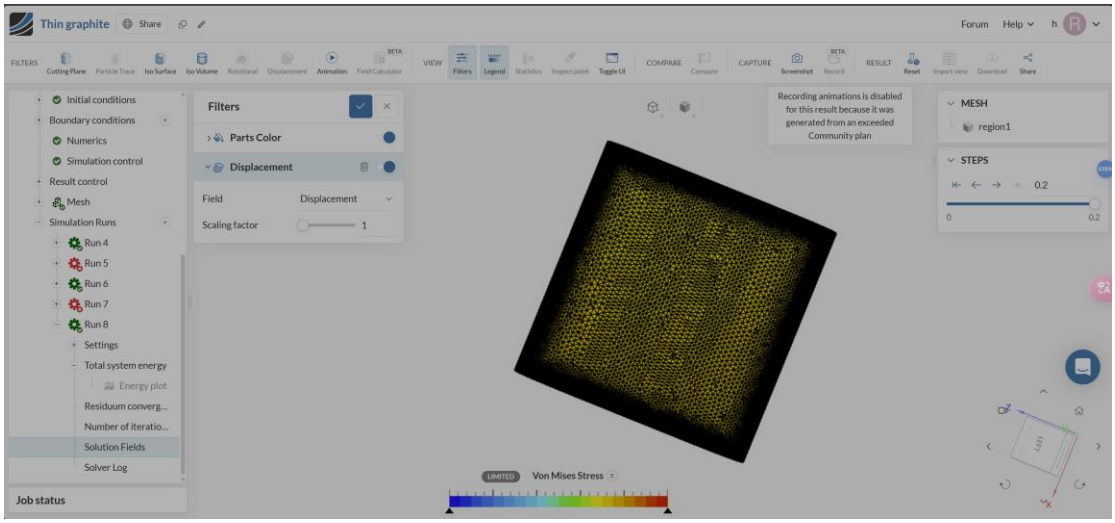
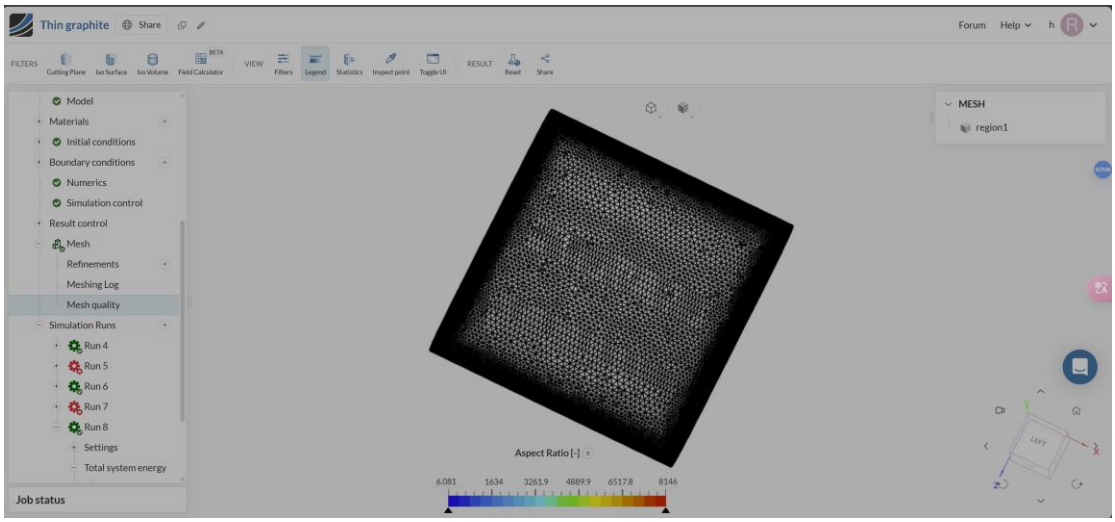


求解器 解决方案字段（上图）



网格质量（上图）

网格划分日志

****

Model import took 1.892128698s.

Maximum precision of model and its entities: 1e-08 m.

Absolute small feature tolerance: 0.0014746820023864063 m.

Surface meshing took 18.608131788s.

Number of cells after 27.921363608s: 387078

Number of cells after 37.224467151s: 289085

Number of cells after 46.529465959s: 288826

Number of cells after 55.832329769s: 288856

Meshing took 58.492155183s. Starting mesh export.

Mesh quality metrics:

Non Orthogonality

Acceptable range: 0.0 to 88.0

    min: 4.8

    max: 90.0

    average: 33.0

    99.99-th percentile: 90.0

Edge Ratio

Acceptable range: 0.0 to 100.0

    min: 1.0

    max: 86.9

    average: 1.8

    99.99-th percentile: 86.9

Volume Ratio

Acceptable range: 0.0 to 100.0

    min: 1.0

    max: 3036.0

    average: 2.1

    99.99-th percentile: 3036.0

Aspect Ratio

Acceptable range: 0.0 to 100.0

    min: 6.1

max: 8145.7

average: 11.2

99.99-th percentile: 8145.7

Tetrahedral Aspect Ratio

Acceptable range: 0.0 to 100.0

min: 6.1

max: 8145.7

average: 11.2

99.99-th percentile: 8145.7

Skewness

Acceptable range: 0.0 to 100.0

min: 0.0

max: 27.6

average: 0.3

99.99-th percentile: 27.6

Min Edge Length : 0

Mesh export took 13.349878358s.

求解器日志

On découpe le pas de temps en 2 incréments jusqu'à ce que le niveau atteigne 3.

Il y a 1 schémas d'adaptations du pas de temps.

Le schéma d'adaptation 1 du pas de temps se déclenche pour un seuil donné.

Le seuil est franchi quand, 1 fois de suite, on fait exactement ou moins de 5 itérations de Newton.

Le mode de calcul de l'instant suivant est fixe.

Le pas de temps suivant sera modifié de 100.00 %.

Résultat commande #0046 (DEFI_LIST_INST): INSTLIST ('<0000002b>') de type

<TimeStepper>

Dépend de :

- TIMELIST ('<0000002a>') de type <ListOfFloats>

Mémoire (Mo) : 1877.07 / 1288.75 / 1354.49 / 1196.69 (VmPeak / VmSize / Optimum / Minimum)

Fin commande #0046 user+syst: 0.01s (syst: 0.00s, elaps: 0.02s)

--

.. _stg1_txt501

--

Commande #0047 de fort.1, ligne 501

```
SIM = DYNA_NON_LINE(AFFICHAGE=_F(INFO_RESIDU='NON',
                                 INFO_TEMPS='OUI',
                                 PAS=1,
                                 UNITE=19),
                    AMOR_RAYL_RIGI='TANGENTE',
                    ARCHIVAGE=_F(CRITERE='RELATIF',
                                 LIST_INST=TIMELIST,
                                 PRECISION=1e-06),
                    CHAM_MATER=MATS,
                    COMPORTEMENT=_F(DEFORMATION='GROT_GDEP',
                                    GROUP_MA='region1',
                                    ITER_CPLAN_MAXI=1,
                                    ITER_INTE_MAXI=20,
                                    ITER_INTE_PAS=0,
                                    PARM_THETA=1.0,
```

```
                        REGU_VISC='NON',
                        RELATION='ELAS',
                        RESI_CPLAN_RELA=1e-06,
                        RESI_INTE_RELA=1e-06),
CONVERGENCE=_F(ARRET='OUI',
                        ITER_GLOB_ELAS=25,
                        ITER_GLOB_MAXI=35,
                        RESI_GLOB_MAXI=0.0001,
                        RESI_GLOB_RELA=5e-05),
ENERGIE=_F(CALCUL='OUI'),
ETAT_INIT=_F(ACCE=INIT_A,
                    CRITERE='RELATIF',
                    DEPL=INIT_D,
                    PRECISION=1e-06,
                    SIGM=INIT_S,
                    VITE=INIT_U),
EXCIT=(_F(CHARGE=BC_0,
                MULT_APPUI='NON',
                TYPE_CHARGE='FIXE_CSTE'),
            _F(CHARGE=BC_1,
                MULT_APPUI='NON',
                TYPE_CHARGE='FIXE_CSTE'),
            _F(CHARGE=BC_2,
                MULT_APPUI='NON',
                TYPE_CHARGE='FIXE_CSTE'),
            _F(CHARGE=BC_3,
                MULT_APPUI='NON',
```

```
                    TYPE_CHARGE='SUIV')),
INCREMENT=_F(INST_FIN=0.2,
                    LIST_INST=INSTLIST,
                    PRECISION=1e-06),
INFO=1,
MESURE=_F(TABLE='NON'),
METHODE='NEWTON',
MODELE=MODEL,
NEWTON=_F(MATRICE='TANGENTE',
                    MATR_RIGI_SYME='NON',
                    PREDICTION='TANGENTE',
                    REAC_INCR=1,
                    REAC_ITER=1,
                    REAC_ITER_ELAS=0),
SCHEMA_TEMPS=_F(ALPHA=-0.1,
                        COEF_MASS_SHIFT=0,
                        FORMULATION='DEPLACEMENT',
                        MODI_EQUI='OUI',
                        SCHEMA='HHT'),
SOLVEUR=_F(ELIM_LAGR='NON',
                    METHODE='MULT_FRONT',
                    NPREC=5,
                    RENUM='MDA',
                    STOP_SINGULIER='OUI'))
```

Liste des comportements

Affecté sur 149636 éléments

Relation : ELAS

Déformation : PETIT

Pas de régularisation visqueuse

Nombre total de variables internes : 1

V1 : VIDE

Affecté sur 288857 éléments

Relation : ELAS

Déformation : GROT_GDEP

Pas de régularisation visqueuse

Nombre total de variables internes : 1

V1 : VIDE

Le système linéaire à résoudre a 264846 degrés de liberté:

- 264846 sont des degrés de liberté physiques

  (ils sont portés par 88282 noeuds du maillage)

- 0 sont les couples de paramètres de Lagrange associés

  aux 0 relations linéaires dualisées.

La matrice est de taille 264846 équations.

Elle contient 4597296 termes non nuls si elle est symétrique et 8929746 termes non nuls si elle

n'est pas symétrique.

Soit un taux de remplissage de 0.013 %.

Lecture de l'état initial

A l'instant initial, tous les termes du bilan d'énergie sont nuls bien qu'un état

initial non vierge soit renseigné. Le bilan d'énergie indique la variation des différents

termes d'énergie entre deux instants de calcul consécutifs ainsi que leur variation

totale entre l'instant courant et l'instant initial.

Il n'y a pas d'état initial défini. On prend un état initial nul.

Le champ <DEPL> est lu dans ETAT_INIT, par un champ donné explicitement

Le champ <SIEF_ELGA> est lu dans ETAT_INIT, par un champ donné explicitement

Le champ <VARI_ELGA> est initialisé a zéro

Le champ <VITE> est lu dans ETAT_INIT, par un champ donné explicitement

Le champ <ACCE> est lu dans ETAT_INIT, par un champ donné explicitement

Le champ <FORC_AMOR> est initialisé a zéro

Le champ <FORC_LIAI> est initialisé a zéro

Filing of the initial state

Filing of the fields

Field stored DEPL at time 0.000000000000e+00 for the sequence number 0

Field stored SIEF_ELGA at time 0.000000000000e+00 for the sequence number 0

Field stored VARI_ELGA at time 0.000000000000e+00 for the sequence number 0

Field stored COMPORTEMENT at time 0.000000000000e+00 for the sequence number 0

Field stored VITE at time 0.000000000000e+00 for the sequence number 0

Field stored ACCE at time 0.000000000000e+00 for the sequence number 0

Field stored FORC_AMOR at time 0.000000000000e+00 for the sequence number 0

Field stored FORC_LIAI at time 0.000000000000e+00 for the sequence number 0

Schéma multi-pas

On n'a pas de structure de données résultat dans le mot-clef ETAT_INIT parce que l'état initial est

entré champ par champ.

On ignore donc le calcul du second membre pour cet instant.

Time of computation: 3.000000000000e-03

| INCREMENT | NEWTON | RESIDU | RESIDU | OPTION | NEWTON |

| INSTANT | ITERATION | RELATIF | ABSOLU | ASSEMBLAGE | TEMPS CALCUL |

| | | RESI_GLOB_RELA | RESI_GLOB_MAXI | | VALEUR |

| 3.00000E-03 | 0 X | 1.89436E-04 X | 1.74839E-08 |TANGENTE | |

| 3.00000E-03 | 1 | 2.57851E-05 | 2.37982E-09 |TANGENTE | 2.21871E+01 |

| BILAN D'ENERGIE | TRAV_EXT | ENER_TOT | ENER_CIN | TRAV_AMOR | DISS_SCH |

| PAS COURANT | 8.1884E-07 | 1.2351E-18 | 6.3292E-05 | 0.0000E+00 | -6.2473E-05 |

| TOTAL | 8.1884E-07 | 1.2351E-18 | 6.3292E-05 | 0.0000E+00 | -6.2473E-05 |

Criterion (S) of convergence reached (S)

The residue of the type RESI_GLOB_RELA is worth 2.578508124546e-05 with the node and degree of

freedom N87261 DY

The residue of the type RESI_GLOB_MAXI is worth 2.379815829563e-09 with the node and degree of

freedom N87261 DY

Temps CPU consommé dans ce pas de temps : 27.454 s

* Nombre d'itérations de Newton : 2

* Temps total intégration comportement : 10.136 s (4 intégrations)

* Temps total factorisation matrice : 7.014 s (2 factorisations)

* Temps construction second membre : 4.927 s

* Temps total résolution K.U=F : 0.174 s (2 résolutions)

* Temps assemblage matrice : 1.221 s

* Temps autres opérations : 3.982 s

Mémoire (Mo) : 3762.49 / 3462.76 / 3235.21 / 1196.69 (VmPeak / VmSize / Optimum / Minimum)

Filing of the fields

Field stored DEPL at time 3.000000000000e-03 for the sequence number 1

Field stored SIEF_ELGA at time 3.000000000000e-03 for the sequence number 1

Field stored VARI_ELGA at time 3.000000000000e-03 for the sequence number 1

Field stored COMPORTEMENT at time 3.000000000000e-03 for the sequence number 1

Field stored VITE at time 3.000000000000e-03 for the sequence number 1

Field stored ACCE at time 3.000000000000e-03 for the sequence number 1

Field stored FORC_AMOR at time 3.000000000000e-03 for the sequence number 1

Field stored FORC_LIAI at time 3.000000000000e-03 for the sequence number 1

Adaptation of the time step.

For the method of adaptation of the type FIXE, the computed time step is worth

6.000000000000e-03.

On all the criteria of adaptation, the smallest time step is worth 6.000000000000e-03.

After best fit on the compulsory points of transition, the smallest time step is worth

3.000000000000e-03.

[1%] Instant calculé : 3.00000e-03, dernier instant archivé : 3.00000e-03, au numéro

d'ordre :

1

Time of computation: 6.000000000000e-03

| INCREMENT | NEWTON | RESIDU | RESIDU | OPTION | NEWTON |

| INSTANT | ITERATION | RELATIF | ABSOLU | ASSEMBLAGE | TEMPS CALCUL |

| | | RESI_GLOB_RELA | RESI_GLOB_MAXI | | VALEUR |

| 6.00000E-03 | 0 | 7.03732E-14 | 6.49505E-18 |TANGENTE | |

| BILAN D'ENERGIE | TRAV_EXT | ENER_TOT | ENER_CIN | TRAV_AMOR | DISS_SCH |

| PAS COURANT | 0.0000E+00 | 8.1480E-18 | -3.7778E-06 | 0.0000E+00 | 3.7778E-06 |

| TOTAL | 8.1884E-07 | 9.3830E-18 | 5.9515E-05 | 0.0000E+00 | -5.8696E-05 |

Criterion (S) of convergence reached (S)

The residue of the type RESI_GLOB_RELA is worth 7.037324266168e-14 with the

node and degree of

freedom N87505 DY

The residue of the type RESI_GLOB_MAXI is worth 6.495048639546e-18 with the node and degree of

freedom N87505 DY

Temps CPU consommé dans ce pas de temps : 17.339 s

* Nombre d'itérations de Newton : 1

* Temps total intégration comportement : 7.476 s (3 intégrations)

* Temps total factorisation matrice : 3.237 s (1 factorisations)

* Temps construction second membre : 3.679 s

* Temps total résolution K.U=F : 0.087 s (1 résolutions)

* Temps assemblage matrice : 0.597 s

* Temps autres opérations : 2.262 s

Mémoire (Mo) : 3843.02 / 3508.32 / 3315.69 / 1196.69 (VmPeak / VmSize / Optimum / Minimum)

Filing of the fields

Field stored DEPL at time 6.000000000000e-03 for the sequence number 2

Field stored SIEF_ELGA at time 6.000000000000e-03 for the sequence number 2

Field stored VARI_ELGA at time 6.000000000000e-03 for the sequence number 2

Field stored COMPORTEMENT at time 6.000000000000e-03 for the sequence number 2

Field stored VITE at time 6.000000000000e-03 for the sequence number 2

Field stored ACCE at time 6.000000000000e-03 for the sequence number 2

Field stored FORC_AMOR at time 6.000000000000e-03 for the sequence number 2

Field stored FORC_LIAI at time 6.000000000000e-03 for the sequence number 2

Adaptation of the time step.

For the method of adaptation of the type FIXE, the computed time step is worth

6.000000000000e-03.

On all the criteria of adaptation, the smallest time step is worth 6.000000000000e-03.

After best fit on the compulsory points of transition, the smallest time step is worth

3.000000000000e-03.

[2%] Instant calculé : 6.00000e-03, dernier instant archivé : 6.00000e-03, au numéro d'ordre :

2

Time of computation: 9.000000000000e-03

| INCREMENT | NEWTON | RESIDU | RESIDU | OPTION | NEWTON |

| INSTANT | ITERATION | RELATIF | ABSOLU | ASSEMBLAGE | TEMPS CALCUL |

| | | RESI_GLOB_RELA | RESI_GLOB_MAXI | | VALEUR |

| 9.00000E-03 | 0 | 2.24712E-13 | 2.07396E-17 |TANGENTE | |

| BILAN D'ENERGIE | TRAV_EXT | ENER_TOT | ENER_CIN | TRAV_AMOR | DISS_SCH |

| PAS COURANT | 0.0000E+00 | 1.0020E-17 | -6.2515E-06 | 0.0000E+00 | 6.2515E-06 |

| TOTAL | 8.1884E-07 | 1.9403E-17 | 5.3263E-05 | 0.0000E+00 | -

5.2444E-05 |

Criterion (S) of convergence reached (S)

The residue of the type RESI_GLOB_RELA is worth 2.247116388330e-13 with the node and degree of

freedom N87505 DY

The residue of the type RESI_GLOB_MAXI is worth 2.073960171352e-17 with the node and degree of

freedom N87505 DY

Temps CPU consommé dans ce pas de temps : 17.452 s

* Nombre d'itérations de Newton : 1

* Temps total intégration comportement : 7.507 s (3 intégrations)

* Temps total factorisation matrice : 3.226 s (1 factorisations)

* Temps construction second membre : 3.736 s

* Temps total résolution K.U=F : 0.091 s (1 résolutions)

* Temps assemblage matrice : 0.609 s

* Temps autres opérations : 2.282 s

Mémoire (Mo) : 3888.49 / 3553.91 / 3361.09 / 1196.69 (VmPeak / VmSize / Optimum / Minimum)

Filing of the fields

Field stored DEPL at time 9.000000000000e-03 for the sequence number 3

Field stored SIEF_ELGA at time 9.000000000000e-03 for the sequence number 3

Field stored VARI_ELGA at time 9.000000000000e-03 for the sequence number 3

Field stored COMPORTEMENT at time 9.000000000000e-03 for the sequence number 3

Field stored VITE at time 9.000000000000e-03 for the sequence number 3

Field stored ACCE at time 9.000000000000e-03 for the sequence number 3

Field stored FORC_AMOR at time 9.000000000000e-03 for the sequence number 3

Field stored FORC_LIAI at time 9.000000000000e-03 for the sequence number 3

Adaptation of the time step.

For the method of adaptation of the type FIXE, the computed time step is worth

6.000000000000e-03.

On all the criteria of adaptation, the smallest time step is worth 6.000000000000e-03.

After best fit on the compulsory points of transition, the smallest time step is worth

3.000000000000e-03.

[4%] Instant calculé : 9.00000e-03, dernier instant archivé : 9.00000e-03, au numéro d'ordre :

3

Time of computation: 1.200000000000e-02

| INCREMENT | NEWTON | RESIDU | RESIDU | OPTION | NEWTON |

| INSTANT | ITERATION | RELATIF | ABSOLU | ASSEMBLAGE | TEMPS CALCUL |

| | | RESI_GLOB_RELA | RESI_GLOB_MAXI | | VALEUR |

| 1.20000E-02 | 0 | 3.69462E-13 | 3.40992E-17 |TANGENTE | |

| BILAN D'ENERGIE | TRAV_EXT | ENER_TOT | ENER_CIN | TRAV_AMOR | DISS_SCH |

| PAS COURANT | 0.0000E+00 | 7.3523E-18 | -7.3199E-06 | 0.0000E+00 | 7.3199E-06 |

| TOTAL | 8.1884E-07 | 2.6755E-17 | 4.5943E-05 | 0.0000E+00 | -4.5124E-05 |

Criterion (S) of convergence reached (S)

The residue of the type RESI_GLOB_RELA is worth 3.694618183544e-13 with the node and degree of

freedom N87505 DY

The residue of the type RESI_GLOB_MAXI is worth 3.409921711585e-17 with the node and degree of

freedom N87505 DY

Temps CPU consommé dans ce pas de temps : 17.429 s

* Nombre d'itérations de Newton : 1

* Temps total intégration comportement : 7.545 s (3 intégrations)

* Temps total factorisation matrice : 3.242 s (1 factorisations)

* Temps construction second membre : 3.679 s

* Temps total résolution K.U=F : 0.093 s (1 résolutions)

* Temps assemblage matrice : 0.599 s

* Temps autres opérations : 2.271 s

Mémoire (Mo) : 3933.93 / 3598.77 / 3406.50 / 1196.69 (VmPeak / VmSize / Optimum / Minimum)

Filing of the fields

Field stored DEPL at time 1.200000000000e-02 for the sequence number 4

Field stored SIEF_ELGA at time 1.200000000000e-02 for the sequence number 4

Field stored VARI_ELGA at time 1.200000000000e-02 for the sequence number 4

Field stored COMPORTEMENT at time 1.200000000000e-02 for the sequence number 4

Field stored VITE at time 1.200000000000e-02 for the sequence number 4

Field stored ACCE at time 1.200000000000e-02 for the sequence number 4

Field stored FORC_AMOR at time 1.200000000000e-02 for the sequence number 4

Field stored FORC_LIAI at time 1.200000000000e-02 for the sequence number 4

Adaptation of the time step.

For the method of adaptation of the type FIXE, the computed time step is worth

6.000000000000e-03.

On all the criteria of adaptation, the smallest time step is worth 6.000000000000e-03.

After best fit on the compulsory points of transition, the smallest time step is worth

3.000000000000e-03.

[5%] Instant calculé : 1.20000e-02, dernier instant archivé : 1.20000e-02, au numéro d'ordre :

4

Time of computation: 1.500000000000e-02

| INCREMENT | NEWTON | RESIDU | RESIDU | OPTION | NEWTON |

| INSTANT | ITERATION | RELATIF | ABSOLU | ASSEMBLAGE | TEMPS CALCUL |

| | | RESI_GLOB_RELA | RESI_GLOB_MAXI | VALEUR |

| 1.50000E-02 | 0 | 4.60216E-13 | 4.24753E-17 |TANGENTE | |

| BILAN D'ENERGIE | TRAV_EXT | ENER_TOT | ENER_CIN | TRAV_AMOR | DISS_SCH |

| PAS COURANT | 0.0000E+00 | 3.6828E-18 | -7.4293E-06 | 0.0000E+00 | 7.4293E-06 |

| TOTAL | 8.1884E-07 | 3.0438E-17 | 3.8514E-05 | 0.0000E+00 | -3.7695E-05 |

Criterion (S) of convergence reached (S)

The residue of the type RESI_GLOB_RELA is worth 4.602160441461e-13 with the node and degree of

freedom N87505 DY

The residue of the type RESI_GLOB_MAXI is worth 4.247531417301e-17 with the node and degree of

freedom N87505 DY

Temps CPU consommé dans ce pas de temps : 17.407 s

* Nombre d'itérations de Newton : 1

* Temps total intégration comportement : 7.522 s (3 intégrations)

* Temps total factorisation matrice : 3.242 s (1 factorisations)

* Temps construction second membre : 3.684 s

* Temps total résolution K.U=F : 0.091 s (1 résolutions)

* Temps assemblage matrice : 0.599 s

* Temps autres opérations : 2.270 s

Mémoire (Mo) : 3979.35 / 3644.59 / 3451.90 / 1196.69 (VmPeak / VmSize / Optimum / Minimum)

Filing of the fields

Field stored DEPL at time 1.500000000000e-02 for the sequence number 5

Field stored SIEF_ELGA at time 1.500000000000e-02 for the sequence number 5

Field stored VARI_ELGA at time 1.500000000000e-02 for the sequence number 5

Field stored COMPORTEMENT at time 1.500000000000e-02 for the sequence number 5

Field stored VITE at time 1.500000000000e-02 for the sequence number 5

Field stored ACCE at time 1.500000000000e-02 for the sequence number 5

Field stored FORC_AMOR at time 1.500000000000e-02 for the sequence number 5

Field stored FORC_LIAI at time 1.500000000000e-02 for the sequence number 5

Adaptation of the time step.

For the method of adaptation of the type FIXE, the computed time step is worth

6.000000000000e-03.

On all the criteria of adaptation, the smallest time step is worth 6.000000000000e-03.

After best fit on the compulsory points of transition, the smallest time step is worth

3.000000000000e-03.

[7%] Instant calculé : 1.50000e-02, dernier instant archivé : 1.50000e-02, au numéro d'ordre :

5

Time of computation: 1.800000000000e-02

| INCREMENT | NEWTON | RESIDU | RESIDU | OPTION | NEWTON |

| INSTANT | ITERATION | RELATIF | ABSOLU | ASSEMBLAGE | TEMPS CALCUL |

| | | RESI_GLOB_RELA | RESI_GLOB_MAXI | | VALEUR |

| 1.80000E-02 | 0 | 4.94639E-13 | 4.56523E-17 |TANGENTE | |

| BILAN D'ENERGIE | TRAV_EXT | ENER_TOT | ENER_CIN | TRAV_AMOR | DISS_SCH |

| PAS COURANT | 0.0000E+00 | 5.3619E-19 | -6.9546E-06 | 0.0000E+00 | 6.9546E-06 |

| TOTAL | 8.1884E-07 | 3.0974E-17 | 3.1559E-05 | 0.0000E+00 | -3.0740E-05 |

Criterion (S) of convergence reached (S)

The residue of the type RESI_GLOB_RELA is worth 4.946386367274e-13 with the node and degree of

freedom N87505 DY

The residue of the type RESI_GLOB_MAXI is worth 4.565232299993e-17 with the node and degree of

freedom N87505 DY

Temps CPU consommé dans ce pas de temps : 17.340 s

* Nombre d'itérations de Newton : 1

* Temps total intégration comportement : 7.464 s (3 intégrations)

* Temps total factorisation matrice : 3.246 s (1 factorisations)

* Temps construction second membre : 3.685 s

* Temps total résolution K.U=F : 0.086 s (1 résolutions)

* Temps assemblage matrice : 0.599 s

* Temps autres opérations : 2.260 s

Mémoire (Mo) : 4024.78 / 3690.40 / 3497.30 / 1196.69 (VmPeak / VmSize / Optimum / Minimum)

Filing of the fields

Field stored DEPL at time 1.800000000000e-02 for the sequence number 6

Field stored SIEF_ELGA at time 1.800000000000e-02 for the sequence number 6

Field stored VARI_ELGA at time 1.800000000000e-02 for the sequence number 6

Field stored COMPORTEMENT at time 1.800000000000e-02 for the sequence number 6

Field stored VITE at time 1.800000000000e-02 for the sequence number 6

Field stored ACCE at time 1.800000000000e-02 for the sequence number 6

Field stored FORC_AMOR at time 1.800000000000e-02 for the sequence number 6

Field stored FORC_LIAI at time 1.800000000000e-02 for the sequence number 6

Adaptation of the time step.

For the method of adaptation of the type FIXE, the computed time step is worth

6.000000000000e-03.

On all the criteria of adaptation, the smallest time step is worth 6.000000000000e-03.

After best fit on the compulsory points of transition, the smallest time step is worth

3.000000000000e-03.

[8%] Instant calculé : 1.80000e-02, dernier instant archivé : 1.80000e-02, au numéro d'ordre :

6

Time of computation: 2.100000000000e-02

| INCREMENT | NEWTON | RESIDU | RESIDU | OPTION | NEWTON |

| INSTANT | ITERATION | RELATIF | ABSOLU | ASSEMBLAGE | TEMPS CALCUL |

| | | RESI_GLOB_RELA | RESI_GLOB_MAXI | | VALEUR |

| 2.10000E-02 | 0 | 4.85477E-13 | 4.48068E-17 |TANGENTE | |

| BILAN D'ENERGIE | TRAV_EXT | ENER_TOT | ENER_CIN | TRAV_AMOR | DISS_SCH |

| PAS COURANT | 0.0000E+00 | -1.6648E-18 | -6.1748E-06 | 0.0000E+00 | 6.1748E-06 |

| TOTAL | 8.1884E-07 | 2.9310E-17 | 2.5385E-05 | 0.0000E+00 | -2.4566E-05 |

Criterion (S) of convergence reached (S)

The residue of the type RESI_GLOB_RELA is worth 4.854771748746e-13 with the node and degree of

freedom N87505 DY

The residue of the type RESI_GLOB_MAXI is worth 4.480677236033e-17 with the node and degree of

freedom N87505 DY

Temps CPU consommé dans ce pas de temps : 17.465 s

* Nombre d'itérations de Newton : 1

* Temps total intégration comportement : 7.529 s (3 intégrations)

* Temps total factorisation matrice : 3.239 s (1 factorisations)

* Temps construction second membre : 3.702 s

* Temps total résolution K.U=F : 0.092 s (1 résolutions)

* Temps assemblage matrice : 0.602 s

* Temps autres opérations : 2.302 s

Mémoire (Mo) : 4070.21 / 3735.38 / 3542.70 / 1196.69 (VmPeak / VmSize / Optimum / Minimum)

Filing of the fields

Field stored DEPL at time 2.100000000000e-02 for the sequence number 7

Field stored SIEF_ELGA at time 2.100000000000e-02 for the sequence number 7

Field stored VARI_ELGA at time 2.100000000000e-02 for the sequence number 7

Field stored COMPORTEMENT at time 2.100000000000e-02 for the sequence number 7

Field stored VITE at time 2.100000000000e-02 for the sequence number 7

Field stored ACCE at time 2.100000000000e-02 for the sequence number 7

Field stored FORC_AMOR at time 2.100000000000e-02 for the sequence number 7

Field stored FORC_LIAI at time 2.100000000000e-02 for the sequence number 7

Adaptation of the time step.

For the method of adaptation of the type FIXE, the computed time step is worth

6.000000000000e-03.

On all the criteria of adaptation, the smallest time step is worth 6.000000000000e-03.

After best fit on the compulsory points of transition, the smallest time step is worth

3.000000000000e-03.

[10%] Instant calculé : 2.10000e-02, dernier instant archivé : 2.10000e-02, au numéro d'ordre :

7

Time of computation: 2.400000000000e-02

| INCREMENT | NEWTON | RESIDU | RESIDU | OPTION | NEWTON |

| INSTANT | ITERATION | RELATIF | ABSOLU | ASSEMBLAGE | TEMPS CALCUL |

| | | RESI_GLOB_RELA | RESI_GLOB_MAXI | | VALEUR |

| 2.40000E-02 | 0 | 4.48015E-13 | 4.13492E-17 |TANGENTE | |

| BILAN D'ENERGIE | TRAV_EXT | ENER_TOT | ENER_CIN | TRAV_AMOR | DISS_SCH |

| PAS COURANT | 0.0000E+00 | -2.9588E-18 | -5.2796E-06 | 0.0000E+00 | 5.2796E-06 |

| TOTAL | 8.1884E-07 | 2.6351E-17 | 2.0105E-05 | 0.0000E+00 | -1.9286E-05 |

Criterion (S) of convergence reached (S)

The residue of the type RESI_GLOB_RELA is worth 4.480145279595e-13 with the node and degree of

freedom N87505 DY

The residue of the type RESI_GLOB_MAXI is worth 4.134918386964e-17 with the node and degree of

freedom N87505 DY

Temps CPU consommé dans ce pas de temps : 17.430 s

* Nombre d'itérations de Newton : 1

* Temps total intégration comportement : 7.495 s (3 intégrations)

* Temps total factorisation matrice : 3.253 s (1 factorisations)

* Temps construction second membre : 3.673 s

* Temps total résolution K.U=F : 0.087 s (1 résolutions)

* Temps assemblage matrice : 0.621 s

* Temps autres opérations : 2.300 s

Mémoire (Mo) : 4115.66 / 3781.07 / 3588.11 / 1196.69 (VmPeak / VmSize / Optimum / Minimum)

Filing of the fields

Field stored DEPL at time 2.400000000000e-02 for the sequence number 8

Field stored SIEF_ELGA at time 2.400000000000e-02 for the sequence number 8

Field stored VARI_ELGA at time 2.400000000000e-02 for the sequence number 8

Field stored COMPORTEMENT at time 2.400000000000e-02 for the sequence number 8

Field stored VITE at time 2.400000000000e-02 for the sequence number 8

Field stored ACCE at time 2.400000000000e-02 for the sequence number 8

Field stored FORC_AMOR at time 2.400000000000e-02 for the sequence number 8

Field stored FORC_LIAI at time 2.400000000000e-02 for the sequence number 8

Adaptation of the time step.

For the method of adaptation of the type FIXE, the computed time step is worth

6.000000000000e-03.

On all the criteria of adaptation, the smallest time step is worth 6.000000000000e-03.

After best fit on the compulsory points of transition, the smallest time step is worth

3.000000000000e-03.

[11%] Instant calculé : 2.40000e-02, dernier instant archivé : 2.40000e-02, au numéro d'ordre :

8

Time of computation: 2.700000000000e-02

| INCREMENT | NEWTON | RESIDU | RESIDU | OPTION | NEWTON |

| INSTANT | ITERATION | RELATIF | ABSOLU | ASSEMBLAGE | TEMPS CALCUL |

| | | RESI_GLOB_RELA | RESI_GLOB_MAXI | | VALEUR |

| 2.70000E-02 | 0 | 3.95489E-13 | 3.65014E-17 |TANGENTE | |

| BILAN D'ENERGIE | TRAV_EXT | ENER_TOT | ENER_CIN | TRAV_AMOR

| DISS_SCH |

| PAS COURANT | 0.0000E+00 | -3.5430E-18 | -4.3880E-06 | 0.0000E+00 | 4.3880E-06 |

| TOTAL | 8.1884E-07 | 2.2808E-17 | 1.5717E-05 | 0.0000E+00 | -1.4898E-05 |

Criterion (S) of convergence reached (S)

The residue of the type RESI_GLOB_RELA is worth 3.954892722131e-13 with the node and degree of

freedom N87505 DY

The residue of the type RESI_GLOB_MAXI is worth 3.650140255427e-17 with the node and degree of

freedom N87505 DY

Temps CPU consommé dans ce pas de temps : 17.373 s

* Nombre d'itérations de Newton : 1

* Temps total intégration comportement : 7.505 s (3 intégrations)

* Temps total factorisation matrice : 3.245 s (1 factorisations)

* Temps construction second membre : 3.680 s

* Temps total résolution K.U=F : 0.086 s (1 résolutions)

* Temps assemblage matrice : 0.593 s

* Temps autres opérations : 2.263 s

Mémoire (Mo) : 4161.07 / 3826.76 / 3633.51 / 1196.69 (VmPeak / VmSize / Optimum / Minimum)

Filing of the fields

Field stored DEPL at time 2.700000000000e-02 for the sequence number 9

Field stored SIEF_ELGA at time 2.700000000000e-02 for the sequence number 9

Field stored VARI_ELGA at time 2.700000000000e-02 for the sequence number 9

Field stored COMPORTEMENT at time 2.700000000000e-02 for the sequence number 9

Field stored VITE at time 2.700000000000e-02 for the sequence number 9

Field stored ACCE at time 2.700000000000e-02 for the sequence number 9

Field stored FORC_AMOR at time 2.700000000000e-02 for the sequence number 9

Field stored FORC_LIAI at time 2.700000000000e-02 for the sequence number 9

Adaptation of the time step.

For the method of adaptation of the type FIXE, the computed time step is worth

6.000000000000e-03.

On all the criteria of adaptation, the smallest time step is worth 6.000000000000e-03.

After best fit on the compulsory points of transition, the smallest time step is worth

3.000000000000e-03.

[13%] Instant calculé : 2.70000e-02, dernier instant archivé : 2.70000e-02, au numéro d'ordre :

9

Time of computation: 3.000000000000e-02

| INCREMENT | NEWTON | RESIDU | RESIDU | OPTION | NEWTON |

| INSTANT | ITERATION | RELATIF | ABSOLU | ASSEMBLAGE | TEMPS CALCUL |

| | | RESI_GLOB_RELA | RESI_GLOB_MAXI | | VALEUR |

| 3.00000E-02 | 0 | 3.37533E-13 | 3.11524E-17 |TANGENTE | |

| BILAN D'ENERGIE | TRAV_EXT | ENER_TOT | ENER_CIN | TRAV_AMOR | DISS_SCH |

| PAS COURANT | 0.0000E+00 | -3.6370E-18 | -3.5668E-06 | 0.0000E+00 | 3.5668E-06 |

| TOTAL | 8.1884E-07 | 1.9171E-17 | 1.2150E-05 | 0.0000E+00 | -1.1331E-05 |

Criterion (S) of convergence reached (S)

The residue of the type RESI_GLOB_RELA is worth 3.375332175172e-13 with the node and degree of

freedom N87505 DY

The residue of the type RESI_GLOB_MAXI is worth 3.115238949236e-17 with the node and degree of

freedom N87505 DY

Temps CPU consommé dans ce pas de temps : 17.379 s

* Nombre d'itérations de Newton : 1

* Temps total intégration comportement : 7.498 s (3 intégrations)

* Temps total factorisation matrice : 3.246 s (1 factorisations)

* Temps construction second membre : 3.682 s

* Temps total résolution K.U=F : 0.091 s (1 résolutions)

* Temps assemblage matrice : 0.600 s

* Temps autres opérations : 2.262 s

Mémoire (Mo) : 4206.52 / 3872.57 / 3678.91 / 1196.69 (VmPeak / VmSize / Optimum / Minimum)

Filing of the fields

Field stored DEPL at time 3.000000000000e-02 for the sequence number 10

Field stored SIEF_ELGA at time 3.000000000000e-02 for the sequence number 10

Field stored VARI_ELGA at time 3.000000000000e-02 for the sequence number 10

Field stored COMPORTEMENT at time 3.000000000000e-02 for the sequence number 10

Field stored VITE at time 3.000000000000e-02 for the sequence number 10

Field stored ACCE at time 3.000000000000e-02 for the sequence number 10

Field stored FORC_AMOR at time 3.000000000000e-02 for the sequence number 10

Field stored FORC_LIAI at time 3.000000000000e-02 for the sequence number 10

Adaptation of the time step.

For the method of adaptation of the type FIXE, the computed time step is worth

6.000000000000e-03.

On all the criteria of adaptation, the smallest time step is worth 6.000000000000e-03.

After best fit on the compulsory points of transition, the smallest time step is worth

3.000000000000e-03.

[14%] Instant calculé : 3.00000e-02, dernier instant archivé : 3.00000e-02, au numéro d'ordre :

10

Time of computation: 3.300000000000e-02

| INCREMENT | NEWTON | RESIDU | RESIDU |

OPTION | NEWTON |

| INSTANT | ITERATION | RELATIF | ABSOLU | ASSEMBLAGE | TEMPS CALCUL |

| | | RESI_GLOB_RELA | RESI_GLOB_MAXI | | VALEUR |

| 3.30000E-02 | 0 | 2.80598E-13 | 2.58976E-17 |TANGENTE | |

| BILAN D'ENERGIE | TRAV_EXT | ENER_TOT | ENER_CIN | TRAV_AMOR | DISS_SCH |

| PAS COURANT | 0.0000E+00 | -3.4285E-18 | -2.8477E-06 | 0.0000E+00 | 2.8477E-06 |

| TOTAL | 8.1884E-07 | 1.5742E-17 | 9.3024E-06 | 0.0000E+00 | -8.4836E-06 |

Criterion (S) of convergence reached (S)

The residue of the type RESI_GLOB_RELA is worth 2.805981622013e-13 with the node and degree of

freedom N87505 DY

The residue of the type RESI_GLOB_MAXI is worth 2.589760884583e-17 with the node and degree of

freedom N87505 DY

Temps CPU consommé dans ce pas de temps : 17.440 s

* Nombre d'itérations de Newton : 1

* Temps total intégration comportement : 7.534 s (3 intégrations)

* Temps total factorisation matrice : 3.237 s (1 factorisations)

* Temps construction second membre : 3.691 s

* Temps total résolution K.U=F : 0.090 s (1 résolutions)

* Temps assemblage matrice : 0.602 s

* Temps autres opérations : 2.286 s

Mémoire (Mo) : 4251.95 / 3917.27 / 3724.31 / 1196.69 (VmPeak / VmSize / Optimum / Minimum)

Filing of the fields

Field stored DEPL at time 3.300000000000e-02 for the sequence number 11

Field stored SIEF_ELGA at time 3.300000000000e-02 for the sequence number 11

Field stored VARI_ELGA at time 3.300000000000e-02 for the sequence number 11

Field stored COMPORTEMENT at time 3.300000000000e-02 for the sequence number 11

Field stored VITE at time 3.300000000000e-02 for the sequence number 11

Field stored ACCE at time 3.300000000000e-02 for the sequence number 11

Field stored FORC_AMOR at time 3.300000000000e-02 for the sequence number 11

Field stored FORC_LIAI at time 3.300000000000e-02 for the sequence number 11

Adaptation of the time step.

For the method of adaptation of the type FIXE, the computed time step is worth

6.000000000000e-03.

On all the criteria of adaptation, the smallest time step is worth 6.000000000000e-03.

After best fit on the compulsory points of transition, the smallest time step is worth

3.000000000000e-03.

[16%] Instant calculé : 3.30000e-02, dernier instant archivé : 3.30000e-02, au numéro d'ordre :

11

Time of computation: 3.600000000000e-02

| INCREMENT | NEWTON | RESIDU | RESIDU | OPTION | NEWTON |

| INSTANT | ITERATION | RELATIF | ABSOLU | ASSEMBLAGE | TEMPS CALCUL |

| | | RESI_GLOB_RELA | RESI_GLOB_MAXI | | VALEUR |

| 3.60000E-02 | 0 | 2.28378E-13 | 2.10780E-17 |TANGENTE | |

| BILAN D'ENERGIE | TRAV_EXT | ENER_TOT | ENER_CIN | TRAV_AMOR | DISS_SCH |

| PAS COURANT | 0.0000E+00 | -3.0587E-18 | -2.2402E-06 | 0.0000E+00 | 2.2402E-06 |

| TOTAL | 8.1884E-07 | 1.2684E-17 | 7.0622E-06 | 0.0000E+00 | -6.2434E-06 |

Criterion (S) of convergence reached (S)

The residue of the type RESI_GLOB_RELA is worth 2.283780590786e-13 with the node and degree of

freedom N87505 DY

The residue of the type RESI_GLOB_MAXI is worth 2.107799137595e-17 with the node and degree of

freedom N87505 DY

Temps CPU consommé dans ce pas de temps : 17.493 s

* Nombre d'itérations de Newton : 1

* Temps total intégration comportement : 7.534 s (3 intégrations)

* Temps total factorisation matrice : 3.252 s (1 factorisations)

* Temps construction second membre : 3.690 s

* Temps total résolution K.U=F : 0.088 s (1 résolutions)

* Temps assemblage matrice : 0.606 s

* Temps autres opérations : 2.324 s

Mémoire (Mo) : 4297.38 / 3963.09 / 3769.72 / 1196.69 (VmPeak / VmSize / Optimum / Minimum)

Filing of the fields

Field stored DEPL at time 3.600000000000e-02 for the sequence number 12

Field stored SIEF_ELGA at time 3.600000000000e-02 for the sequence number 12

Field stored VARI_ELGA at time 3.600000000000e-02 for the sequence number 12

Field stored COMPORTEMENT at time 3.600000000000e-02 for the sequence number 12

Field stored VITE at time 3.600000000000e-02 for the sequence number 12

Field stored ACCE at time 3.600000000000e-02 for the sequence number 12

Field stored FORC_AMOR at time 3.600000000000e-02 for the sequence number 12

Field stored FORC_LIAI at time 3.600000000000e-02 for the sequence number 12

Adaptation of the time step.

For the method of adaptation of the type FIXE, the computed time step is worth

6.000000000000e-03.

On all the criteria of adaptation, the smallest time step is worth 6.000000000000e-03.

After best fit on the compulsory points of transition, the smallest time step is worth

3.000000000000e-03.

[17%] Instant calculé : 3.60000e-02, dernier instant archivé : 3.60000e-02, au numéro d'ordre :

12

Time of computation: 3.900000000000e-02

| INCREMENT | NEWTON | RESIDU | RESIDU | OPTION | NEWTON |

| INSTANT | ITERATION | RELATIF | ABSOLU | ASSEMBLAGE | TEMPS CALCUL |

| | | RESI_GLOB_RELA | RESI_GLOB_MAXI | | VALEUR |

| 3.90000E-02 | 0 | 1.82673E-13 | 1.68597E-17 |TANGENTE | |

| BILAN D'ENERGIE | TRAV_EXT | ENER_TOT | ENER_CIN | TRAV_AMOR | DISS_SCH |

| PAS COURANT | 0.0000E+00 | -2.6245E-18 | -1.7405E-06 | 0.0000E+00 | 1.7405E-06 |

| TOTAL | 8.1884E-07 | 1.0059E-17 | 5.3217E-06 | 0.0000E+00 | -

4.5028E-06 |

Criterion (S) of convergence reached (S)

The residue of the type RESI_GLOB_RELA is worth 1.826728497527e-13 with the node and degree of

freedom N87505 DY

The residue of the type RESI_GLOB_MAXI is worth 1.685966141950e-17 with the node and degree of

freedom N87505 DY

Temps CPU consommé dans ce pas de temps : 17.403 s

* Nombre d'itérations de Newton : 1

* Temps total intégration comportement : 7.504 s (3 intégrations)

* Temps total factorisation matrice : 3.232 s (1 factorisations)

* Temps construction second membre : 3.682 s

* Temps total résolution K.U=F : 0.092 s (1 résolutions)

* Temps assemblage matrice : 0.604 s

* Temps autres opérations : 2.288 s

Mémoire (Mo) : 4342.82 / 4008.91 / 3815.12 / 1196.69 (VmPeak / VmSize / Optimum / Minimum)

Filing of the fields

Field stored DEPL at time 3.900000000000e-02 for the sequence number 13

Field stored SIEF_ELGA at time 3.900000000000e-02 for the sequence number 13

Field stored VARI_ELGA at time 3.900000000000e-02 for the sequence number 13

Field stored COMPORTEMENT at time 3.900000000000e-02 for the sequence number 13

Field stored VITE at time 3.900000000000e-02 for the sequence number 13

Field stored ACCE at time 3.900000000000e-02 for the sequence number 13

Field stored FORC_AMOR at time 3.900000000000e-02 for the sequence number 13

Field stored FORC_LIAI at time 3.900000000000e-02 for the sequence number 13

Adaptation of the time step.

For the method of adaptation of the type FIXE, the computed time step is worth

6.000000000000e-03.

On all the criteria of adaptation, the smallest time step is worth 6.000000000000e-03.

After best fit on the compulsory points of transition, the smallest time step is worth

3.000000000000e-03.

[19%] Instant calculé : 3.90000e-02, dernier instant archivé : 3.90000e-02, au numéro d'ordre :

13

Time of computation: 4.200000000000e-02

| INCREMENT | NEWTON | RESIDU | RESIDU | OPTION | NEWTON |

| INSTANT | ITERATION | RELATIF | ABSOLU | ASSEMBLAGE | TEMPS CALCUL |

| | | RESI_GLOB_RELA | RESI_GLOB_MAXI | | VALEUR |

| 4.20000E-02 | 0 | 1.43992E-13 | 1.32896E-17 |TANGENTE | |

| BILAN D'ENERGIE | TRAV_EXT | ENER_TOT | ENER_CIN | TRAV_AMOR | DISS_SCH |

| PAS COURANT | 0.0000E+00 | -2.1872E-18 | -1.3380E-06 | 0.0000E+00 | 1.3380E-06 |

| TOTAL | 8.1884E-07 | 7.8719E-18 | 3.9836E-06 | 0.0000E+00 | -3.1648E-06 |

Criterion (S) of convergence reached (S)

The residue of the type RESI_GLOB_RELA is worth 1.439918867235e-13 with the node and degree of

freedom N87505 DY

The residue of the type RESI_GLOB_MAXI is worth 1.328962930506e-17 with the node and degree of

freedom N87505 DY

Temps CPU consommé dans ce pas de temps : 17.392 s

* Nombre d'itérations de Newton : 1

* Temps total intégration comportement : 7.513 s (3 intégrations)

* Temps total factorisation matrice : 3.262 s (1 factorisations)

* Temps construction second membre : 3.679 s

* Temps total résolution K.U=F : 0.086 s (1 résolutions)

* Temps assemblage matrice : 0.594 s

* Temps autres opérations : 2.257 s

Mémoire (Mo) : 4388.25 / 4053.61 / 3860.52 / 1196.69 (VmPeak / VmSize / Optimum / Minimum)

Filing of the fields

Field stored DEPL at time 4.200000000000e-02 for the sequence number 14

Field stored SIEF_ELGA at time 4.200000000000e-02 for the sequence number 14

Field stored VARI_ELGA at time 4.200000000000e-02 for the sequence number 14

Field stored COMPORTEMENT at time 4.200000000000e-02 for the sequence number 14

Field stored VITE at time 4.200000000000e-02 for the sequence number 14

Field stored ACCE at time 4.200000000000e-02 for the sequence number 14

Field stored FORC_AMOR at time 4.200000000000e-02 for the sequence number 14

Field stored FORC_LIAI at time 4.200000000000e-02 for the sequence number 14

Adaptation of the time step.

For the method of adaptation of the type FIXE, the computed time step is worth

6.000000000000e-03.

On all the criteria of adaptation, the smallest time step is worth 6.000000000000e-03.

After best fit on the compulsory points of transition, the smallest time step is worth

3.000000000000e-03.

[21%] Instant calculé : 4.20000e-02, dernier instant archivé : 4.20000e-02, au numéro d'ordre :

14

Time of computation: 4.500000000000e-02

| INCREMENT | NEWTON | RESIDU | RESIDU | OPTION | NEWTON |

| INSTANT | ITERATION | RELATIF | ABSOLU | ASSEMBLAGE | TEMPS CALCUL |

| | | RESI_GLOB_RELA | RESI_GLOB_MAXI |

| VALEUR |

| 4.50000E-02 | 0 | 1.12118E-13 | 1.03479E-17 |TANGENTE | |

| BILAN D'ENERGIE | TRAV_EXT | ENER_TOT | ENER_CIN | TRAV_AMOR | DISS_SCH |

| PAS COURANT | 0.0000E+00 | -1.7817E-18 | -1.0192E-06 | 0.0000E+00 | 1.0192E-06 |

| TOTAL | 8.1884E-07 | 6.0902E-18 | 2.9644E-06 | 0.0000E+00 | -2.1456E-06 |

Criterion (S) of convergence reached (S)

The residue of the type RESI_GLOB_RELA is worth 1.121183510213e-13 with the node and degree of

freedom N87505 DY

The residue of the type RESI_GLOB_MAXI is worth 1.034788387925e-17 with the node and degree of

freedom N87505 DY

Temps CPU consommé dans ce pas de temps : 17.451 s

* Nombre d'itérations de Newton : 1

* Temps total intégration comportement : 7.551 s (3 intégrations)

* Temps total factorisation matrice : 3.268 s (1 factorisations)

* Temps construction second membre : 3.675 s

* Temps total résolution K.U=F : 0.088 s (1 résolutions)

* Temps assemblage matrice : 0.596 s

* Temps autres opérations : 2.273 s

Mémoire (Mo) : 4433.66 / 4099.47 / 3905.92 / 1196.69 (VmPeak / VmSize / Optimum / Minimum)

Filing of the fields

Field stored DEPL at time 4.500000000000e-02 for the sequence number 15

Field stored SIEF_ELGA at time 4.500000000000e-02 for the sequence number 15

Field stored VARI_ELGA at time 4.500000000000e-02 for the sequence number 15

Field stored COMPORTEMENT at time 4.500000000000e-02 for the sequence number 15

Field stored VITE at time 4.500000000000e-02 for the sequence number 15

Field stored ACCE at time 4.500000000000e-02 for the sequence number 15

Field stored FORC_AMOR at time 4.500000000000e-02 for the sequence number 15

Field stored FORC_LIAI at time 4.500000000000e-02 for the sequence number 15

Adaptation of the time step.

For the method of adaptation of the type FIXE, the computed time step is worth

6.000000000000e-03.

On all the criteria of adaptation, the smallest time step is worth 6.000000000000e-03.

After best fit on the compulsory points of transition, the smallest time step is worth

3.000000000000e-03.

[22%] Instant calculé : 4.50000e-02, dernier instant archivé : 4.50000e-02, au numéro d'ordre :

15

Time of computation: 4.800000000000e-02

| INCREMENT | NEWTON | RESIDU | RESIDU | OPTION | NEWTON |

| INSTANT | ITERATION | RELATIF | ABSOLU | ASSEMBLAGE | TEMPS CALCUL |

| | | RESI_GLOB_RELA | RESI_GLOB_MAXI | | VALEUR |

| 4.80000E-02 | 0 | 8.63743E-14 | 7.97185E-18 |TANGENTE | |

| BILAN D'ENERGIE | TRAV_EXT | ENER_TOT | ENER_CIN | TRAV_AMOR | DISS_SCH |

| PAS COURANT | 0.0000E+00 | -1.4250E-18 | -7.7016E-07 | 0.0000E+00 | 7.7016E-07 |

| TOTAL | 8.1884E-07 | 4.6652E-18 | 2.1943E-06 | 0.0000E+00 | -1.3754E-06 |

Criterion (S) of convergence reached (S)

The residue of the type RESI_GLOB_RELA is worth 8.637425317036e-14 with the node and degree of

freedom N87505 DY

The residue of the type RESI_GLOB_MAXI is worth 7.971850583084e-18 with the node and degree of

freedom N87505 DY

Temps CPU consommé dans ce pas de temps : 17.356 s

* Nombre d'itérations de Newton : 1

* Temps total intégration comportement : 7.486 s (3 intégrations)

* Temps total factorisation matrice : 3.238 s (1 factorisations)

* Temps construction second membre : 3.686 s

* Temps total résolution K.U=F : 0.091 s (1 résolutions)

* Temps assemblage matrice : 0.593 s

* Temps autres opérations : 2.261 s

Mémoire (Mo) : 4479.12 / 4145.20 / 3951.33 / 1196.69 (VmPeak / VmSize / Optimum / Minimum)

Filing of the fields

Field stored DEPL at time 4.800000000000e-02 for the sequence number 16

Field stored SIEF_ELGA at time 4.800000000000e-02 for the sequence number 16

Field stored VARI_ELGA at time 4.800000000000e-02 for the sequence number 16

Field stored COMPORTEMENT at time 4.800000000000e-02 for the sequence number 16

Field stored VITE at time 4.800000000000e-02 for the sequence number 16

Field stored ACCE at time 4.800000000000e-02 for the sequence number 16

Field stored FORC_AMOR at time 4.800000000000e-02 for the sequence number 16

Field stored FORC_LIAI at time 4.800000000000e-02 for the sequence number 16

Adaptation of the time step.

For the method of adaptation of the type FIXE, the computed time step is worth

6.000000000000e-03.

On all the criteria of adaptation, the smallest time step is worth 6.000000000000e-03.

After best fit on the compulsory points of transition, the smallest time step is worth

3.000000000000e-03.

[24%] Instant calculé : 4.80000e-02, dernier instant archivé : 4.80000e-02, au numéro d'ordre :

16

Time of computation: 5.100000000000e-02

| INCREMENT | NEWTON | RESIDU | RESIDU | OPTION | NEWTON |

| INSTANT | ITERATION | RELATIF | ABSOLU | ASSEMBLAGE | TEMPS CALCUL |

| | | RESI_GLOB_RELA | RESI_GLOB_MAXI | | VALEUR |

| 5.10000E-02 | 0 | 6.59325E-14 | 6.08519E-18 |TANGENTE | |

| BILAN D'ENERGIE | TRAV_EXT | ENER_TOT | ENER_CIN | TRAV_AMOR | DISS_SCH |

| PAS COURANT | 0.0000E+00 | -1.1226E-18 | -5.7788E-07 | 0.0000E+00 | 5.7788E-07 |

| TOTAL | 8.1884E-07 | 3.5426E-18 | 1.6164E-06 | 0.0000E+00 | -7.9755E-07 |

Criterion (S) of convergence reached (S)

The residue of the type RESI_GLOB_RELA is worth 6.593246895368e-14 with the node and degree of

freedom N87505 DY

The residue of the type RESI_GLOB_MAXI is worth 6.085190572193e-18 with the node and degree of

freedom N87505 DY

Temps CPU consommé dans ce pas de temps : 17.407 s

* Nombre d'itérations de Newton : 1

* Temps total intégration comportement : 7.476 s (3 intégrations)

* Temps total factorisation matrice : 3.261 s (1 factorisations)

* Temps construction second membre : 3.685 s

* Temps total résolution K.U=F : 0.088 s (1 résolutions)

* Temps assemblage matrice : 0.601 s

* Temps autres opérations : 2.296 s

Mémoire (Mo) : 4524.55 / 4189.89 / 3996.73 / 1196.69 (VmPeak / VmSize / Optimum / Minimum)

Filing of the fields

Field stored DEPL at time 5.100000000000e-02 for the sequence number 17

Field stored SIEF_ELGA at time 5.100000000000e-02 for the sequence number 17

Field stored VARI_ELGA at time 5.100000000000e-02 for the sequence number 17

Field stored COMPORTEMENT at time 5.100000000000e-02 for the sequence number 17

Field stored VITE at time 5.100000000000e-02 for the sequence number 17

Field stored ACCE at time 5.100000000000e-02 for the sequence number 17

Field stored FORC_AMOR at time 5.100000000000e-02 for the sequence number 17

Field stored FORC_LIAI at time 5.100000000000e-02 for the sequence number 17

Adaptation of the time step.

For the method of adaptation of the type FIXE, the computed time step is worth

6.000000000000e-03.

On all the criteria of adaptation, the smallest time step is worth 6.000000000000e-03.

After best fit on the compulsory points of transition, the smallest time step is worth

3.000000000000e-03.

[25%] Instant calculé : 5.10000e-02, dernier instant archivé : 5.10000e-02, au numéro d'ordre :

17

Time of computation: 5.400000000000e-02

| INCREMENT | NEWTON | RESIDU | RESIDU | OPTION | NEWTON |

| INSTANT | ITERATION | RELATIF | ABSOLU | ASSEMBLAGE | TEMPS CALCUL |

| | | RESI_GLOB_RELA | RESI_GLOB_MAXI | | VALEUR |

| 5.40000E-02 | 0 | 4.99154E-14 | 4.60691E-18 |TANGENTE | |

| BILAN D'ENERGIE | TRAV_EXT | ENER_TOT | ENER_CIN | TRAV_AMOR | DISS_SCH |

| PAS COURANT | 0.0000E+00 | -8.7331E-19 | -4.3090E-07 | 0.0000E+00 | 4.3090E-07 |

| TOTAL | 8.1884E-07 | 2.6693E-18 | 1.1855E-06 | 0.0000E+00 | -3.6666E-07 |

Criterion (S) of convergence reached (S)

The residue of the type RESI_GLOB_RELA is worth 4.991539778058e-14 with the node and degree of

freedom N87505 DY

The residue of the type RESI_GLOB_MAXI is worth 4.606906320998e-18 with the node and degree of

freedom N87505 DY

Temps CPU consommé dans ce pas de temps : 17.438 s

* Nombre d'itérations de Newton : 1

* Temps total intégration comportement : 7.542 s (3 intégrations)

* Temps total factorisation matrice : 3.264 s (1 factorisations)

* Temps construction second membre : 3.675 s

* Temps total résolution K.U=F : 0.088 s (1 résolutions)

* Temps assemblage matrice : 0.592 s

* Temps autres opérations : 2.277 s

Mémoire (Mo) : 4569.97 / 4235.68 / 4042.13 / 1196.69 (VmPeak / VmSize / Optimum / Minimum)

Filing of the fields

Field stored DEPL at time 5.400000000000e-02 for the sequence number 18

Field stored SIEF_ELGA at time 5.400000000000e-02 for the sequence number 18

Field stored VARI_ELGA at time 5.400000000000e-02 for the sequence number 18

Field stored COMPORTEMENT at time 5.400000000000e-02 for the sequence number 18

Field stored VITE at time 5.400000000000e-02 for the sequence number 18

Field stored ACCE at time 5.400000000000e-02 for the sequence number 18

Field stored FORC_AMOR at time 5.400000000000e-02 for the sequence number 18

Field stored FORC_LIAI at time 5.400000000000e-02 for the sequence number 18

Adaptation of the time step.

For the method of adaptation of the type FIXE, the computed time step is worth

6.000000000000e-03.

On all the criteria of adaptation, the smallest time step is worth 6.000000000000e-03.

After best fit on the compulsory points of transition, the smallest time step is worth

3.000000000000e-03.

[27%] Instant calculé : 5.40000e-02, dernier instant archivé : 5.40000e-02, au numéro d'ordre :

18

Time of computation: 5.700000000000e-02

| INCREMENT | NEWTON | RESIDU | RESIDU | OPTION | NEWTON |

| INSTANT | ITERATION | RELATIF | ABSOLU | ASSEMBLAGE | TEMPS CALCUL |

| | | RESI_GLOB_RELA | RESI_GLOB_MAXI | | VALEUR |

| 5.70000E-02 | 0 | 3.75315E-14 | 3.46394E-18 |TANGENTE | |

| BILAN D'ENERGIE | TRAV_EXT | ENER_TOT | ENER_CIN | TRAV_AMOR | DISS_SCH |

| PAS COURANT | 0.0000E+00 | -6.7206E-19 | -3.1950E-07 | 0.0000E+00 | 3.1950E-07 |

| TOTAL | 8.1884E-07 | 1.9972E-18 | 8.6599E-07 | 0.0000E+00 | -4.7155E-08 |

Criterion (S) of convergence reached (S)

The residue of the type RESI_GLOB_RELA is worth 3.753147833397e-14 with the node and degree of

freedom N87505 DY

The residue of the type RESI_GLOB_MAXI is worth 3.463941237796e-18 with the node and degree of

freedom N87505 DY

Temps CPU consommé dans ce pas de temps : 17.396 s

* Nombre d'itérations de Newton : 1

* Temps total intégration comportement : 7.502 s (3 intégrations)

* Temps total factorisation matrice : 3.242 s (1 factorisations)

* Temps construction second membre : 3.685 s

* Temps total résolution K.U=F : 0.091 s (1 résolutions)

* Temps assemblage matrice : 0.600 s

* Temps autres opérations : 2.276 s

Mémoire (Mo) : 4615.39 / 4281.23 / 4087.53 / 1196.69 (VmPeak / VmSize / Optimum / Minimum)

Filing of the fields

Field stored DEPL at time 5.700000000000e-02 for the sequence number 19

Field stored SIEF_ELGA at time 5.700000000000e-02 for the sequence number 19

Field stored VARI_ELGA at time 5.700000000000e-02 for the sequence number 19

Field stored COMPORTEMENT at time 5.700000000000e-02 for the sequence number 19

Field stored VITE at time 5.700000000000e-02 for the sequence number 19

Field stored ACCE at time 5.700000000000e-02 for the sequence number 19

Field stored FORC_AMOR at time 5.700000000000e-02 for the sequence number 19

Field stored FORC_LIAI at time 5.700000000000e-02 for the sequence number 19

Adaptation of the time step.

For the method of adaptation of the type FIXE, the computed time step is worth

6.000000000000e-03.

On all the criteria of adaptation, the smallest time step is worth 6.000000000000e-03.

After best fit on the compulsory points of transition, the smallest time step is worth

3.000000000000e-03.

[28%] Instant calculé : 5.70000e-02, dernier instant archivé : 5.70000e-02, au numéro d'ordre :

19

Time of computation: 6.000000000000e-02

| INCREMENT | NEWTON | RESIDU | RESIDU | OPTION | NEWTON |

| INSTANT | ITERATION | RELATIF | ABSOLU |

ASSEMBLAGE | TEMPS CALCUL |

| | | RESI_GLOB_RELA | RESI_GLOB_MAXI |
| VALEUR |

| 6.00000E-02 | 0 | 2.80276E-14 | 2.58679E-18 |TANGENTE
| |

| BILAN D'ENERGIE | TRAV_EXT | ENER_TOT | ENER_CIN | TRAV_AMOR
| DISS_SCH |

| PAS COURANT | 0.0000E+00 | -5.1240E-19 | -2.3571E-07 | 0.0000E+00 |
2.3571E-07 |

| TOTAL | 8.1884E-07 | 1.4848E-18 | 6.3028E-07 | 0.0000E+00 |
1.8856E-07 |

Criterion (S) of convergence reached (S)

The residue of the type RESI_GLOB_RELA is worth 2.802758017229e-14 with the node and degree of

freedom N87505 DY

The residue of the type RESI_GLOB_MAXI is worth 2.586785681355e-18 with the node and degree of

freedom N87505 DY

Temps CPU consommé dans ce pas de temps : 17.408 s

* Nombre d'itérations de Newton : 1

* Temps total intégration comportement : 7.514 s (3 intégrations)

* Temps total factorisation matrice : 3.247 s (1 factorisations)

* Temps construction second membre : 3.682 s

* Temps total résolution K.U=F : 0.087 s (1 résolutions)

* Temps assemblage matrice : 0.597 s

* Temps autres opérations : 2.282 s

Mémoire (Mo) : 4660.85 / 4326.96 / 4132.94 / 1196.69 (VmPeak / VmSize / Optimum / Minimum)

Filing of the fields

Field stored DEPL at time 6.000000000000e-02 for the sequence number 20

Field stored SIEF_ELGA at time 6.000000000000e-02 for the sequence number 20

Field stored VARI_ELGA at time 6.000000000000e-02 for the sequence number 20

Field stored COMPORTEMENT at time 6.000000000000e-02 for the sequence number 20

Field stored VITE at time 6.000000000000e-02 for the sequence number 20

Field stored ACCE at time 6.000000000000e-02 for the sequence number 20

Field stored FORC_AMOR at time 6.000000000000e-02 for the sequence number 20

Field stored FORC_LIAI at time 6.000000000000e-02 for the sequence number 20

Adaptation of the time step.

For the method of adaptation of the type FIXE, the computed time step is worth

6.000000000000e-03.

On all the criteria of adaptation, the smallest time step is worth 6.000000000000e-03.

After best fit on the compulsory points of transition, the smallest time step is worth

3.000000000000e-03.

[30%] Instant calculé : 6.00000e-02, dernier instant archivé : 6.00000e-02, au numéro d'ordre :

20

Time of computation: 6.300000000000e-02

| INCREMENT | NEWTON | RESIDU | RESIDU | OPTION | NEWTON |

| INSTANT | ITERATION | RELATIF | ABSOLU | ASSEMBLAGE | TEMPS CALCUL |

| | | RESI_GLOB_RELA | RESI_GLOB_MAXI | | VALEUR |

| 6.30000E-02 | 0 | 2.08255E-14 | 1.92208E-18 |TANGENTE | |

| BILAN D'ENERGIE | TRAV_EXT | ENER_TOT | ENER_CIN | TRAV_AMOR | DISS_SCH |

| PAS COURANT | 0.0000E+00 | -3.8751E-19 | -1.7311E-07 | 0.0000E+00 | 1.7311E-07 |

| TOTAL | 8.1884E-07 | 1.0973E-18 | 4.5717E-07 | 0.0000E+00 | 3.6166E-07 |

Criterion (S) of convergence reached (S)

The residue of the type RESI_GLOB_RELA is worth 2.082551937693e-14 with the node and degree of

freedom N87505 DY

The residue of the type RESI_GLOB_MAXI is worth 1.922076575998e-18 with the

node and degree of

freedom N87505 DY

Temps CPU consommé dans ce pas de temps : 17.409 s

* Nombre d'itérations de Newton : 1

* Temps total intégration comportement : 7.505 s (3 intégrations)

* Temps total factorisation matrice : 3.255 s (1 factorisations)

* Temps construction second membre : 3.674 s

* Temps total résolution K.U=F : 0.085 s (1 résolutions)

* Temps assemblage matrice : 0.599 s

* Temps autres opérations : 2.290 s

Mémoire (Mo) : 4706.27 / 4371.62 / 4178.34 / 1196.69 (VmPeak / VmSize / Optimum / Minimum)

Filing of the fields

Field stored DEPL at time 6.300000000000e-02 for the sequence number 21

Field stored SIEF_ELGA at time 6.300000000000e-02 for the sequence number 21

Field stored VARI_ELGA at time 6.300000000000e-02 for the sequence number 21

Field stored COMPORTEMENT at time 6.300000000000e-02 for the sequence number 21

Field stored VITE at time 6.300000000000e-02 for the sequence number 21

Field stored ACCE at time 6.300000000000e-02 for the sequence number 21

Field stored FORC_AMOR at time 6.300000000000e-02 for the sequence number 21

Field stored FORC_LIAI at time 6.300000000000e-02 for the sequence number 21

Adaptation of the time step.

For the method of adaptation of the type FIXE, the computed time step is worth

6.000000000000e-03.

On all the criteria of adaptation, the smallest time step is worth 6.000000000000e-03.

After best fit on the compulsory points of transition, the smallest time step is worth

3.000000000000e-03.

[31%] Instant calculé : 6.30000e-02, dernier instant archivé : 6.30000e-02, au numéro d'ordre :

21

Time of computation: 6.600000000000e-02

| INCREMENT | NEWTON | RESIDU | RESIDU | OPTION | NEWTON |

| INSTANT | ITERATION | RELATIF | ABSOLU | ASSEMBLAGE | TEMPS CALCUL |

| | | RESI_GLOB_RELA | RESI_GLOB_MAXI | | VALEUR |

| 6.60000E-02 | 0 | 1.53884E-14 | 1.42026E-18 |TANGENTE | |

| BILAN D'ENERGIE | TRAV_EXT | ENER_TOT | ENER_CIN | TRAV_AMOR | DISS_SCH |

| PAS COURANT | 0.0000E+00 | -2.9097E-19 | -1.2660E-07 | 0.0000E+00 | 1.2660E-07 |

| TOTAL | 8.1884E-07 | 8.0636E-19 | 3.3057E-07 | 0.0000E+00 | 4.8827E-07 |

Criterion (S) of convergence reached (S)

The residue of the type RESI_GLOB_RELA is worth 1.538841088067e-14 with the node and degree of

freedom N87505 DY

The residue of the type RESI_GLOB_MAXI is worth 1.420262494309e-18 with the node and degree of

freedom N87505 DY

Temps CPU consommé dans ce pas de temps : 17.330 s

* Nombre d'itérations de Newton : 1

* Temps total intégration comportement : 7.481 s (3 intégrations)

* Temps total factorisation matrice : 3.229 s (1 factorisations)

* Temps construction second membre : 3.674 s

* Temps total résolution K.U=F : 0.087 s (1 résolutions)

* Temps assemblage matrice : 0.594 s

* Temps autres opérations : 2.265 s

Mémoire (Mo) : 4751.73 / 4417.35 / 4223.74 / 1196.69 (VmPeak / VmSize / Optimum / Minimum)

Filing of the fields

Field stored DEPL at time 6.600000000000e-02 for the sequence number 22

Field stored SIEF_ELGA at time 6.600000000000e-02 for the sequence number 22

Field stored VARI_ELGA at time 6.600000000000e-02 for the sequence number 22

Field stored COMPORTEMENT at time 6.600000000000e-02 for the sequence number 22

Field stored VITE at time 6.600000000000e-02 for the sequence number 22

Field stored ACCE at time 6.600000000000e-02 for the sequence number 22

Field stored FORC_AMOR at time 6.600000000000e-02 for the sequence number 22

Field stored FORC_LIAI at time 6.600000000000e-02 for the sequence number 22

Adaptation of the time step.

For the method of adaptation of the type FIXE, the computed time step is worth

6.000000000000e-03.

On all the criteria of adaptation, the smallest time step is worth 6.000000000000e-03.

After best fit on the compulsory points of transition, the smallest time step is worth

3.000000000000e-03.

[33%] Instant calculé : 6.60000e-02, dernier instant archivé : 6.60000e-02, au numéro d'ordre :

22

Time of computation: 6.900000000000e-02

| INCREMENT | NEWTON | RESIDU | RESIDU | OPTION | NEWTON |

| INSTANT | ITERATION | RELATIF | ABSOLU | ASSEMBLAGE | TEMPS CALCUL |

| | | RESI_GLOB_RELA | RESI_GLOB_MAXI | | VALEUR |

| 6.90000E-02 | 0 | 1.13179E-14 | 1.04458E-18 |TANGENTE | |

| BILAN D'ENERGIE | TRAV_EXT | ENER_TOT | ENER_CIN | TRAV_AMOR | DISS_SCH |

| PAS COURANT | 0.0000E+00 | -2.1710E-19 | -9.2240E-08 | 0.0000E+00 | 9.2240E-08 |

| TOTAL | 8.1884E-07 | 5.8926E-19 | 2.3833E-07 | 0.0000E+00 | 5.8051E-07 |

Criterion (S) of convergence reached (S)

The residue of the type RESI_GLOB_RELA is worth 1.131789284672e-14 with the node and degree of

freedom N87505 DY

The residue of the type RESI_GLOB_MAXI is worth 1.044576912422e-18 with the node and degree of

freedom N87505 DY

Temps CPU consommé dans ce pas de temps : 17.379 s

* Nombre d'itérations de Newton : 1

* Temps total intégration comportement : 7.525 s (3 intégrations)

* Temps total factorisation matrice : 3.230 s (1 factorisations)

* Temps construction second membre : 3.688 s

* Temps total résolution K.U=F : 0.087 s (1 résolutions)

* Temps assemblage matrice : 0.592 s

* Temps autres opérations : 2.257 s

Mémoire (Mo) : 4797.15 / 4463.00 / 4269.14 / 1196.69 (VmPeak / VmSize / Optimum / Minimum)

Filing of the fields

Field stored DEPL at time 6.900000000000e-02 for the sequence number 23

Field stored SIEF_ELGA at time 6.900000000000e-02 for the sequence number 23

Field stored VARI_ELGA at time 6.900000000000e-02 for the sequence number 23

Field stored COMPORTEMENT at time 6.900000000000e-02 for the sequence number 23

Field stored VITE at time 6.900000000000e-02 for the sequence number 23

Field stored ACCE at time 6.900000000000e-02 for the sequence number 23

Field stored FORC_AMOR at time 6.900000000000e-02 for the sequence number 23

Field stored FORC_LIAI at time 6.900000000000e-02 for the sequence number 23

Adaptation of the time step.

For the method of adaptation of the type FIXE, the computed time step is worth

6.000000000000e-03.

On all the criteria of adaptation, the smallest time step is worth 6.000000000000e-03.

After best fit on the compulsory points of transition, the smallest time step is worth

3.000000000000e-03.

[34%] Instant calculé : 6.90000e-02, dernier instant archivé : 6.90000e-02, au numéro d'ordre :

23

Time of computation: 7.200000000000e-02

| INCREMENT | NEWTON | RESIDU | RESIDU | OPTION | NEWTON |

| INSTANT | ITERATION | RELATIF | ABSOLU | ASSEMBLAGE | TEMPS CALCUL |

| | | RESI_GLOB_RELA | RESI_GLOB_MAXI | | VALEUR |

| 7.20000E-02 | 0 | 8.29132E-15 | 7.65241E-19 |TANGENTE | |

| BILAN D'ENERGIE | TRAV_EXT | ENER_TOT | ENER_CIN | TRAV_AMOR | DISS_SCH |

| PAS COURANT | 0.0000E+00 | -1.6107E-19 | -6.6972E-08 | 0.0000E+00 | 6.6972E-08 |

| TOTAL | 8.1884E-07 | 4.2819E-19 | 1.7136E-07 | 0.0000E+00 | 6.4748E-07 |

Criterion (S) of convergence reached (S)

The residue of the type RESI_GLOB_RELA is worth 8.291317999107e-15 with the node and degree of

freedom N87505 DY

The residue of the type RESI_GLOB_MAXI is worth 7.652413282851e-19 with the node and degree of

freedom N87505 DY

Temps CPU consommé dans ce pas de temps : 17.371 s

* Nombre d'itérations de Newton : 1

* Temps total intégration comportement : 7.501 s (3 intégrations)

* Temps total factorisation matrice : 3.233 s (1 factorisations)

* Temps construction second membre : 3.686 s

* Temps total résolution K.U=F : 0.087 s (1 résolutions)

* Temps assemblage matrice : 0.593 s

* Temps autres opérations : 2.272 s

Mémoire (Mo) : 4842.60 / 4508.59 / 4314.54 / 1196.69 (VmPeak / VmSize / Optimum / Minimum)

Filing of the fields

Field stored DEPL at time 7.200000000000e-02 for the sequence number 24

Field stored SIEF_ELGA at time 7.200000000000e-02 for the sequence number 24

Field stored VARI_ELGA at time 7.200000000000e-02 for the sequence number 24

Field stored COMPORTEMENT at time 7.200000000000e-02 for the sequence number 24

Field stored VITE at time 7.200000000000e-02 for the sequence number 24

Field stored ACCE at time 7.200000000000e-02 for the sequence number 24

Field stored FORC_AMOR at time 7.200000000000e-02 for the sequence number 24

Field stored FORC_LIAI at time 7.200000000000e-02 for the sequence number 24

Adaptation of the time step.

For the method of adaptation of the type FIXE, the computed time step is worth

6.000000000000e-03.

On all the criteria of adaptation, the smallest time step is worth 6.000000000000e-03.

After best fit on the compulsory points of transition, the smallest time step is worth

3.000000000000e-03.

[36%] Instant calculé : 7.20000e-02, dernier instant archivé : 7.20000e-02, au numéro d'ordre :

24

Time of computation: 7.500000000000e-02

| INCREMENT | NEWTON | RESIDU | RESIDU |

OPTION | NEWTON |

| INSTANT | ITERATION | RELATIF | ABSOLU | ASSEMBLAGE | TEMPS CALCUL |

| | | RESI_GLOB_RELA | RESI_GLOB_MAXI | | VALEUR |

| 7.50000E-02 | 0 | 6.04684E-15 | 5.58089E-19 |TANGENTE | |

| BILAN D'ENERGIE | TRAV_EXT | ENER_TOT | ENER_CIN | TRAV_AMOR | DISS_SCH |

| PAS COURANT | 0.0000E+00 | -1.1889E-19 | -4.8470E-08 | 0.0000E+00 | 4.8470E-08 |

| TOTAL | 8.1884E-07 | 3.0931E-19 | 1.2289E-07 | 0.0000E+00 | 6.9595E-07 |

Criterion (S) of convergence reached (S)

The residue of the type RESI_GLOB_RELA is worth 6.046840148501e-15 with the node and degree of

freedom N87505 DY

The residue of the type RESI_GLOB_MAXI is worth 5.580888331222e-19 with the node and degree of

freedom N87505 DY

Temps CPU consommé dans ce pas de temps : 17.355 s

* Nombre d'itérations de Newton : 1

* Temps total intégration comportement : 7.537 s (3 intégrations)

* Temps total factorisation matrice : 3.217 s (1 factorisations)

* Temps construction second membre : 3.672 s

* Temps total résolution K.U=F : 0.087 s (1 résolutions)

* Temps assemblage matrice : 0.590 s

* Temps autres opérations : 2.252 s

Mémoire (Mo) : 4888.02 / 4554.32 / 4359.95 / 1196.69 (VmPeak / VmSize / Optimum / Minimum)

Filing of the fields

Field stored DEPL at time 7.500000000000e-02 for the sequence number 25

Field stored SIEF_ELGA at time 7.500000000000e-02 for the sequence number 25

Field stored VARI_ELGA at time 7.500000000000e-02 for the sequence number 25

Field stored COMPORTEMENT at time 7.500000000000e-02 for the sequence number 25

Field stored VITE at time 7.500000000000e-02 for the sequence number 25

Field stored ACCE at time 7.500000000000e-02 for the sequence number 25

Field stored FORC_AMOR at time 7.500000000000e-02 for the sequence number 25

Field stored FORC_LIAI at time 7.500000000000e-02 for the sequence number 25

Adaptation of the time step.

For the method of adaptation of the type FIXE, the computed time step is worth

6.000000000000e-03.

On all the criteria of adaptation, the smallest time step is worth 6.000000000000e-03.

After best fit on the compulsory points of transition, the smallest time step is worth

3.000000000000e-03.

[37%] Instant calculé : 7.50000e-02, dernier instant archivé : 7.50000e-02, au numéro d'ordre :

Time of computation: 7.800000000000e-02

INCREMENT	NEWTON	RESIDU	RESIDU	OPTION	NEWTON
INSTANT	ITERATION	RELATIF	ABSOLU	ASSEMBLAGE	TEMPS CALCUL
		RESI_GLOB_RELA	RESI_GLOB_MAXI		VALEUR
7.80000E-02	0	4.39919E-15	4.06020E-19	TANGENTE	

BILAN D'ENERGIE	TRAV_EXT	ENER_TOT	ENER_CIN	TRAV_AMOR	DISS_SCH
PAS COURANT	0.0000E+00	-8.7352E-20	-3.4976E-08	0.0000E+00	3.4976E-08
TOTAL	8.1884E-07	2.2195E-19	8.7912E-08	0.0000E+00	7.3092E-07

Criterion (S) of convergence reached (S)

The residue of the type RESI_GLOB_RELA is worth 4.399188059090e-15 with the node and degree of

freedom N87505 DY

The residue of the type RESI_GLOB_MAXI is worth 4.060199493104e-19 with the node and degree of

freedom N87505 DY

Temps CPU consommé dans ce pas de temps : 17.346 s

* Nombre d'itérations de Newton : 1

* Temps total intégration comportement : 7.486 s (3 intégrations)

* Temps total factorisation matrice : 3.238 s (1 factorisations)

* Temps construction second membre : 3.679 s

* Temps total résolution K.U=F : 0.087 s (1 résolutions)

* Temps assemblage matrice : 0.592 s

* Temps autres opérations : 2.265 s

Mémoire (Mo) : 4933.45 / 4599.63 / 4405.35 / 1196.69 (VmPeak / VmSize / Optimum / Minimum)

Filing of the fields

Field stored DEPL at time 7.800000000000e-02 for the sequence number 26

Field stored SIEF_ELGA at time 7.800000000000e-02 for the sequence number 26

Field stored VARI_ELGA at time 7.800000000000e-02 for the sequence number 26

Field stored COMPORTEMENT at time 7.800000000000e-02 for the sequence number 26

Field stored VITE at time 7.800000000000e-02 for the sequence number 26

Field stored ACCE at time 7.800000000000e-02 for the sequence number 26

Field stored FORC_AMOR at time 7.800000000000e-02 for the sequence number 26

Field stored FORC_LIAI at time 7.800000000000e-02 for the sequence number 26

Adaptation of the time step.

For the method of adaptation of the type FIXE, the computed time step is worth

6.000000000000e-03.

On all the criteria of adaptation, the smallest time step is worth 6.000000000000e-03.

After best fit on the compulsory points of transition, the smallest time step is worth

3.000000000000e-03.

[39%] Instant calculé : 7.80000e-02, dernier instant archivé : 7.80000e-02, au numéro d'ordre :

26

Time of computation: 8.100000000000e-02

| INCREMENT | NEWTON | RESIDU | RESIDU | OPTION | NEWTON |

| INSTANT | ITERATION | RELATIF | ABSOLU | ASSEMBLAGE | TEMPS CALCUL |

| | | RESI_GLOB_RELA | RESI_GLOB_MAXI | | VALEUR |

| 8.10000E-02 | 0 | 3.19120E-15 | 2.94529E-19 |TANGENTE | |

| BILAN D'ENERGIE | TRAV_EXT | ENER_TOT | ENER_CIN | TRAV_AMOR | DISS_SCH |

| PAS COURANT | 0.0000E+00 | -6.3913E-20 | -2.5170E-08 | 0.0000E+00 | 2.5170E-08 |

| TOTAL | 8.1884E-07 | 1.5804E-19 | 6.2742E-08 | 0.0000E+00 |

7.5609E-07 |

Criterion (S) of convergence reached (S)

The residue of the type RESI_GLOB_RELA is worth 3.191196657768e-15 with the node and degree of

freedom N87505 DY

The residue of the type RESI_GLOB_MAXI is worth 2.945292376281e-19 with the node and degree of

freedom N87505 DY

Temps CPU consommé dans ce pas de temps : 17.313 s

* Nombre d'itérations de Newton : 1

* Temps total intégration comportement : 7.481 s (3 intégrations)

* Temps total factorisation matrice : 3.227 s (1 factorisations)

* Temps construction second membre : 3.671 s

* Temps total résolution K.U=F : 0.087 s (1 résolutions)

* Temps assemblage matrice : 0.591 s

* Temps autres opérations : 2.256 s

Mémoire (Mo) : 4978.86 / 4645.00 / 4450.75 / 1196.69 (VmPeak / VmSize / Optimum / Minimum)

Filing of the fields

Field stored DEPL at time 8.100000000000e-02 for the sequence number 27

Field stored SIEF_ELGA at time 8.100000000000e-02 for the sequence number 27

Field stored VARI_ELGA at time 8.100000000000e-02 for the sequence number 27

Field stored COMPORTEMENT at time 8.100000000000e-02 for the sequence number 27

Field stored VITE at time 8.100000000000e-02 for the sequence number 27

Field stored ACCE at time 8.100000000000e-02 for the sequence number 27

Field stored FORC_AMOR at time 8.100000000000e-02 for the sequence number 27

Field stored FORC_LIAI at time 8.100000000000e-02 for the sequence number 27

Adaptation of the time step.

For the method of adaptation of the type FIXE, the computed time step is worth

6.000000000000e-03.

On all the criteria of adaptation, the smallest time step is worth 6.000000000000e-03.

After best fit on the compulsory points of transition, the smallest time step is worth

3.000000000000e-03.

[40%] Instant calculé : 8.10000e-02, dernier instant archivé : 8.10000e-02, au numéro d'ordre :

27

Time of computation: 8.400000000000e-02

| INCREMENT | NEWTON | RESIDU | RESIDU | OPTION | NEWTON |

| INSTANT | ITERATION | RELATIF | ABSOLU | ASSEMBLAGE | TEMPS CALCUL |

| | | RESI_GLOB_RELA | RESI_GLOB_MAXI | | VALEUR |

| 8.40000E-02 | 0 | 2.30169E-15 | 2.12433E-19 |TANGENTE | |

| BILAN D'ENERGIE | TRAV_EXT | ENER_TOT | ENER_CIN | TRAV_AMOR | DISS_SCH |

| PAS COURANT | 0.0000E+00 | -4.6584E-20 | -1.8067E-08 | 0.0000E+00 | 1.8067E-08 |

| TOTAL | 8.1884E-07 | 1.1146E-19 | 4.4675E-08 | 0.0000E+00 | 7.7416E-07 |

Criterion (S) of convergence reached (S)

The residue of the type RESI_GLOB_RELA is worth 2.301693967549e-15 with the node and degree of

freedom N87505 DY

The residue of the type RESI_GLOB_MAXI is worth 2.124332161934e-19 with the node and degree of

freedom N87505 DY

Temps CPU consommé dans ce pas de temps : 17.434 s

* Nombre d'itérations de Newton : 1

* Temps total intégration comportement : 7.569 s (3 intégrations)

* Temps total factorisation matrice : 3.254 s (1 factorisations)

* Temps construction second membre : 3.675 s

* Temps total résolution K.U=F : 0.090 s (1 résolutions)

* Temps assemblage matrice : 0.589 s

* Temps autres opérations : 2.256 s

Mémoire (Mo) : 5024.29 / 4690.28 / 4496.16 / 1196.69 (VmPeak / VmSize / Optimum / Minimum)

Filing of the fields

Field stored DEPL at time 8.400000000000e-02 for the sequence number 28

Field stored SIEF_ELGA at time 8.400000000000e-02 for the sequence number 28

Field stored VARI_ELGA at time 8.400000000000e-02 for the sequence number 28

Field stored COMPORTEMENT at time 8.400000000000e-02 for the sequence number 28

Field stored VITE at time 8.400000000000e-02 for the sequence number 28

Field stored ACCE at time 8.400000000000e-02 for the sequence number 28

Field stored FORC_AMOR at time 8.400000000000e-02 for the sequence number 28

Field stored FORC_LIAI at time 8.400000000000e-02 for the sequence number 28

Adaptation of the time step.

For the method of adaptation of the type FIXE, the computed time step is worth

6.000000000000e-03.

On all the criteria of adaptation, the smallest time step is worth 6.000000000000e-03.

After best fit on the compulsory points of transition, the smallest time step is worth

3.000000000000e-03.

[42%] Instant calculé : 8.40000e-02, dernier instant archivé : 8.40000e-02, au numéro d'ordre :

28

Time of computation: 8.700000000000e-02

| INCREMENT | NEWTON | RESIDU | RESIDU | OPTION | NEWTON |

| INSTANT | ITERATION | RELATIF | ABSOLU | ASSEMBLAGE | TEMPS CALCUL |

| | | RESI_GLOB_RELA | RESI_GLOB_MAXI |

| VALEUR |

| 8.70000E-02 | 0 | 1.65826E-15 | 1.53048E-19 |TANGENTE | |

| BILAN D'ENERGIE | TRAV_EXT | ENER_TOT | ENER_CIN | TRAV_AMOR | DISS_SCH |

| PAS COURANT | 0.0000E+00 | -3.3835E-20 | -1.2938E-08 | 0.0000E+00 | 1.2938E-08 |

| TOTAL | 8.1884E-07 | 7.7621E-20 | 3.1737E-08 | 0.0000E+00 | 7.8710E-07 |

Criterion (S) of convergence reached (S)

The residue of the type RESI_GLOB_RELA is worth 1.658263599821e-15 with the node and degree of

freedom N87505 DY

The residue of the type RESI_GLOB_MAXI is worth 1.530482656570e-19 with the node and degree of

freedom N87505 DY

Temps CPU consommé dans ce pas de temps : 17.389 s

* Nombre d'itérations de Newton : 1

* Temps total intégration comportement : 7.529 s (3 intégrations)

* Temps total factorisation matrice : 3.245 s (1 factorisations)

* Temps construction second membre : 3.671 s

* Temps total résolution K.U=F : 0.088 s (1 résolutions)

* Temps assemblage matrice : 0.599 s

* Temps autres opérations : 2.257 s

Mémoire (Mo) : 5069.75 / 4736.25 / 4541.56 / 1196.69 (VmPeak / VmSize / Optimum / Minimum)

Filing of the fields

Field stored DEPL at time 8.700000000000e-02 for the sequence number 29

Field stored SIEF_ELGA at time 8.700000000000e-02 for the sequence number 29

Field stored VARI_ELGA at time 8.700000000000e-02 for the sequence number 29

Field stored COMPORTEMENT at time 8.700000000000e-02 for the sequence number 29

Field stored VITE at time 8.700000000000e-02 for the sequence number 29

Field stored ACCE at time 8.700000000000e-02 for the sequence number 29

Field stored FORC_AMOR at time 8.700000000000e-02 for the sequence number 29

Field stored FORC_LIAI at time 8.700000000000e-02 for the sequence number 29

Adaptation of the time step.

For the method of adaptation of the type FIXE, the computed time step is worth

6.000000000000e-03.

On all the criteria of adaptation, the smallest time step is worth 6.000000000000e-03.

After best fit on the compulsory points of transition, the smallest time step is worth

3.000000000000e-03.

[43%] Instant calculé : 8.70000e-02, dernier instant archivé : 8.70000e-02, au numéro d'ordre :

29

Time of computation: 9.000000000000e-02

| INCREMENT | NEWTON | RESIDU | RESIDU | OPTION | NEWTON |

| INSTANT | ITERATION | RELATIF | ABSOLU | ASSEMBLAGE | TEMPS CALCUL |

| | | RESI_GLOB_RELA | RESI_GLOB_MAXI | | VALEUR |

| 9.00000E-02 | 0 | 1.19078E-15 | 1.09903E-19 |TANGENTE | |

| BILAN D'ENERGIE | TRAV_EXT | ENER_TOT | ENER_CIN | TRAV_AMOR | DISS_SCH |

| PAS COURANT | 0.0000E+00 | -2.4496E-20 | -9.2446E-09 | 0.0000E+00 | 9.2446E-09 |

| TOTAL | 8.1884E-07 | 5.3125E-20 | 2.2492E-08 | 0.0000E+00 | 7.9634E-07 |

Criterion (S) of convergence reached (S)

The residue of the type RESI_GLOB_RELA is worth 1.190783546603e-15 with the node and degree of

freedom N87505 DY

The residue of the type RESI_GLOB_MAXI is worth 1.099025249062e-19 with the node and degree of

freedom N87505 DY

Temps CPU consommé dans ce pas de temps : 17.357 s

* Nombre d'itérations de Newton : 1

* Temps total intégration comportement : 7.479 s (3 intégrations)

* Temps total factorisation matrice : 3.237 s (1 factorisations)

* Temps construction second membre : 3.697 s

* Temps total résolution K.U=F : 0.088 s (1 résolutions)

* Temps assemblage matrice : 0.592 s

* Temps autres opérations : 2.264 s

Mémoire (Mo) : 5115.17 / 4781.37 / 4586.96 / 1196.69 (VmPeak / VmSize / Optimum / Minimum)

Filing of the fields

Field stored DEPL at time 9.000000000000e-02 for the sequence number 30

Field stored SIEF_ELGA at time 9.000000000000e-02 for the sequence number 30

Field stored VARI_ELGA at time 9.000000000000e-02 for the sequence number 30

Field stored COMPORTEMENT at time 9.000000000000e-02 for the sequence number 30

Field stored VITE at time 9.000000000000e-02 for the sequence number 30

Field stored ACCE at time 9.000000000000e-02 for the sequence number 30

Field stored FORC_AMOR at time 9.000000000000e-02 for the sequence number 30

Field stored FORC_LIAI at time 9.000000000000e-02 for the sequence number 30

Adaptation of the time step.

For the method of adaptation of the type FIXE, the computed time step is worth

6.000000000000e-03.

On all the criteria of adaptation, the smallest time step is worth 6.000000000000e-03.

After best fit on the compulsory points of transition, the smallest time step is worth

3.000000000000e-03.

[45%] Instant calculé : 9.00000e-02, dernier instant archivé : 9.00000e-02, au numéro d'ordre :

30

Time of computation: 9.300000000000e-02

| INCREMENT | NEWTON | RESIDU | RESIDU | OPTION | NEWTON |

| INSTANT | ITERATION | RELATIF | ABSOLU | ASSEMBLAGE | TEMPS CALCUL |

| | | RESI_GLOB_RELA | RESI_GLOB_MAXI | | VALEUR |

| 9.30000E-02 | 0 | 8.54370E-16 | 7.88535E-20 |TANGENTE | |

| BILAN D'ENERGIE | TRAV_EXT | ENER_TOT | ENER_CIN | TRAV_AMOR | DISS_SCH |

| PAS COURANT | 0.0000E+00 | -1.7682E-20 | -6.5918E-09 | 0.0000E+00 | 6.5918E-09 |

| TOTAL | 8.1884E-07 | 3.5444E-20 | 1.5901E-08 | 0.0000E+00 | 8.0294E-07 |

Criterion (S) of convergence reached (S)

The residue of the type RESI_GLOB_RELA is worth 8.543699868329e-16 with the node and degree of

freedom N87505 DY

The residue of the type RESI_GLOB_MAXI is worth 7.885347343346e-20 with the node and degree of

freedom N87505 DY

Temps CPU consommé dans ce pas de temps : 17.436 s

* Nombre d'itérations de Newton : 1

* Temps total intégration comportement : 7.553 s (3 intégrations)

* Temps total factorisation matrice : 3.249 s (1 factorisations)

* Temps construction second membre : 3.674 s

* Temps total résolution K.U=F : 0.087 s (1 résolutions)

* Temps assemblage matrice : 0.593 s

* Temps autres opérations : 2.280 s

Mémoire (Mo) : 5160.60 / 4826.84 / 4632.36 / 1196.69 (VmPeak / VmSize / Optimum / Minimum)

Filing of the fields

Field stored DEPL at time 9.300000000000e-02 for the sequence number 31

Field stored SIEF_ELGA at time 9.300000000000e-02 for the sequence number 31

Field stored VARI_ELGA at time 9.300000000000e-02 for the sequence number 31

Field stored COMPORTEMENT at time 9.300000000000e-02 for the sequence number 31

Field stored VITE at time 9.300000000000e-02 for the sequence number 31

Field stored ACCE at time 9.300000000000e-02 for the sequence number 31

Field stored FORC_AMOR at time 9.300000000000e-02 for the sequence number 31

Field stored FORC_LIAI at time 9.300000000000e-02 for the sequence number 31

Adaptation of the time step.

For the method of adaptation of the type FIXE, the computed time step is worth

6.000000000000e-03.

On all the criteria of adaptation, the smallest time step is worth 6.000000000000e-03.

After best fit on the compulsory points of transition, the smallest time step is worth

3.000000000000e-03.

[46%] Instant calculé : 9.30000e-02, dernier instant archivé : 9.30000e-02, au numéro d'ordre :

31

Time of computation: 9.600000000000e-02

| INCREMENT | NEWTON | RESIDU | RESIDU | OPTION | NEWTON |

| INSTANT | ITERATION | RELATIF | ABSOLU | ASSEMBLAGE | TEMPS CALCUL |

| | | RESI_GLOB_RELA | RESI_GLOB_MAXI | | VALEUR |

| 9.60000E-02 | 0 | 6.13603E-16 | 5.66321E-20 |TANGENTE | |

| BILAN D'ENERGIE | TRAV_EXT | ENER_TOT | ENER_CIN | TRAV_AMOR | DISS_SCH |

| PAS COURANT | 0.0000E+00 | -1.2728E-20 | -4.6911E-09 | 0.0000E+00 | 4.6911E-09 |

| TOTAL | 8.1884E-07 | 2.2716E-20 | 1.1209E-08 | 0.0000E+00 | 8.0763E-07 |

Criterion (S) of convergence reached (S)

The residue of the type RESI_GLOB_RELA is worth 6.136034195465e-16 with the node and degree of

freedom N87505 DY

The residue of the type RESI_GLOB_MAXI is worth 5.663209345783e-20 with the node and degree of

freedom N87505 DY

Temps CPU consommé dans ce pas de temps : 17.471 s

* Nombre d'itérations de Newton : 1

* Temps total intégration comportement : 7.597 s (3 intégrations)

* Temps total factorisation matrice : 3.240 s (1 factorisations)

* Temps construction second membre : 3.672 s

* Temps total résolution K.U=F : 0.086 s (1 résolutions)

* Temps assemblage matrice : 0.593 s

* Temps autres opérations : 2.283 s

Mémoire (Mo) : 5206.01 / 4872.30 / 4677.76 / 1196.69 (VmPeak / VmSize / Optimum / Minimum)

Filing of the fields

Field stored DEPL at time 9.600000000000e-02 for the sequence number 32

Field stored SIEF_ELGA at time 9.600000000000e-02 for the sequence number 32

Field stored VARI_ELGA at time 9.600000000000e-02 for the sequence number 32

Field stored COMPORTEMENT at time 9.600000000000e-02 for the sequence number 32

Field stored VITE at time 9.600000000000e-02 for the sequence number 32

Field stored ACCE at time 9.600000000000e-02 for the sequence number 32

Field stored FORC_AMOR at time 9.600000000000e-02 for the sequence number 32

Field stored FORC_LIAI at time 9.600000000000e-02 for the sequence number 32

Adaptation of the time step.

For the method of adaptation of the type FIXE, the computed time step is worth

6.000000000000e-03.

On all the criteria of adaptation, the smallest time step is worth 6.000000000000e-03.

After best fit on the compulsory points of transition, the smallest time step is worth

3.000000000000e-03.

[48%] Instant calculé : 9.60000e-02, dernier instant archivé : 9.60000e-02, au numéro d'ordre :

32

Time of computation: 9.900000000000e-02

| INCREMENT | NEWTON | RESIDU | RESIDU | OPTION | NEWTON |

| INSTANT | ITERATION | RELATIF | ABSOLU | ASSEMBLAGE | TEMPS CALCUL |

| | | RESI_GLOB_RELA | RESI_GLOB_MAXI | | VALEUR |

| 9.90000E-02 | 0 | 4.35789E-16 | 4.02208E-20 |TANGENTE | |

| BILAN D'ENERGIE | TRAV_EXT | ENER_TOT | ENER_CIN | TRAV_AMOR | DISS_SCH |

| PAS COURANT | 0.0000E+00 | -9.1386E-21 | -3.3324E-09 | 0.0000E+00 | 3.3324E-09 |

| TOTAL | 8.1884E-07 | 1.3577E-20 | 7.8770E-09 | 0.0000E+00 | 8.1096E-07 |

Criterion (S) of convergence reached (S)

The residue of the type RESI_GLOB_RELA is worth 4.357889207763e-16 with the node and degree of

freedom N87505 DY

The residue of the type RESI_GLOB_MAXI is worth 4.022083010478e-20 with the node and degree of

freedom N87505 DY

Temps CPU consommé dans ce pas de temps : 17.447 s

* Nombre d'itérations de Newton : 1

* Temps total intégration comportement : 7.578 s (3 intégrations)

* Temps total factorisation matrice : 3.239 s (1 factorisations)

* Temps construction second membre : 3.673 s

* Temps total résolution K.U=F : 0.086 s (1 résolutions)

* Temps assemblage matrice : 0.603 s

* Temps autres opérations : 2.267 s

Mémoire (Mo) : 5251.44 / 4917.64 / 4723.17 / 1196.69 (VmPeak / VmSize / Optimum / Minimum)

Filing of the fields

Field stored DEPL at time 9.900000000000e-02 for the sequence number 33

Field stored SIEF_ELGA at time 9.900000000000e-02 for the sequence number 33

Field stored VARI_ELGA at time 9.900000000000e-02 for the sequence number 33

Field stored COMPORTEMENT at time 9.900000000000e-02 for the sequence number 33

Field stored VITE at time 9.900000000000e-02 for the sequence number 33

Field stored ACCE at time 9.900000000000e-02 for the sequence number 33

Field stored FORC_AMOR at time 9.900000000000e-02 for the sequence number 33

Field stored FORC_LIAI at time 9.900000000000e-02 for the sequence number 33

Adaptation of the time step.

For the method of adaptation of the type FIXE, the computed time step is worth

6.000000000000e-03.

On all the criteria of adaptation, the smallest time step is worth 6.000000000000e-03.

After best fit on the compulsory points of transition, the smallest time step is worth

3.000000000000e-03.

[49%] Instant calculé : 9.90000e-02, dernier instant archivé : 9.90000e-02, au numéro d'ordre :

33

Time of computation: 1.020000000000e-01

| INCREMENT | NEWTON | RESIDU | RESIDU | OPTION | NEWTON |

| INSTANT | ITERATION | RELATIF | ABSOLU |

ASSEMBLAGE | TEMPS CALCUL |

| | | RESI_GLOB_RELA | RESI_GLOB_MAXI |
| VALEUR |

| 1.02000E-01 | 0 | 3.11749E-16 | 2.87727E-20 |TANGENTE
| |

| BILAN D'ENERGIE | TRAV_EXT | ENER_TOT | ENER_CIN | TRAV_AMOR
| DISS_SCH |

| PAS COURANT | 0.0000E+00 | -6.5458E-21 | -2.3631E-09 | 0.0000E+00 |
2.3631E-09 |

| TOTAL | 8.1884E-07 | 7.0313E-21 | 5.5139E-09 | 0.0000E+00 |
8.1332E-07 |

Criterion (S) of convergence reached (S)

The residue of the type RESI_GLOB_RELA is worth 3.117489680052e-16 with the node and degree of

freedom N87505 DY

The residue of the type RESI_GLOB_MAXI is worth 2.877265042704e-20 with the node and degree of

freedom N87505 DY

Temps CPU consommé dans ce pas de temps : 17.434 s

* Nombre d'itérations de Newton : 1

* Temps total intégration comportement : 7.575 s (3 intégrations)

* Temps total factorisation matrice : 3.238 s (1 factorisations)

* Temps construction second membre : 3.665 s

* Temps total résolution K.U=F : 0.086 s (1 résolutions)

* Temps assemblage matrice : 0.599 s

* Temps autres opérations : 2.270 s

Mémoire (Mo) : 5296.87 / 4962.97 / 4768.57 / 1196.69 (VmPeak / VmSize / Optimum / Minimum)

Filing of the fields

Field stored DEPL at time 1.020000000000e-01 for the sequence number 34

Field stored SIEF_ELGA at time 1.020000000000e-01 for the sequence number 34

Field stored VARI_ELGA at time 1.020000000000e-01 for the sequence number 34

Field stored COMPORTEMENT at time 1.020000000000e-01 for the sequence number 34

Field stored VITE at time 1.020000000000e-01 for the sequence number 34

Field stored ACCE at time 1.020000000000e-01 for the sequence number 34

Field stored FORC_AMOR at time 1.020000000000e-01 for the sequence number 34

Field stored FORC_LIAI at time 1.020000000000e-01 for the sequence number 34

Adaptation of the time step.

For the method of adaptation of the type FIXE, the computed time step is worth

6.000000000000e-03.

On all the criteria of adaptation, the smallest time step is worth 6.000000000000e-03.

After best fit on the compulsory points of transition, the smallest time step is worth

3.000000000000e-03.

[51%] Instant calculé : 1.02000e-01, dernier instant archivé : 1.02000e-01, au numéro d'ordre :

34

Time of computation: 1.050000000000e-01

| INCREMENT | NEWTON | RESIDU | RESIDU | OPTION | NEWTON |

| INSTANT | ITERATION | RELATIF | ABSOLU | ASSEMBLAGE | TEMPS CALCUL |

| | | RESI_GLOB_RELA | RESI_GLOB_MAXI | | VALEUR |

| 1.05000E-01 | 0 | 2.20691E-16 | 2.03685E-20 |TANGENTE | |

| BILAN D'ENERGIE | TRAV_EXT | ENER_TOT | ENER_CIN | TRAV_AMOR | DISS_SCH |

| PAS COURANT | 0.0000E+00 | -4.6782E-21 | -1.6731E-09 | 0.0000E+00 | 1.6731E-09 |

| TOTAL | 8.1884E-07 | 2.3530E-21 | 3.8408E-09 | 0.0000E+00 | 8.1500E-07 |

Criterion (S) of convergence reached (S)

The residue of the type RESI_GLOB_RELA is worth 2.206907367801e-16 with the node and degree of

freedom N87505 DY

The residue of the type RESI_GLOB_MAXI is worth 2.036849540351e-20 with the

node and degree of

freedom N87505 DY

Temps CPU consommé dans ce pas de temps : 17.422 s

* Nombre d'itérations de Newton : 1

* Temps total intégration comportement : 7.566 s (3 intégrations)

* Temps total factorisation matrice : 3.241 s (1 factorisations)

* Temps construction second membre : 3.676 s

* Temps total résolution K.U=F : 0.085 s (1 résolutions)

* Temps assemblage matrice : 0.594 s

* Temps autres opérations : 2.260 s

Mémoire (Mo) : 5342.33 / 5008.44 / 4813.97 / 1196.69 (VmPeak / VmSize / Optimum / Minimum)

Filing of the fields

Field stored DEPL at time 1.050000000000e-01 for the sequence number 35

Field stored SIEF_ELGA at time 1.050000000000e-01 for the sequence number 35

Field stored VARI_ELGA at time 1.050000000000e-01 for the sequence number 35

Field stored COMPORTEMENT at time 1.050000000000e-01 for the sequence number 35

Field stored VITE at time 1.050000000000e-01 for the sequence number 35

Field stored ACCE at time 1.050000000000e-01 for the sequence number 35

Field stored FORC_AMOR at time 1.050000000000e-01 for the sequence number 35

Field stored FORC_LIAI at time 1.050000000000e-01 for the sequence number 35

Adaptation of the time step.

For the method of adaptation of the type FIXE, the computed time step is worth

6.000000000000e-03.

On all the criteria of adaptation, the smallest time step is worth 6.000000000000e-03.

After best fit on the compulsory points of transition, the smallest time step is worth

3.000000000000e-03.

[52%] Instant calculé : 1.05000e-01, dernier instant archivé : 1.05000e-01, au numéro d'ordre :

35

Time of computation: 1.080000000000e-01

| INCREMENT | NEWTON | RESIDU | RESIDU | OPTION | NEWTON |

| INSTANT | ITERATION | RELATIF | ABSOLU | ASSEMBLAGE | TEMPS CALCUL |

| | | RESI_GLOB_RELA | RESI_GLOB_MAXI | | VALEUR |

| 1.08000E-01 | 0 | 1.56054E-16 | 1.44029E-20 |TANGENTE | |

| BILAN D'ENERGIE | TRAV_EXT | ENER_TOT | ENER_CIN | TRAV_AMOR | DISS_SCH |

| PAS COURANT | 0.0000E+00 | -3.3365E-21 | -1.1827E-09 | 0.0000E+00 | 1.1827E-09 |

| TOTAL | 8.1884E-07 | -9.8347E-22 | 2.6581E-09 | 0.0000E+00 | 8.1618E-07 |

Criterion (S) of convergence reached (S)

The residue of the type RESI_GLOB_RELA is worth 1.560537324892e-16 with the node and degree of

freedom N87505 DY

The residue of the type RESI_GLOB_MAXI is worth 1.440286882577e-20 with the node and degree of

freedom N87505 DY

Temps CPU consommé dans ce pas de temps : 17.444 s

* Nombre d'itérations de Newton : 1

* Temps total intégration comportement : 7.569 s (3 intégrations)

* Temps total factorisation matrice : 3.242 s (1 factorisations)

* Temps construction second membre : 3.684 s

* Temps total résolution K.U=F : 0.086 s (1 résolutions)

* Temps assemblage matrice : 0.599 s

* Temps autres opérations : 2.264 s

Mémoire (Mo) : 5387.76 / 5054.00 / 4859.37 / 1196.69 (VmPeak / VmSize / Optimum / Minimum)

Filing of the fields

Field stored DEPL at time 1.080000000000e-01 for the sequence number 36

Field stored SIEF_ELGA at time 1.080000000000e-01 for the sequence number 36

Field stored VARI_ELGA at time 1.080000000000e-01 for the sequence number 36

Field stored COMPORTEMENT at time 1.080000000000e-01 for the sequence number 36

Field stored VITE at time 1.080000000000e-01 for the sequence number 36

Field stored ACCE at time 1.080000000000e-01 for the sequence number 36

Field stored FORC_AMOR at time 1.080000000000e-01 for the sequence number 36

Field stored FORC_LIAI at time 1.080000000000e-01 for the sequence number 36

Adaptation of the time step.

For the method of adaptation of the type FIXE, the computed time step is worth

6.000000000000e-03.

On all the criteria of adaptation, the smallest time step is worth 6.000000000000e-03.

After best fit on the compulsory points of transition, the smallest time step is worth

3.000000000000e-03.

[54%] Instant calculé : 1.08000e-01, dernier instant archivé : 1.08000e-01, au numéro d'ordre :

36

Time of computation: 1.110000000000e-01

| INCREMENT | NEWTON | RESIDU | RESIDU | OPTION | NEWTON |

| INSTANT | ITERATION | RELATIF | ABSOLU | ASSEMBLAGE | TEMPS CALCUL |

| | | RESI_GLOB_RELA | RESI_GLOB_MAXI | | VALEUR |

| 1.11000E-01 | 0 | 1.11851E-16 | 1.03232E-20 |TANGENTE | |

| BILAN D'ENERGIE | TRAV_EXT | ENER_TOT | ENER_CIN | TRAV_AMOR | DISS_SCH |

| PAS COURANT | 0.0000E+00 | -2.3749E-21 | -8.3486E-10 | 0.0000E+00 | 8.3486E-10 |

| TOTAL | 8.1884E-07 | -3.3584E-21 | 1.8232E-09 | 0.0000E+00 | 8.1701E-07 |

Criterion (S) of convergence reached (S)

The residue of the type RESI_GLOB_RELA is worth 1.118510556780e-16 with the node and degree of

freedom N87505 DY

The residue of the type RESI_GLOB_MAXI is worth 1.032321404466e-20 with the node and degree of

freedom N87505 DY

Temps CPU consommé dans ce pas de temps : 17.395 s

* Nombre d'itérations de Newton : 1

* Temps total intégration comportement : 7.555 s (3 intégrations)

* Temps total factorisation matrice : 3.246 s (1 factorisations)

* Temps construction second membre : 3.664 s

* Temps total résolution K.U=F : 0.086 s (1 résolutions)

* Temps assemblage matrice : 0.589 s

* Temps autres opérations : 2.255 s

Mémoire (Mo) : 5433.19 / 5099.43 / 4904.78 / 1196.69 (VmPeak / VmSize / Optimum / Minimum)

Filing of the fields

Field stored DEPL at time 1.110000000000e-01 for the sequence number 37

Field stored SIEF_ELGA at time 1.110000000000e-01 for the sequence number 37

Field stored VARI_ELGA at time 1.110000000000e-01 for the sequence number 37

Field stored COMPORTEMENT at time 1.110000000000e-01 for the sequence number 37

Field stored VITE at time 1.110000000000e-01 for the sequence number 37

Field stored ACCE at time 1.110000000000e-01 for the sequence number 37

Field stored FORC_AMOR at time 1.110000000000e-01 for the sequence number 37

Field stored FORC_LIAI at time 1.110000000000e-01 for the sequence number 37

Adaptation of the time step.

For the method of adaptation of the type FIXE, the computed time step is worth

6.000000000000e-03.

On all the criteria of adaptation, the smallest time step is worth 6.000000000000e-03.

After best fit on the compulsory points of transition, the smallest time step is worth

3.000000000000e-03.

[55%] Instant calculé : 1.11000e-01, dernier instant archivé : 1.11000e-01, au numéro d'ordre :

37

Time of computation: 1.140000000000e-01

| INCREMENT | NEWTON | RESIDU | RESIDU | OPTION | NEWTON |

| INSTANT | ITERATION | RELATIF | ABSOLU | ASSEMBLAGE | TEMPS CALCUL |

| | | RESI_GLOB_RELA | RESI_GLOB_MAXI | | VALEUR |

| 1.14000E-01 | 0 | 7.82240E-17 | 7.21963E-21 |TANGENTE |

| BILAN D'ENERGIE | TRAV_EXT | ENER_TOT | ENER_CIN | TRAV_AMOR | DISS_SCH |

| PAS COURANT | 0.0000E+00 | -1.6874E-21 | -5.8850E-10 | 0.0000E+00 | 5.8850E-10 |

| TOTAL | 8.1884E-07 | -5.0458E-21 | 1.2347E-09 | 0.0000E+00 | 8.1760E-07 |

Criterion (S) of convergence reached (S)

The residue of the type RESI_GLOB_RELA is worth 7.822403957995e-17 with the node and degree of

freedom N87505 DY

The residue of the type RESI_GLOB_MAXI is worth 7.219632386363e-21 with the node and degree of

freedom N87505 DY

Temps CPU consommé dans ce pas de temps : 17.416 s

* Nombre d'itérations de Newton : 1

* Temps total intégration comportement : 7.529 s (3 intégrations)

* Temps total factorisation matrice : 3.239 s (1 factorisations)

* Temps construction second membre : 3.662 s

* Temps total résolution K.U=F : 0.086 s (1 résolutions)

* Temps assemblage matrice : 0.611 s

* Temps autres opérations : 2.289 s

Mémoire (Mo) : 5478.65 / 5144.64 / 4950.18 / 1196.69 (VmPeak / VmSize / Optimum / Minimum)

Filing of the fields

Field stored DEPL at time 1.140000000000e-01 for the sequence number 38

Field stored SIEF_ELGA at time 1.140000000000e-01 for the sequence number 38

Field stored VARI_ELGA at time 1.140000000000e-01 for the sequence number 38

Field stored COMPORTEMENT at time 1.140000000000e-01 for the sequence number 38

Field stored VITE at time 1.140000000000e-01 for the sequence number 38

Field stored ACCE at time 1.140000000000e-01 for the sequence number 38

Field stored FORC_AMOR at time 1.140000000000e-01 for the sequence number 38

Field stored FORC_LIAI at time 1.140000000000e-01 for the sequence number 38

Adaptation of the time step.

For the method of adaptation of the type FIXE, the computed time step is worth

6.000000000000e-03.

On all the criteria of adaptation, the smallest time step is worth 6.000000000000e-03.

After best fit on the compulsory points of transition, the smallest time step is worth

3.000000000000e-03.

[57%] Instant calculé : 1.14000e-01, dernier instant archivé : 1.14000e-01, au numéro d'ordre :

38

Time of computation: 1.170000000000e-01

| INCREMENT | NEWTON | RESIDU | RESIDU |

OPTION | NEWTON |

| INSTANT | ITERATION | RELATIF | ABSOLU | ASSEMBLAGE | TEMPS CALCUL |

| | | RESI_GLOB_RELA | RESI_GLOB_MAXI | | VALEUR |

| 1.17000E-01 | 0 | 5.32727E-17 | 4.91676E-21 |TANGENTE | |

| BILAN D'ENERGIE | TRAV_EXT | ENER_TOT | ENER_CIN | TRAV_AMOR | DISS_SCH |

| PAS COURANT | 0.0000E+00 | -1.1968E-21 | -4.1430E-10 | 0.0000E+00 | 4.1430E-10 |

| TOTAL | 8.1884E-07 | -6.2426E-21 | 8.2041E-10 | 0.0000E+00 | 8.1802E-07 |

Criterion (S) of convergence reached (S)

The residue of the type RESI_GLOB_RELA is worth 5.327265023639e-17 with the node and degree of

freedom N87505 DY

The residue of the type RESI_GLOB_MAXI is worth 4.916761561015e-21 with the node and degree of

freedom N87505 DY

Temps CPU consommé dans ce pas de temps : 17.474 s

* Nombre d'itérations de Newton : 1

* Temps total intégration comportement : 7.610 s (3 intégrations)

* Temps total factorisation matrice : 3.237 s (1 factorisations)

* Temps construction second membre : 3.673 s

* Temps total résolution K.U=F : 0.089 s (1 résolutions)

* Temps assemblage matrice : 0.595 s

* Temps autres opérations : 2.270 s

Mémoire (Mo) : 5524.06 / 5190.73 / 4995.58 / 1196.69 (VmPeak / VmSize / Optimum / Minimum)

Filing of the fields

Field stored DEPL at time 1.170000000000e-01 for the sequence number 39

Field stored SIEF_ELGA at time 1.170000000000e-01 for the sequence number 39

Field stored VARI_ELGA at time 1.170000000000e-01 for the sequence number 39

Field stored COMPORTEMENT at time 1.170000000000e-01 for the sequence number 39

Field stored VITE at time 1.170000000000e-01 for the sequence number 39

Field stored ACCE at time 1.170000000000e-01 for the sequence number 39

Field stored FORC_AMOR at time 1.170000000000e-01 for the sequence number 39

Field stored FORC_LIAI at time 1.170000000000e-01 for the sequence number 39

Adaptation of the time step.

For the method of adaptation of the type FIXE, the computed time step is worth

6.000000000000e-03.

On all the criteria of adaptation, the smallest time step is worth 6.000000000000e-03.

After best fit on the compulsory points of transition, the smallest time step is worth

3.000000000000e-03.

[58%] Instant calculé : 1.17000e-01, dernier instant archivé : 1.17000e-01, au numéro d'ordre :

Time of computation: 1.200000000000e-01

| INCREMENT | NEWTON | RESIDU | RESIDU | OPTION | NEWTON |

| INSTANT | ITERATION | RELATIF | ABSOLU | ASSEMBLAGE | TEMPS CALCUL |

| | | RESI_GLOB_RELA | RESI_GLOB_MAXI | | VALEUR |

| 1.20000E-01 | 0 | 4.18904E-17 | 3.86624E-21 |TANGENTE | |

| BILAN D'ENERGIE | TRAV_EXT | ENER_TOT | ENER_CIN | TRAV_AMOR | DISS_SCH |

| PAS COURANT | 0.0000E+00 | -8.4748E-22 | -2.9130E-10 | 0.0000E+00 | 2.9130E-10 |

| TOTAL | 8.1884E-07 | -7.0901E-21 | 5.2911E-10 | 0.0000E+00 | 8.1831E-07 |

Criterion (S) of convergence reached (S)

The residue of the type RESI_GLOB_RELA is worth 4.189037133326e-17 with the node and degree of

freedom N87505 DY

The residue of the type RESI_GLOB_MAXI is worth 3.866242183073e-21 with the node and degree of

freedom N87505 DY

Temps CPU consommé dans ce pas de temps : 17.420 s

* Nombre d'itérations de Newton : 1

* Temps total intégration comportement : 7.572 s (3 intégrations)

* Temps total factorisation matrice : 3.240 s (1 factorisations)

* Temps construction second membre : 3.667 s

* Temps total résolution K.U=F : 0.087 s (1 résolutions)

* Temps assemblage matrice : 0.591 s

* Temps autres opérations : 2.262 s

Mémoire (Mo) : 5569.50 / 5235.63 / 5040.98 / 1196.69 (VmPeak / VmSize / Optimum / Minimum)

Filing of the fields

Field stored DEPL at time 1.200000000000e-01 for the sequence number 40

Field stored SIEF_ELGA at time 1.200000000000e-01 for the sequence number 40

Field stored VARI_ELGA at time 1.200000000000e-01 for the sequence number 40

Field stored COMPORTEMENT at time 1.200000000000e-01 for the sequence number 40

Field stored VITE at time 1.200000000000e-01 for the sequence number 40

Field stored ACCE at time 1.200000000000e-01 for the sequence number 40

Field stored FORC_AMOR at time 1.200000000000e-01 for the sequence number 40

Field stored FORC_LIAI at time 1.200000000000e-01 for the sequence number 40

Adaptation of the time step.

For the method of adaptation of the type FIXE, the computed time step is worth

6.000000000000e-03.

On all the criteria of adaptation, the smallest time step is worth 6.000000000000e-03.

After best fit on the compulsory points of transition, the smallest time step is worth

3.000000000000e-03.

[60%] Instant calculé : 1.20000e-01, dernier instant archivé : 1.20000e-01, au numéro d'ordre :

40

Time of computation: 1.230000000000e-01

| INCREMENT | NEWTON | RESIDU | RESIDU | OPTION | NEWTON |

| INSTANT | ITERATION | RELATIF | ABSOLU | ASSEMBLAGE | TEMPS CALCUL |

| | | RESI_GLOB_RELA | RESI_GLOB_MAXI | | VALEUR |

| 1.23000E-01 | 0 | 2.60627E-17 | 2.40544E-21 |TANGENTE | |

| BILAN D'ENERGIE | TRAV_EXT | ENER_TOT | ENER_CIN | TRAV_AMOR | DISS_SCH |

| PAS COURANT | 0.0000E+00 | -5.9918E-22 | -2.0458E-10 | 0.0000E+00 | 2.0458E-10 |

| TOTAL | 8.1884E-07 | -7.6893E-21 | 3.2453E-10 | 0.0000E+00 |

8.1851E-07 |

Criterion (S) of convergence reached (S)

The residue of the type RESI_GLOB_RELA is worth 2.606272996087e-17 with the node and degree of

freedom N87505 DY

The residue of the type RESI_GLOB_MAXI is worth 2.405441221304e-21 with the node and degree of

freedom N87505 DY

Temps CPU consommé dans ce pas de temps : 17.478 s

* Nombre d'itérations de Newton : 1

* Temps total intégration comportement : 7.616 s (3 intégrations)

* Temps total factorisation matrice : 3.240 s (1 factorisations)

* Temps construction second membre : 3.678 s

* Temps total résolution K.U=F : 0.087 s (1 résolutions)

* Temps assemblage matrice : 0.590 s

* Temps autres opérations : 2.267 s

Mémoire (Mo) : 5614.98 / 5280.97 / 5086.39 / 1196.69 (VmPeak / VmSize / Optimum / Minimum)

Filing of the fields

Field stored DEPL at time 1.230000000000e-01 for the sequence number 41

Field stored SIEF_ELGA at time 1.230000000000e-01 for the sequence number 41

Field stored VARI_ELGA at time 1.230000000000e-01 for the sequence number 41

Field stored COMPORTEMENT at time 1.230000000000e-01 for the sequence number 41

Field stored VITE at time 1.230000000000e-01 for the sequence number 41

Field stored ACCE at time 1.230000000000e-01 for the sequence number 41

Field stored FORC_AMOR at time 1.230000000000e-01 for the sequence number 41

Field stored FORC_LIAI at time 1.230000000000e-01 for the sequence number 41

Adaptation of the time step.

For the method of adaptation of the type FIXE, the computed time step is worth

6.000000000000e-03.

On all the criteria of adaptation, the smallest time step is worth 6.000000000000e-03.

After best fit on the compulsory points of transition, the smallest time step is worth

3.000000000000e-03.

[61%] Instant calculé : 1.23000e-01, dernier instant archivé : 1.23000e-01, au numéro d'ordre :

41

Time of computation: 1.260000000000e-01

| INCREMENT | NEWTON | RESIDU | RESIDU | OPTION | NEWTON |

| INSTANT | ITERATION | RELATIF | ABSOLU | ASSEMBLAGE | TEMPS CALCUL |

| | | RESI_GLOB_RELA | RESI_GLOB_MAXI | | VALEUR |

| 1.26000E-01 | 0 | 1.96815E-17 | 1.81649E-21 |TANGENTE | |

| BILAN D'ENERGIE | TRAV_EXT | ENER_TOT | ENER_CIN | TRAV_AMOR | DISS_SCH |

| PAS COURANT | 0.0000E+00 | -4.2302E-22 | -1.4351E-10 | 0.0000E+00 | 1.4351E-10 |

| TOTAL | 8.1884E-07 | -8.1123E-21 | 1.8102E-10 | 0.0000E+00 | 8.1866E-07 |

Criterion (S) of convergence reached (S)

The residue of the type RESI_GLOB_RELA is worth 1.968148383565e-17 with the node and degree of

freedom N87505 DY

The residue of the type RESI_GLOB_MAXI is worth 1.816488625166e-21 with the node and degree of

freedom N87505 DY

Temps CPU consommé dans ce pas de temps : 17.453 s

* Nombre d'itérations de Newton : 1

* Temps total intégration comportement : 7.602 s (3 intégrations)

* Temps total factorisation matrice : 3.237 s (1 factorisations)

* Temps construction second membre : 3.669 s

* Temps total résolution K.U=F : 0.086 s (1 résolutions)

* Temps assemblage matrice : 0.591 s

* Temps autres opérations : 2.268 s

Mémoire (Mo) : 5660.39 / 5326.62 / 5131.79 / 1196.69 (VmPeak / VmSize / Optimum / Minimum)

Filing of the fields

Field stored DEPL at time 1.260000000000e-01 for the sequence number 42

Field stored SIEF_ELGA at time 1.260000000000e-01 for the sequence number 42

Field stored VARI_ELGA at time 1.260000000000e-01 for the sequence number 42

Field stored COMPORTEMENT at time 1.260000000000e-01 for the sequence number 42

Field stored VITE at time 1.260000000000e-01 for the sequence number 42

Field stored ACCE at time 1.260000000000e-01 for the sequence number 42

Field stored FORC_AMOR at time 1.260000000000e-01 for the sequence number 42

Field stored FORC_LIAI at time 1.260000000000e-01 for the sequence number 42

Adaptation of the time step.

For the method of adaptation of the type FIXE, the computed time step is worth

6.000000000000e-03.

On all the criteria of adaptation, the smallest time step is worth 6.000000000000e-03.

After best fit on the compulsory points of transition, the smallest time step is worth

3.000000000000e-03.

[63%] Instant calculé : 1.26000e-01, dernier instant archivé : 1.26000e-01, au numéro d'ordre :

42

Time of computation: 1.290000000000e-01

| INCREMENT | NEWTON | RESIDU | RESIDU | OPTION | NEWTON |

| INSTANT | ITERATION | RELATIF | ABSOLU | ASSEMBLAGE | TEMPS CALCUL |

| | | RESI_GLOB_RELA | RESI_GLOB_MAXI |

| VALEUR |

| 1.29000E-01 | 0 | 1.38201E-17 | 1.27551E-21 |TANGENTE |

| BILAN D'ENERGIE | TRAV_EXT | ENER_TOT | ENER_CIN | TRAV_AMOR | DISS_SCH |

| PAS COURANT | 0.0000E+00 | -2.9823E-22 | -1.0057E-10 | 0.0000E+00 | 1.0057E-10 |

| TOTAL | 8.1884E-07 | -8.4105E-21 | 8.0453E-11 | 0.0000E+00 | 8.1876E-07 |

Criterion (S) of convergence reached (S)

The residue of the type RESI_GLOB_RELA is worth 1.382005832176e-17 with the node and degree of

freedom N86616 DY

The residue of the type RESI_GLOB_MAXI is worth 1.275512504557e-21 with the node and degree of

freedom N86616 DY

Temps CPU consommé dans ce pas de temps : 17.413 s

* Nombre d'itérations de Newton : 1

* Temps total intégration comportement : 7.551 s (3 intégrations)

* Temps total factorisation matrice : 3.244 s (1 factorisations)

* Temps construction second membre : 3.668 s

* Temps total résolution K.U=F : 0.086 s (1 résolutions)

* Temps assemblage matrice : 0.590 s

* Temps autres opérations : 2.275 s

Mémoire (Mo) : 5705.91 / 5371.90 / 5177.19 / 1196.69 (VmPeak / VmSize / Optimum / Minimum)

Filing of the fields

Field stored DEPL at time 1.290000000000e-01 for the sequence number 43

Field stored SIEF_ELGA at time 1.290000000000e-01 for the sequence number 43

Field stored VARI_ELGA at time 1.290000000000e-01 for the sequence number 43

Field stored COMPORTEMENT at time 1.290000000000e-01 for the sequence number 43

Field stored VITE at time 1.290000000000e-01 for the sequence number 43

Field stored ACCE at time 1.290000000000e-01 for the sequence number 43

Field stored FORC_AMOR at time 1.290000000000e-01 for the sequence number 43

Field stored FORC_LIAI at time 1.290000000000e-01 for the sequence number 43

Adaptation of the time step.

For the method of adaptation of the type FIXE, the computed time step is worth

6.000000000000e-03.

On all the criteria of adaptation, the smallest time step is worth 6.000000000000e-03.

After best fit on the compulsory points of transition, the smallest time step is worth

3.000000000000e-03.

[64%] Instant calculé : 1.29000e-01, dernier instant archivé : 1.29000e-01, au numéro d'ordre :

43

Time of computation: 1.320000000000e-01

| INCREMENT | NEWTON | RESIDU | RESIDU | OPTION | NEWTON |

| INSTANT | ITERATION | RELATIF | ABSOLU | ASSEMBLAGE | TEMPS CALCUL |

| | | RESI_GLOB_RELA | RESI_GLOB_MAXI | | VALEUR |

| 1.32000E-01 | 0 | 1.12389E-17 | 1.03728E-21 |TANGENTE | |

| BILAN D'ENERGIE | TRAV_EXT | ENER_TOT | ENER_CIN | TRAV_AMOR | DISS_SCH |

| PAS COURANT | 0.0000E+00 | -2.0998E-22 | -7.0399E-11 | 0.0000E+00 | 7.0399E-11 |

| TOTAL | 8.1884E-07 | -8.6205E-21 | 1.0054E-11 | 0.0000E+00 | 8.1883E-07 |

Criterion (S) of convergence reached (S)

The residue of the type RESI_GLOB_RELA is worth 1.123888011380e-17 with the node and degree of

freedom N87505 DY

The residue of the type RESI_GLOB_MAXI is worth 1.037284488141e-21 with the node and degree of

freedom N87505 DY

Temps CPU consommé dans ce pas de temps : 17.612 s

* Nombre d'itérations de Newton : 1

* Temps total intégration comportement : 7.741 s (3 intégrations)

* Temps total factorisation matrice : 3.248 s (1 factorisations)

* Temps construction second membre : 3.675 s

* Temps total résolution K.U=F : 0.086 s (1 résolutions)

* Temps assemblage matrice : 0.591 s

* Temps autres opérations : 2.271 s

Mémoire (Mo) : 5751.34 / 5417.33 / 5222.60 / 1196.69 (VmPeak / VmSize / Optimum / Minimum)

Filing of the fields

Field stored DEPL at time 1.320000000000e-01 for the sequence number 44

Field stored SIEF_ELGA at time 1.320000000000e-01 for the sequence number 44

Field stored VARI_ELGA at time 1.320000000000e-01 for the sequence number 44

Field stored COMPORTEMENT at time 1.320000000000e-01 for the sequence number 44

Field stored VITE at time 1.320000000000e-01 for the sequence number 44

Field stored ACCE at time 1.320000000000e-01 for the sequence number 44

Field stored FORC_AMOR at time 1.320000000000e-01 for the sequence number 44

Field stored FORC_LIAI at time 1.320000000000e-01 for the sequence number 44

Adaptation of the time step.

For the method of adaptation of the type FIXE, the computed time step is worth

6.000000000000e-03.

On all the criteria of adaptation, the smallest time step is worth 6.000000000000e-03.

After best fit on the compulsory points of transition, the smallest time step is worth

3.000000000000e-03.

[66%] Instant calculé : 1.32000e-01, dernier instant archivé : 1.32000e-01, au numéro d'ordre :

44

Time of computation: 1.350000000000e-01

| INCREMENT | NEWTON | RESIDU | RESIDU | OPTION | NEWTON |

| INSTANT | ITERATION | RELATIF | ABSOLU | ASSEMBLAGE | TEMPS CALCUL |

| | | RESI_GLOB_RELA | RESI_GLOB_MAXI | | VALEUR |

| 1.35000E-01 | 0 | 1.05757E-17 | 9.76073E-22 |TANGENTE | |

| BILAN D'ENERGIE | TRAV_EXT | ENER_TOT | ENER_CIN | TRAV_AMOR | DISS_SCH |

| PAS COURANT | 0.0000E+00 | -1.4766E-22 | -4.9233E-11 | 0.0000E+00 | 4.9233E-11 |

| TOTAL | 8.1884E-07 | -8.7682E-21 | -3.9178E-11 | 0.0000E+00 | 8.1888E-07 |

Criterion (S) of convergence reached (S)

The residue of the type RESI_GLOB_RELA is worth 1.057566071315e-17 with the node and degree of

freedom N79615 DX

The residue of the type RESI_GLOB_MAXI is worth 9.760731228126e-22 with the node and degree of

freedom N79615 DX

Temps CPU consommé dans ce pas de temps : 17.544 s

* Nombre d'itérations de Newton : 1

* Temps total intégration comportement : 7.688 s (3 intégrations)

* Temps total factorisation matrice : 3.241 s (1 factorisations)

* Temps construction second membre : 3.670 s

* Temps total résolution K.U=F : 0.085 s (1 résolutions)

* Temps assemblage matrice : 0.593 s

* Temps autres opérations : 2.268 s

Mémoire (Mo) : 5796.77 / 5462.76 / 5268.00 / 1196.69 (VmPeak / VmSize / Optimum / Minimum)

Filing of the fields

Field stored DEPL at time 1.350000000000e-01 for the sequence number 45

Field stored SIEF_ELGA at time 1.350000000000e-01 for the sequence number 45

Field stored VARI_ELGA at time 1.350000000000e-01 for the sequence number 45

Field stored COMPORTEMENT at time 1.350000000000e-01 for the sequence number 45

Field stored VITE at time 1.350000000000e-01 for the sequence number 45

Field stored ACCE at time 1.350000000000e-01 for the sequence number 45

Field stored FORC_AMOR at time 1.350000000000e-01 for the sequence number 45

Field stored FORC_LIAI at time 1.350000000000e-01 for the sequence number 45

Adaptation of the time step.

For the method of adaptation of the type FIXE, the computed time step is worth

6.000000000000e-03.

On all the criteria of adaptation, the smallest time step is worth 6.000000000000e-03.

After best fit on the compulsory points of transition, the smallest time step is worth

3.000000000000e-03.

[67%] Instant calculé : 1.35000e-01, dernier instant archivé : 1.35000e-01, au numéro d'ordre :

45

Time of computation: 1.380000000000e-01

| INCREMENT | NEWTON | RESIDU | RESIDU | OPTION | NEWTON |

| INSTANT | ITERATION | RELATIF | ABSOLU | ASSEMBLAGE | TEMPS CALCUL |

| | | RESI_GLOB_RELA | RESI_GLOB_MAXI | | VALEUR |

| 1.38000E-01 | 0 | 1.01455E-17 | 9.36368E-22 |TANGENTE | |

| BILAN D'ENERGIE | TRAV_EXT | ENER_TOT | ENER_CIN | TRAV_AMOR | DISS_SCH |

| PAS COURANT | 0.0000E+00 | -1.0371E-22 | -3.4398E-11 | 0.0000E+00 | 3.4398E-11 |

| TOTAL | 8.1884E-07 | -8.8719E-21 | -7.3577E-11 | 0.0000E+00 | 8.1891E-07 |

Criterion (S) of convergence reached (S)

The residue of the type RESI_GLOB_RELA is worth 1.014546434515e-17 with the node and degree of

freedom N84745 DX

The residue of the type RESI_GLOB_MAXI is worth 9.363684534100e-22 with the node and degree of

freedom N84745 DX

Temps CPU consommé dans ce pas de temps : 17.688 s

* Nombre d'itérations de Newton : 1

* Temps total intégration comportement : 7.564 s (3 intégrations)

* Temps total factorisation matrice : 3.315 s (1 factorisations)

* Temps construction second membre : 3.718 s

* Temps total résolution K.U=F : 0.093 s (1 résolutions)

* Temps assemblage matrice : 0.701 s

* Temps autres opérations : 2.297 s

Mémoire (Mo) : 5796.77 / 2934.79 / 5268.00 / 1196.69 (VmPeak / VmSize / Optimum / Minimum)

Filing of the fields

Field stored DEPL at time 1.380000000000e-01 for the sequence number 46

Field stored SIEF_ELGA at time 1.380000000000e-01 for the sequence number 46

Field stored VARI_ELGA at time 1.380000000000e-01 for the sequence number 46

Field stored COMPORTEMENT at time 1.380000000000e-01 for the sequence number 46

Field stored VITE at time 1.380000000000e-01 for the sequence number 46

Field stored ACCE at time 1.380000000000e-01 for the sequence number 46

Field stored FORC_AMOR at time 1.380000000000e-01 for the sequence number 46

Field stored FORC_LIAI at time 1.380000000000e-01 for the sequence number 46

Adaptation of the time step.

For the method of adaptation of the type FIXE, the computed time step is worth

6.000000000000e-03.

On all the criteria of adaptation, the smallest time step is worth 6.000000000000e-03.

After best fit on the compulsory points of transition, the smallest time step is worth

3.000000000000e-03.

[69%] Instant calculé : 1.38000e-01, dernier instant archivé : 1.38000e-01, au numéro d'ordre :

46

Time of computation: 1.410000000000e-01

| INCREMENT | NEWTON | RESIDU | RESIDU | OPTION | NEWTON |

| INSTANT | ITERATION | RELATIF | ABSOLU | ASSEMBLAGE | TEMPS CALCUL |

| | | RESI_GLOB_RELA | RESI_GLOB_MAXI | | VALEUR |

| 1.41000E-01 | 0 | 8.17373E-18 | 7.54389E-22 |TANGENTE | |

| BILAN D'ENERGIE | TRAV_EXT | ENER_TOT | ENER_CIN | TRAV_AMOR | DISS_SCH |

| PAS COURANT | 0.0000E+00 | -7.2764E-23 | -2.4012E-11 | 0.0000E+00 | 2.4012E-11 |

| TOTAL | 8.1884E-07 | -8.9446E-21 | -9.7588E-11 | 0.0000E+00 | 8.1893E-07 |

Criterion (S) of convergence reached (S)

The residue of the type RESI_GLOB_RELA is worth 8.173730991855e-18 with the node and degree of

freedom N84934 DX

The residue of the type RESI_GLOB_MAXI is worth 7.543887186484e-22 with the node and degree of

freedom N84934 DX

Temps CPU consommé dans ce pas de temps : 17.389 s

* Nombre d'itérations de Newton : 1

* Temps total intégration comportement : 7.552 s (3 intégrations)

* Temps total factorisation matrice : 3.232 s (1 factorisations)

* Temps construction second membre : 3.683 s

* Temps total résolution K.U=F : 0.089 s (1 résolutions)

* Temps assemblage matrice : 0.586 s

* Temps autres opérations : 2.248 s

Mémoire (Mo) : 5796.77 / 2980.21 / 5268.00 / 1196.69 (VmPeak / VmSize / Optimum / Minimum)

Filing of the fields

Field stored DEPL at time 1.410000000000e-01 for the sequence number 47

Field stored SIEF_ELGA at time 1.410000000000e-01 for the sequence number 47

Field stored VARI_ELGA at time 1.410000000000e-01 for the sequence number 47

Field stored COMPORTEMENT at time 1.410000000000e-01 for the sequence number 47

Field stored VITE at time 1.410000000000e-01 for the sequence number 47

Field stored ACCE at time 1.410000000000e-01 for the sequence number 47

Field stored FORC_AMOR at time 1.410000000000e-01 for the sequence number 47

Field stored FORC_LIAI at time 1.410000000000e-01 for the sequence number 47

Adaptation of the time step.

For the method of adaptation of the type FIXE, the computed time step is worth

6.000000000000e-03.

On all the criteria of adaptation, the smallest time step is worth 6.000000000000e-03.

After best fit on the compulsory points of transition, the smallest time step is worth

3.000000000000e-03.

[70%] Instant calculé : 1.41000e-01, dernier instant archivé : 1.41000e-01, au numéro d'ordre :

47

Time of computation: 1.440000000000e-01

| INCREMENT | NEWTON | RESIDU | RESIDU | OPTION | NEWTON |

| INSTANT | ITERATION | RELATIF | ABSOLU |

ASSEMBLAGE | TEMPS CALCUL |

| | | RESI_GLOB_RELA | RESI_GLOB_MAXI |
| VALEUR |

| 1.44000E-01 | 0 | 8.87280E-18 | 8.18909E-22 |TANGENTE
| |

| BILAN D'ENERGIE | TRAV_EXT | ENER_TOT | ENER_CIN | TRAV_AMOR
| DISS_SCH |

| PAS COURANT | 0.0000E+00 | -5.0995E-23 | -1.6747E-11 | 0.0000E+00 |
1.6747E-11 |

| TOTAL | 8.1884E-07 | -8.9956E-21 | -1.1434E-10 | 0.0000E+00 |
8.1895E-07 |

Criterion (S) of convergence reached (S)

The residue of the type RESI_GLOB_RELA is worth 8.872800089843e-18 with the node and degree of

freedom N85415 DY

The residue of the type RESI_GLOB_MAXI is worth 8.189088064275e-22 with the node and degree of

freedom N85415 DY

Temps CPU consommé dans ce pas de temps : 17.480 s

* Nombre d'itérations de Newton : 1

* Temps total intégration comportement : 7.590 s (3 intégrations)

* Temps total factorisation matrice : 3.249 s (1 factorisations)

* Temps construction second membre : 3.697 s

* Temps total résolution K.U=F : 0.088 s (1 résolutions)

* Temps assemblage matrice : 0.589 s

* Temps autres opérations : 2.266 s

Mémoire (Mo) : 5796.77 / 3025.64 / 5268.00 / 1196.69 (VmPeak / VmSize / Optimum / Minimum)

Filing of the fields

Field stored DEPL at time 1.440000000000e-01 for the sequence number 48

Field stored SIEF_ELGA at time 1.440000000000e-01 for the sequence number 48

Field stored VARI_ELGA at time 1.440000000000e-01 for the sequence number 48

Field stored COMPORTEMENT at time 1.440000000000e-01 for the sequence number 48

Field stored VITE at time 1.440000000000e-01 for the sequence number 48

Field stored ACCE at time 1.440000000000e-01 for the sequence number 48

Field stored FORC_AMOR at time 1.440000000000e-01 for the sequence number 48

Field stored FORC_LIAI at time 1.440000000000e-01 for the sequence number 48

Adaptation of the time step.

For the method of adaptation of the type FIXE, the computed time step is worth

6.000000000000e-03.

On all the criteria of adaptation, the smallest time step is worth 6.000000000000e-03.

After best fit on the compulsory points of transition, the smallest time step is worth

3.000000000000e-03.

[72%] Instant calculé : 1.44000e-01, dernier instant archivé : 1.44000e-01, au numéro d'ordre :

48

Time of computation: 1.470000000000e-01

| INCREMENT | NEWTON | RESIDU | RESIDU | OPTION | NEWTON |

| INSTANT | ITERATION | RELATIF | ABSOLU | ASSEMBLAGE | TEMPS CALCUL |

| | | RESI_GLOB_RELA | RESI_GLOB_MAXI | | VALEUR |

| 1.47000E-01 | 0 | 8.58600E-18 | 7.92439E-22 |TANGENTE | |

| BILAN D'ENERGIE | TRAV_EXT | ENER_TOT | ENER_CIN | TRAV_AMOR | DISS_SCH |

| PAS COURANT | 0.0000E+00 | -3.5702E-23 | -1.1671E-11 | 0.0000E+00 | 1.1671E-11 |

| TOTAL | 8.1884E-07 | -9.0313E-21 | -1.2601E-10 | 0.0000E+00 | 8.1896E-07 |

Criterion (S) of convergence reached (S)

The residue of the type RESI_GLOB_RELA is worth 8.586002511181e-18 with the node and degree of

freedom N82040 DX

The residue of the type RESI_GLOB_MAXI is worth 7.924390268258e-22 with the

node and degree of

freedom N82040 DX

Temps CPU consommé dans ce pas de temps : 17.454 s

* Nombre d'itérations de Newton : 1

* Temps total intégration comportement : 7.574 s (3 intégrations)

* Temps total factorisation matrice : 3.255 s (1 factorisations)

* Temps construction second membre : 3.681 s

* Temps total résolution K.U=F : 0.088 s (1 résolutions)

* Temps assemblage matrice : 0.594 s

* Temps autres opérations : 2.261 s

Mémoire (Mo) : 5796.77 / 3071.07 / 5268.00 / 1196.69 (VmPeak / VmSize / Optimum / Minimum)

Filing of the fields

Field stored DEPL at time 1.470000000000e-01 for the sequence number 49

Field stored SIEF_ELGA at time 1.470000000000e-01 for the sequence number 49

Field stored VARI_ELGA at time 1.470000000000e-01 for the sequence number 49

Field stored COMPORTEMENT at time 1.470000000000e-01 for the sequence number 49

Field stored VITE at time 1.470000000000e-01 for the sequence number 49

Field stored ACCE at time 1.470000000000e-01 for the sequence number 49

Field stored FORC_AMOR at time 1.470000000000e-01 for the sequence number 49

Field stored FORC_LIAI at time 1.470000000000e-01 for the sequence number 49

Adaptation of the time step.

For the method of adaptation of the type FIXE, the computed time step is worth

6.000000000000e-03.

On all the criteria of adaptation, the smallest time step is worth 6.000000000000e-03.

After best fit on the compulsory points of transition, the smallest time step is worth

3.000000000000e-03.

[73%] Instant calculé : 1.47000e-01, dernier instant archivé : 1.47000e-01, au numéro d'ordre :

49

Time of computation: 1.500000000000e-01

| INCREMENT | NEWTON | RESIDU | RESIDU | OPTION | NEWTON |

| INSTANT | ITERATION | RELATIF | ABSOLU | ASSEMBLAGE | TEMPS CALCUL |

| | | RESI_GLOB_RELA | RESI_GLOB_MAXI | | VALEUR |

| 1.50000E-01 | 0 | 8.20062E-18 | 7.56870E-22 |TANGENTE | |

| BILAN D'ENERGIE | TRAV_EXT | ENER_TOT | ENER_CIN | TRAV_AMOR | DISS_SCH |

| PAS COURANT | 0.0000E+00 | -2.4970E-23 | -8.1268E-12 | 0.0000E+00 | 8.1268E-12 |

| TOTAL | 8.1884E-07 | -9.0563E-21 | -1.3413E-10 | 0.0000E+00 | 8.1897E-07 |

Criterion (S) of convergence reached (S)

The residue of the type RESI_GLOB_RELA is worth 8.200618264855e-18 with the node and degree of

freedom N84465 DY

The residue of the type RESI_GLOB_MAXI is worth 7.568702604860e-22 with the node and degree of

freedom N84465 DY

Temps CPU consommé dans ce pas de temps : 17.388 s

* Nombre d'itérations de Newton : 1

* Temps total intégration comportement : 7.562 s (3 intégrations)

* Temps total factorisation matrice : 3.236 s (1 factorisations)

* Temps construction second membre : 3.671 s

* Temps total résolution K.U=F : 0.086 s (1 résolutions)

* Temps assemblage matrice : 0.586 s

* Temps autres opérations : 2.247 s

Mémoire (Mo) : 5796.77 / 3116.50 / 5268.00 / 1196.69 (VmPeak / VmSize / Optimum / Minimum)

Filing of the fields

Field stored DEPL at time 1.500000000000e-01 for the sequence number 50

Field stored SIEF_ELGA at time 1.500000000000e-01 for the sequence number 50

Field stored VARI_ELGA at time 1.500000000000e-01 for the sequence number 50

Field stored COMPORTEMENT at time 1.500000000000e-01 for the sequence number 50

Field stored VITE at time 1.500000000000e-01 for the sequence number 50

Field stored ACCE at time 1.500000000000e-01 for the sequence number 50

Field stored FORC_AMOR at time 1.500000000000e-01 for the sequence number 50

Field stored FORC_LIAI at time 1.500000000000e-01 for the sequence number 50

Adaptation of the time step.

For the method of adaptation of the type FIXE, the computed time step is worth

6.000000000000e-03.

On all the criteria of adaptation, the smallest time step is worth 6.000000000000e-03.

After best fit on the compulsory points of transition, the smallest time step is worth

3.000000000000e-03.

[75%] Instant calculé : 1.50000e-01, dernier instant archivé : 1.50000e-01, au numéro d'ordre :

50

Time of computation: 1.530000000000e-01

| INCREMENT | NEWTON | RESIDU | RESIDU | OPTION | NEWTON |

| INSTANT | ITERATION | RELATIF | ABSOLU | ASSEMBLAGE | TEMPS CALCUL |

| | | RESI_GLOB_RELA | RESI_GLOB_MAXI | | VALEUR |

| 1.53000E-01 | 0 | 9.95725E-18 | 9.18998E-22 |TANGENTE | |

| BILAN D'ENERGIE | TRAV_EXT | ENER_TOT | ENER_CIN | TRAV_AMOR | DISS_SCH |

| PAS COURANT | 0.0000E+00 | -1.7448E-23 | -5.6546E-12 | 0.0000E+00 | 5.6546E-12 |

| TOTAL | 8.1884E-07 | -9.0738E-21 | -1.3979E-10 | 0.0000E+00 | 8.1898E-07 |

Criterion (S) of convergence reached (S)

The residue of the type RESI_GLOB_RELA is worth 9.957253434157e-18 with the node and degree of

freedom N82091 DX

The residue of the type RESI_GLOB_MAXI is worth 9.189976605464e-22 with the node and degree of

freedom N82091 DX

Temps CPU consommé dans ce pas de temps : 17.423 s

* Nombre d'itérations de Newton : 1

* Temps total intégration comportement : 7.565 s (3 intégrations)

* Temps total factorisation matrice : 3.240 s (1 factorisations)

* Temps construction second membre : 3.678 s

* Temps total résolution K.U=F : 0.088 s (1 résolutions)

* Temps assemblage matrice : 0.585 s

* Temps autres opérations : 2.267 s

Mémoire (Mo) : 5796.77 / 3161.93 / 5268.00 / 1196.69 (VmPeak / VmSize / Optimum / Minimum)

Filing of the fields

Field stored DEPL at time 1.530000000000e-01 for the sequence number 51

Field stored SIEF_ELGA at time 1.530000000000e-01 for the sequence number 51

Field stored VARI_ELGA at time 1.530000000000e-01 for the sequence number 51

Field stored COMPORTEMENT at time 1.530000000000e-01 for the sequence number 51

Field stored VITE at time 1.530000000000e-01 for the sequence number 51

Field stored ACCE at time 1.530000000000e-01 for the sequence number 51

Field stored FORC_AMOR at time 1.530000000000e-01 for the sequence number 51

Field stored FORC_LIAI at time 1.530000000000e-01 for the sequence number 51

Adaptation of the time step.

For the method of adaptation of the type FIXE, the computed time step is worth

6.000000000000e-03.

On all the criteria of adaptation, the smallest time step is worth 6.000000000000e-03.

After best fit on the compulsory points of transition, the smallest time step is worth

3.000000000000e-03.

[76%] Instant calculé : 1.53000e-01, dernier instant archivé : 1.53000e-01, au numéro d'ordre :

51

Time of computation: 1.560000000000e-01

| INCREMENT | NEWTON | RESIDU | RESIDU | OPTION | NEWTON |

| INSTANT | ITERATION | RELATIF | ABSOLU | ASSEMBLAGE | TEMPS CALCUL |

| | | RESI_GLOB_RELA | RESI_GLOB_MAXI | | VALEUR |

| 1.56000E-01 | 0 | 8.01241E-18 | 7.39499E-22 |TANGENTE | |

| BILAN D'ENERGIE | TRAV_EXT | ENER_TOT | ENER_CIN | TRAV_AMOR | DISS_SCH |

| PAS COURANT | 0.0000E+00 | -1.2181E-23 | -3.9315E-12 | 0.0000E+00 | 3.9315E-12 |

| TOTAL | 8.1884E-07 | -9.0859E-21 | -1.4372E-10 | 0.0000E+00 | 8.1898E-07 |

Criterion (S) of convergence reached (S)

The residue of the type RESI_GLOB_RELA is worth 8.012407353858e-18 with the node and degree of

freedom N87450 DX

The residue of the type RESI_GLOB_MAXI is worth 7.394994676224e-22 with the node and degree of

freedom N87450 DX

Temps CPU consommé dans ce pas de temps : 17.422 s

* Nombre d'itérations de Newton : 1

* Temps total intégration comportement : 7.563 s (3 intégrations)

* Temps total factorisation matrice : 3.240 s (1 factorisations)

* Temps construction second membre : 3.675 s

* Temps total résolution K.U=F : 0.086 s (1 résolutions)

* Temps assemblage matrice : 0.594 s

* Temps autres opérations : 2.264 s

Mémoire (Mo) : 5796.77 / 3207.36 / 5268.00 / 1196.69 (VmPeak / VmSize / Optimum / Minimum)

Filing of the fields

Field stored DEPL at time 1.560000000000e-01 for the sequence number 52

Field stored SIEF_ELGA at time 1.560000000000e-01 for the sequence number 52

Field stored VARI_ELGA at time 1.560000000000e-01 for the sequence number 52

Field stored COMPORTEMENT at time 1.560000000000e-01 for the sequence number 52

Field stored VITE at time 1.560000000000e-01 for the sequence number 52

Field stored ACCE at time 1.560000000000e-01 for the sequence number 52

Field stored FORC_AMOR at time 1.560000000000e-01 for the sequence number 52

Field stored FORC_LIAI at time 1.560000000000e-01 for the sequence number 52

Adaptation of the time step.

For the method of adaptation of the type FIXE, the computed time step is worth

6.000000000000e-03.

On all the criteria of adaptation, the smallest time step is worth 6.000000000000e-03.

After best fit on the compulsory points of transition, the smallest time step is worth

3.000000000000e-03.

[78%] Instant calculé : 1.56000e-01, dernier instant archivé : 1.56000e-01, au numéro d'ordre :

52

Time of computation: 1.590000000000e-01

| INCREMENT | NEWTON | RESIDU | RESIDU |

OPTION | NEWTON |

| INSTANT | ITERATION | RELATIF | ABSOLU | ASSEMBLAGE | TEMPS CALCUL |

| | | RESI_GLOB_RELA | RESI_GLOB_MAXI | | VALEUR |

| 1.59000E-01 | 0 | 9.82282E-18 | 9.06590E-22 |TANGENTE | |

| BILAN D'ENERGIE | TRAV_EXT | ENER_TOT | ENER_CIN | TRAV_AMOR | DISS_SCH |

| PAS COURANT | 0.0000E+00 | -8.4964E-24 | -2.7316E-12 | 0.0000E+00 | 2.7316E-12 |

| TOTAL | 8.1884E-07 | -9.0944E-21 | -1.4645E-10 | 0.0000E+00 | 8.1898E-07 |

Criterion (S) of convergence reached (S)

The residue of the type RESI_GLOB_RELA is worth 9.822817069159e-18 with the node and degree of

freedom N84954 DX

The residue of the type RESI_GLOB_MAXI is worth 9.065899513581e-22 with the node and degree of

freedom N84954 DX

Temps CPU consommé dans ce pas de temps : 17.416 s

* Nombre d'itérations de Newton : 1

* Temps total intégration comportement : 7.574 s (3 intégrations)

* Temps total factorisation matrice : 3.239 s (1 factorisations)

* Temps construction second membre : 3.677 s

* Temps total résolution K.U=F : 0.086 s (1 résolutions)

* Temps assemblage matrice : 0.586 s

* Temps autres opérations : 2.254 s

Mémoire (Mo) : 5796.77 / 3252.79 / 5268.00 / 1196.69 (VmPeak / VmSize / Optimum / Minimum)

Filing of the fields

Field stored DEPL at time 1.590000000000e-01 for the sequence number 53

Field stored SIEF_ELGA at time 1.590000000000e-01 for the sequence number 53

Field stored VARI_ELGA at time 1.590000000000e-01 for the sequence number 53

Field stored COMPORTEMENT at time 1.590000000000e-01 for the sequence number 53

Field stored VITE at time 1.590000000000e-01 for the sequence number 53

Field stored ACCE at time 1.590000000000e-01 for the sequence number 53

Field stored FORC_AMOR at time 1.590000000000e-01 for the sequence number 53

Field stored FORC_LIAI at time 1.590000000000e-01 for the sequence number 53

Adaptation of the time step.

For the method of adaptation of the type FIXE, the computed time step is worth

6.000000000000e-03.

On all the criteria of adaptation, the smallest time step is worth 6.000000000000e-03.

After best fit on the compulsory points of transition, the smallest time step is worth

3.000000000000e-03.

[79%] Instant calculé : 1.59000e-01, dernier instant archivé : 1.59000e-01, au numéro d'ordre :

Time of computation: 1.620000000000e-01

| INCREMENT | NEWTON | RESIDU | RESIDU | OPTION | NEWTON |

| INSTANT | ITERATION | RELATIF | ABSOLU | ASSEMBLAGE | TEMPS CALCUL |

| | | RESI_GLOB_RELA | RESI_GLOB_MAXI | | VALEUR |

| 1.62000E-01 | 0 | 8.66666E-18 | 7.99884E-22 |TANGENTE | |

| BILAN D'ENERGIE | TRAV_EXT | ENER_TOT | ENER_CIN | TRAV_AMOR | DISS_SCH |

| PAS COURANT | 0.0000E+00 | -5.9215E-24 | -1.8966E-12 | 0.0000E+00 | 1.8966E-12 |

| TOTAL | 8.1884E-07 | -9.1004E-21 | -1.4835E-10 | 0.0000E+00 | 8.1899E-07 |

Criterion (S) of convergence reached (S)

The residue of the type RESI_GLOB_RELA is worth 8.666664330180e-18 with the node and degree of

freedom N82580 DZ

The residue of the type RESI_GLOB_MAXI is worth 7.998836523388e-22 with the node and degree of

freedom N82580 DZ

Temps CPU consommé dans ce pas de temps : 17.391 s

* Nombre d'itérations de Newton : 1

* Temps total intégration comportement : 7.533 s (3 intégrations)

* Temps total factorisation matrice : 3.240 s (1 factorisations)

* Temps construction second membre : 3.688 s

* Temps total résolution K.U=F : 0.090 s (1 résolutions)

* Temps assemblage matrice : 0.585 s

* Temps autres opérations : 2.254 s

Mémoire (Mo) : 5796.77 / 3298.22 / 5268.00 / 1196.69 (VmPeak / VmSize / Optimum / Minimum)

Filing of the fields

Field stored DEPL at time 1.620000000000e-01 for the sequence number 54

Field stored SIEF_ELGA at time 1.620000000000e-01 for the sequence number 54

Field stored VARI_ELGA at time 1.620000000000e-01 for the sequence number 54

Field stored COMPORTEMENT at time 1.620000000000e-01 for the sequence number 54

Field stored VITE at time 1.620000000000e-01 for the sequence number 54

Field stored ACCE at time 1.620000000000e-01 for the sequence number 54

Field stored FORC_AMOR at time 1.620000000000e-01 for the sequence number 54

Field stored FORC_LIAI at time 1.620000000000e-01 for the sequence number 54

Adaptation of the time step.

For the method of adaptation of the type FIXE, the computed time step is worth

6.000000000000e-03.

On all the criteria of adaptation, the smallest time step is worth 6.000000000000e-03.

After best fit on the compulsory points of transition, the smallest time step is worth

3.000000000000e-03.

[81%] Instant calculé : 1.62000e-01, dernier instant archivé : 1.62000e-01, au numéro d'ordre :

54

Time of computation: 1.650000000000e-01

| INCREMENT | NEWTON | RESIDU | RESIDU | OPTION | NEWTON |

| INSTANT | ITERATION | RELATIF | ABSOLU | ASSEMBLAGE | TEMPS CALCUL |

| | | RESI_GLOB_RELA | RESI_GLOB_MAXI | | VALEUR |

| 1.65000E-01 | 0 | 8.62633E-18 | 7.96161E-22 |TANGENTE | |

| BILAN D'ENERGIE | TRAV_EXT | ENER_TOT | ENER_CIN | TRAV_AMOR | DISS_SCH |

| PAS COURANT | 0.0000E+00 | -4.1237E-24 | -1.3160E-12 | 0.0000E+00 | 1.3160E-12 |

| TOTAL | 8.1884E-07 | -9.1045E-21 | -1.4966E-10 | 0.0000E+00 |

8.1899E-07 |

Criterion (S) of convergence reached (S)

The residue of the type RESI_GLOB_RELA is worth 8.626333420680e-18 with the node and degree of

freedom N84645 DX

The residue of the type RESI_GLOB_MAXI is worth 7.961613395823e-22 with the node and degree of

freedom N84645 DX

Temps CPU consommé dans ce pas de temps : 17.403 s

* Nombre d'itérations de Newton : 1

* Temps total intégration comportement : 7.557 s (3 intégrations)

* Temps total factorisation matrice : 3.240 s (1 factorisations)

* Temps construction second membre : 3.679 s

* Temps total résolution K.U=F : 0.085 s (1 résolutions)

* Temps assemblage matrice : 0.584 s

* Temps autres opérations : 2.259 s

Mémoire (Mo) : 5796.77 / 3343.65 / 5268.00 / 1196.69 (VmPeak / VmSize / Optimum / Minimum)

Filing of the fields

Field stored DEPL at time 1.650000000000e-01 for the sequence number 55

Field stored SIEF_ELGA at time 1.650000000000e-01 for the sequence number 55

Field stored VARI_ELGA at time 1.650000000000e-01 for the sequence number 55

Field stored COMPORTEMENT at time 1.650000000000e-01 for the sequence number 55

Field stored VITE at time 1.650000000000e-01 for the sequence number 55

Field stored ACCE at time 1.650000000000e-01 for the sequence number 55

Field stored FORC_AMOR at time 1.650000000000e-01 for the sequence number 55

Field stored FORC_LIAI at time 1.650000000000e-01 for the sequence number 55

Adaptation of the time step.

For the method of adaptation of the type FIXE, the computed time step is worth

6.000000000000e-03.

On all the criteria of adaptation, the smallest time step is worth 6.000000000000e-03.

After best fit on the compulsory points of transition, the smallest time step is worth

3.000000000000e-03.

[82%] Instant calculé : 1.65000e-01, dernier instant archivé : 1.65000e-01, au numéro d'ordre :

55

Time of computation: 1.680000000000e-01

| INCREMENT | NEWTON | RESIDU | RESIDU | OPTION | NEWTON |

| INSTANT | ITERATION | RELATIF | ABSOLU | ASSEMBLAGE | TEMPS CALCUL |

| | | RESI_GLOB_RELA | RESI_GLOB_MAXI | | VALEUR |

| 1.68000E-01 | 0 | 7.52844E-18 | 6.94832E-22 |TANGENTE | |

| BILAN D'ENERGIE | TRAV_EXT | ENER_TOT | ENER_CIN | TRAV_AMOR | DISS_SCH |

| PAS COURANT | 0.0000E+00 | -2.8695E-24 | -9.1255E-13 | 0.0000E+00 | 9.1255E-13 |

| TOTAL | 8.1884E-07 | -9.1074E-21 | -1.5058E-10 | 0.0000E+00 | 8.1899E-07 |

Criterion (S) of convergence reached (S)

The residue of the type RESI_GLOB_RELA is worth 7.528436439866e-18 with the node and degree of

freedom N85460 DX

The residue of the type RESI_GLOB_MAXI is worth 6.948317145445e-22 with the node and degree of

freedom N85460 DX

Temps CPU consommé dans ce pas de temps : 17.350 s

* Nombre d'itérations de Newton : 1

* Temps total intégration comportement : 7.515 s (3 intégrations)

* Temps total factorisation matrice : 3.239 s (1 factorisations)

* Temps construction second membre : 3.672 s

* Temps total résolution K.U=F : 0.086 s (1 résolutions)

* Temps assemblage matrice : 0.584 s

* Temps autres opérations : 2.254 s

Mémoire (Mo) : 5796.77 / 3389.08 / 5268.00 / 1196.69 (VmPeak / VmSize / Optimum / Minimum)

Filing of the fields

Field stored DEPL at time 1.680000000000e-01 for the sequence number 56

Field stored SIEF_ELGA at time 1.680000000000e-01 for the sequence number 56

Field stored VARI_ELGA at time 1.680000000000e-01 for the sequence number 56

Field stored COMPORTEMENT at time 1.680000000000e-01 for the sequence number 56

Field stored VITE at time 1.680000000000e-01 for the sequence number 56

Field stored ACCE at time 1.680000000000e-01 for the sequence number 56

Field stored FORC_AMOR at time 1.680000000000e-01 for the sequence number 56

Field stored FORC_LIAI at time 1.680000000000e-01 for the sequence number 56

Adaptation of the time step.

For the method of adaptation of the type FIXE, the computed time step is worth

6.000000000000e-03.

On all the criteria of adaptation, the smallest time step is worth 6.000000000000e-03.

After best fit on the compulsory points of transition, the smallest time step is worth

3.000000000000e-03.

[84%] Instant calculé : 1.68000e-01, dernier instant archivé : 1.68000e-01, au numéro d'ordre :

56

Time of computation: 1.710000000000e-01

| INCREMENT | NEWTON | RESIDU | RESIDU | OPTION | NEWTON |

| INSTANT | ITERATION | RELATIF | ABSOLU | ASSEMBLAGE | TEMPS CALCUL |

| | | RESI_GLOB_RELA | RESI_GLOB_MAXI |

| VALEUR |

| 1.71000E-01 | 0 | 9.86987E-18 | 9.10933E-22 |TANGENTE | |

| BILAN D'ENERGIE | TRAV_EXT | ENER_TOT | ENER_CIN | TRAV_AMOR | DISS_SCH |

| PAS COURANT | 0.0000E+00 | -1.9953E-24 | -6.3240E-13 | 0.0000E+00 | 6.3240E-13 |

| TOTAL | 8.1884E-07 | -9.1093E-21 | -1.5121E-10 | 0.0000E+00 | 8.1899E-07 |

Criterion (S) of convergence reached (S)

The residue of the type RESI_GLOB_RELA is worth 9.869869796908e-18 with the node and degree of

freedom N84961 DX

The residue of the type RESI_GLOB_MAXI is worth 9.109326495740e-22 with the node and degree of

freedom N84961 DX

Temps CPU consommé dans ce pas de temps : 17.371 s

* Nombre d'itérations de Newton : 1

* Temps total intégration comportement : 7.534 s (3 intégrations)

* Temps total factorisation matrice : 3.243 s (1 factorisations)

* Temps construction second membre : 3.670 s

* Temps total résolution K.U=F : 0.087 s (1 résolutions)

* Temps assemblage matrice : 0.590 s

* Temps autres opérations : 2.248 s

Mémoire (Mo) : 5796.77 / 3434.51 / 5268.00 / 1196.69 (VmPeak / VmSize / Optimum / Minimum)

Filing of the fields

Field stored DEPL at time 1.710000000000e-01 for the sequence number 57

Field stored SIEF_ELGA at time 1.710000000000e-01 for the sequence number 57

Field stored VARI_ELGA at time 1.710000000000e-01 for the sequence number 57

Field stored COMPORTEMENT at time 1.710000000000e-01 for the sequence number 57

Field stored VITE at time 1.710000000000e-01 for the sequence number 57

Field stored ACCE at time 1.710000000000e-01 for the sequence number 57

Field stored FORC_AMOR at time 1.710000000000e-01 for the sequence number 57

Field stored FORC_LIAI at time 1.710000000000e-01 for the sequence number 57

Adaptation of the time step.

For the method of adaptation of the type FIXE, the computed time step is worth

6.000000000000e-03.

On all the criteria of adaptation, the smallest time step is worth 6.000000000000e-03.

After best fit on the compulsory points of transition, the smallest time step is worth

3.000000000000e-03.

[85%] Instant calculé : 1.71000e-01, dernier instant archivé : 1.71000e-01, au numéro d'ordre :

57

Time of computation: 1.740000000000e-01

| INCREMENT | NEWTON | RESIDU | RESIDU | OPTION | NEWTON |

| INSTANT | ITERATION | RELATIF | ABSOLU | ASSEMBLAGE | TEMPS CALCUL |

| | | RESI_GLOB_RELA | RESI_GLOB_MAXI | | VALEUR |

| 1.74000E-01 | 0 | 7.59341E-18 | 7.00829E-22 |TANGENTE | |

| BILAN D'ENERGIE | TRAV_EXT | ENER_TOT | ENER_CIN | TRAV_AMOR | DISS_SCH |

| PAS COURANT | 0.0000E+00 | -1.3864E-24 | -4.3800E-13 | 0.0000E+00 | 4.3800E-13 |

| TOTAL | 8.1884E-07 | -9.1107E-21 | -1.5165E-10 | 0.0000E+00 | 8.1899E-07 |

Criterion (S) of convergence reached (S)

The residue of the type RESI_GLOB_RELA is worth 7.593414016282e-18 with the node and degree of

freedom N79510 DY

The residue of the type RESI_GLOB_MAXI is worth 7.008287739856e-22 with the node and degree of

freedom N79510 DY

Temps CPU consommé dans ce pas de temps : 17.418 s

* Nombre d'itérations de Newton : 1

* Temps total intégration comportement : 7.583 s (3 intégrations)

* Temps total factorisation matrice : 3.242 s (1 factorisations)

* Temps construction second membre : 3.677 s

* Temps total résolution K.U=F : 0.086 s (1 résolutions)

* Temps assemblage matrice : 0.586 s

* Temps autres opérations : 2.244 s

Mémoire (Mo) : 5796.77 / 3479.94 / 5268.00 / 1196.69 (VmPeak / VmSize / Optimum / Minimum)

Filing of the fields

Field stored DEPL at time 1.740000000000e-01 for the sequence number 58

Field stored SIEF_ELGA at time 1.740000000000e-01 for the sequence number 58

Field stored VARI_ELGA at time 1.740000000000e-01 for the sequence number 58

Field stored COMPORTEMENT at time 1.740000000000e-01 for the sequence number 58

Field stored VITE at time 1.740000000000e-01 for the sequence number 58

Field stored ACCE at time 1.740000000000e-01 for the sequence number 58

Field stored FORC_AMOR at time 1.740000000000e-01 for the sequence number 58

Field stored FORC_LIAI at time 1.740000000000e-01 for the sequence number 58

Adaptation of the time step.

For the method of adaptation of the type FIXE, the computed time step is worth

6.000000000000e-03.

On all the criteria of adaptation, the smallest time step is worth 6.000000000000e-03.

After best fit on the compulsory points of transition, the smallest time step is worth

3.000000000000e-03.

[87%] Instant calculé : 1.74000e-01, dernier instant archivé : 1.74000e-01, au numéro d'ordre :

58

Time of computation: 1.770000000000e-01

| INCREMENT | NEWTON | RESIDU | RESIDU | OPTION | NEWTON |

| INSTANT | ITERATION | RELATIF | ABSOLU | ASSEMBLAGE | TEMPS CALCUL |

| | | RESI_GLOB_RELA | RESI_GLOB_MAXI | | VALEUR |

| 1.77000E-01 | 0 | 9.48897E-18 | 8.75777E-22 |TANGENTE | |

| BILAN D'ENERGIE | TRAV_EXT | ENER_TOT | ENER_CIN | TRAV_AMOR | DISS_SCH |

| PAS COURANT | 0.0000E+00 | -9.6267E-25 | -3.0318E-13 | 0.0000E+00 | 3.0318E-13 |

| TOTAL | 8.1884E-07 | -9.1117E-21 | -1.5195E-10 | 0.0000E+00 | 8.1899E-07 |

Criterion (S) of convergence reached (S)

The residue of the type RESI_GLOB_RELA is worth 9.488966762748e-18 with the node and degree of

freedom N85349 DX

The residue of the type RESI_GLOB_MAXI is worth 8.757774735405e-22 with the node and degree of

freedom N85349 DX

Temps CPU consommé dans ce pas de temps : 17.375 s

* Nombre d'itérations de Newton : 1

* Temps total intégration comportement : 7.518 s (3 intégrations)

* Temps total factorisation matrice : 3.245 s (1 factorisations)

* Temps construction second membre : 3.672 s

* Temps total résolution K.U=F : 0.086 s (1 résolutions)

* Temps assemblage matrice : 0.585 s

* Temps autres opérations : 2.269 s

Mémoire (Mo) : 5796.77 / 3525.37 / 5268.00 / 1196.69 (VmPeak / VmSize / Optimum / Minimum)

Filing of the fields

Field stored DEPL at time 1.770000000000e-01 for the sequence number 59

Field stored SIEF_ELGA at time 1.770000000000e-01 for the sequence number 59

Field stored VARI_ELGA at time 1.770000000000e-01 for the sequence number 59

Field stored COMPORTEMENT at time 1.770000000000e-01 for the sequence number 59

Field stored VITE at time 1.770000000000e-01 for the sequence number 59

Field stored ACCE at time 1.770000000000e-01 for the sequence number 59

Field stored FORC_AMOR at time 1.770000000000e-01 for the sequence number 59

Field stored FORC_LIAI at time 1.770000000000e-01 for the sequence number 59

Adaptation of the time step.

For the method of adaptation of the type FIXE, the computed time step is worth

6.000000000000e-03.

On all the criteria of adaptation, the smallest time step is worth 6.000000000000e-03.

After best fit on the compulsory points of transition, the smallest time step is worth

3.000000000000e-03.

[88%] Instant calculé : 1.77000e-01, dernier instant archivé : 1.77000e-01, au numéro d'ordre :

59

Time of computation: 1.800000000000e-01

| INCREMENT | NEWTON | RESIDU | RESIDU | OPTION | NEWTON |

| INSTANT | ITERATION | RELATIF | ABSOLU | ASSEMBLAGE | TEMPS CALCUL |

| | | RESI_GLOB_RELA | RESI_GLOB_MAXI | | VALEUR |

| 1.80000E-01 | 0 | 9.60772E-18 | 8.86738E-22 |TANGENTE | |

| BILAN D'ENERGIE | TRAV_EXT | ENER_TOT | ENER_CIN | TRAV_AMOR | DISS_SCH |

| PAS COURANT | 0.0000E+00 | -6.6801E-25 | -2.0975E-13 | 0.0000E+00 | 2.0975E-13 |

| TOTAL | 8.1884E-07 | -9.1124E-21 | -1.5216E-10 | 0.0000E+00 | 8.1899E-07 |

Criterion (S) of convergence reached (S)

The residue of the type RESI_GLOB_RELA is worth 9.607718885163e-18 with the node and degree of

freedom N79615 DX

The residue of the type RESI_GLOB_MAXI is worth 8.867376166568e-22 with the node and degree of

freedom N79615 DX

Temps CPU consommé dans ce pas de temps : 17.403 s

* Nombre d'itérations de Newton : 1

* Temps total intégration comportement : 7.554 s (3 intégrations)

* Temps total factorisation matrice : 3.236 s (1 factorisations)

* Temps construction second membre : 3.677 s

* Temps total résolution K.U=F : 0.091 s (1 résolutions)

* Temps assemblage matrice : 0.588 s

* Temps autres opérations : 2.256 s

Mémoire (Mo) : 5796.77 / 3570.80 / 5268.00 / 1196.69 (VmPeak / VmSize / Optimum / Minimum)

Filing of the fields

Field stored DEPL at time 1.800000000000e-01 for the sequence number 60

Field stored SIEF_ELGA at time 1.800000000000e-01 for the sequence number 60

Field stored VARI_ELGA at time 1.800000000000e-01 for the sequence number 60

Field stored COMPORTEMENT at time 1.800000000000e-01 for the sequence number 60

Field stored VITE at time 1.800000000000e-01 for the sequence number 60

Field stored ACCE at time 1.800000000000e-01 for the sequence number 60

Field stored FORC_AMOR at time 1.800000000000e-01 for the sequence number 60

Field stored FORC_LIAI at time 1.800000000000e-01 for the sequence number 60

Adaptation of the time step.

For the method of adaptation of the type FIXE, the computed time step is worth

6.000000000000e-03.

On all the criteria of adaptation, the smallest time step is worth 6.000000000000e-03.

After best fit on the compulsory points of transition, the smallest time step is worth

3.000000000000e-03.

[90%] Instant calculé : 1.80000e-01, dernier instant archivé : 1.80000e-01, au numéro d'ordre :

60

Time of computation: 1.830000000000e-01

| INCREMENT | NEWTON | RESIDU | RESIDU | OPTION | NEWTON |

| INSTANT | ITERATION | RELATIF | ABSOLU | ASSEMBLAGE | TEMPS CALCUL |

| | | RESI_GLOB_RELA | RESI_GLOB_MAXI | | VALEUR |

| 1.83000E-01 | 0 | 7.43209E-18 | 6.85940E-22 |TANGENTE | |

| BILAN D'ENERGIE | TRAV_EXT | ENER_TOT | ENER_CIN | TRAV_AMOR | DISS_SCH |

| PAS COURANT | 0.0000E+00 | -4.6325E-25 | -1.4503E-13 | 0.0000E+00 | 1.4503E-13 |

| TOTAL | 8.1884E-07 | -9.1128E-21 | -1.5230E-10 | 0.0000E+00 | 8.1899E-07 |

Criterion (S) of convergence reached (S)

The residue of the type RESI_GLOB_RELA is worth 7.432090378285e-18 with the node and degree of

freedom N81791 DX

The residue of the type RESI_GLOB_MAXI is worth 6.859395229596e-22 with the node and degree of

freedom N81791 DX

Temps CPU consommé dans ce pas de temps : 17.479 s

* Nombre d'itérations de Newton : 1

* Temps total intégration comportement : 7.596 s (3 intégrations)

* Temps total factorisation matrice : 3.241 s (1 factorisations)

* Temps construction second membre : 3.705 s

* Temps total résolution K.U=F : 0.089 s (1 résolutions)

* Temps assemblage matrice : 0.585 s

* Temps autres opérations : 2.263 s

Mémoire (Mo) : 5796.77 / 3616.23 / 5268.00 / 1196.69 (VmPeak / VmSize / Optimum / Minimum)

Filing of the fields

Field stored DEPL at time 1.830000000000e-01 for the sequence number 61

Field stored SIEF_ELGA at time 1.830000000000e-01 for the sequence number 61

Field stored VARI_ELGA at time 1.830000000000e-01 for the sequence number 61

Field stored COMPORTEMENT at time 1.830000000000e-01 for the sequence number 61

Field stored VITE at time 1.830000000000e-01 for the sequence number 61

Field stored ACCE at time 1.830000000000e-01 for the sequence number 61

Field stored FORC_AMOR at time 1.830000000000e-01 for the sequence number 61

Field stored FORC_LIAI at time 1.830000000000e-01 for the sequence number 61

Adaptation of the time step.

For the method of adaptation of the type FIXE, the computed time step is worth

6.000000000000e-03.

On all the criteria of adaptation, the smallest time step is worth 6.000000000000e-03.

After best fit on the compulsory points of transition, the smallest time step is worth

3.000000000000e-03.

[91%] Instant calculé : 1.83000e-01, dernier instant archivé : 1.83000e-01, au numéro d'ordre :

61

Time of computation: 1.860000000000e-01

| INCREMENT | NEWTON | RESIDU | RESIDU | OPTION | NEWTON |

| INSTANT | ITERATION | RELATIF | ABSOLU |

ASSEMBLAGE | TEMPS CALCUL |

| | | RESI_GLOB_RELA | RESI_GLOB_MAXI |
| VALEUR |

| 1.86000E-01 | 0 | 8.87056E-18 | 8.18702E-22 |TANGENTE
| |

| BILAN D'ENERGIE | TRAV_EXT | ENER_TOT | ENER_CIN | TRAV_AMOR
| DISS_SCH |

| PAS COURANT | 0.0000E+00 | -3.2105E-25 | -1.0023E-13 | 0.0000E+00 |
1.0023E-13 |

| TOTAL | 8.1884E-07 | -9.1131E-21 | -1.5240E-10 | 0.0000E+00 |
8.1899E-07 |

Criterion (S) of convergence reached (S)

The residue of the type RESI_GLOB_RELA is worth 8.870559483759e-18 with the node and degree of

freedom N82580 DX

The residue of the type RESI_GLOB_MAXI is worth 8.187020112744e-22 with the node and degree of

freedom N82580 DX

Temps CPU consommé dans ce pas de temps : 17.502 s

* Nombre d'itérations de Newton : 1

* Temps total intégration comportement : 7.632 s (3 intégrations)

* Temps total factorisation matrice : 3.241 s (1 factorisations)

* Temps construction second membre : 3.685 s

* Temps total résolution K.U=F : 0.090 s (1 résolutions)

* Temps assemblage matrice : 0.589 s

* Temps autres opérations : 2.265 s

Mémoire (Mo) : 5796.77 / 3661.66 / 5268.00 / 1196.69 (VmPeak / VmSize / Optimum / Minimum)

Filing of the fields

Field stored DEPL at time 1.860000000000e-01 for the sequence number 62

Field stored SIEF_ELGA at time 1.860000000000e-01 for the sequence number 62

Field stored VARI_ELGA at time 1.860000000000e-01 for the sequence number 62

Field stored COMPORTEMENT at time 1.860000000000e-01 for the sequence number 62

Field stored VITE at time 1.860000000000e-01 for the sequence number 62

Field stored ACCE at time 1.860000000000e-01 for the sequence number 62

Field stored FORC_AMOR at time 1.860000000000e-01 for the sequence number 62

Field stored FORC_LIAI at time 1.860000000000e-01 for the sequence number 62

Adaptation of the time step.

For the method of adaptation of the type FIXE, the computed time step is worth

6.000000000000e-03.

On all the criteria of adaptation, the smallest time step is worth 6.000000000000e-03.

After best fit on the compulsory points of transition, the smallest time step is worth

3.000000000000e-03.

[93%] Instant calculé : 1.86000e-01, dernier instant archivé : 1.86000e-01, au numéro d'ordre :

62

Time of computation: 1.890000000000e-01

| INCREMENT | NEWTON | RESIDU | RESIDU | OPTION | NEWTON |

| INSTANT | ITERATION | RELATIF | ABSOLU | ASSEMBLAGE | TEMPS CALCUL |

| | | RESI_GLOB_RELA | RESI_GLOB_MAXI | | VALEUR |

| 1.89000E-01 | 0 | 9.03973E-18 | 8.34315E-22 |TANGENTE | |

| BILAN D'ENERGIE | TRAV_EXT | ENER_TOT | ENER_CIN | TRAV_AMOR | DISS_SCH |

| PAS COURANT | 0.0000E+00 | -2.2237E-25 | -6.9233E-14 | 0.0000E+00 | 6.9233E-14 |

| TOTAL | 8.1884E-07 | -9.1134E-21 | -1.5247E-10 | 0.0000E+00 | 8.1899E-07 |

Criterion (S) of convergence reached (S)

The residue of the type RESI_GLOB_RELA is worth 9.039725243048e-18 with the node and degree of

freedom N81941 DX

The residue of the type RESI_GLOB_MAXI is worth 8.343150453363e-22 with the

node and degree of

freedom N81941 DX

Temps CPU consommé dans ce pas de temps : 17.403 s

* Nombre d'itérations de Newton : 1

* Temps total intégration comportement : 7.553 s (3 intégrations)

* Temps total factorisation matrice : 3.238 s (1 factorisations)

* Temps construction second membre : 3.676 s

* Temps total résolution K.U=F : 0.090 s (1 résolutions)

* Temps assemblage matrice : 0.587 s

* Temps autres opérations : 2.258 s

Mémoire (Mo) : 5796.77 / 3707.09 / 5268.00 / 1196.69 (VmPeak / VmSize / Optimum / Minimum)

Filing of the fields

Field stored DEPL at time 1.890000000000e-01 for the sequence number 63

Field stored SIEF_ELGA at time 1.890000000000e-01 for the sequence number 63

Field stored VARI_ELGA at time 1.890000000000e-01 for the sequence number 63

Field stored COMPORTEMENT at time 1.890000000000e-01 for the sequence number 63

Field stored VITE at time 1.890000000000e-01 for the sequence number 63

Field stored ACCE at time 1.890000000000e-01 for the sequence number 63

Field stored FORC_AMOR at time 1.890000000000e-01 for the sequence number 63

Field stored FORC_LIAI at time 1.890000000000e-01 for the sequence number 63

Adaptation of the time step.

For the method of adaptation of the type FIXE, the computed time step is worth

6.000000000000e-03.

On all the criteria of adaptation, the smallest time step is worth 6.000000000000e-03.

After best fit on the compulsory points of transition, the smallest time step is worth

3.000000000000e-03.

[94%] Instant calculé : 1.89000e-01, dernier instant archivé : 1.89000e-01, au numéro d'ordre :

63

Time of computation: 1.920000000000e-01

| INCREMENT | NEWTON | RESIDU | RESIDU | OPTION | NEWTON |

| INSTANT | ITERATION | RELATIF | ABSOLU | ASSEMBLAGE | TEMPS CALCUL |

| | | RESI_GLOB_RELA | RESI_GLOB_MAXI | | VALEUR |

| 1.92000E-01 | 0 | 1.06339E-17 | 9.81450E-22 |TANGENTE | |

| BILAN D'ENERGIE | TRAV_EXT | ENER_TOT | ENER_CIN | TRAV_AMOR | DISS_SCH |

| PAS COURANT | 0.0000E+00 | -1.5394E-25 | -4.7799E-14 | 0.0000E+00 | 4.7799E-14 |

| TOTAL | 8.1884E-07 | -9.1135E-21 | -1.5252E-10 | 0.0000E+00 | 8.1899E-07 |

Criterion (S) of convergence reached (S)

The residue of the type RESI_GLOB_RELA is worth 1.063391647131e-17 with the node and degree of

freedom N80427 DX

The residue of the type RESI_GLOB_MAXI is worth 9.814497967942e-22 with the node and degree of

freedom N80427 DX

Temps CPU consommé dans ce pas de temps : 17.396 s

* Nombre d'itérations de Newton : 1

* Temps total intégration comportement : 7.528 s (3 intégrations)

* Temps total factorisation matrice : 3.246 s (1 factorisations)

* Temps construction second membre : 3.679 s

* Temps total résolution K.U=F : 0.090 s (1 résolutions)

* Temps assemblage matrice : 0.587 s

* Temps autres opérations : 2.267 s

Mémoire (Mo) : 5796.77 / 3752.52 / 5268.00 / 1196.69 (VmPeak / VmSize / Optimum / Minimum)

Filing of the fields

Field stored DEPL at time 1.920000000000e-01 for the sequence number 64

Field stored SIEF_ELGA at time 1.920000000000e-01 for the sequence number 64

Field stored VARI_ELGA at time 1.920000000000e-01 for the sequence number 64

Field stored COMPORTEMENT at time 1.920000000000e-01 for the sequence number 64

Field stored VITE at time 1.920000000000e-01 for the sequence number 64

Field stored ACCE at time 1.920000000000e-01 for the sequence number 64

Field stored FORC_AMOR at time 1.920000000000e-01 for the sequence number 64

Field stored FORC_LIAI at time 1.920000000000e-01 for the sequence number 64

Adaptation of the time step.

For the method of adaptation of the type FIXE, the computed time step is worth

6.000000000000e-03.

On all the criteria of adaptation, the smallest time step is worth 6.000000000000e-03.

After best fit on the compulsory points of transition, the smallest time step is worth

3.000000000000e-03.

[96%] Instant calculé : 1.92000e-01, dernier instant archivé : 1.92000e-01, au numéro d'ordre :

64

Time of computation: 1.950000000000e-01

| INCREMENT | NEWTON | RESIDU | RESIDU | OPTION | NEWTON |

| INSTANT | ITERATION | RELATIF | ABSOLU | ASSEMBLAGE | TEMPS CALCUL |

| | | RESI_GLOB_RELA | RESI_GLOB_MAXI | | VALEUR |

| 1.95000E-01 | 0 | 8.24431E-18 | 7.60903E-22 |TANGENTE | |

| BILAN D'ENERGIE | TRAV_EXT | ENER_TOT | ENER_CIN | TRAV_AMOR | DISS_SCH |

| PAS COURANT | 0.0000E+00 | -1.0650E-25 | -3.2985E-14 | 0.0000E+00 | 3.2985E-14 |

| TOTAL | 8.1884E-07 | -9.1136E-21 | -1.5255E-10 | 0.0000E+00 | 8.1899E-07 |

Criterion (S) of convergence reached (S)

The residue of the type RESI_GLOB_RELA is worth 8.244310083478e-18 with the node and degree of

freedom N78257 DZ

The residue of the type RESI_GLOB_MAXI is worth 7.609027659722e-22 with the node and degree of

freedom N78257 DZ

Temps CPU consommé dans ce pas de temps : 17.431 s

* Nombre d'itérations de Newton : 1

* Temps total intégration comportement : 7.571 s (3 intégrations)

* Temps total factorisation matrice : 3.247 s (1 factorisations)

* Temps construction second membre : 3.680 s

* Temps total résolution K.U=F : 0.089 s (1 résolutions)

* Temps assemblage matrice : 0.591 s

* Temps autres opérations : 2.254 s

Mémoire (Mo) : 5796.77 / 3797.95 / 5268.00 / 1196.69 (VmPeak / VmSize / Optimum / Minimum)

Filing of the fields

Field stored DEPL at time 1.950000000000e-01 for the sequence number 65

Field stored SIEF_ELGA at time 1.950000000000e-01 for the sequence number 65

Field stored VARI_ELGA at time 1.950000000000e-01 for the sequence number 65

Field stored COMPORTEMENT at time 1.950000000000e-01 for the sequence number 65

Field stored VITE at time 1.950000000000e-01 for the sequence number 65

Field stored ACCE at time 1.950000000000e-01 for the sequence number 65

Field stored FORC_AMOR at time 1.950000000000e-01 for the sequence number 65

Field stored FORC_LIAI at time 1.950000000000e-01 for the sequence number 65

Adaptation of the time step.

For the method of adaptation of the type FIXE, the computed time step is worth

6.000000000000e-03.

On all the criteria of adaptation, the smallest time step is worth 6.000000000000e-03.

After best fit on the compulsory points of transition, the smallest time step is worth

3.000000000000e-03.

[97%] Instant calculé : 1.95000e-01, dernier instant archivé : 1.95000e-01, au numéro d'ordre :

65

Time of computation: 1.980000000000e-01

| INCREMENT | NEWTON | RESIDU | RESIDU | OPTION | NEWTON |

| INSTANT | ITERATION | RELATIF | ABSOLU | ASSEMBLAGE | TEMPS CALCUL |

| | | RESI_GLOB_RELA | RESI_GLOB_MAXI | | VALEUR |

| 1.98000E-01 | 0 | 8.12276E-18 | 7.49684E-22 |TANGENTE | |

| BILAN D'ENERGIE | TRAV_EXT | ENER_TOT | ENER_CIN | TRAV_AMOR | DISS_SCH |

| PAS COURANT | 0.0000E+00 | -7.3645E-26 | -2.2752E-14 | 0.0000E+00 | 2.2752E-14 |

| TOTAL | 8.1884E-07 | -9.1137E-21 | -1.5258E-10 | 0.0000E+00 | 8.1899E-07 |

Criterion (S) of convergence reached (S)

The residue of the type RESI_GLOB_RELA is worth 8.122757203460e-18 with the node and degree of

freedom N85176 DX

The residue of the type RESI_GLOB_MAXI is worth 7.496841289145e-22 with the node and degree of

freedom N85176 DX

Temps CPU consommé dans ce pas de temps : 17.472 s

* Nombre d'itérations de Newton : 1

* Temps total intégration comportement : 7.614 s (3 intégrations)

* Temps total factorisation matrice : 3.240 s (1 factorisations)

* Temps construction second membre : 3.674 s

* Temps total résolution K.U=F : 0.090 s (1 résolutions)

* Temps assemblage matrice : 0.590 s

* Temps autres opérations : 2.264 s

Mémoire (Mo) : 5796.77 / 3843.38 / 5268.00 / 1196.69 (VmPeak / VmSize / Optimum / Minimum)

Filing of the fields

Field stored DEPL at time 1.980000000000e-01 for the sequence number 66

Field stored SIEF_ELGA at time 1.980000000000e-01 for the sequence number 66

Field stored VARI_ELGA at time 1.980000000000e-01 for the sequence number 66

Field stored COMPORTEMENT at time 1.980000000000e-01 for the sequence number 66

Field stored VITE at time 1.980000000000e-01 for the sequence number 66

Field stored ACCE at time 1.980000000000e-01 for the sequence number 66

Field stored FORC_AMOR at time 1.980000000000e-01 for the sequence number 66

Field stored FORC_LIAI at time 1.980000000000e-01 for the sequence number 66

Adaptation of the time step.

For the method of adaptation of the type FIXE, the computed time step is worth

6.000000000000e-03.

On all the criteria of adaptation, the smallest time step is worth 6.000000000000e-03.

After best fit on the compulsory points of transition, the smallest time step is worth

2.000000000000e-03.

[99%] Instant calculé : 1.98000e-01, dernier instant archivé : 1.98000e-01, au numéro d'ordre :

66

Time of computation: 2.000000000000e-01

| INCREMENT | NEWTON | RESIDU | RESIDU |

OPTION | NEWTON |

| INSTANT | ITERATION | RELATIF | ABSOLU | ASSEMBLAGE | TEMPS CALCUL |

| | | RESI_GLOB_RELA | RESI_GLOB_MAXI | | VALEUR |

| 2.00000E-01 | 0 | 9.82394E-18 | 9.06693E-22 |TANGENTE | |

| BILAN D'ENERGIE | TRAV_EXT | ENER_TOT | ENER_CIN | TRAV_AMOR | DISS_SCH |

| PAS COURANT | 0.0000E+00 | -2.8912E-26 | -1.1273E-14 | 0.0000E+00 | 1.1273E-14 |

| TOTAL | 8.1884E-07 | -9.1137E-21 | -1.5259E-10 | 0.0000E+00 | 8.1899E-07 |

Criterion (S) of convergence reached (S)

The residue of the type RESI_GLOB_RELA is worth 9.823937372200e-18 with the node and degree of

freedom N81882 DZ

The residue of the type RESI_GLOB_MAXI is worth 9.066933489347e-22 with the node and degree of

freedom N81882 DZ

Temps CPU consommé dans ce pas de temps : 17.565 s

* Nombre d'itérations de Newton : 1

* Temps total intégration comportement : 7.673 s (3 intégrations)

* Temps total factorisation matrice : 3.248 s (1 factorisations)

* Temps construction second membre : 3.697 s

* Temps total résolution K.U=F : 0.091 s (1 résolutions)

* Temps assemblage matrice : 0.587 s

* Temps autres opérations : 2.268 s

Mémoire (Mo) : 5796.77 / 3888.81 / 5268.00 / 1196.69 (VmPeak / VmSize / Optimum / Minimum)

Filing of the fields

Field stored DEPL at time 2.000000000000e-01 for the sequence number 67

Field stored SIEF_ELGA at time 2.000000000000e-01 for the sequence number 67

Field stored VARI_ELGA at time 2.000000000000e-01 for the sequence number 67

Field stored COMPORTEMENT at time 2.000000000000e-01 for the sequence number 67

Field stored VITE at time 2.000000000000e-01 for the sequence number 67

Field stored ACCE at time 2.000000000000e-01 for the sequence number 67

Field stored FORC_AMOR at time 2.000000000000e-01 for the sequence number 67

Field stored FORC_LIAI at time 2.000000000000e-01 for the sequence number 67

[100%] Instant calculé : 2.00000e-01, dernier instant archivé : 2.00000e-01, au numéro d'ordre :

67

Temps CPU consommé dans le calcul : 20 min 39 s

dont temps CPU "perdu" dans les découpes : 0.000 s

* Nombre de pas de temps : 67

* Nombre d'itérations de Newton : 68

* Temps dans l'archivage : 5.103 s

* Temps dans le post-traitement : 54.154 s

* Temps total intégration comportement : 8 min 28 s (202 intégrations)

* Temps total factorisation matrice : 3 min 41 s (68 factorisations)

* Temps construction second membre : 4 min 7 s

* Temps total résolution K.U=F : 5.981 s (68 résolutions)

* Temps assemblage matrice : 40.520 s

#1 Resolution des systemes lineaires CPU (USER+SYST/SYST/ELAPS): 227.92 18.59 227.93

#2 Calculs elementaires et assemblages CPU (USER+SYST/SYST/ELAPS): 940.59 39.95 940.85

#3 Dechargement de la memoire sur disque CPU (USER+SYST/SYST/ELAPS): 3.32 3.25 3.32

#4 Communications MPI CPU (USER+SYST/SYST/ELAPS): 0.02 0.00 0.01

Résultat commande #0047 (DYNA_NON_LINE): SIM ('<0000002c>') de type <NonLinearResult>

Dépend de :

- TIMELIST ('<0000002a>') de type <ListOfFloats>

- MATS ('<00000004>') de type <MaterialField>

- BC_0 ('<00000026>') de type <MechanicalDirichletBC>

- BC_1 ('<00000027>') de type <MechanicalDirichletBC>

- BC_2 ('<00000028>') de type <MechanicalLoadFunction>

- BC_3 ('<00000029>') de type <MechanicalLoadFunction>

- INSTLIST ('<0000002b>') de type <TimeStepper>

- MODEL ('<00000003>') de type <Model>

Mémoire (Mo) : 5796.77 / 4315.06 / 5268.00 / 1196.69 (VmPeak / VmSize / Optimum / Minimum)

Fin commande #0047 user+syst: 1168.06s (syst: 90.71s, elaps: 1259.06s)

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```
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.. _stg1_txt575

# ------------------------------------------------------------------------
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# Commande #0048 de fort.1, ligne 575

FIN(INFO_RESU='NON',

      PROC0='OUI',

      RETASSAGE='NON')

Saving objects...

pi                              <class 'float'>

e                               <class 'float'>

tau                             <class 'float'>

inf                             <class 'float'>

nan                             <class 'float'>

MAT_0                           <class 'libaster.Material'>

MESH                            <class 'libaster.Mesh'>

MODEL                           <class 'libaster.Model'>

MATS                            <class 'libaster.MaterialField'>

F_4                             <class 'libaster.FieldOnNodesReal'>

F_0                             <class 'libaster.Formula'>

F_1                             <class 'libaster.Formula'>

F_2                             <class 'libaster.Formula'>

F_3                             <class 'libaster.FieldOnNodesReal'>

INIT_D                          <class 'libaster.FieldOnNodesReal'>

F_9                             <class 'libaster.FieldOnNodesReal'>

F_5                             <class 'libaster.Formula'>

F_6                             <class 'libaster.Formula'>
```

F_7 <class 'libaster.Formula'>

F_8 <class 'libaster.FieldOnNodesReal'>

INIT_U <class 'libaster.FieldOnNodesReal'>

F_14 <class 'libaster.FieldOnNodesReal'>

F_10 <class 'libaster.Formula'>

F_11 <class 'libaster.Formula'>

F_12 <class 'libaster.Formula'>

F_13 <class 'libaster.FieldOnNodesReal'>

INIT_A <class 'libaster.FieldOnNodesReal'>

F_22 <class 'libaster.FieldOnNodesReal'>

F_23 <class 'libaster.FieldOnCellsReal'>

F_15 <class 'libaster.Formula'>

F_16 <class 'libaster.Formula'>

F_17 <class 'libaster.Formula'>

F_18 <class 'libaster.Formula'>

F_19 <class 'libaster.Formula'>

F_20 <class 'libaster.Formula'>

F_21 <class 'libaster.FieldOnCellsReal'>

F_24 <class 'libaster.FieldOnCellsReal'>

INIT_S <class 'libaster.FieldOnCellsReal'>

F_25 <class 'libaster.Formula'>

F_26 <class 'libaster.Formula'>

F_27 <class 'libaster.Formula'>

F_28 <class 'libaster.Formula'>

BC_0 <class 'libaster.MechanicalDirichletBC'>

BC_1 <class 'libaster.MechanicalDirichletBC'>

BC_2 <class 'libaster.MechanicalLoadFunction'>

BC_3 <class 'libaster.MechanicalLoadFunction'>

TIMELIST <class 'libaster.ListOfFloats'>

INSTLIST <class 'libaster.TimeStepper'>

SIM <class 'libaster.NonLinearResult'>

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 ‖ <I> <CATAMESS_89>
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‖

 ‖ List of warnings emitted during the execution of computation.
‖

 ‖
‖

 ‖ Warnings which you chose to ignore of are preceded by (*).
‖

 ‖ Number of occurrences for each warning:
‖

 ‖ ALGORITH13_82 emitted 1 time
‖

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-

 Concepts de la base: G

 Nom Type Taille (Mo) Nombre Nombre
de

			d'objets	segments
TOTAL		3697.10	2751	3244
00000001	MATER_SDASTER	0.00	9	9
00000002	MAILLAGE_SDASTER	41.90	38	89
00000003	MODELE_SDASTER	18.78	9	14
00000004	CHAM_MATER	2.20	9	14
00000005	CHAM_NO_SDASTER	2.02	5	5
00000006	FORMULE	0.00	4	4
00000007	FORMULE	0.00	4	4
00000008	FORMULE	0.00	4	4
00000009	CHAM_NO_SDASTER	10.10	10	12
0000000a	CHAM_NO_SDASTER	10.10	10	12
0000000b	CHAM_NO_SDASTER	2.02	5	5
0000000c	FORMULE	0.00	4	4
0000000d	FORMULE	0.00	4	4
0000000e	FORMULE	0.00	4	4

0000000f	CHAM_NO_SDASTER	10.10	10	12
00000010	CHAM_NO_SDASTER	10.10	10	12
00000011	CHAM_NO_SDASTER	2.02	5	5
00000012	FORMULE	0.00	4	4
00000013	FORMULE	0.00	4	4
00000014	FORMULE	0.00	4	4
00000015	CHAM_NO_SDASTER	10.10	10	12
00000016	CHAM_NO_SDASTER	10.10	10	12
00000017	CHAM_NO_SDASTER	2.02	5	5
00000018	CHAM_ELEM	30.28	5	5
00000019	FORMULE	0.00	4	4
0000001a	FORMULE	0.00	4	4
0000001b	FORMULE	0.00	4	4
0000001c	FORMULE	0.00	4	4
0000001d	FORMULE	0.00	4	4
0000001e	FORMULE	0.00	4	4

0000001f	CHAM_ELEM	182.26	5	5
00000020	CHAM_ELEM	182.26	5	5
00000021	CHAM_ELEM	22.06	5	5
00000022	FORMULE	0.00	4	4
00000023	FORMULE	0.00	4	4
00000024	FORMULE	0.00	4	4
00000025	FORMULE	0.00	4	4
00000026	CHAR_CINE_MECA	6.85	4	4
00000027	CHAR_CINE_MECA	6.85	4	4
00000028	CHAR_MECA	3.35	32	37
00000029	CHAR_MECA	1.14	32	37
0000002a	LISTR8_SDASTER	0.00	6	6
0000002b	LIST_INST	0.00	9	9
0000002c	EVOL_NOLI	3100.46	2378	2727
&FOZERO		0.00	2	2
&&_NUM_C		0.00	1	1

&CATA.AC	0.00	2	4
&CATA.CL	0.62	1	3
&CATA.GD	0.19	4	11
&CATA.ME	0.22	2	4
&CATA.OP	0.32	4	19
&CATA.PH	0.00	1	1
&CATA.PR	0.00	2	4
&CATA.TE	28.61	17	42
&CATA.TH	0.01	2	4
&CATA.TM	0.01	7	11

Nom de la base : GLOBALE

Nombre d'enregistrements utilisés : 5145

Nombre d'enregistrements maximum : 2684354

Nombre d'enregistrements par fichier : 15728

Longueur d'enregistrement (octets) : 819200

Nombre total d'accès en lecture : 3011

Volume des accès en lecture : 2352.34 Mo.

Nombre total d'accès en écriture : 5372

Volume des accès en écriture : 4196.88 Mo.

Nombre d'identificateurs utilisés : 3232

Taille maximum du répertoire : 4000

Pourcentage d'utilisation du répertoire : 80 %

Nom de la base : VOLATILE

Nombre d'enregistrements utilisés : 3086

Nombre d'enregistrements maximum : 2684354

Nombre d'enregistrements par fichier : 15728

Longueur d'enregistrement (octets) : 819200

Nombre total d'accès en lecture : 6016

Volume des accès en lecture : 4700.00 Mo.

Nombre total d'accès en écriture : 4150

Volume des accès en écriture : 3242.19 Mo.

Nombre d'identificateurs utilisés : 1333

Taille maximum du répertoire : 2000

Pourcentage d'utilisation du répertoire : 66 %

<I> <FIN> ARRET NORMAL DANS "FIN" PAR APPEL A "JEFINI".

<I> <FIN> MEMOIRE JEVEUX MINIMALE REQUISE POUR L'EXECUTION : 1196.69 Mo

<I> <FIN> MEMOIRE JEVEUX OPTIMALE REQUISE POUR L'EXECUTION : 5268.00 Mo

<I> <FIN> MAXIMUM DE MEMOIRE UTILISEE PAR LE PROCESSUS LORS DE L'EXECUTION : 5796.77 Mo

<I> FERMETURE DES BASES EFFECTUEE

STATISTIQUES CONCERNANT L'ALLOCATION DYNAMIQUE :

TAILLE CUMULEE MAXIMUM : 5268 Mo.

TAILLE CUMULEE LIBEREE : 31628 Mo.

NOMBRE TOTAL D'ALLOCATIONS : 20338804

NOMBRE TOTAL DE LIBERATIONS : 20338784

APPELS AU MECANISME DE LIBERATION : 1

TAILLE MEMOIRE CUMULEE RECUPEREE : 4347 Mo.

VOLUME DES LECTURES : 0 Mo.

VOLUME DES ECRITURES : 4738 Mo.

MEMOIRE JEVEUX MINIMALE REQUISE POUR L'EXECUTION : 1196.69 Mo

- IMPOSE DE NOMBREUX ACCES DISQUE

- RALENTIT LA VITESSE D'EXECUTION

MEMOIRE JEVEUX OPTIMALE REQUISE POUR L'EXECUTION : 5268.00 Mo

- LIMITE LES ACCES DISQUE

- AMELIORE LA VITESSE D'EXECUTION

MAXIMUM DE MEMOIRE UTILISEE PAR LE PROCESSUS : 5796.77 Mo

- COMPREND LA MEMOIRE CONSOMMEE PAR JEVEUX,

LE SUPERVISEUR PYTHON, LES LIBRAIRIES EXTERNES

<I> FIN D'EXECUTION LE : SA-18-JANV-2025 15:18:26

DeprecationWarning: PY_SSIZE_T_CLEAN will be required for '#' formats

libaster.jeveux_finalize(options)

Signature of pickled file :
2382408e0ce538f1afc1558fce3d73c285cfb49e13d4dea9a4d4ef40bec80c59

Signature of info file :
d385a9a9c129be9a50e5ef4a3b59bf4c115982fffe4be2daa132b188e168a54e

Signature of Jeveux database:
846ffb10637eaf7c5949643fae75137eff5420a7cff20b0317aa472d8862bfa6

****

* COMMAND : USER : SYSTEM : USER+SYS : ELAPSED *

****

* DEBUT : 0.02 : 0.25 : 0.27 : 0.37 *

* DEFI_MATERIAU	:	0.00 :	0.00 :	0.00 :	0.02 *
* LIRE_MAILLAGE	:	0.62 :	0.03 :	0.65 :	0.66 *
* DEFI_GROUP	:	0.35 :	0.00 :	0.35 :	0.35 *
* MODI_MAILLAGE	:	1.03 :	0.01 :	1.04 :	1.06 *
* AFFE_MODELE	:	0.70 :	0.03 :	0.73 :	0.75 *
* AFFE_MATERIAU	:	0.01 :	0.00 :	0.01 :	0.01 *
* CREA_CHAMP	:	0.01 :	0.00 :	0.01 :	0.01 *
* FORMULE	:	0.00 :	0.00 :	0.00 :	0.00 *
* FORMULE	:	0.00 :	0.00 :	0.00 :	0.00 *
* FORMULE	:	0.00 :	0.00 :	0.00 :	0.00 *
* CREA_CHAMP	:	0.01 :	0.01 :	0.02 :	0.03 *
* CREA_CHAMP	:	0.29 :	0.01 :	0.30 :	0.29 *
* CREA_CHAMP	:	0.00 :	0.00 :	0.00 :	0.01 *
* FORMULE	:	0.00 :	0.00 :	0.00 :	0.00 *
* FORMULE	:	0.01 :	0.00 :	0.01 :	0.00 *
* FORMULE	:	0.00 :	0.00 :	0.00 :	0.00 *
* CREA_CHAMP	:	0.01 :	0.00 :	0.01 :	0.02

*
 * CREA_CHAMP : 0.29 : 0.01 : 0.30 : 0.30
*
 * CREA_CHAMP : 0.00 : 0.00 : 0.00 : 0.00
*
 * FORMULE : 0.00 : 0.00 : 0.00 : 0.00
*
 * FORMULE : 0.00 : 0.00 : 0.00 : 0.00
*
 * FORMULE : 0.00 : 0.00 : 0.00 : 0.00
*
 * CREA_CHAMP : 0.02 : 0.01 : 0.03 : 0.03
*
 * CREA_CHAMP : 0.28 : 0.00 : 0.28 : 0.29
*
 * CREA_CHAMP : 0.01 : 0.00 : 0.01 : 0.01
*
 * CREA_CHAMP : 0.26 : 0.10 : 0.36 : 0.36
*
 * FORMULE : 0.00 : 0.00 : 0.00 : 0.00
*
 * FORMULE : 0.01 : 0.00 : 0.01 : 0.00
*
 * FORMULE : 0.00 : 0.00 : 0.00 : 0.00
*
 * FORMULE : 0.00 : 0.00 : 0.00 : 0.00
*
 * FORMULE : 0.00 : 0.00 : 0.00 : 0.00
*
 * FORMULE : 0.00 : 0.00 : 0.00 : 0.00
*

```
 * CREA_CHAMP                :      1.47 :      0.36 :      1.83 :      1.84
*
 * CREA_CHAMP                :      8.99 :      0.55 :      9.54 :      9.54
*
 * CREA_CHAMP                :      0.87 :      0.26 :      1.13 :      1.13
*
 * FORMULE                   :      0.00 :      0.00 :      0.00 :      0.00
*
 * FORMULE                   :      0.00 :      0.00 :      0.00 :      0.00
*
 * FORMULE                   :      0.00 :      0.00 :      0.00 :      0.00
*
 * FORMULE                   :      0.00 :      0.00 :      0.00 :      0.00
*
 * AFFE_CHAR_CINE            :      0.18 :      0.00 :      0.18 :      0.18
*
 * AFFE_CHAR_CINE            :      0.17 :      0.01 :      0.18 :      0.17
*
 * AFFE_CHAR_MECA_F          :      0.48 :      0.04 :      0.52 :      0.53
*
 * AFFE_CHAR_MECA_F          :      8.34 :      0.20 :      8.54 :      8.55
*
 * DEFI_LIST_REEL            :      0.00 :      0.01 :      0.01 :      0.00 *
 * DEFI_LIST_INST            :      0.01 :      0.00 :      0.01 :      0.02 *
 * DYNA_NON_LINE             :   1168.06 :     90.71 :   1258.77 :
1259.06 *
 * FIN                       :      0.25 :      1.31 :      1.56 :      1.57 *
 *    . check syntax         :      0.05 :      0.00 :      0.05 :      0.05 *
 *    . fortran              :   1192.62 :     92.78 :   1285.40 :   1285.89 *
 ********************************************************************************
```

```
 * TOTAL_JOB                    :      1192.77 :         93.92 :      1286.69 :      1287.22
*
 ********************************************************************************
# Mémoire (Mo) :    5796.77 /     535.04 /    5268.00 /    1196.69 (VmPeak / VmSize / Optimum / Minimum)
# Fin commande #0048      user+syst:              0.25s (syst:              1.31s, elaps:              1.57s)
# --------------------------------------------------------------------------------
End of the Code_Aster execution
Code_Aster MPI exits normally
Exited
EXECUTION_CODE_ASTER_EXIT_12=0
--------------------------------------------------------------------------------
# import code_aster
import code_aster
from code_aster.Commands import *
# import math library for functions and formula
from math import *
# import simscale macros and utilities
import simscale_macros
# Input file start
POURSUITE(
    IGNORE_ALARM=("SUPERVIS_1", "ALGORITH11_87"),
    LANG="en",
)
try:
```

```
    # reconstructing model for single-core post-processing
    MODEL = MODI_MODELE(
        DISTRIBUTION=_F(
            METHODE="CENTRALISE",
        ),
        MODELE=MODEL,
        reuse=MODEL,
    )
    TAB_ENER = simscale_macros.GET_ENERGIE(
        NOM_CMP=("TRAV_EXT", "ENER_CIN", "ENER_TOT", "TRAV_AMOR",
"TRAV_LIAI", "DISS_SCH"),
        NOM_TABLE="PARA_CALC",
        RESULTAT=SIM,
    )
    DEFI_FICHIER(
        ACCES="NEW",
        ACTION="ASSOCIER",
        FICHIER="REPE_OUT/energy-plots",
        TYPE="ASCII",
        UNITE=30,
    )
    IMPR_TABLE(
        COMM_PARA="$$",
        FORMAT="TABLEAU",
        FORMAT_R="E12.5",
        NOM_PARA=("INST", "TRAV_EXT", "ENER_CIN", "ENER_TOT", "TRAV_AMOR",
"TRAV_LIAI", "DISS_SCH"),
```

```
        SEPARATEUR='',',
        TABLE=TAB_ENER,
        UNITE=30,
)
DEFI_FICHIER(
        ACTION="LIBERER",
        UNITE=30,
)
# Derived result calculation on nodes
SIM = CALC_CHAMP(
        CONTRAINTE=("SIGM_NOEU"),
        CRITERES=("SIEQ_NOEU"),
        DEFORMATION=("EPSG_NOEU"),
        GROUP_MA=(
                "face1",
                "face10",
                "face11",
                "face12",
                "face13",
                "face14",
                "face2",
                "face3",
                "face4",
                "face5",
                "face6",
                "face7",
                "face8",
```

```
            "face9",
            "region1",
        ),
        RESULTAT=SIM,
        reuse=SIM,
)
# Restricted mesh (only volume elements) for global fields printing
MESH_PP = CREA_MAILLAGE(
        MAILLAGE=MESH,
        RESTREINT=_F(
            GROUP_MA=("region1"),
        ),
)
# Restricted model definition for global fields printing
MOD_PP = AFFE_MODELE(
        AFFE=(
            _F(
                MODELISATION="3D",
                PHENOMENE="MECANIQUE",
                TOUT="OUI",
            ),
            _F(
                GROUP_MA=("region1"),
                MODELISATION="3D",
                PHENOMENE="MECANIQUE",
            ),
        ),
```

```
        MAILLAGE=MESH_PP,
    )
    # Restricted result for global fields printing
    SIM_PP = EXTR_RESU(
        ARCHIVAGE=_F(
            NOM_CHAM=("ACCE", "DEPL", "EPSG_NOEU", "SIEQ_NOEU",
"SIGM_NOEU", "VITE"),
            PAS_ARCH=1,
        ),
        RESTREINT=_F(
            MODELE=MOD_PP,
        ),
        RESULTAT=SIM,
    )
    # Destroying intermediate objects for global fields result restriction
    DETRUIRE(
        INFO=1,
        NOM=(MESH, MODEL, SIM),
    )
    # Solution fields in file
    IMPR_RESU(
        FORMAT="MED",
        RESU=(
            _F(
                NOM_CHAM="DEPL",
                NOM_CHAM_MED="displacement",
                NOM_CMP=("DX", "DY", "DZ"),
```

```
        RESULTAT=SIM_PP,
    ),
    _F(
        NOM_CHAM="SIGM_NOEU",
        NOM_CHAM_MED="cauchy stress",
        NOM_CMP=("SIXX", "SIYY", "SIZZ", "SIXY", "SIXZ", "SIYZ"),
        RESULTAT=SIM_PP,
    ),
    _F(
        NOM_CHAM="SIEQ_NOEU",
        NOM_CHAM_MED="von Mises stress",
        NOM_CMP=("VMIS"),
        RESULTAT=SIM_PP,
    ),
    _F(
        NOM_CHAM="EPSG_NOEU",
        NOM_CHAM_MED="total nonlinear strain",
        NOM_CMP=("EPXX", "EPYY", "EPZZ", "EPXY", "EPXZ", "EPYZ"),
        RESULTAT=SIM_PP,
    ),
    _F(
        NOM_CHAM="VITE",
        NOM_CHAM_MED="velocity",
        NOM_CMP=("DX", "DY", "DZ"),
        RESULTAT=SIM_PP,
    ),
    _F(
```

```
                    NOM_CHAM="ACCE",
                    NOM_CHAM_MED="acceleration",
                    NOM_CMP=("DX", "DY", "DZ"),
                    RESULTAT=SIM_PP,
                ),
            ),
            UNITE=80,
        )
finally:
        # Input file end
        FIN(
            INFO_RESU="NON",
            PROC0="OUI",
            RETASSAGE="NON",
        )
--------------------------------------------------------------------------------
-----
MPI_Init...
calling MPI_Init...
Ouverture en écriture du fichier ./vola.1
<INFO> Démarrage de l'exécution.
                -- CODE_ASTER -- VERSION : CORRECTIVE AVANT STABILISATION
(stable-updates) --
                                        Version 15.6.10 modifiée le 14/12/2022
                                            révision cf12489e9fcc - branche 'v15'
                                        Copyright EDF R&D 1991 - 2025
                                            Exécution du : Sat Jan 18 15:18:41 2025
```

Type de processeur : x86_64

Langue des messages : en (UTF-8)

Version de Python : 3.8.10

Version de NumPy : 1.17.4

Parallélisme MPI : actif

Rang du processeur courant : 0

Nombre de processeurs utilisés : 1

Parallélisme OpenMP : actif

Nombre de processus utilisés : 1

Version de la librairie HDF5 : 1.10.3

Version de la librairie MED : 4.1.1

Version de la librairie MFront : 3.4.0

Version de la librairie MUMPS : 5.2.1

Version de la librairie PETSc : 3.12.3p0

Version de la librairie SCOTCH : 6.0.4

Mémoire limite pour l'exécution : 120000.00 Mo

consommée par l'initialisation : 484.88 Mo

reste pour l'allocation dynamique : 119515.12 Mo

Taille limite des fichiers d'échange : 2048.00 Go

<frozen importlib._bootstrap>:219: ImportWarning: can't resolve package from __spec__ or __package__, falling back on __name__ and __path__

DeprecationWarning: PY_SSIZE_T_CLEAN will be required for '#' formats

libaster.jeveux_init()

Found the comm-file: post.comm

Original directory for logging was found:

.. _stg1_txt125

```
# ------------------------------------------------------------------------
--------------------
# Commande #0001 de    ligne 125
POURSUITE(CODE='NON',
                DEBUG=_F(JEVEUX='NON',
                         JXVERI='NON',
                         SDVERI='NON',
                         VERI_BASE_NB=125),
                IGNORE_ALARM=('SUPERVIS_1', 'ALGORITH11_87'),
                IMPR_MACRO='NON',
                INFO=1,
                LANG='en',
                MEMOIRE=_F(TAILLE_BLOC=800.0,
                           TAILLE_GROUP_ELEM=1000),
                MESURE_TEMPS=_F(MOYENNE='NON',
                                NIVE_DETAIL=1),
                RESERVE_CPU=_F(BORNE=900))
restarting from a previous execution...
Initial value of maximum time CPU = 35996400 second
  Valeur of the maximum time CPU placed to the orders = 35995500 second
  Réserve CPU envisaged = 900 seconds
Ouverture en lecture du fichier ./glob.1
Ajustement de la taille maximale des bases à 2048.00 Go.
Nom de la base                                :   GLOBALE
        Créée avec la version                 :   15.06.10
        Nombre d'enregistrements utilisés     :   5145
        Nombre d'enregistrements maximum      :   2684354
```

Nombre d'enregistrements par fichier : 15728

Longueur d'enregistrement (octets) : 819200

Nombre d'identificateurs utilisés : 3232

Taille maximum du répertoire : 4000

Pourcentage d'utilisation du répertoire : 80 %

Ouverture en lecture du fichier ./glob.1

Ouverture en écriture du fichier ./vola.1

End of reading (lasted 0.000002 S.)

DeprecationWarning: PY_SSIZE_T_CLEAN will be required for '#' formats

libaster.call_poursuite(syntax)

Restored objects:

pi <class 'float'>

e <class 'float'>

tau <class 'float'>

inf <class 'float'>

nan <class 'float'>

MAT_0 <class 'libaster.Material'>

MESH <class 'libaster.Mesh'>

MODEL <class 'libaster.Model'>

MATS <class 'libaster.MaterialField'>

F_4 <class 'libaster.FieldOnNodesReal'>

F_0 <class 'libaster.Formula'>

F_1 <class 'libaster.Formula'>

F_2 <class 'libaster.Formula'>

F_3 <class 'libaster.FieldOnNodesReal'>

INIT_D <class 'libaster.FieldOnNodesReal'>

F_9 <class 'libaster.FieldOnNodesReal'>

F_5 <class 'libaster.Formula'>

F_6 <class 'libaster.Formula'>

F_7 <class 'libaster.Formula'>

F_8 <class 'libaster.FieldOnNodesReal'>

INIT_U <class 'libaster.FieldOnNodesReal'>

F_14 <class 'libaster.FieldOnNodesReal'>

F_10 <class 'libaster.Formula'>

F_11 <class 'libaster.Formula'>

F_12 <class 'libaster.Formula'>

F_13 <class 'libaster.FieldOnNodesReal'>

INIT_A <class 'libaster.FieldOnNodesReal'>

F_22 <class 'libaster.FieldOnNodesReal'>

F_23 <class 'libaster.FieldOnCellsReal'>

F_15 <class 'libaster.Formula'>

F_16 <class 'libaster.Formula'>

F_17 <class 'libaster.Formula'>

F_18 <class 'libaster.Formula'>

F_19 <class 'libaster.Formula'>

F_20 <class 'libaster.Formula'>

F_21 <class 'libaster.FieldOnCellsReal'>

F_24 <class 'libaster.FieldOnCellsReal'>

INIT_S <class 'libaster.FieldOnCellsReal'>

F_25 <class 'libaster.Formula'>

F_26 <class 'libaster.Formula'>

F_27 <class 'libaster.Formula'>

F_28 <class 'libaster.Formula'>

BC_0 <class 'libaster.MechanicalDirichletBC'>

BC_1 <class 'libaster.MechanicalDirichletBC'>

BC_2 <class 'libaster.MechanicalLoadFunction'>

BC_3 <class 'libaster.MechanicalLoadFunction'>

TIMELIST <class 'libaster.ListOfFloats'>

INSTLIST <class 'libaster.TimeStepper'>

SIM <class 'libaster.NonLinearResult'>

Mémoire (Mo) : 3752.31 / 3752.31 / 3262.35 / 197.02 (VmPeak / VmSize / Optimum / Minimum)

Fin commande #0001 user+syst: 0.06s (syst: 1.79s, elaps: 1.85s)

.. _stg1_txt19

Commande #0002 de fort.1, ligne 19

MODEL = MODI_MODELE(DISTRIBUTION=_F(METHODE='CENTRALISE'),

MODELE=MODEL,

reuse=MODEL)

Résultat commande #0002 (MODI_MODELE): MODEL ('<00000003>') de type <Model>

Dépend de :

- MESH ('<00000002>') de type <Mesh>

Mémoire (Mo) : 3752.31 / 3752.29 / 3262.35 / 197.02 (VmPeak / VmSize / Optimum / Minimum)

Fin commande #0002 user+syst: 0.00s (syst: 0.00s, elaps: 0.00s)

```
.. _stg1_txt27

# ------------------------------------------------------------------------
---------------------

# Commande #0003 de fort.1, ligne 27

GET_ENERGIE(NOM_CMP=('TRAV_EXT', 'ENER_CIN', 'ENER_TOT', 'TRAV_AMOR',
'TRAV_LIAI', 'DISS_SCH'),

                NOM_TABLE='PARA_CALC',

                RESULTAT=SIM)

# Résultat commande #0003 (GET_ENERGIE): '<0000002e>' de type <Table>

# Mémoire (Mo) :    3752.43 /    3752.43 /    3262.39 /     197.02 (VmPeak / VmSize /
Optimum / Minimum)

# Fin commande #0003      user+syst:              0.01s (syst:              0.01s, elaps:
0.02s)

# ------------------------------------------------------------------------
---------------------

.. _stg1_txt33

# ------------------------------------------------------------------------
---------------------

# Commande #0006 de fort.1, ligne 33

DEFI_FICHIER(ACCES='NEW',

                ACTION='ASSOCIER',

                FICHIER='REPE_OUT/energy-plots',

                TYPE='ASCII',

                UNITE=30)

# Mémoire (Mo) :    3752.56 /    3752.56 /    3262.39 /     197.02 (VmPeak / VmSize /
Optimum / Minimum)

# Fin commande #0006      user+syst:              0.00s (syst:              0.00s, elaps:
0.00s)

# ------------------------------------------------------------------------
```

```
----------------------

.. _stg1_txt41

# ------------------------------------------------------------------------
--------------------

# Commande #0007 de fort.1, ligne 41

IMPR_TABLE(COMMENTAIRE='#',

                COMM_PARA='$$',

                DEBUT_LIGNE='',

                FIN_LIGNE='\n',

                FIN_TABLE='',

                FORMAT='TABLEAU',

                FORMAT_R='E12.5',

                IMPR_FONCTION='NON',

                INFO=1,

                NOM_PARA=('INST', 'TRAV_EXT', 'ENER_CIN', 'ENER_TOT', 'TRAV_AMOR',
'TRAV_LIAI', 'DISS_SCH'),

                SEPARATEUR=',',

                TABLE='<0000002e>',

                UNITE=30)

# Mémoire (Mo) :    3753.06 /    3752.81 /    3262.39 /     197.02 (VmPeak / VmSize /
Optimum / Minimum)

# Fin commande #0007      user+syst:              0.00s (syst:              0.00s, elaps:
0.01s)

# ------------------------------------------------------------------------
--------------------

.. _stg1_txt51

# ------------------------------------------------------------------------
----------------------
```

Commande #0008 de fort.1, ligne 51

DEFI_FICHIER(ACTION='LIBERER',

UNITE=30)

Mémoire (Mo) : 3753.06 / 3752.81 / 3262.39 / 197.02 (VmPeak / VmSize / Optimum / Minimum)

Fin commande #0008 user+syst: 0.00s (syst: 0.00s, elaps: 0.00s)

.. _stg1_txt57

Commande #0009 de fort.1, ligne 57

SIM = CALC_CHAMP(CONTRAINTE='SIGM_NOEU',

CRITERE='RELATIF',

CRITERES='SIEQ_NOEU',

DEFORMATION='EPSG_NOEU',

GROUP_MA=('face1', 'face10', 'face11', 'face12', 'face13', 'face14', 'face2', 'face3', 'face4', 'face5', 'face6', 'face7', 'face8', 'face9', 'region1'),

INFO=1,

PARALLELISME_TEMPS='NON',

PRECISION=1e-06,

RESULTAT=SIM,

reuse=SIM)

#2 Calculs elementaires et assemblages CPU (USER+SYST/SYST/ELAPS): 147.72 17.98 147.49

Résultat commande #0009 (CALC_CHAMP): SIM ('<0000002c>') de type <NonLinearResult>

Dépend de :

- TIMELIST ('<0000002a>') de type <ListOfFloats>

- MATS ('<00000004>') de type <MaterialField>

- BC_0 ('<00000026>') de type <MechanicalDirichletBC>

- BC_1 ('<00000027>') de type <MechanicalDirichletBC>

- BC_2 ('<00000028>') de type <MechanicalLoadFunction>

- BC_3 ('<00000029>') de type <MechanicalLoadFunction>

- INSTLIST ('<0000002b>') de type <TimeStepper>

- MODEL ('<00000003>') de type <Model>

Mémoire (Mo) : 27926.21 / 1974.71 / 27399.45 / 574.68 (VmPeak / VmSize / Optimum / Minimum)

Fin commande #0009 user+syst: 325.94s (syst: 69.39s, elaps: 395.39s)

--

.. _stg1_txt83

--

Commande #0010 de fort.1, ligne 83

MESH_PP = CREA_MAILLAGE(INFO=1,

MAILLAGE=MESH,

RESTREINT=_F(GROUP_MA='region1',

TOUT_GROUP_MA='NON',

TOUT_GROUP_NO='NON'))

Vérification du maillage.

------------ MAILLAGE 0000002f - IMPRESSIONS NIVEAU 1 ------------

ASTER 15.06.10 CONCEPT 0000002f CALCULE LE 18/01/2025 A 15:25:19 DE TYPE

MAILLAGE_SDASTER

NOMBRE DE NOEUDS 88282

NOMBRE DE MAILLES 288857

TETRA4 288857

NOMBRE DE GROUPES DE MAILLES 1

region1 288857

DeprecationWarning: PY_SSIZE_T_CLEAN will be required for '#' formats

return libaster.call_oper(syntax, 0)

Résultat commande #0010 (CREA_MAILLAGE): MESH_PP ('<0000002f>') de type <Mesh>

Dépend de :

- MESH ('<00000002>') de type <Mesh>

Mémoire (Mo) : 27926.21 / 2044.24 / 27399.45 / 574.68 (VmPeak / VmSize / Optimum / Minimum)

Fin commande #0010 user+syst: 0.95s (syst: 0.05s, elaps: 0.99s)

.. _stg1_txt91

Commande #0011 de fort.1, ligne 91

```
MOD_PP = AFFE_MODELE(AFFE=(_F(MODELISATION='3D',
                              PHENOMENE='MECANIQUE',
                              TOUT='OUI'),
                           _F(GROUP_MA='region1',
                              MODELISATION='3D',
                              PHENOMENE='MECANIQUE')),
```

DISTRIBUTION=_F(METHODE='SOUS_DOMAINE',

PARTITIONNEUR='METIS'),

INFO=1,

MAILLAGE=MESH_PP,

VERI_JACOBIEN='OUI',

VERI_NORM_IFS='OUI')

Sur les 288857 mailles du maillage 0000002f, on a demandé l'affectation de 288857, on a pu en

affecter 288857.

Modélisation Formulation Type maille Élément fini Nombre

3D _ TETRA4 MECA_TETRA4 288857

#2 Calculs elementaires et assemblages CPU (USER+SYST/SYST/ELAPS): 0.09 0.02 0.09

Résultat commande #0011 (AFFE_MODELE): MOD_PP ('<00000030>') de type <Model>

Dépend de :

- MESH_PP ('<0000002f>') de type <Mesh>

Mémoire (Mo) : 27926.21 / 2087.31 / 27399.45 / 574.68 (VmPeak / VmSize / Optimum / Minimum)

Fin commande #0011 user+syst: 0.48s (syst: 0.04s, elaps: 0.52s)

--

.. _stg1_txt108

--

Commande #0012 de fort.1, ligne 108

SIM_PP = EXTR_RESU(ARCHIVAGE=_F(CRITERE='RELATIF',

NOM_CHAM=('ACCE', 'DEPL', 'EPSG_NOEU',

'SIEQ_NOEU', 'SIGM_NOEU', 'VITE'),

PAS_ARCH=1,

PRECISION=1e-06),

INFO=1,

RESTREINT=_F(MODELE=MOD_PP),

RESULTAT=SIM)

STRUCTURE DU CONCEPT 00000031 CALCULE POUR 68 NUMEROS D'ORDRE

LISTE DES NOMS SYMBOLIQUES:

! ---------- !----------------!----------------!----------------!----------------!----------------!----------------!----------------!

! NUME_ORDRE ! DEPL ! VITE ! ACCE ! SIGM_NOEU ! SIEQ_NOEU ! EPSG_NOEU ! COMPORTEMENT !

! ---------- !----------------!----------------!----------------!----------------!----------------!----------------!----------------!

! 0 ! DEPL_R ! DEPL_R ! DEPL_R ! SIEF_R ! SIEF_R ! EPSI_R ! COMPOR !

! ... ! ... ! ... ! ... ! ... ! ... ! ... ! ... !

! 67 ! DEPL_R ! DEPL_R ! DEPL_R ! SIEF_R ! SIEF_R ! EPSI_R ! COMPOR !

! ---------- !----------------!----------------!----------------!----------------!----------------!----------------!----------------!

LISTE DES NOMS DE VARIABLES D'ACCES:

INST DE TYPE R

LISTE DES NOMS DE PARAMETRES:

! ---------- !----------------!----------------!----------------!----------------!----------------!----------------!----------------!----------------!

! NUME_ORDRE ! CARAELEM ! CHAMPMAT ! MODELE !

EXCIT ! ETA_PILOTAGE ! ITER_GLOB ! CHAR_MINI ! TRAN_GENE_NOLI ! INST_PREC !

! ---------- !----------------!----------------!----------------!----------------!----------------!----------------!----------------!

! 0 ! K8 ! K8 ! K8 ! K24 ! R ! I ! R ! K24 ! R !

! ... ! ... ! ... ! ... ! ... ! ... ! ... ! ... ! ... ! ... !

! 67 ! K8 ! K8 ! K8 ! K24 ! R ! I ! R ! K24 ! R !

! ---------- !----------------!----------------!----------------!----------------!----------------!----------------!----------------!

Résultat commande #0012 (EXTR_RESU): SIM_PP ('<00000031>') de type <NonLinearResult>

Dépend de :

- MOD_PP ('<00000030>') de type <Model>

Mémoire (Mo) : 27926.21 / 5333.34 / 27399.45 / 574.68 (VmPeak / VmSize / Optimum / Minimum)

Fin commande #0012 user+syst: 137.52s (syst: 33.44s, elaps: 170.98s)

--

.. _stg1_txt120

--

Commande #0013 de fort.1, ligne 120

DETRUIRE(INFO=1,

NOM=(MESH, MODEL, SIM))

Suppression de la référence : 'MESH'

Suppression de la référence : 'MODEL'

Suppression de la référence : 'SIM'

Mémoire (Mo) : 27926.21 / 5333.34 / 27399.45 / 574.68 (VmPeak / VmSize / Optimum / Minimum)

Fin commande #0013 user+syst: 0.03s (syst: 0.00s, elaps: 0.04s)

.. _stg1_txt126

Commande #0014 de fort.1, ligne 126

```
IMPR_RESU(FORMAT='MED',
          INFO=1,
          RESU=(_F(IMPR_NOM_VARI='OUI',
                   INFO_MAILLAGE='NON',
                   NOM_CHAM='DEPL',
                   NOM_CHAM_MED='displacement',
                   NOM_CMP=('DX', 'DY', 'DZ'),
                   RESULTAT=SIM_PP),
                _F(IMPR_NOM_VARI='OUI',
                   INFO_MAILLAGE='NON',
                   NOM_CHAM='SIGM_NOEU',
                   NOM_CHAM_MED='cauchy stress',
                   NOM_CMP=('SIXX', 'SIYY', 'SIZZ', 'SIXY', 'SIXZ', 'SIYZ'),
                   RESULTAT=SIM_PP),
```

```
                _F(IMPR_NOM_VARI='OUI',
                    INFO_MAILLAGE='NON',
                    NOM_CHAM='SIEQ_NOEU',
                    NOM_CHAM_MED='von Mises stress',
                    NOM_CMP='VMIS',
                    RESULTAT=SIM_PP),
                _F(IMPR_NOM_VARI='OUI',
                    INFO_MAILLAGE='NON',
                    NOM_CHAM='EPSG_NOEU',
                    NOM_CHAM_MED='total nonlinear strain',
                    NOM_CMP=('EPXX', 'EPYY', 'EPZZ', 'EPXY', 'EPXZ', 'EPYZ'),
                    RESULTAT=SIM_PP),
                _F(IMPR_NOM_VARI='OUI',
                    INFO_MAILLAGE='NON',
                    NOM_CHAM='VITE',
                    NOM_CHAM_MED='velocity',
                    NOM_CMP=('DX', 'DY', 'DZ'),
                    RESULTAT=SIM_PP),
                _F(IMPR_NOM_VARI='OUI',
                    INFO_MAILLAGE='NON',
                    NOM_CHAM='ACCE',
                    NOM_CHAM_MED='acceleration',
                    NOM_CMP=('DX', 'DY', 'DZ'),
                    RESULTAT=SIM_PP)),
            UNITE=80,
            VERSION_MED='3.3.1')
```

Création du fichier au format MED 3.3.1.

Mémoire (Mo) : 27926.21 / 5335.00 / 27399.45 / 574.68 (VmPeak / VmSize / Optimum / Minimum)

Fin commande #0014 user+syst: 4.89s (syst: 2.52s, elaps: 7.40s)

.. _stg1_txt171

Commande #0015 de fort.1, ligne 171

FIN(INFO_RESU='NON',

PROC0='OUI',

RETASSAGE='NON')

Saving objects...

pi <class 'float'>

e <class 'float'>

tau <class 'float'>

inf <class 'float'>

nan <class 'float'>

MAT_0 <class 'libaster.Material'>

MATS <class 'libaster.MaterialField'>

F_4 <class 'libaster.FieldOnNodesReal'>

F_0 <class 'libaster.Formula'>

F_1 <class 'libaster.Formula'>

F_2 <class 'libaster.Formula'>

F_3 <class 'libaster.FieldOnNodesReal'>

INIT_D <class 'libaster.FieldOnNodesReal'>

F_9 <class 'libaster.FieldOnNodesReal'>

F_5 <class 'libaster.Formula'>

F_6 <class 'libaster.Formula'>

F_7 <class 'libaster.Formula'>

F_8 <class 'libaster.FieldOnNodesReal'>

INIT_U <class 'libaster.FieldOnNodesReal'>

F_14 <class 'libaster.FieldOnNodesReal'>

F_10 <class 'libaster.Formula'>

F_11 <class 'libaster.Formula'>

F_12 <class 'libaster.Formula'>

F_13 <class 'libaster.FieldOnNodesReal'>

INIT_A <class 'libaster.FieldOnNodesReal'>

F_22 <class 'libaster.FieldOnNodesReal'>

F_23 <class 'libaster.FieldOnCellsReal'>

F_15 <class 'libaster.Formula'>

F_16 <class 'libaster.Formula'>

F_17 <class 'libaster.Formula'>

F_18 <class 'libaster.Formula'>

F_19 <class 'libaster.Formula'>

F_20 <class 'libaster.Formula'>

F_21 <class 'libaster.FieldOnCellsReal'>

F_24 <class 'libaster.FieldOnCellsReal'>

INIT_S <class 'libaster.FieldOnCellsReal'>

F_25 <class 'libaster.Formula'>

F_26 <class 'libaster.Formula'>

F_27 <class 'libaster.Formula'>

F_28 <class 'libaster.Formula'>

BC_0 <class 'libaster.MechanicalDirichletBC'>

BC_1 <class 'libaster.MechanicalDirichletBC'>

BC_2 <class 'libaster.MechanicalLoadFunction'>

BC_3 <class 'libaster.MechanicalLoadFunction'>

TIMELIST <class 'libaster.ListOfFloats'>

INSTLIST <class 'libaster.TimeStepper'>

TAB_ENER <class 'libaster.Table'>

MESH_PP <class 'libaster.Mesh'>

MOD_PP <class 'libaster.Model'>

SIM_PP <class 'libaster.NonLinearResult'>

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 ‖ <I> <CATAMESS_89>
‖

 ‖
‖

 ‖ List of warnings emitted during the execution of computation.
‖

 ‖
‖

 ‖ Warnings which you chose to ignore of are preceded by (*).
‖

 ‖ Number of occurrences for each warning:
‖

 ‖ no warning
‖

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Concepts de la base: G

Nom	Type	Taille (Mo)	Nombre d'objets	Nombre de segments
TOTAL		7130.12	5719	6589
00000001	MATER_SDASTER	0.00	9	9
00000002	MAILLAGE_SDASTER	41.90	38	89
00000003	MODELE_SDASTER	18.78	9	14
00000004	CHAM_MATER	2.20	9	14
00000005	CHAM_NO_SDASTER	2.02	5	5
00000006	FORMULE	0.00	4	4
00000007	FORMULE	0.00	4	4
00000008	FORMULE	0.00	4	4
00000009	CHAM_NO_SDASTER	10.10	10	12
0000000a	CHAM_NO_SDASTER	10.10	10	12
0000000b	CHAM_NO_SDASTER	2.02	5	5
0000000c	FORMULE	0.00	4	

4

0000000d FORMULE 0.00 4
4

0000000e FORMULE 0.00 4
4

0000000f CHAM_NO_SDASTER 10.10 10
12

00000010 CHAM_NO_SDASTER 10.10 10
12

00000011 CHAM_NO_SDASTER 2.02 5
5

00000012 FORMULE 0.00 4
4

00000013 FORMULE 0.00 4
4

00000014 FORMULE 0.00 4
4

00000015 CHAM_NO_SDASTER 10.10 10
12

00000016 CHAM_NO_SDASTER 10.10 10
12

00000017 CHAM_NO_SDASTER 2.02 5
5

00000018 CHAM_ELEM 30.28 5
5

00000019 FORMULE 0.00 4
4

0000001a FORMULE 0.00 4
4

0000001b FORMULE 0.00 4
4

0000001c	FORMULE	0.00	4	4
0000001d	FORMULE	0.00	4	4
0000001e	FORMULE	0.00	4	4
0000001f	CHAM_ELEM	182.26	5	5
00000020	CHAM_ELEM	182.26	5	5
00000021	CHAM_ELEM	22.06	5	5
00000022	FORMULE	0.00	4	4
00000023	FORMULE	0.00	4	4
00000024	FORMULE	0.00	4	4
00000025	FORMULE	0.00	4	4
00000026	CHAR_CINE_MECA	6.85	4	4
00000027	CHAR_CINE_MECA	6.85	4	4
00000028	CHAR_MECA	3.35	32	37
00000029	CHAR_MECA	1.14	32	37
0000002a	LISTR8_SDASTER	0.00	6	6
0000002b	LIST_INST	0.00	9	9

0000002c	EVOL_NOLI	4506.16	3209	3564
0000002e	TABLE_SDASTER	0.01	19	19
0000002f	MAILLAGE_SDASTER	32.18	38	52
00000030	MODELE_SDASTER	14.21	9	14
00000031	EVOL_NOLI	1980.91	2071	2423
&FOZERO		0.00	2	2
&&_NUM_C		0.00	1	1
&CATA.AC		0.00	2	4
&CATA.CL		0.62	1	3
&CATA.GD		0.19	4	11
&CATA.ME		0.22	2	4
&CATA.OP		0.32	4	19
&CATA.PH		0.00	1	1
&CATA.PR		0.00	2	4
&CATA.TE		28.61	17	42
&CATA.TH		0.01	2	4

&CATA.TM 0.01 7
11

Nom de la base : GLOBALE

Nombre d'enregistrements utilisés : 9929

Nombre d'enregistrements maximum : 2684354

Nombre d'enregistrements par fichier : 15728

Longueur d'enregistrement (octets) : 819200

Nombre total d'accès en lecture : 8220

Volume des accès en lecture : 6421.88 Mo.

Nombre total d'accès en écriture : 5017

Volume des accès en écriture : 3919.53 Mo.

Nombre d'identificateurs utilisés : 6595

Taille maximum du répertoire : 8000

Pourcentage d'utilisation du répertoire : 82 %

Nom de la base : VOLATILE

Nombre d'enregistrements utilisés : 107

Nombre d'enregistrements maximum : 2684354

Nombre d'enregistrements par fichier : 15728

Longueur d'enregistrement (octets) : 819200

Nombre total d'accès en lecture : 0

Volume des accès en lecture : 0.00 Mo.

Nombre total d'accès en écriture : 291

Volume des accès en écriture : 227.34 Mo.

Nombre d'identificateurs utilisés : 1716

Taille maximum du répertoire : 2000

Pourcentage d'utilisation du répertoire : 85 %

<I> <FIN> ARRET NORMAL DANS "FIN" PAR APPEL A "JEFINI".

<I> <FIN> MEMOIRE JEVEUX MINIMALE REQUISE POUR L'EXECUTION : 574.68 Mo

<I> <FIN> MEMOIRE JEVEUX OPTIMALE REQUISE POUR L'EXECUTION : 27399.45 Mo

<I> <FIN> MAXIMUM DE MEMOIRE UTILISEE PAR LE PROCESSUS LORS DE L'EXECUTION : 27926.21 Mo

<I> FERMETURE DES BASES EFFECTUEE

STATISTIQUES CONCERNANT L'ALLOCATION DYNAMIQUE :

TAILLE CUMULEE MAXIMUM : 27399 Mo.

TAILLE CUMULEE LIBEREE : 29632 Mo.

NOMBRE TOTAL D'ALLOCATIONS : 9379678

NOMBRE TOTAL DE LIBERATIONS : 9379678

APPELS AU MECANISME DE LIBERATION : 1

TAILLE MEMOIRE CUMULEE RECUPEREE : 4575 Mo.

VOLUME DES LECTURES : 2 Mo.

VOLUME DES ECRITURES : 1517 Mo.

MEMOIRE JEVEUX MINIMALE REQUISE POUR L'EXECUTION : 574.68 Mo

- IMPOSE DE NOMBREUX ACCES DISQUE

- RALENTIT LA VITESSE D'EXECUTION

MEMOIRE JEVEUX OPTIMALE REQUISE POUR L'EXECUTION : 27399.45 Mo

- LIMITE LES ACCES DISQUE

- AMELIORE LA VITESSE D'EXECUTION

MAXIMUM DE MEMOIRE UTILISEE PAR LE PROCESSUS : 27926.21 Mo

- COMPREND LA MEMOIRE CONSOMMEE PAR JEVEUX,

LE SUPERVISEUR PYTHON, LES LIBRAIRIES EXTERNES

<I> FIN D'EXECUTION LE : SA-18-JANV-2025 15:28:20

DeprecationWarning: PY_SSIZE_T_CLEAN will be required for '#' formats

libaster.jeveux_finalize(options)

Signature of pickled file :
112705f198562bf1f791925091850811848997912ccb18c93f5a10a646b50c98

Signature of info file :
2430df9d0b8b6d14052313012f791712f1f9d6516d988d3e0a59f744e2e260b5

Signature of Jeveux database:
926b2d9c263a37adcad0411461e3a87ae56c01f4596f2e9d5db1e0821806df66

****

* COMMAND : USER : SYSTEM : USER+SYS : ELAPSED *

****

* POURSUITE : 0.06 : 1.79 : 1.85 : 1.85 *

* MODI_MODELE : 0.00 : 0.00 : 0.00 : 0.00 *

* GET_ENERGIE : 0.01 : 0.01 : 0.02 : 0.02 *

* DEFI_FICHIER : 0.00 : 0.00 : 0.00 : 0.00 *

* IMPR_TABLE : 0.00 : 0.00 : 0.00 : 0.01 *

* DEFI_FICHIER : 0.00 : 0.00 : 0.00 : 0.00 *

* CALC_CHAMP : 325.94 : 69.39 : 395.33 : 395.39 *

* CREA_MAILLAGE : 0.95 : 0.05 : 1.00 : 0.99 *

* AFFE_MODELE : 0.48 : 0.04 : 0.52 : 0.52 *

* EXTR_RESU : 137.52 : 33.44 : 170.96 : 170.98 *

* DETRUIRE : 0.03 : 0.00 : 0.03 : 0.04 *

* IMPR_RESU : 4.89 : 2.52 : 7.41 : 7.40 *

```
 * FIN                              :          0.33 :          1.83 :          2.16 :          2.18 *
 *    . check syntax                :          0.01 :          0.00 :          0.01 :          0.00 *
 *    . fortran                     :        470.11 :        107.07 :        577.18 :        577.30 *
 ********************************************************************************
 * TOTAL_JOB                       :        470.23 :        109.56 :        579.79 :        579.88
*
 ********************************************************************************
# Mémoire (Mo) : 27926.21 /      525.67 / 27399.45 /      574.68 (VmPeak / VmSize /
Optimum / Minimum)
# Fin commande #0015      user+syst:              0.33s (syst:              1.83s, elaps:
2.18s)
# --------------------------------------------------------------------------------
--------------------
End of the Code_Aster execution
Code_Aster MPI exits normally
Exited
EXECUTION_CODE_ASTER_EXIT_12=0
```