MATRIX
*** AUTO STEP TIME:  NEXT TIME INC = 0.10000E-02  UNCHANGED

*** LOAD STEP    38   SUBSTEP    19  COMPLETED.    CUM ITER =    973
*** TIME =   2.35900         TIME INC =  0.100000E-02  NEW TRIANG MATRIX
*** AUTO STEP TIME:  NEXT TIME INC = 0.10000E-02  UNCHANGED

*** LOAD STEP    38   SUBSTEP    20  COMPLETED.    CUM ITER =    974
*** TIME =   2.36000         TIME INC =  0.100000E-02  NEW TRIANG MATRIX
*** AUTO STEP TIME:  NEXT TIME INC = 0.10000E-02  UNCHANGED

*** LOAD STEP    38   SUBSTEP    21  COMPLETED.    CUM ITER =    975
*** TIME =   2.36100         TIME INC =  0.100000E-02  NEW TRIANG MATRIX
*** AUTO STEP TIME:  NEXT TIME INC = 0.10000E-02  UNCHANGED

*** LOAD STEP    38   SUBSTEP    22  COMPLETED.    CUM ITER =    976
*** TIME =   2.36200         TIME INC =  0.100000E-02  NEW TRIANG MATRIX
*** AUTO STEP TIME:  NEXT TIME INC = 0.10000E-02  UNCHANGED

*** LOAD STEP    38   SUBSTEP    23  COMPLETED.    CUM ITER =    977
*** TIME =   2.36300         TIME INC =  0.100000E-02  NEW TRIANG MATRIX
*** AUTO STEP TIME:  NEXT TIME INC = 0.10000E-02  UNCHANGED

*** LOAD STEP    38   SUBSTEP    24  COMPLETED.    CUM ITER =    978
*** TIME =   2.36400         TIME INC =  0.100000E-02  NEW TRIANG MATRIX
*** AUTO STEP TIME:  NEXT TIME INC = 0.10000E-02  UNCHANGED

*** LOAD STEP    38   SUBSTEP    25  COMPLETED.    CUM ITER =    979
*** TIME =   2.36500         TIME INC =  0.100000E-02  NEW TRIANG MATRIX
*** AUTO STEP TIME:  NEXT TIME INC = 0.10000E-02  UNCHANGED

*** LOAD STEP    38   SUBSTEP    26  COMPLETED.    CUM ITER =    980
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*** TIME =   2.36600         TIME INC =  0.100000E-02  NEW TRIANG MATRIX
*** AUTO STEP TIME:  NEXT TIME INC = 0.10000E-02  UNCHANGED

*** LOAD STEP    38   SUBSTEP    27  COMPLETED.    CUM ITER =    981
*** TIME =   2.36700         TIME INC =  0.100000E-02  NEW TRIANG MATRIX
*** AUTO TIME STEP:  NEXT TIME INC = 0.20000E-02  INCREASED (FACTOR = 2.0000)

*** LOAD STEP    38   SUBSTEP    28  COMPLETED.    CUM ITER =    982
*** TIME =   2.36900         TIME INC =  0.200000E-02  NEW TRIANG MATRIX
*** AUTO STEP TIME:  NEXT TIME INC = 0.20000E-02  UNCHANGED

*** LOAD STEP    38   SUBSTEP    29  COMPLETED.    CUM ITER =    983
*** TIME =   2.37100         TIME INC =  0.200000E-02  NEW TRIANG MATRIX
*** AUTO STEP TIME:  NEXT TIME INC = 0.20000E-02  UNCHANGED

*** LOAD STEP    38   SUBSTEP    30  COMPLETED.    CUM ITER =    984
*** TIME =   2.37300         TIME INC =  0.200000E-02  NEW TRIANG MATRIX
*** AUTO STEP TIME:  NEXT TIME INC = 0.20000E-02  UNCHANGED

*** LOAD STEP    38   SUBSTEP    31  COMPLETED.    CUM ITER =    985
*** TIME =   2.37500         TIME INC =  0.200000E-02  NEW TRIANG MATRIX
*** AUTO STEP TIME:  NEXT TIME INC = 0.20000E-02  UNCHANGED

*** LOAD STEP    38   SUBSTEP    32  COMPLETED.    CUM ITER =    986
*** TIME =   2.37700         TIME INC =  0.200000E-02  NEW TRIANG MATRIX
*** AUTO STEP TIME:  NEXT TIME INC = 0.20000E-02  UNCHANGED

*** LOAD STEP    38   SUBSTEP    33  COMPLETED.    CUM ITER =    987
*** TIME =   2.37900         TIME INC =  0.200000E-02  NEW TRIANG MATRIX
*** AUTO STEP TIME:  NEXT TIME INC = 0.20000E-02  UNCHANGED

*** LOAD STEP    38   SUBSTEP    34  COMPLETED.    CUM ITER =    988
*** TIME =   2.38100         TIME INC =  0.200000E-02  NEW TRIANG MATRIX
*** AUTO STEP TIME:  NEXT TIME INC = 0.20000E-02  UNCHANGED

*** LOAD STEP    38   SUBSTEP    35  COMPLETED.    CUM ITER =    989
*** TIME =   2.38300         TIME INC =  0.200000E-02  NEW TRIANG MATRIX
*** AUTO STEP TIME:  NEXT TIME INC = 0.20000E-02  UNCHANGED

*** LOAD STEP    38   SUBSTEP    36  COMPLETED.    CUM ITER =    990
*** TIME =   2.38500         TIME INC =  0.200000E-02  NEW TRIANG MATRIX
*** AUTO STEP TIME:  NEXT TIME INC = 0.20000E-02  UNCHANGED

*** LOAD STEP    38   SUBSTEP    37  COMPLETED.    CUM ITER =    991
*** TIME =   2.38700         TIME INC =  0.200000E-02  NEW TRIANG MATRIX
*** AUTO STEP TIME:  NEXT TIME INC = 0.20000E-02  UNCHANGED

*** LOAD STEP    38   SUBSTEP    38  COMPLETED.    CUM ITER =    992
*** TIME =   2.38900         TIME INC =  0.200000E-02  NEW TRIANG MATRIX
*** AUTO STEP TIME:  NEXT TIME INC = 0.20000E-02  UNCHANGED

*** LOAD STEP    38   SUBSTEP    39  COMPLETED.    CUM ITER =    993
*** TIME =   2.39100         TIME INC =  0.200000E-02  NEW TRIANG MATRIX
*** AUTO STEP TIME:  NEXT TIME INC = 0.20000E-02  UNCHANGED

*** LOAD STEP    38   SUBSTEP    40  COMPLETED.    CUM ITER =    994
*** TIME =   2.39300         TIME INC =  0.200000E-02  NEW TRIANG MATRIX
*** AUTO STEP TIME:  NEXT TIME INC = 0.20000E-02  UNCHANGED

*** LOAD STEP    38   SUBSTEP    41  COMPLETED.    CUM ITER =    995
*** TIME =   2.39500         TIME INC =  0.200000E-02  NEW TRIANG MATRIX
*** AUTO STEP TIME:  NEXT TIME INC = 0.20000E-02  UNCHANGED

*** LOAD STEP    38   SUBSTEP    42  COMPLETED.    CUM ITER =    996
*** TIME =   2.39700         TIME INC =  0.200000E-02  NEW TRIANG MATRIX
*** AUTO STEP TIME:  NEXT TIME INC = 0.20000E-02  UNCHANGED

*** LOAD STEP    38   SUBSTEP    43  COMPLETED.    CUM ITER =    997
*** TIME =   2.39900         TIME INC =  0.200000E-02  NEW TRIANG MATRIX
*** AUTO STEP TIME:  NEXT TIME INC = 0.20000E-02  UNCHANGED
```

```
 *** LOAD STEP    38   SUBSTEP    44  COMPLETED.    CUM ITER =    998
 *** TIME =   2.40100         TIME INC =  0.200000E-02  NEW TRIANG MATRIX
 *** AUTO STEP TIME:  NEXT TIME INC = 0.20000E-02  UNCHANGED

 *** LOAD STEP    38   SUBSTEP    45  COMPLETED.    CUM ITER =    999
 *** TIME =   2.40300         TIME INC =  0.200000E-02  NEW TRIANG MATRIX
 *** AUTO STEP TIME:  NEXT TIME INC = 0.20000E-02  UNCHANGED

 *** LOAD STEP    38   SUBSTEP    46  COMPLETED.    CUM ITER =   1000
 *** TIME =   2.40500         TIME INC =  0.200000E-02  NEW TRIANG MATRIX
 *** AUTO STEP TIME:  NEXT TIME INC = 0.20000E-02  UNCHANGED


 *** ERROR ***                           CP =    2783.938   TIME= 10:22:19
 Number of results on results file exceeds maximum of 1000.
  Maximum may be increased with /CONFIG command.


 NUMBER OF WARNING MESSAGES ENCOUNTERED=         40
 NUMBER OF ERROR   MESSAGES ENCOUNTERED=          1



 ***** PROBLEM TERMINATED BY INDICATED ERROR(S) OR BY END OF INPUT DATA *****

 *** PAGE FILE USED  ***
 NUMBER OF R/W OPERATIONS=      1491586
 MAXIMUM RECORD NUMBER   =         1619
 RECORD SIZE (I*4 WORDS) =        16384
 PAGE FILE SIZE (MB)     =      101.188

+---------------------- A N S Y S   S T A T I S T I C S -----------------------+

Release: 12.1       UP20091102   Version: WINDOWS x64
Date Run: 09/23/2010   Time: 10:22
Windows Process ID:         3608

Number of cores:   2 (Shared Memory Parallel)

Job Name: file
Working Directory: D:\Daten\Ansys Simulation\_ProjectScratch\Scr8B73

Elapsed time spent pre-processing model (/PREP7)  :      1.0 seconds
Elapsed time spent solution - preprocessing       :     43.6 seconds
Elapsed time spent computing solution             :   1546.3 seconds
Elapsed time spent solution - postprocessing      :      0.0 seconds
Elapsed time spent post-processing model (/POST1) :      0.0 seconds

+------------------ E N D   A N S Y S   S T A T I S T I C S -------------------+


 *------------------------------------------------------------------------------*
 |                                                                              |
 |                            ANSYS RUN COMPLETED                               |
 |                                                                              |
 |------------------------------------------------------------------------------|
 |                                                                              |
 |            Release 12.1           UP20091102         WINDOWS x64             |
 |                                                                              |
 |------------------------------------------------------------------------------|
 |                                                                              |
 |   Maximum Scratch Memory Used       =    35069980 Words      133.781 MB     |
 |                                                                              |
 |------------------------------------------------------------------------------|
 |                                                                              |
 |        CP Time      (sec) =       2784.016       Time  =  10:22:19           |
 |        Elapsed Time (sec) =       1597.000       Date  =  09/23/2010         |
 |                                                                              |
 *------------------------------------------------------------------------------*
```