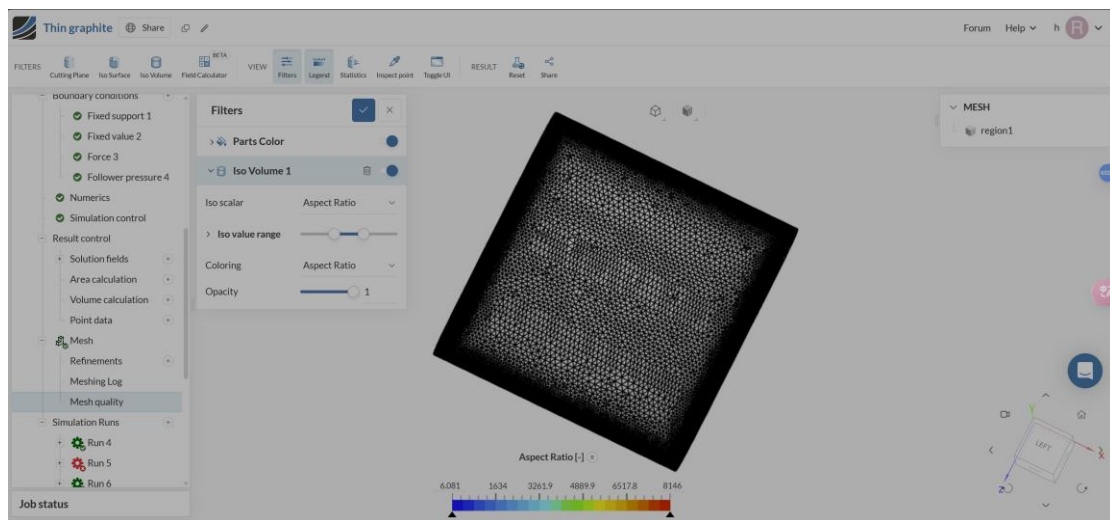


Solver solution field (above)



Mesh quality (above)

## Grid logs

SimScale incorporates Simulation Modeling Suite(TM) software by Simmetrix Inc. © 1997-2025. All Rights Reserved.

```
*****
*****
```

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.

Solver logs

INSTANT	ITERATION	RELATIF	ABSOLU
NB. ITER	COEFFICIENT	ASSEMBLAGE	TEMPS CALCUL
		RESI_GLOB_RELA	RESI_GLOB_MAXI
RHO		VALEUR	
-----			
4.65000E-01	0	6.22805E-18	5.74813E-22
	TANGENTE		

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| BILAN D'ENERGIE | TRAV_EXT | ENER_TOT | ENER_CIN | TRAV_AMOR
| DISS_SCH |
| PAS COURANT | 0.0000E+00 | -3.8529E-31 | -3.1562E-19 | 0.0000E+00 |
3.1562E-19 |
| TOTAL | 2.9387E-07 | 4.0994E-21 | -1.5263E-10 | 0.0000E+00 |
2.9403E-07 |
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Criterion (S) of convergence reached (S)

The residue of the type RESI\_GLOB\_RELA is worth 6.228049060458e-18 with the node and degree of

freedom N78505 DY

The residue of the type RESI\_GLOB\_MAXI is worth 5.748133814387e-22 with the node and degree of

freedom N78505 DY

Temps CPU consommé dans ce pas de temps : 23.504 s

\* Nombre d'itérations de Newton : 1

\* Temps total intégration comportement : 10.310 s (3 intégrations)

\* Temps total factorisation matrice : 3.338 s (1 factorisations)

\* Temps construction second membre : 5.292 s

\* Temps total résolution K.U=F : 0.140 s (1 résolutions)

\* Temps assemblage matrice : 0.988 s

\* Nombre d'itérations de recherche linéaire : 3

\* Temps autres opérations : 3.436 s

Mémoire (Mo) : 5871.63 / 5070.32 / 5342.91 / 1196.69 (VmPeak / VmSize /

Optimum / Minimum)

Filing of the fields

Field stored DEPL at time 4.650000000000e-01 for the sequence number 93

Field stored SIEF\_ELGA at time 4.650000000000e-01 for the sequence number 93

Field stored VARI\_ELGA at time 4.650000000000e-01 for the sequence number 93

Field stored COMPORTEMENT at time 4.650000000000e-01 for the sequence number 93

Field stored VITE at time 4.650000000000e-01 for the sequence number 93

Field stored ACCE at time 4.650000000000e-01 for the sequence number 93

Field stored FORC\_AMOR at time 4.650000000000e-01 for the sequence number 93

Field stored FORC\_LIAI at time 4.650000000000e-01 for the sequence number 93

Adaptation of the time step.

For the method of adaptation of the type FIXE, the computed time step is worth 1.000000000000e-02.

On all the criteria of adaptation, the smallest time step is worth 1.000000000000e-02.

After best fit on the compulsory points of transition, the smallest time step is worth 5.000000000000e-03.

[ 58%] Instant calculé : 4.65000e-01, dernier instant archivé : 4.65000e-01, au numéro d'ordre :

93

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Time of computation: 4.700000000000e-01

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	INCREMENT		NEWTON		RESIDU		RESIDU	
RECH.	LINE.		RECH.	LINE.		OPTION		NEWTON

INSTANT	ITERATION	RELATIF	ABSOLU	
NB. ITER	COEFFICIENT	ASSEMBLAGE	TEMPS CALCUL	
		RESI_GLOB_RELA	RESI_GLOB_MAXI	
RHO		VALEUR		
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4.70000E-01	0	9.54984E-18	8.81396E-22	
	TANGENTE			
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BILAN D'ENERGIE	TRAV_EXT	ENER_TOT	ENER_CIN	TRAV_AMOR
DISS_SCH				
PAS COURANT	0.0000E+00	-2.6374E-31	-2.1579E-19	0.0000E+00
				2.1579E-19
TOTAL	2.9387E-07	4.0994E-21	-1.5263E-10	0.0000E+00
				2.9403E-07
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Criterion (S) of convergence reached (S)

The residue of the type RESI\_GLOB\_RELA is worth 9.549839478799e-18 with the node and degree of

freedom N82016 DX

The residue of the type RESI\_GLOB\_MAXI is worth 8.813956777986e-22 with the node and degree of

freedom N82016 DX

Temps CPU consommé dans ce pas de temps : 23.529 s

\* Nombre d'itérations de Newton : 1

\* Temps total intégration comportement : 10.277 s (3 intégrations)

\* Temps total factorisation matrice : 3.345 s (1 factorisations)  
 \* Temps construction second membre : 5.337 s  
 \* Temps total résolution K.U=F : 0.140 s (1 résolutions)  
 \* Temps assemblage matrice : 0.988 s  
 \* Nombre d'itérations de recherche linéaire : 3  
 \* Temps autres opérations : 3.442 s

Mémoire (Mo) : 5871.63 / 5115.75 / 5342.91 / 1196.69 (VmPeak / VmSize / Optimum / Minimum)

Filing of the fields

Field stored DEPL at time 4.700000000000e-01 for the sequence number 94  
 Field stored SIEF\_ELGA at time 4.700000000000e-01 for the sequence number 94  
 Field stored VARI\_ELGA at time 4.700000000000e-01 for the sequence number 94  
 Field stored COMPORTEMENT at time 4.700000000000e-01 for the sequence number 94  
 Field stored VITE at time 4.700000000000e-01 for the sequence number 94  
 Field stored ACCE at time 4.700000000000e-01 for the sequence number 94  
 Field stored FORC\_AMOR at time 4.700000000000e-01 for the sequence number 94  
 Field stored FORC\_LIAI at time 4.700000000000e-01 for the sequence number 94

Adaptation of the time step.

For the method of adaptation of the type FIXE, the computed time step is worth 1.000000000000e-02.

On all the criteria of adaptation, the smallest time step is worth 1.000000000000e-02.

After best fit on the compulsory points of transition, the smallest time step is worth 5.000000000000e-03.

[ 58%] Instant calculé : 4.70000e-01, dernier instant archivé : 4.70000e-01, au numéro d'ordre :

Time of computation: 4.750000000000e-01

INCREMENT	NEWTON	RESIDU	RESIDU
RECH. LINE.	RECH. LINE.	OPTION	NEWTON
INSTANT	ITERATION	RELATIF	ABSOLU
NB. ITER	COEFFICIENT	ASSEMBLAGE	TEMPS CALCUL
		RESI_GLOB_RELA	RESI_GLOB_MAXI
RHO		VALEUR	

4.75000E-01	0	7.51879E-18	6.93941E-22
	TANGENTE		

BILAN D'ENERGIE	TRAV_EXT	ENER_TOT	ENER_CIN	TRAV_AMOR
DISS_SCH				
PAS COURANT	0.0000E+00	-1.8049E-31	-1.4750E-19	0.0000E+00
TOTAL	2.9387E-07	4.0994E-21	-1.5263E-10	0.0000E+00

Criterion (S) of convergence reached (S)

The residue of the type RESI\_GLOB\_RELA is worth 7.518785860637e-18 with the node and degree of



freedom N82043 DZ

The residue of the type RESI\_GLOB\_MAXI is worth 6.939410211628e-22 with the node and degree of

freedom N82043 DZ

Temps CPU consommé dans ce pas de temps : 23.417 s

\* Nombre d'itérations de Newton : 1

\* Temps total intégration comportement : 10.243 s (3 intégrations)

\* Temps total factorisation matrice : 3.325 s (1 factorisations)

\* Temps construction second membre : 5.292 s

\* Temps total résolution K.U=F : 0.140 s (1 résolutions)

\* Temps assemblage matrice : 0.985 s

\* Nombre d'itérations de recherche linéaire : 3

\* Temps autres opérations : 3.432 s

Mémoire (Mo) : 5871.63 / 5161.18 / 5342.91 / 1196.69 (VmPeak / VmSize / Optimum / Minimum)

Filing of the fields

Field stored DEPL at time 4.750000000000e-01 for the sequence number 95

Field stored SIEF\_ELGA at time 4.750000000000e-01 for the sequence number 95

Field stored VARI\_ELGA at time 4.750000000000e-01 for the sequence number 95

Field stored COMPORTEMENT at time 4.750000000000e-01 for the sequence number 95

Field stored VITE at time 4.750000000000e-01 for the sequence number 95

Field stored ACCE at time 4.750000000000e-01 for the sequence number 95

Field stored FORC\_AMOR at time 4.750000000000e-01 for the sequence number 95

Field stored FORC\_LIAI at time 4.750000000000e-01 for the sequence number 95

Adaptation of the time step.

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

1.000000000000e-02.

On all the criteria of adaptation, the smallest time step is worth 1.000000000000e-02.

After best fit on the compulsory points of transition, the smallest time step is worth 5.000000000000e-03.

[ 59%] Instant calculé : 4.75000e-01, dernier instant archivé : 4.75000e-01, au numéro d'ordre :

95

Time of computation: 4.800000000000e-01

INCREMENT	NEWTON	RESIDU	RESIDU
RECH. LINE.	RECH. LINE.	OPTION	NEWTON
INSTANT	ITERATION	RELATIF	ABSOLU
NB. ITER	COEFFICIENT	ASSEMBLAGE	TEMPS CALCUL
		RESI_GLOB_RELA	RESI_GLOB_MAXI
RHO		VALEUR	

4.80000E-01	0	7.56424E-18	6.98136E-22
	TANGENTE		

BILAN D'ENERGIE	TRAV_EXT	ENER_TOT	ENER_CIN	TRAV_AMOR
DISS_SCH				

PAS COURANT	0.0000E+00	-1.2349E-31	-1.0080E-19	0.0000E+00
				1.0080E-19

| TOTAL | 2.9387E-07 | 4.0994E-21 | -1.5263E-10 | 0.0000E+00 |  
2.9403E-07 |

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Criterion (S) of convergence reached (S)

The residue of the type RESI\_GLOB\_RELAX is worth 7.564241281315e-18 with the  
node and degree of

freedom N85043 DZ

The residue of the type RESI\_GLOB\_MAXI is worth 6.981362970527e-22 with the  
node and degree of

freedom N85043 DZ

Temps CPU consommé dans ce pas de temps : 23.431 s

\* Nombre d'itérations de Newton : 1

\* Temps total intégration comportement : 10.225 s (3 intégrations)

\* Temps total factorisation matrice : 3.343 s (1 factorisations)

\* Temps construction second membre : 5.305 s

\* Temps total résolution K.U=F : 0.140 s (1 résolutions)

\* Temps assemblage matrice : 0.988 s

\* Nombre d'itérations de recherche linéaire : 3

\* Temps autres opérations : 3.431 s

Mémoire (Mo) : 5871.63 / 5206.61 / 5342.91 / 1196.69 (VmPeak / VmSize /  
Optimum / Minimum)

Filing of the fields

Field stored DEPL at time 4.800000000000e-01 for the sequence number 96

Field stored SIEF\_ELGA at time 4.800000000000e-01 for the sequence number 96

Field stored VARI\_ELGA at time 4.800000000000e-01 for the sequence number 96

Field stored COMPORTEMENT at time 4.800000000000e-01 for the sequence  
number 96

Field stored VITE at time 4.800000000000e-01 for the sequence number 96

Field stored ACCE at time 4.800000000000e-01 for the sequence number 96

Field stored FORC\_AMOR at time 4.800000000000e-01 for the sequence number 96

Field stored FORC\_LIAI at time 4.800000000000e-01 for the sequence number 96

Adaptation of the time step.

For the method of adaptation of the type FIXE, the computed time step is worth 1.000000000000e-02.

On all the criteria of adaptation, the smallest time step is worth 1.000000000000e-02.

After best fit on the compulsory points of transition, the smallest time step is worth 5.000000000000e-03.

[ 60%] Instant calculé : 4.80000e-01, dernier instant archivé : 4.80000e-01, au numéro d'ordre :

96

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Time of computation: 4.850000000000e-01

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	INCREMENT		NEWTON		RESIDU		RESIDU	
RECH.	LINE.		RECH.	LINE.		OPTION		NEWTON
	INSTANT		ITERATION		RELATIF		ABSOLU	
NB. ITER		COEFFICIENT		ASSEMBLAGE		TEMPS CALCUL		
					RESI_GLOB_RELA		RESI_GLOB_MAXI	
	RHO				VALEUR			

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	4.85000E-01		0		7.88901E-18		7.28110E-22	
			TANGENTE					

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| BILAN D'ENERGIE | TRAV_EXT | ENER_TOT | ENER_CIN | TRAV_AMOR
| DISS_SCH |
| PAS COURANT | 0.0000E+00 | -8.4468E-32 | -6.8872E-20 | 0.0000E+00 |
6.8872E-20 |
| TOTAL | 2.9387E-07 | 4.0994E-21 | -1.5263E-10 | 0.0000E+00 |
2.9403E-07 |
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Criterion (S) of convergence reached (S)

The residue of the type RESI\_GLOB\_RELA is worth 7.889006630247e-18 with the node and degree of

freedom N81897 DX

The residue of the type RESI\_GLOB\_MAXI is worth 7.281102851478e-22 with the node and degree of

freedom N81897 DX

Temps CPU consommé dans ce pas de temps : 23.391 s

\* Nombre d'itérations de Newton : 1

\* Temps total intégration comportement : 10.198 s (3 intégrations)

\* Temps total factorisation matrice : 3.332 s (1 factorisations)

\* Temps construction second membre : 5.298 s

\* Temps total résolution K.U=F : 0.138 s (1 résolutions)

\* Temps assemblage matrice : 0.988 s

\* Nombre d'itérations de recherche linéaire : 3

\* Temps autres opérations : 3.437 s

Mémoire (Mo) : 5871.63 / 5252.04 / 5342.91 / 1196.69 (VmPeak / VmSize /

Optimum / Minimum)

Filing of the fields

Field stored DEPL at time 4.850000000000e-01 for the sequence number 97

Field stored SIEF\_ELGA at time 4.850000000000e-01 for the sequence number 97

Field stored VARI\_ELGA at time 4.850000000000e-01 for the sequence number 97

Field stored COMPORTEMENT at time 4.850000000000e-01 for the sequence number 97

Field stored VITE at time 4.850000000000e-01 for the sequence number 97

Field stored ACCE at time 4.850000000000e-01 for the sequence number 97

Field stored FORC\_AMOR at time 4.850000000000e-01 for the sequence number 97

Field stored FORC\_LIAI at time 4.850000000000e-01 for the sequence number 97

Adaptation of the time step.

For the method of adaptation of the type FIXE, the computed time step is worth 1.000000000000e-02.

On all the criteria of adaptation, the smallest time step is worth 1.000000000000e-02.

After best fit on the compulsory points of transition, the smallest time step is worth 5.000000000000e-03.

[ 60%] Instant calculé : 4.85000e-01, dernier instant archivé : 4.85000e-01, au numéro d'ordre :

97

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Time of computation: 4.900000000000e-01

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	INCREMENT		NEWTON		RESIDU		RESIDU	
RECH.	LINE.		RECH.	LINE.		OPTION		NEWTON

INSTANT	ITERATION	RELATIF	ABSOLU	
NB. ITER	COEFFICIENT	ASSEMBLAGE	TEMPS CALCUL	
		RESI_GLOB_RELA	RESI_GLOB_MAXI	
RHO		VALEUR		
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4.90000E-01	0	7.02335E-18	6.48215E-22	
	TANGENTE			
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BILAN D'ENERGIE	TRAV_EXT	ENER_TOT	ENER_CIN	TRAV_AMOR
DISS_SCH				
PAS COURANT	0.0000E+00	-5.7764E-32	-4.7047E-20	0.0000E+00
				4.7047E-20
TOTAL	2.9387E-07	4.0994E-21	-1.5263E-10	0.0000E+00
				2.9403E-07
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Criterion (S) of convergence reached (S)

The residue of the type RESI\_GLOB\_RELA is worth 7.023353721387e-18 with the node and degree of

freedom N85441 DZ

The residue of the type RESI\_GLOB\_MAXI is worth 6.482154624090e-22 with the node and degree of

freedom N85441 DZ

Temps CPU consommé dans ce pas de temps : 23.405 s

\* Nombre d'itérations de Newton : 1

\* Temps total intégration comportement : 10.204 s (3 intégrations)

\* Temps total factorisation matrice : 3.335 s (1 factorisations)  
 \* Temps construction second membre : 5.299 s  
 \* Temps total résolution K.U=F : 0.140 s (1 résolutions)  
 \* Temps assemblage matrice : 0.990 s  
 \* Nombre d'itérations de recherche linéaire : 3  
 \* Temps autres opérations : 3.437 s

Mémoire (Mo) : 5871.63 / 5297.47 / 5342.91 / 1196.69 (VmPeak / VmSize / Optimum / Minimum)

Filing of the fields

Field stored DEPL at time 4.900000000000e-01 for the sequence number 98  
 Field stored SIEF\_ELGA at time 4.900000000000e-01 for the sequence number 98  
 Field stored VARI\_ELGA at time 4.900000000000e-01 for the sequence number 98  
 Field stored COMPORTEMENT at time 4.900000000000e-01 for the sequence number 98  
 Field stored VITE at time 4.900000000000e-01 for the sequence number 98  
 Field stored ACCE at time 4.900000000000e-01 for the sequence number 98  
 Field stored FORC\_AMOR at time 4.900000000000e-01 for the sequence number 98  
 Field stored FORC\_LIAI at time 4.900000000000e-01 for the sequence number 98

Adaptation of the time step.

For the method of adaptation of the type FIXE, the computed time step is worth 1.000000000000e-02.

On all the criteria of adaptation, the smallest time step is worth 1.000000000000e-02.

After best fit on the compulsory points of transition, the smallest time step is worth 5.000000000000e-03.

[ 61%] Instant calculé : 4.90000e-01, dernier instant archivé : 4.90000e-01, au numéro d'ordre :



Time of computation: 4.950000000000e-01

INCREMENT	NEWTON	RESIDU	RESIDU
RECH. LINE.	RECH. LINE.	OPTION	NEWTON
INSTANT	ITERATION	RELATIF	ABSOLU
NB. ITER	COEFFICIENT	ASSEMBLAGE	TEMPS CALCUL
		RESI_GLOB_RELA	RESI_GLOB_MAXI
RHO		VALEUR	

4.95000E-01	0	7.78817E-18	7.18803E-22
	TANGENTE		

BILAN D'ENERGIE	TRAV_EXT	ENER_TOT	ENER_CIN	TRAV_AMOR
DISS_SCH				
PAS COURANT	0.0000E+00	-3.9494E-32	-3.2132E-20	0.0000E+00
TOTAL	2.9387E-07	4.0994E-21	-1.5263E-10	0.0000E+00

Criterion (S) of convergence reached (S)

The residue of the type RESI\_GLOB\_RELA is worth 7.788167321993e-18 with the node and degree of

freedom N81701 DY

The residue of the type RESI\_GLOB\_MAXI is worth 7.188033925405e-22 with the node and degree of

freedom N81701 DY

Temps CPU consommé dans ce pas de temps : 23.430 s

\* Nombre d'itérations de Newton : 1

\* Temps total intégration comportement : 10.245 s (3 intégrations)

\* Temps total factorisation matrice : 3.333 s (1 factorisations)

\* Temps construction second membre : 5.291 s

\* Temps total résolution K.U=F : 0.138 s (1 résolutions)

\* Temps assemblage matrice : 0.985 s

\* Nombre d'itérations de recherche linéaire : 3

\* Temps autres opérations : 3.438 s

Mémoire (Mo) : 5871.63 / 5342.90 / 5342.91 / 1196.69 (VmPeak / VmSize / Optimum / Minimum)

Filing of the fields

Field stored DEPL at time 4.950000000000e-01 for the sequence number 99

Field stored SIEF\_ELGA at time 4.950000000000e-01 for the sequence number 99

Field stored VARI\_ELGA at time 4.950000000000e-01 for the sequence number 99

Field stored COMPORTEMENT at time 4.950000000000e-01 for the sequence number 99

Field stored VITE at time 4.950000000000e-01 for the sequence number 99

Field stored ACCE at time 4.950000000000e-01 for the sequence number 99

Field stored FORC\_AMOR at time 4.950000000000e-01 for the sequence number 99

Field stored FORC\_LIAI at time 4.950000000000e-01 for the sequence number 99

Adaptation of the time step.

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

1.000000000000e-02.

On all the criteria of adaptation, the smallest time step is worth 1.000000000000e-02.

After best fit on the compulsory points of transition, the smallest time step is worth 5.000000000000e-03.

[ 61%] Instant calculé : 4.95000e-01, dernier instant archivé : 4.95000e-01, au numéro d'ordre :

99

Time of computation: 5.000000000000e-01

INCREMENT	NEWTON	RESIDU	RESIDU
RECH. LINE.	RECH. LINE.	OPTION	NEWTON
INSTANT	ITERATION	RELATIF	ABSOLU
NB. ITER	COEFFICIENT	ASSEMBLAGE	TEMPS CALCUL
		RESI_GLOB_RELA	RESI_GLOB_MAXI
RHO		VALEUR	

5.00000E-01	0	9.69498E-18	8.94791E-22
	TANGENTE		

BILAN D'ENERGIE	TRAV_EXT	ENER_TOT	ENER_CIN	TRAV_AMOR
DISS_SCH				

PAS COURANT	0.0000E+00	-2.6996E-32	-2.1941E-20	0.0000E+00
				2.1941E-20

| TOTAL | 2.9387E-07 | 4.0994E-21 | -1.5263E-10 | 0.0000E+00 |  
2.9403E-07 |

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Criterion (S) of convergence reached (S)

The residue of the type RESI\_GLOB\_RELA is worth 9.694979989265e-18 with the  
node and degree of

freedom N84889 DY

The residue of the type RESI\_GLOB\_MAXI is worth 8.947913185193e-22 with the  
node and degree of

freedom N84889 DY

Temps CPU consommé dans ce pas de temps : 23.482 s

\* Nombre d'itérations de Newton : 1

\* Temps total intégration comportement : 10.288 s (3 intégrations)

\* Temps total factorisation matrice : 3.309 s (1 factorisations)

\* Temps construction second membre : 5.307 s

\* Temps total résolution K.U=F : 0.141 s (1 résolutions)

\* Temps assemblage matrice : 0.987 s

\* Nombre d'itérations de recherche linéaire : 3

\* Temps autres opérations : 3.449 s

Mémoire (Mo) : 5871.63 / 5388.33 / 5342.91 / 1196.69 (VmPeak / VmSize /  
Optimum / Minimum)

Filing of the fields

Field stored DEPL at time 5.000000000000e-01 for the sequence number 100

Field stored SIEF\_ELGA at time 5.000000000000e-01 for the sequence number 100

Field stored VARI\_ELGA at time 5.000000000000e-01 for the sequence number  
100

Field stored COMPORTEMENT at time 5.000000000000e-01 for the sequence  
number 100

Field stored VITE at time 5.000000000000e-01 for the sequence number 100

Field stored ACCE at time 5.000000000000e-01 for the sequence number 100

Field stored FORC\_AMOR at time 5.000000000000e-01 for the sequence number 100

Field stored FORC\_LIAI at time 5.000000000000e-01 for the sequence number 100

Adaptation of the time step.

For the method of adaptation of the type FIXE, the computed time step is worth 1.000000000000e-02.

On all the criteria of adaptation, the smallest time step is worth 1.000000000000e-02.

After best fit on the compulsory points of transition, the smallest time step is worth 5.000000000000e-03.

[ 62%] Instant calculé : 5.00000e-01, dernier instant archivé : 5.00000e-01, au numéro d'ordre :

100

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Time of computation: 5.050000000000e-01

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	INCREMENT		NEWTON		RESIDU		RESIDU	
RECH.	LINE.		RECH.	LINE.		OPTION		NEWTON
	INSTANT		ITERATION		RELATIF		ABSOLU	
NB. ITER		COEFFICIENT		ASSEMBLAGE		TEMPS CALCUL		
					RESI_GLOB_REL		RESI_GLOB_MAXI	
	RHO				VALEUR			

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	5.05000E-01		0		8.34976E-18		7.70635E-22	
			TANGENTE					

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| BILAN D'ENERGIE | TRAV_EXT   | ENER_TOT   | ENER_CIN   | TRAV_AMOR
| DISS_SCH       |
| PAS COURANT    | 0.0000E+00 | -1.8450E-32 | -1.4979E-20 | 0.0000E+00 |
|                | 1.4979E-20 |
| TOTAL          | 2.9387E-07 | 4.0994E-21 | -1.5263E-10 | 0.0000E+00 |
|                | 2.9403E-07 |
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Criterion (S) of convergence reached (S)

The residue of the type RESI\_GLOB\_RELA is worth 8.349761342387e-18 with the node and degree of

freedom N85230 DZ

The residue of the type RESI\_GLOB\_MAXI is worth 7.706353153023e-22 with the node and degree of

freedom N85230 DZ

Temps CPU consommé dans ce pas de temps : 23.562 s

- \* Nombre d'itérations de Newton : 1
- \* Temps total intégration comportement : 10.360 s (3 intégrations)
- \* Temps total factorisation matrice : 3.350 s (1 factorisations)
- \* Temps construction second membre : 5.286 s
- \* Temps total résolution K.U=F : 0.139 s (1 résolutions)
- \* Temps assemblage matrice : 0.985 s
- \* Nombre d'itérations de recherche linéaire : 3
- \* Temps autres opérations : 3.441 s

Mémoire (Mo) : 5871.63 / 5434.16 / 5342.91 / 1196.69 (VmPeak / VmSize /

Optimum / Minimum)

Filing of the fields

Field stored DEPL at time 5.050000000000e-01 for the sequence number 101

Field stored SIEF\_ELGA at time 5.050000000000e-01 for the sequence number 101

Field stored VARI\_ELGA at time 5.050000000000e-01 for the sequence number 101

Field stored COMPORTEMENT at time 5.050000000000e-01 for the sequence number 101

Field stored VITE at time 5.050000000000e-01 for the sequence number 101

Field stored ACCE at time 5.050000000000e-01 for the sequence number 101

Field stored FORC\_AMOR at time 5.050000000000e-01 for the sequence number 101

Field stored FORC\_LIAI at time 5.050000000000e-01 for the sequence number 101

Adaptation of the time step.

For the method of adaptation of the type FIXE, the computed time step is worth 1.000000000000e-02.

On all the criteria of adaptation, the smallest time step is worth 1.000000000000e-02.

After best fit on the compulsory points of transition, the smallest time step is worth 5.000000000000e-03.

[ 63%] Instant calculé : 5.05000e-01, dernier instant archivé : 5.05000e-01, au numéro d'ordre :

101

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Time of computation: 5.100000000000e-01

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	INCREMENT		NEWTON		RESIDU		RESIDU	
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RECH. LINE.	RECH. LINE.	OPTION	NEWTON
INSTANT	ITERATION	RELATIF	ABSOLU
NB. ITER	COEFFICIENT	ASSEMBLAGE	TEMPS CALCUL
		RESI_GLOB_RELA	RESI_GLOB_MAXI
RHO		VALEUR	

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5.10000E-01	0	8.28699E-18	7.64842E-22
	TANGENTE		

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BILAN D'ENERGIE	TRAV_EXT	ENER_TOT	ENER_CIN	TRAV_AMOR
DISS_SCH				

PAS COURANT	0.0000E+00	-1.2606E-32	-1.0224E-20	0.0000E+00
				1.0224E-20

TOTAL	2.9387E-07	4.0994E-21	-1.5263E-10	0.0000E+00
				2.9403E-07

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Criterion (S) of convergence reached (S)

The residue of the type RESI\_GLOB\_RELA is worth 8.286990456631e-18 with the node and degree of

freedom N82016 DX

The residue of the type RESI\_GLOB\_MAXI is worth 7.648419208143e-22 with the node and degree of

freedom N82016 DX

Temps CPU consommé dans ce pas de temps : 23.461 s

\* Nombre d'itérations de Newton : 1



\* Temps total intégration comportement : 10.229 s (3 intégrations)

\* Temps total factorisation matrice : 3.345 s (1 factorisations)

\* Temps construction second membre : 5.309 s

\* Temps total résolution K.U=F : 0.141 s (1 résolutions)

\* Temps assemblage matrice : 0.992 s

\* Nombre d'itérations de recherche linéaire : 3

\* Temps autres opérations : 3.444 s

Mémoire (Mo) : 5871.63 / 5479.59 / 5342.91 / 1196.69 (VmPeak / VmSize / Optimum / Minimum)

Filing of the fields

Field stored DEPL at time 5.100000000000e-01 for the sequence number 102

Field stored SIEF\_ELGA at time 5.100000000000e-01 for the sequence number 102

Field stored VARI\_ELGA at time 5.100000000000e-01 for the sequence number 102

Field stored COMPORTEMENT at time 5.100000000000e-01 for the sequence number 102

Field stored VITE at time 5.100000000000e-01 for the sequence number 102

Field stored ACCE at time 5.100000000000e-01 for the sequence number 102

Field stored FORC\_AMOR at time 5.100000000000e-01 for the sequence number 102

Field stored FORC\_LIAI at time 5.100000000000e-01 for the sequence number 102

Adaptation of the time step.

For the method of adaptation of the type FIXE, the computed time step is worth 1.000000000000e-02.

On all the criteria of adaptation, the smallest time step is worth 1.000000000000e-02.

After best fit on the compulsory points of transition, the smallest time step is worth 5.000000000000e-03.

[ 63%] Instant calculé : 5.10000e-01, dernier instant archivé : 5.10000e-01, au numéro d'ordre :

102

Time of computation: 5.150000000000e-01

INCREMENT	NEWTON	RESIDU	RESIDU
RECH. LINE.	RECH. LINE.	OPTION	NEWTON
INSTANT	ITERATION	RELATIF	ABSOLU
NB. ITER	COEFFICIENT	ASSEMBLAGE	TEMPS CALCUL
		RESI_GLOB_RELA	RESI_GLOB_MAXI
RHO		VALEUR	

5.15000E-01	0	7.81104E-18	7.20914E-22
	TANGENTE		

BILAN D'ENERGIE	TRAV_EXT	ENER_TOT	ENER_CIN	TRAV_AMOR
DISS_SCH				

PAS COURANT	0.0000E+00	-8.6115E-33	-6.9774E-21	0.0000E+00
				6.9774E-21

TOTAL	2.9387E-07	4.0994E-21	-1.5263E-10	0.0000E+00
				2.9403E-07

Criterion (S) of convergence reached (S)

The residue of the type RESI\_GLOB\_RELA is worth 7.811038078839e-18 with the node and degree of

freedom N84660 DX

The residue of the type RESI\_GLOB\_MAXI is worth 7.209142328615e-22 with the node and degree of

freedom N84660 DX

Temps CPU consommé dans ce pas de temps : 23.549 s

\* Nombre d'itérations de Newton : 1

\* Temps total intégration comportement : 10.305 s (3 intégrations)

\* Temps total factorisation matrice : 3.316 s (1 factorisations)

\* Temps construction second membre : 5.312 s

\* Temps total résolution K.U=F : 0.140 s (1 résolutions)

\* Temps assemblage matrice : 0.986 s

\* Nombre d'itérations de recherche linéaire : 3

\* Temps autres opérations : 3.489 s

Mémoire (Mo) : 5871.63 / 5525.02 / 5342.91 / 1196.69 (VmPeak / VmSize / Optimum / Minimum)

Filing of the fields

Field stored DEPL at time 5.150000000000e-01 for the sequence number 103

Field stored SIEF\_ELGA at time 5.150000000000e-01 for the sequence number 103

Field stored VARI\_ELGA at time 5.150000000000e-01 for the sequence number 103

Field stored COMPORTEMENT at time 5.150000000000e-01 for the sequence number 103

Field stored VITE at time 5.150000000000e-01 for the sequence number 103

Field stored ACCE at time 5.150000000000e-01 for the sequence number 103

Field stored FORC\_AMOR at time 5.150000000000e-01 for the sequence number 103

Field stored FORC\_LIAI at time 5.150000000000e-01 for the sequence number 103

Adaptation of the time step.

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

1.000000000000e-02.

On all the criteria of adaptation, the smallest time step is worth 1.000000000000e-02.

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

5.000000000000e-03.

[ 64%] Instant calculé : 5.15000e-01, dernier instant archivé : 5.15000e-01, au numéro d'ordre :

103

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Time of computation: 5.200000000000e-01

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INCREMENT	NEWTON	RESIDU	RESIDU
RECH. LINE.	RECH. LINE.	OPTION	NEWTON
INSTANT	ITERATION	RELATIF	ABSOLU
NB. ITER	COEFFICIENT	ASSEMBLAGE	TEMPS CALCUL
		RESI_GLOB_RELA	RESI_GLOB_MAXI
RHO		VALEUR	

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5.20000E-01	0	8.97135E-18	8.28004E-22
	TANGENTE		

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| BILAN D'ENERGIE | TRAV\_EXT | ENER\_TOT | ENER\_CIN | TRAV\_AMOR  
| DISS\_SCH |

| PAS COURANT | 0.0000E+00 | -5.8815E-33 | -4.7608E-21 | 0.0000E+00 |  
4.7608E-21 |

| TOTAL | 2.9387E-07 | 4.0994E-21 | -1.5263E-10 | 0.0000E+00 |  
2.9403E-07 |

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Criterion (S) of convergence reached (S)

The residue of the type RESI\_GLOB\_RELA is worth 8.971345730783e-18 with the  
node and degree of

freedom N85188 DY

The residue of the type RESI\_GLOB\_MAXI is worth 8.280040066332e-22 with the  
node and degree of

freedom N85188 DY

Temps CPU consommé dans ce pas de temps : 23.514 s

\* Nombre d'itérations de Newton : 1

\* Temps total intégration comportement : 10.248 s (3 intégrations)

\* Temps total factorisation matrice : 3.356 s (1 factorisations)

\* Temps construction second membre : 5.331 s

\* Temps total résolution K.U=F : 0.139 s (1 résolutions)

\* Temps assemblage matrice : 0.993 s

\* Nombre d'itérations de recherche linéaire : 3

\* Temps autres opérations : 3.447 s

Mémoire (Mo) : 5904.90 / 5570.45 / 5376.11 / 1196.69 (VmPeak / VmSize /  
Optimum / Minimum)

Filing of the fields

Field stored DEPL at time 5.200000000000e-01 for the sequence number 104

Field stored SIEF\_ELGA at time 5.200000000000e-01 for the sequence number 104

Field stored VARI\_ELGA at time 5.200000000000e-01 for the sequence number 104

Field stored COMPORTEMENT at time 5.200000000000e-01 for the sequence number 104

Field stored VITE at time 5.200000000000e-01 for the sequence number 104

Field stored ACCE at time 5.200000000000e-01 for the sequence number 104

Field stored FORC\_AMOR at time 5.200000000000e-01 for the sequence number 104

Field stored FORC\_LIAI at time 5.200000000000e-01 for the sequence number 104

Adaptation of the time step.

For the method of adaptation of the type FIXE, the computed time step is worth 1.000000000000e-02.

On all the criteria of adaptation, the smallest time step is worth 1.000000000000e-02.

After best fit on the compulsory points of transition, the smallest time step is worth 5.000000000000e-03.

[ 65%] Instant calculé : 5.20000e-01, dernier instant archivé : 5.20000e-01, au numéro d'ordre :

104

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Time of computation: 5.250000000000e-01

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	INCREMENT		NEWTON		RESIDU		RESIDU	
RECH.	LINE.		RECH.	LINE.		OPTION		NEWTON
	INSTANT		ITERATION		RELATIF		ABSOLU	
NB.	ITER		COEFFICIENT		ASSEMBLAGE		TEMPS CALCUL	
					RESI_GLOB_RELA		RESI_GLOB_MAXI	
	RHO				VALEUR			

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| 5.25000E-01 | 0 | 7.17501E-18 | 6.62213E-22 |
|              |TANGENTE |              |
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| BILAN D'ENERGIE | TRAV_EXT | ENER_TOT | ENER_CIN | TRAV_AMOR
| DISS_SCH |
| PAS COURANT | 0.0000E+00 | -4.0162E-33 | -3.2478E-21 | 0.0000E+00 |
3.2478E-21 |
| TOTAL | 2.9387E-07 | 4.0994E-21 | -1.5263E-10 | 0.0000E+00 |
2.9403E-07 |
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Criterion (S) of convergence reached (S)

The residue of the type RESI\_GLOB\_RELA is worth 7.175013104581e-18 with the node and degree of

freedom N85441 DZ

The residue of the type RESI\_GLOB\_MAXI is worth 6.622127578758e-22 with the node and degree of

freedom N85441 DZ

Temps CPU consommé dans ce pas de temps : 23.442 s

\* Nombre d'itérations de Newton : 1

\* Temps total intégration comportement : 10.225 s (3 intégrations)

\* Temps total factorisation matrice : 3.341 s (1 factorisations)

\* Temps construction second membre : 5.303 s

\* Temps total résolution K.U=F : 0.140 s (1 résolutions)

\* Temps assemblage matrice : 0.985 s

\* Nombre d'itérations de recherche linéaire : 3

\* Temps autres opérations : 3.448 s

Mémoire (Mo) : 5950.34 / 5615.88 / 5421.51 / 1196.69 (VmPeak / VmSize / Optimum / Minimum)

Filing of the fields

Field stored DEPL at time 5.250000000000e-01 for the sequence number 105

Field stored SIEF\_ELGA at time 5.250000000000e-01 for the sequence number 105

Field stored VARI\_ELGA at time 5.250000000000e-01 for the sequence number 105

Field stored COMPORTEMENT at time 5.250000000000e-01 for the sequence number 105

Field stored VITE at time 5.250000000000e-01 for the sequence number 105

Field stored ACCE at time 5.250000000000e-01 for the sequence number 105

Field stored FORC\_AMOR at time 5.250000000000e-01 for the sequence number 105

Field stored FORC\_LIAI at time 5.250000000000e-01 for the sequence number 105

Adaptation of the time step.

For the method of adaptation of the type FIXE, the computed time step is worth 1.000000000000e-02.

On all the criteria of adaptation, the smallest time step is worth 1.000000000000e-02.

After best fit on the compulsory points of transition, the smallest time step is worth 5.000000000000e-03.

[ 65%] Instant calculé : 5.25000e-01, dernier instant archivé : 5.25000e-01, au numéro d'ordre :

105

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Time of computation: 5.300000000000e-01



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| INCREMENT | NEWTON | RESIDU | RESIDU |
RECH. LINE. | RECH. LINE. | OPTION | NEWTON |
| INSTANT | ITERATION | RELATIF | ABSOLU |
NB. ITER | COEFFICIENT | ASSEMBLAGE | TEMPS CALCUL |
| | | RESI_GLOB_RELA | RESI_GLOB_MAXI |
| RHO | | VALEUR |

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| 5.30000E-01 | 0 | 6.98353E-18 | 6.44540E-22 |
| | TANGENTE | |

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| BILAN D'ENERGIE | TRAV_EXT | ENER_TOT | ENER_CIN | TRAV_AMOR
| DISS_SCH |
| PAS COURANT | 0.0000E+00 | -2.7419E-33 | -2.2152E-21 | 0.0000E+00 |
2.2152E-21 |
| TOTAL | 2.9387E-07 | 4.0994E-21 | -1.5263E-10 | 0.0000E+00 |
2.9403E-07 |

```

Criterion (S) of convergence reached (S)

The residue of the type RESI\_GLOB\_RELA is worth 6.983531680005e-18 with the node and degree of

freedom N81882 DX

The residue of the type RESI\_GLOB\_MAXI is worth 6.445401152754e-22 with the node and degree of

freedom N81882 DX

Temps CPU consommé dans ce pas de temps : 23.311 s

\* Nombre d'itérations de Newton : 1

\* Temps total intégration comportement : 10.236 s (3 intégrations)

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

\* Temps construction second membre : 5.240 s

\* Temps total résolution  $K.U=F$  : 0.138 s (1 résolutions)

\* Temps assemblage matrice : 0.987 s

\* Nombre d'itérations de recherche linéaire : 3

\* Temps autres opérations : 3.454 s

Mémoire (Mo) : 5995.77 / 5661.30 / 5466.91 / 1196.69 (VmPeak / VmSize / Optimum / Minimum)

Filing of the fields

Field stored DEPL at time 5.300000000000e-01 for the sequence number 106

Field stored SIEF\_ELGA at time 5.300000000000e-01 for the sequence number 106

Field stored VARI\_ELGA at time 5.300000000000e-01 for the sequence number 106

Field stored COMPORTEMENT at time 5.300000000000e-01 for the sequence number 106

Field stored VITE at time 5.300000000000e-01 for the sequence number 106

Field stored ACCE at time 5.300000000000e-01 for the sequence number 106

Field stored FORC\_AMOR at time 5.300000000000e-01 for the sequence number 106

Field stored FORC\_LIAI at time 5.300000000000e-01 for the sequence number 106

Adaptation of the time step.

For the method of adaptation of the type FIXE, the computed time step is worth 1.000000000000e-02.

On all the criteria of adaptation, the smallest time step is worth 1.000000000000e-02.

After best fit on the compulsory points of transition, the smallest time step is worth  
5.000000000000e-03.

[ 66%] Instant calculé : 5.30000e-01, dernier instant archivé : 5.30000e-01, au numéro  
d'ordre :

106

Time of computation: 5.350000000000e-01

INCREMENT	NEWTON	RESIDU	RESIDU
RECH. LINE.	RECH. LINE.	OPTION	NEWTON
INSTANT	ITERATION	RELATIF	ABSOLU
NB. ITER	COEFFICIENT	ASSEMBLAGE	TEMPS CALCUL
		RESI_GLOB_RELA	RESI_GLOB_MAXI
RHO		VALEUR	

5.35000E-01	0	7.75244E-18	7.15506E-22
	TANGENTE		

BILAN D'ENERGIE	TRAV_EXT	ENER_TOT	ENER_CIN	TRAV_AMOR
DISS_SCH				
PAS COURANT	0.0000E+00	-1.8716E-33	-1.5107E-21	0.0000E+00
				1.5107E-21
TOTAL	2.9387E-07	4.0994E-21	-1.5263E-10	0.0000E+00
				2.9403E-07

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Criterion (S) of convergence reached (S)

The residue of the type RESI\_GLOB\_RELAX is worth 7.752443850211e-18 with the node and degree of

freedom N77911 DZ

The residue of the type RESI\_GLOB\_MAXI is worth 7.155063199881e-22 with the node and degree of

freedom N77911 DZ

Temps CPU consommé dans ce pas de temps : 23.427 s

\* Nombre d'itérations de Newton : 1

\* Temps total intégration comportement : 10.258 s (3 intégrations)

\* Temps total factorisation matrice : 3.339 s (1 factorisations)

\* Temps construction second membre : 5.242 s

\* Temps total résolution K.U=F : 0.139 s (1 résolutions)

\* Temps assemblage matrice : 0.993 s

\* Nombre d'itérations de recherche linéaire : 3

\* Temps autres opérations : 3.456 s

Mémoire (Mo) : 6041.20 / 5706.96 / 5512.31 / 1196.69 (VmPeak / VmSize / Optimum / Minimum)

Filing of the fields

Field stored DEPL at time 5.350000000000e-01 for the sequence number 107

Field stored SIEF\_ELGA at time 5.350000000000e-01 for the sequence number 107

Field stored VARI\_ELGA at time 5.350000000000e-01 for the sequence number 107

Field stored COMPORTEMENT at time 5.350000000000e-01 for the sequence number 107

Field stored VITE at time 5.350000000000e-01 for the sequence number 107

Field stored ACCE at time 5.350000000000e-01 for the sequence number 107

Field stored FORC\_AMOR at time 5.350000000000e-01 for the sequence number 107

Field stored FORC\_LIAI at time 5.350000000000e-01 for the sequence number 107

Adaptation of the time step.

For the method of adaptation of the type FIXE, the computed time step is worth 1.000000000000e-02.

On all the criteria of adaptation, the smallest time step is worth 1.000000000000e-02.

After best fit on the compulsory points of transition, the smallest time step is worth 5.000000000000e-03.

[ 66%] Instant calculé : 5.35000e-01, dernier instant archivé : 5.35000e-01, au numéro d'ordre :

107

Time of computation: 5.400000000000e-01

INCREMENT	NEWTON	RESIDU	RESIDU
RECH. LINE.	RECH. LINE.	OPTION	NEWTON
INSTANT	ITERATION	RELATIF	ABSOLU
NB. ITER	COEFFICIENT	ASSEMBLAGE	TEMPS CALCUL
		RESI_GLOB_RELA	RESI_GLOB_MAXI
RHO		VALEUR	

5.40000E-01	0	7.94475E-18	7.33255E-22
	TANGENTE		

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| BILAN D'ENERGIE | TRAV_EXT | ENER_TOT | ENER_CIN | TRAV_AMOR
| DISS_SCH |
| PAS COURANT | 0.0000E+00 | -1.2773E-33 | -1.0300E-21 | 0.0000E+00 |
1.0300E-21 |
| TOTAL | 2.9387E-07 | 4.0994E-21 | -1.5263E-10 | 0.0000E+00 |
2.9403E-07 |
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Criterion (S) of convergence reached (S)

The residue of the type RESI\_GLOB\_RELA is worth 7.944749638402e-18 with the node and degree of

freedom N87527 DX

The residue of the type RESI\_GLOB\_MAXI is worth 7.332550466451e-22 with the node and degree of

freedom N87527 DX

Temps CPU consommé dans ce pas de temps : 23.563 s

\* Nombre d'itérations de Newton : 1

\* Temps total intégration comportement : 10.324 s (3 intégrations)

\* Temps total factorisation matrice : 3.350 s (1 factorisations)

\* Temps construction second membre : 5.320 s

\* Temps total résolution K.U=F : 0.138 s (1 résolutions)

\* Temps assemblage matrice : 0.989 s

\* Nombre d'itérations de recherche linéaire : 3

\* Temps autres opérations : 3.442 s

Mémoire (Mo) : 6086.64 / 5752.20 / 5557.72 / 1196.69 (VmPeak / VmSize / Optimum / Minimum)

Filing of the fields

Field stored DEPL at time 5.400000000000e-01 for the sequence number 108

Field stored SIEF\_ELGA at time 5.400000000000e-01 for the sequence number 108

Field stored VARI\_ELGA at time 5.400000000000e-01 for the sequence number 108

Field stored COMPORTEMENT at time 5.400000000000e-01 for the sequence number 108

Field stored VITE at time 5.400000000000e-01 for the sequence number 108

Field stored ACCE at time 5.400000000000e-01 for the sequence number 108

Field stored FORC\_AMOR at time 5.400000000000e-01 for the sequence number 108

Field stored FORC\_LIAI at time 5.400000000000e-01 for the sequence number 108

Adaptation of the time step.

For the method of adaptation of the type FIXE, the computed time step is worth 1.000000000000e-02.

On all the criteria of adaptation, the smallest time step is worth 1.000000000000e-02.

After best fit on the compulsory points of transition, the smallest time step is worth 5.000000000000e-03.

[ 67%] Instant calculé : 5.40000e-01, dernier instant archivé : 5.40000e-01, au numéro d'ordre :

108

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Time of computation: 5.450000000000e-01

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	INCREMENT		NEWTON		RESIDU		RESIDU	
RECH.	LINE.		RECH.	LINE.		OPTION		NEWTON
	INSTANT		ITERATION		RELATIF		ABSOLU	

NB. ITER	COEFFICIENT	ASSEMBLAGE	TEMPS CALCUL	
		RESI_GLOB_RELA	RESI_GLOB_MAXI	
RHO		VALEUR		
-----				
5.45000E-01	0	8.35337E-18	7.70969E-22	
	TANGENTE			
-----				
-----				
-----				
BILAN D'ENERGIE	TRAV_EXT	ENER_TOT	ENER_CIN	TRAV_AMOR
DISS_SCH				
PAS COURANT	0.0000E+00	-8.7152E-34	-7.0221E-22	0.0000E+00
				7.0221E-22
TOTAL	2.9387E-07	4.0994E-21	-1.5263E-10	0.0000E+00
				2.9403E-07
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Criterion (S) of convergence reached (S)

The residue of the type RESI\_GLOB\_RELA is worth 8.353373471811e-18 with the node and degree of

freedom N80641 DX

The residue of the type RESI\_GLOB\_MAXI is worth 7.709686942317e-22 with the node and degree of

freedom N80641 DX

Temps CPU consommé dans ce pas de temps : 23.546 s

\* Nombre d'itérations de Newton : 1

\* Temps total intégration comportement : 10.337 s (3 intégrations)

\* Temps total factorisation matrice : 3.337 s (1 factorisations)



\* Temps construction second membre : 5.296 s

\* Temps total résolution K.U=F : 0.139 s (1 résolutions)

\* Temps assemblage matrice : 0.990 s

\* Nombre d'itérations de recherche linéaire : 3

\* Temps autres opérations : 3.447 s

Mémoire (Mo) : 6132.07 / 5797.63 / 5603.12 / 1196.69 (VmPeak / VmSize / Optimum / Minimum)

Filing of the fields

Field stored DEPL at time 5.450000000000e-01 for the sequence number 109

Field stored SIEF\_ELGA at time 5.450000000000e-01 for the sequence number 109

Field stored VARI\_ELGA at time 5.450000000000e-01 for the sequence number 109

Field stored COMPORTEMENT at time 5.450000000000e-01 for the sequence number 109

Field stored VITE at time 5.450000000000e-01 for the sequence number 109

Field stored ACCE at time 5.450000000000e-01 for the sequence number 109

Field stored FORC\_AMOR at time 5.450000000000e-01 for the sequence number 109

Field stored FORC\_LIAI at time 5.450000000000e-01 for the sequence number 109

Adaptation of the time step.

For the method of adaptation of the type FIXE, the computed time step is worth 1.000000000000e-02.

On all the criteria of adaptation, the smallest time step is worth 1.000000000000e-02.

After best fit on the compulsory points of transition, the smallest time step is worth 5.000000000000e-03.

[ 68%] Instant calculé : 5.45000e-01, dernier instant archivé : 5.45000e-01, au numéro d'ordre :

Time of computation: 5.500000000000e-01

INCREMENT	NEWTON	RESIDU	RESIDU
RECH. LINE.	RECH. LINE.	OPTION	NEWTON
INSTANT	ITERATION	RELATIF	ABSOLU
NB. ITER	COEFFICIENT	ASSEMBLAGE	TEMPS CALCUL
		RESI_GLOB_RELA	RESI_GLOB_MAXI
RHO		VALEUR	

5.50000E-01	0	6.86864E-18	6.33936E-22
	TANGENTE		

BILAN D'ENERGIE	TRAV_EXT	ENER_TOT	ENER_CIN	TRAV_AMOR
DISS_SCH				

PAS COURANT	0.0000E+00	-5.9456E-34	-4.7863E-22	0.0000E+00

TOTAL	2.9387E-07	4.0994E-21	-1.5263E-10	0.0000E+00

Criterion (S) of convergence reached (S)

The residue of the type RESI\_GLOB\_RELA is worth 6.868639351663e-18 with the node and degree of

freedom N78471 DY

The residue of the type RESI\_GLOB\_MAXI is worth 6.339362091221e-22 with the node and degree of

freedom N78471 DY

Temps CPU consommé dans ce pas de temps : 23.508 s

- \* Nombre d'itérations de Newton : 1
- \* Temps total intégration comportement : 10.289 s (3 intégrations)
- \* Temps total factorisation matrice : 3.335 s (1 factorisations)
- \* Temps construction second membre : 5.295 s
- \* Temps total résolution K.U=F : 0.139 s (1 résolutions)
- \* Temps assemblage matrice : 0.991 s
- \* Nombre d'itérations de recherche linéaire : 3
- \* Temps autres opérations : 3.459 s

Mémoire (Mo) : 6177.50 / 5843.19 / 5648.52 / 1196.69 (VmPeak / VmSize / Optimum / Minimum)

Filing of the fields

Field stored DEPL at time 5.500000000000e-01 for the sequence number 110

Field stored SIEF\_ELGA at time 5.500000000000e-01 for the sequence number 110

Field stored VARI\_ELGA at time 5.500000000000e-01 for the sequence number 110

Field stored COMPORTEMENT at time 5.500000000000e-01 for the sequence number 110

Field stored VITE at time 5.500000000000e-01 for the sequence number 110

Field stored ACCE at time 5.500000000000e-01 for the sequence number 110

Field stored FORC\_AMOR at time 5.500000000000e-01 for the sequence number 110

Field stored FORC\_LIAI at time 5.500000000000e-01 for the sequence number 110

Adaptation of the time step.

For the method of adaptation of the type FIXE, the computed time step is worth  
1.000000000000e-02.

On all the criteria of adaptation, the smallest time step is worth 1.000000000000e-02.

After best fit on the compulsory points of transition, the smallest time step is worth  
5.000000000000e-03.

[ 68%] Instant calculé : 5.50000e-01, dernier instant archivé : 5.50000e-01, au numéro  
d'ordre :

110

Time of computation: 5.550000000000e-01

INCREMENT	NEWTON	RESIDU	RESIDU
RECH. LINE.	RECH. LINE.	OPTION	NEWTON
INSTANT	ITERATION	RELATIF	ABSOLU
NB. ITER	COEFFICIENT	ASSEMBLAGE	TEMPS CALCUL
		RESI_GLOB_RELA	RESI_GLOB_MAXI
RHO		VALEUR	

5.55000E-01	0	8.74311E-18	8.06939E-22
	TANGENTE		

BILAN D'ENERGIE	TRAV_EXT	ENER_TOT	ENER_CIN	TRAV_AMOR
DISS_SCH				

| PAS COURANT | 0.0000E+00 | -4.0554E-34 | -3.2619E-22 | 0.0000E+00 |  
3.2619E-22 |

| TOTAL | 2.9387E-07 | 4.0994E-21 | -1.5263E-10 | 0.0000E+00 |  
2.9403E-07 |

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Criterion (S) of convergence reached (S)

The residue of the type RESI\_GLOB\_RELAX is worth 8.743111268818e-18 with the  
node and degree of

freedom N79907 DX

The residue of the type RESI\_GLOB\_MAXI is worth 8.069392684513e-22 with the  
node and degree of

freedom N79907 DX

Temps CPU consommé dans ce pas de temps : 23.696 s

\* Nombre d'itérations de Newton : 1

\* Temps total intégration comportement : 10.299 s (3 intégrations)

\* Temps total factorisation matrice : 3.349 s (1 factorisations)

\* Temps construction second membre : 5.367 s

\* Temps total résolution K.U=F : 0.148 s (1 résolutions)

\* Temps assemblage matrice : 1.136 s

\* Nombre d'itérations de recherche linéaire : 3

\* Temps autres opérations : 3.397 s

Mémoire (Mo) : 6177.50 / 2944.05 / 5648.52 / 1196.69 (VmPeak / VmSize /  
Optimum / Minimum)

Filing of the fields

Field stored DEPL at time 5.550000000000e-01 for the sequence number 111

Field stored SIEF\_ELGA at time 5.550000000000e-01 for the sequence number 111

Field stored VARI\_ELGA at time 5.550000000000e-01 for the sequence number  
111

Field stored COMPORTEMENT at time 5.550000000000e-01 for the sequence number 111

Field stored VITE at time 5.550000000000e-01 for the sequence number 111

Field stored ACCE at time 5.550000000000e-01 for the sequence number 111

Field stored FORC\_AMOR at time 5.550000000000e-01 for the sequence number 111

Field stored FORC\_LIAI at time 5.550000000000e-01 for the sequence number 111

Adaptation of the time step.

For the method of adaptation of the type FIXE, the computed time step is worth 1.000000000000e-02.

On all the criteria of adaptation, the smallest time step is worth 1.000000000000e-02.

After best fit on the compulsory points of transition, the smallest time step is worth 5.000000000000e-03.

[ 69%] Instant calculé : 5.55000e-01, dernier instant archivé : 5.55000e-01, au numéro d'ordre :

111

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Time of computation: 5.600000000000e-01

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	INCREMENT		NEWTON		RESIDU		RESIDU	
RECH.	LINE.		RECH.	LINE.		OPTION		NEWTON
	INSTANT		ITERATION		RELATIF		ABSOLU	
NB. ITER		COEFFICIENT		ASSEMBLAGE		TEMPS CALCUL		
					RESI_GLOB_REL		RESI_GLOB_MAXI	
	RHO				VALEUR			

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5.60000E-01	0	1.07514E-17	9.92290E-22	
	TANGENTE			

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BILAN D'ENERGIE	TRAV_EXT	ENER_TOT	ENER_CIN	TRAV_AMOR
DISS_SCH				

PAS COURANT	0.0000E+00	-2.7657E-34	-2.2226E-22	0.0000E+00
2.2226E-22				

TOTAL	2.9387E-07	4.0994E-21	-1.5263E-10	0.0000E+00
2.9403E-07				

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Criterion (S) of convergence reached (S)

The residue of the type RESI\_GLOB\_RELA is worth 1.075136616622e-17 with the node and degree of

freedom N84662 DX

The residue of the type RESI\_GLOB\_MAXI is worth 9.922897332858e-22 with the node and degree of

freedom N84662 DX

Temps CPU consommé dans ce pas de temps : 23.618 s

\* Nombre d'itérations de Newton : 1

\* Temps total intégration comportement : 10.325 s (3 intégrations)

\* Temps total factorisation matrice : 3.344 s (1 factorisations)

\* Temps construction second membre : 5.341 s

\* Temps total résolution K.U=F : 0.140 s (1 résolutions)

\* Temps assemblage matrice : 0.997 s

\* Nombre d'itérations de recherche linéaire : 3

\* Temps autres opérations : 3.472 s

Mémoire (Mo) : 6177.50 / 2989.48 / 5648.52 / 1196.69 (VmPeak / VmSize / Optimum / Minimum)

Filing of the fields

Field stored DEPL at time 5.600000000000e-01 for the sequence number 112

Field stored SIEF\_ELGA at time 5.600000000000e-01 for the sequence number 112

Field stored VARI\_ELGA at time 5.600000000000e-01 for the sequence number 112

Field stored COMPORTEMENT at time 5.600000000000e-01 for the sequence number 112

Field stored VITE at time 5.600000000000e-01 for the sequence number 112

Field stored ACCE at time 5.600000000000e-01 for the sequence number 112

Field stored FORC\_AMOR at time 5.600000000000e-01 for the sequence number 112

Field stored FORC\_LIAI at time 5.600000000000e-01 for the sequence number 112

Adaptation of the time step.

For the method of adaptation of the type FIXE, the computed time step is worth 1.000000000000e-02.

On all the criteria of adaptation, the smallest time step is worth 1.000000000000e-02.

After best fit on the compulsory points of transition, the smallest time step is worth 5.000000000000e-03.

[ 70%] Instant calculé : 5.60000e-01, dernier instant archivé : 5.60000e-01, au numéro d'ordre :

112

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Time of computation: 5.650000000000e-01

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INCREMENT		NEWTON		RESIDU
RECH. LINE.		RECH. LINE.		OPTION
				NEWTON
INSTANT		ITERATION		RELATIF
NB. ITER		COEFFICIENT		ABSOLU
		ASSEMBLAGE		TEMPS CALCUL
				RESI_GLOB_RELA
				RESI_GLOB_MAXI
RHO				VALEUR
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5.65000E-01		0		7.36270E-18
		TANGENTE		6.79535E-22
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-----				
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BILAN D'ENERGIE		TRAV_EXT		ENER_TOT
DISS_SCH				ENER_CIN
				TRAV_AMOR
PAS COURANT		0.0000E+00		-1.8858E-34
1.5143E-22				-1.5143E-22
				0.0000E+00
TOTAL		2.9387E-07		4.0994E-21
2.9403E-07				-1.5263E-10
				0.0000E+00
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Criterion (S) of convergence reached (S)

The residue of the type RESI\_GLOB\_RELA is worth 7.362701677019e-18 with the node and degree of

freedom N85229 DX

The residue of the type RESI\_GLOB\_MAXI is worth 6.795353418717e-22 with the node and degree of

freedom N85229 DX

Temps CPU consommé dans ce pas de temps : 23.526 s

\* Nombre d'itérations de Newton : 1

\* Temps total intégration comportement : 10.296 s (3 intégrations)

\* Temps total factorisation matrice : 3.317 s (1 factorisations)

\* Temps construction second membre : 5.341 s

\* Temps total résolution K.U=F : 0.142 s (1 résolutions)

\* Temps assemblage matrice : 0.992 s

\* Nombre d'itérations de recherche linéaire : 3

\* Temps autres opérations : 3.439 s

Mémoire (Mo) : 6177.50 / 3034.91 / 5648.52 / 1196.69 (VmPeak / VmSize / Optimum / Minimum)

Filing of the fields

Field stored DEPL at time 5.650000000000e-01 for the sequence number 113

Field stored SIEF\_ELGA at time 5.650000000000e-01 for the sequence number 113

Field stored VARI\_ELGA at time 5.650000000000e-01 for the sequence number 113

Field stored COMPORTEMENT at time 5.650000000000e-01 for the sequence number 113

Field stored VITE at time 5.650000000000e-01 for the sequence number 113

Field stored ACCE at time 5.650000000000e-01 for the sequence number 113

Field stored FORC\_AMOR at time 5.650000000000e-01 for the sequence number 113

Field stored FORC\_LIAI at time 5.650000000000e-01 for the sequence number 113

Adaptation of the time step.

For the method of adaptation of the type FIXE, the computed time step is worth 1.000000000000e-02.

On all the criteria of adaptation, the smallest time step is worth 1.000000000000e-02.

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

5.000000000000e-03.

[ 70%] Instant calculé : 5.65000e-01, dernier instant archivé : 5.65000e-01, au numéro d'ordre :

113

Time of computation: 5.700000000000e-01

INCREMENT	NEWTON	RESIDU	RESIDU
RECH. LINE.	RECH. LINE.	OPTION	NEWTON
INSTANT	ITERATION	RELATIF	ABSOLU
NB. ITER	COEFFICIENT	ASSEMBLAGE	TEMPS CALCUL
		RESI_GLOB_RELA	RESI_GLOB_MAXI
RHO		VALEUR	

5.70000E-01	0	1.14919E-17	1.06064E-21
	TANGENTE		

BILAN D'ENERGIE	TRAV_EXT	ENER_TOT	ENER_CIN	TRAV_AMOR
DISS_SCH				

PAS COURANT	0.0000E+00	-1.2856E-34	-1.0315E-22	0.0000E+00
				1.0315E-22

TOTAL	2.9387E-07	4.0994E-21	-1.5263E-10	0.0000E+00
				2.9403E-07

Criterion (S) of convergence reached (S)

The residue of the type RESI\_GLOB\_RELAX is worth 1.149188866484e-17 with the node and degree of

freedom N83055 DX

The residue of the type RESI\_GLOB\_MAXI is worth 1.060635733346e-21 with the node and degree of

freedom N83055 DX

Temps CPU consommé dans ce pas de temps : 23.404 s

\* Nombre d'itérations de Newton : 1

\* Temps total intégration comportement : 10.244 s (3 intégrations)

\* Temps total factorisation matrice : 3.320 s (1 factorisations)

\* Temps construction second membre : 5.289 s

\* Temps total résolution K.U=F : 0.139 s (1 résolutions)

\* Temps assemblage matrice : 0.986 s

\* Nombre d'itérations de recherche linéaire : 3

\* Temps autres opérations : 3.427 s

Mémoire (Mo) : 6177.50 / 3080.34 / 5648.52 / 1196.69 (VmPeak / VmSize / Optimum / Minimum)

Filing of the fields

Field stored DEPL at time 5.700000000000e-01 for the sequence number 114

Field stored SIEF\_ELGA at time 5.700000000000e-01 for the sequence number 114

Field stored VARI\_ELGA at time 5.700000000000e-01 for the sequence number 114

Field stored COMPORTEMENT at time 5.700000000000e-01 for the sequence number 114

Field stored VITE at time 5.700000000000e-01 for the sequence number 114

Field stored ACCE at time 5.700000000000e-01 for the sequence number 114

Field stored FORC\_AMOR at time 5.700000000000e-01 for the sequence number

114

Field stored FORC\_LIAI at time 5.700000000000e-01 for the sequence number 114

Adaptation of the time step.

For the method of adaptation of the type FIXE, the computed time step is worth  
1.000000000000e-02.

On all the criteria of adaptation, the smallest time step is worth 1.000000000000e-02.

After best fit on the compulsory points of transition, the smallest time step is worth  
5.000000000000e-03.

[ 71%] Instant calculé : 5.70000e-01, dernier instant archivé : 5.70000e-01, au numéro  
d'ordre :

114

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Time of computation: 5.750000000000e-01

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	INCREMENT		NEWTON		RESIDU		RESIDU	
RECH.	LINE.		RECH.	LINE.		OPTION		NEWTON
	INSTANT		ITERATION		RELATIF		ABSOLU	
NB.	ITER		COEFFICIENT		ASSEMBLAGE		TEMPS CALCUL	
					RESI_GLOB_RELA		RESI_GLOB_MAXI	
	RHO				VALEUR			

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	5.75000E-01		0		8.66315E-18		7.99559E-22	
			TANGENTE					

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| BILAN D'ENERGIE | TRAV\_EXT | ENER\_TOT | ENER\_CIN | TRAV\_AMOR  
| DISS\_SCH |

| PAS COURANT | 0.0000E+00 | -8.7629E-35 | -7.0253E-23 | 0.0000E+00 |  
7.0253E-23 |

| TOTAL | 2.9387E-07 | 4.0994E-21 | -1.5263E-10 | 0.0000E+00 |  
2.9403E-07 |

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Criterion (S) of convergence reached (S)

The residue of the type RESI\_GLOB\_RELAX is worth 8.663146904106e-18 with the  
node and degree of

freedom N85230 DZ

The residue of the type RESI\_GLOB\_MAXI is worth 7.995590139882e-22 with the  
node and degree of

freedom N85230 DZ

Temps CPU consommé dans ce pas de temps : 23.440 s

\* Nombre d'itérations de Newton : 1

\* Temps total intégration comportement : 10.239 s (3 intégrations)

\* Temps total factorisation matrice : 3.349 s (1 factorisations)

\* Temps construction second membre : 5.289 s

\* Temps total résolution K.U=F : 0.138 s (1 résolutions)

\* Temps assemblage matrice : 0.989 s

\* Nombre d'itérations de recherche linéaire : 3

\* Temps autres opérations : 3.436 s

Mémoire (Mo) : 6177.50 / 3125.77 / 5648.52 / 1196.69 (VmPeak / VmSize /  
Optimum / Minimum)

Filing of the fields

Field stored DEPL at time 5.750000000000e-01 for the sequence number 115

Field stored SIEF\_ELGA at time 5.750000000000e-01 for the sequence number 115

Field stored VARI\_ELGA at time 5.750000000000e-01 for the sequence number 115

Field stored COMPORTEMENT at time 5.750000000000e-01 for the sequence number 115

Field stored VITE at time 5.750000000000e-01 for the sequence number 115

Field stored ACCE at time 5.750000000000e-01 for the sequence number 115

Field stored FORC\_AMOR at time 5.750000000000e-01 for the sequence number 115

Field stored FORC\_LIAI at time 5.750000000000e-01 for the sequence number 115

Adaptation of the time step.

For the method of adaptation of the type FIXE, the computed time step is worth 1.000000000000e-02.

On all the criteria of adaptation, the smallest time step is worth 1.000000000000e-02.

After best fit on the compulsory points of transition, the smallest time step is worth 5.000000000000e-03.

[ 71%] Instant calculé : 5.75000e-01, dernier instant archivé : 5.75000e-01, au numéro d'ordre :

115

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Time of computation: 5.800000000000e-01

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	INCREMENT		NEWTON		RESIDU		RESIDU	
RECH.	LINE.		RECH.	LINE.		OPTION		NEWTON
	INSTANT		ITERATION		RELATIF		ABSOLU	
NB. ITER		COEFFICIENT		ASSEMBLAGE		TEMPS CALCUL		

		RESI_GLOB_RELA	RESI_GLOB_MAXI	
RHO		VALEUR		
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5.80000E-01	0	9.62514E-18	8.88345E-22	
	TANGENTE			
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BILAN D'ENERGIE	TRAV_EXT	ENER_TOT	ENER_CIN	TRAV_AMOR
DISS_SCH				
PAS COURANT	0.0000E+00	-5.9721E-35	-4.7841E-23	0.0000E+00
				4.7841E-23
TOTAL	2.9387E-07	4.0994E-21	-1.5263E-10	0.0000E+00
				2.9403E-07
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Criterion (S) of convergence reached (S)

The residue of the type RESI\_GLOB\_RELA is worth 9.625138711965e-18 with the node and degree of

freedom N84894 DX

The residue of the type RESI\_GLOB\_MAXI is worth 8.883453672465e-22 with the node and degree of

freedom N84894 DX

Temps CPU consommé dans ce pas de temps : 23.501 s

\* Nombre d'itérations de Newton : 1

\* Temps total intégration comportement : 10.275 s (3 intégrations)

\* Temps total factorisation matrice : 3.360 s (1 factorisations)

\* Temps construction second membre : 5.303 s



\* Temps total résolution K.U=F : 0.138 s (1 résolutions)

\* Temps assemblage matrice : 0.990 s

\* Nombre d'itérations de recherche linéaire : 3

\* Temps autres opérations : 3.436 s

Mémoire (Mo) : 6177.50 / 3171.20 / 5648.52 / 1196.69 (VmPeak / VmSize / Optimum / Minimum)

Filing of the fields

Field stored DEPL at time 5.800000000000e-01 for the sequence number 116

Field stored SIEF\_ELGA at time 5.800000000000e-01 for the sequence number 116

Field stored VARI\_ELGA at time 5.800000000000e-01 for the sequence number 116

Field stored COMPORTEMENT at time 5.800000000000e-01 for the sequence number 116

Field stored VITE at time 5.800000000000e-01 for the sequence number 116

Field stored ACCE at time 5.800000000000e-01 for the sequence number 116

Field stored FORC\_AMOR at time 5.800000000000e-01 for the sequence number 116

Field stored FORC\_LIAI at time 5.800000000000e-01 for the sequence number 116

Adaptation of the time step.

For the method of adaptation of the type FIXE, the computed time step is worth 1.000000000000e-02.

On all the criteria of adaptation, the smallest time step is worth 1.000000000000e-02.

After best fit on the compulsory points of transition, the smallest time step is worth 5.000000000000e-03.

[ 72%] Instant calculé : 5.80000e-01, dernier instant archivé : 5.80000e-01, au numéro d'ordre :

116

Time of computation: 5.850000000000e-01

INCREMENT	NEWTON	RESIDU	RESIDU
RECH. LINE.	RECH. LINE.	OPTION	NEWTON
INSTANT	ITERATION	RELATIF	ABSOLU
NB. ITER	COEFFICIENT	ASSEMBLAGE	TEMPS CALCUL
		RESI_GLOB_RELA	RESI_GLOB_MAXI
RHO		VALEUR	

5.85000E-01	0	9.03460E-18	8.33842E-22
	TANGENTE		

BILAN D'ENERGIE	TRAV_EXT	ENER_TOT	ENER_CIN	TRAV_AMOR
DISS_SCH				
PAS COURANT	0.0000E+00	-4.0694E-35	-3.2574E-23	0.0000E+00
				3.2574E-23
TOTAL	2.9387E-07	4.0994E-21	-1.5263E-10	0.0000E+00
				2.9403E-07

Criterion (S) of convergence reached (S)

The residue of the type RESI\_GLOB\_RELA is worth 9.034598475397e-18 with the node and degree of

freedom N85167 DZ

The residue of the type RESI\_GLOB\_MAXI is worth 8.338418739436e-22 with the node and degree of

freedom N85167 DZ

Temps CPU consommé dans ce pas de temps : 23.362 s

\* Nombre d'itérations de Newton : 1

\* Temps total intégration comportement : 10.249 s (3 intégrations)

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

\* Temps construction second membre : 5.302 s

\* Temps total résolution K.U=F : 0.140 s (1 résolutions)

\* Temps assemblage matrice : 0.990 s

\* Nombre d'itérations de recherche linéaire : 3

\* Temps autres opérations : 3.435 s

Mémoire (Mo) : 6177.50 / 3216.63 / 5648.52 / 1196.69 (VmPeak / VmSize / Optimum / Minimum)

Filing of the fields

Field stored DEPL at time 5.850000000000e-01 for the sequence number 117

Field stored SIEF\_ELGA at time 5.850000000000e-01 for the sequence number 117

Field stored VARI\_ELGA at time 5.850000000000e-01 for the sequence number 117

Field stored COMPORTEMENT at time 5.850000000000e-01 for the sequence number 117

Field stored VITE at time 5.850000000000e-01 for the sequence number 117

Field stored ACCE at time 5.850000000000e-01 for the sequence number 117

Field stored FORC\_AMOR at time 5.850000000000e-01 for the sequence number 117

Field stored FORC\_LIAI at time 5.850000000000e-01 for the sequence number 117

Adaptation of the time step.

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

1.000000000000e-02.

On all the criteria of adaptation, the smallest time step is worth 1.000000000000e-02.

After best fit on the compulsory points of transition, the smallest time step is worth 5.000000000000e-03.

[ 73%] Instant calculé : 5.85000e-01, dernier instant archivé : 5.85000e-01, au numéro d'ordre :

117

Time of computation: 5.900000000000e-01

INCREMENT	NEWTON	RESIDU	RESIDU
RECH. LINE.	RECH. LINE.	OPTION	NEWTON
INSTANT	ITERATION	RELATIF	ABSOLU
NB. ITER	COEFFICIENT	ASSEMBLAGE	TEMPS CALCUL
		RESI_GLOB_RELA	RESI_GLOB_MAXI
RHO		VALEUR	

5.90000E-01	0	7.49125E-18	6.91400E-22
	TANGENTE		

BILAN D'ENERGIE	TRAV_EXT	ENER_TOT	ENER_CIN	TRAV_AMOR
DISS_SCH				

PAS COURANT	0.0000E+00	-2.7725E-35	-2.2176E-23	0.0000E+00
				2.2176E-23

| TOTAL | 2.9387E-07 | 4.0994E-21 | -1.5263E-10 | 0.0000E+00 |  
2.9403E-07 |

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Criterion (S) of convergence reached (S)

The residue of the type RESI\_GLOB\_RELA is worth 7.491249938056e-18 with the  
node and degree of

freedom N84664 DY

The residue of the type RESI\_GLOB\_MAXI is worth 6.913996126710e-22 with the  
node and degree of

freedom N84664 DY

Temps CPU consommé dans ce pas de temps : 23.454 s

\* Nombre d'itérations de Newton : 1

\* Temps total intégration comportement : 10.313 s (3 intégrations)

\* Temps total factorisation matrice : 3.326 s (1 factorisations)

\* Temps construction second membre : 5.244 s

\* Temps total résolution K.U=F : 0.138 s (1 résolutions)

\* Temps assemblage matrice : 0.991 s

\* Nombre d'itérations de recherche linéaire : 3

\* Temps autres opérations : 3.442 s

Mémoire (Mo) : 6177.50 / 3262.06 / 5648.52 / 1196.69 (VmPeak / VmSize /  
Optimum / Minimum)

Filing of the fields

Field stored DEPL at time 5.900000000000e-01 for the sequence number 118

Field stored SIEF\_ELGA at time 5.900000000000e-01 for the sequence number 118

Field stored VARI\_ELGA at time 5.900000000000e-01 for the sequence number  
118

Field stored COMPORTEMENT at time 5.900000000000e-01 for the sequence  
number 118

Field stored VITE at time 5.900000000000e-01 for the sequence number 118

Field stored ACCE at time 5.900000000000e-01 for the sequence number 118

Field stored FORC\_AMOR at time 5.900000000000e-01 for the sequence number 118

Field stored FORC\_LIAI at time 5.900000000000e-01 for the sequence number 118

Adaptation of the time step.

For the method of adaptation of the type FIXE, the computed time step is worth 1.000000000000e-02.

On all the criteria of adaptation, the smallest time step is worth 1.000000000000e-02.

After best fit on the compulsory points of transition, the smallest time step is worth 5.000000000000e-03.

[ 73%] Instant calculé : 5.90000e-01, dernier instant archivé : 5.90000e-01, au numéro d'ordre :

118

Time of computation: 5.950000000000e-01

	INCREMENT		NEWTON		RESIDU		RESIDU	
RECH.	LINE.		RECH.	LINE.		OPTION		NEWTON
	INSTANT		ITERATION		RELATIF		ABSOLU	
NB. ITER		COEFFICIENT		ASSEMBLAGE		TEMPS CALCUL		
					RESI_GLOB_REL		RESI_GLOB_MAXI	
	RHO				VALEUR			

	5.95000E-01		0		9.55589E-18		8.81954E-22	
			TANGENTE					

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| BILAN D'ENERGIE | TRAV_EXT | ENER_TOT | ENER_CIN | TRAV_AMOR
| DISS_SCH |
| PAS COURANT | 0.0000E+00 | -1.8886E-35 | -1.5095E-23 | 0.0000E+00 |
1.5095E-23 |
| TOTAL | 2.9387E-07 | 4.0994E-21 | -1.5263E-10 | 0.0000E+00 |
2.9403E-07 |
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Criterion (S) of convergence reached (S)

The residue of the type RESI\_GLOB\_RELA is worth 9.555892322145e-18 with the node and degree of

freedom N84934 DY

The residue of the type RESI\_GLOB\_MAXI is worth 8.819543206927e-22 with the node and degree of

freedom N84934 DY

Temps CPU consommé dans ce pas de temps : 23.543 s

- \* Nombre d'itérations de Newton : 1
- \* Temps total intégration comportement : 10.259 s (3 intégrations)
- \* Temps total factorisation matrice : 3.361 s (1 factorisations)
- \* Temps construction second membre : 5.295 s
- \* Temps total résolution K.U=F : 0.140 s (1 résolutions)
- \* Temps assemblage matrice : 1.014 s
- \* Nombre d'itérations de recherche linéaire : 3
- \* Temps autres opérations : 3.474 s

Mémoire (Mo) : 6177.50 / 3307.49 / 5648.52 / 1196.69 (VmPeak / VmSize /

Optimum / Minimum)

Filing of the fields

Field stored DEPL at time 5.950000000000e-01 for the sequence number 119

Field stored SIEF\_ELGA at time 5.950000000000e-01 for the sequence number 119

Field stored VARI\_ELGA at time 5.950000000000e-01 for the sequence number 119

Field stored COMPORTEMENT at time 5.950000000000e-01 for the sequence number 119

Field stored VITE at time 5.950000000000e-01 for the sequence number 119

Field stored ACCE at time 5.950000000000e-01 for the sequence number 119

Field stored FORC\_AMOR at time 5.950000000000e-01 for the sequence number 119

Field stored FORC\_LIAI at time 5.950000000000e-01 for the sequence number 119

Adaptation of the time step.

For the method of adaptation of the type FIXE, the computed time step is worth 1.000000000000e-02.

On all the criteria of adaptation, the smallest time step is worth 1.000000000000e-02.

After best fit on the compulsory points of transition, the smallest time step is worth 5.000000000000e-03.

[ 74%] Instant calculé : 5.95000e-01, dernier instant archivé : 5.95000e-01, au numéro d'ordre :

119

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Time of computation: 6.000000000000e-01

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	INCREMENT		NEWTON		RESIDU		RESIDU	
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RECH. LINE.	RECH. LINE.	OPTION	NEWTON
INSTANT	ITERATION	RELATIF	ABSOLU
NB. ITER	COEFFICIENT	ASSEMBLAGE	TEMPS CALCUL
		RESI_GLOB_RELA	RESI_GLOB_MAXI
RHO		VALEUR	

6.00000E-01	0	7.28486E-18	6.72351E-22
	TANGENTE		

BILAN D'ENERGIE	TRAV_EXT	ENER_TOT	ENER_CIN	TRAV_AMOR
DISS_SCH				
PAS COURANT	0.0000E+00	-1.2863E-35	-1.0273E-23	0.0000E+00
				1.0273E-23
TOTAL	2.9387E-07	4.0994E-21	-1.5263E-10	0.0000E+00
				2.9403E-07

Criterion (S) of convergence reached (S)

The residue of the type RESI\_GLOB\_RELA is worth 7.284857881037e-18 with the node and degree of freedom N85194 DZ

The residue of the type RESI\_GLOB\_MAXI is worth 6.723508037992e-22 with the node and degree of freedom N85194 DZ

Temps CPU consommé dans ce pas de temps : 23.525 s

\* Nombre d'itérations de Newton : 1

\* Temps total intégration comportement : 10.286 s (3 intégrations)

\* Temps total factorisation matrice : 3.337 s (1 factorisations)

\* Temps construction second membre : 5.320 s

\* Temps total résolution K.U=F : 0.140 s (1 résolutions)

\* Temps assemblage matrice : 0.989 s

\* Nombre d'itérations de recherche linéaire : 3

\* Temps autres opérations : 3.453 s

Mémoire (Mo) : 6177.50 / 3352.92 / 5648.52 / 1196.69 (VmPeak / VmSize / Optimum / Minimum)

Filing of the fields

Field stored DEPL at time 6.000000000000e-01 for the sequence number 120

Field stored SIEF\_ELGA at time 6.000000000000e-01 for the sequence number 120

Field stored VARI\_ELGA at time 6.000000000000e-01 for the sequence number 120

Field stored COMPORTEMENT at time 6.000000000000e-01 for the sequence number 120

Field stored VITE at time 6.000000000000e-01 for the sequence number 120

Field stored ACCE at time 6.000000000000e-01 for the sequence number 120

Field stored FORC\_AMOR at time 6.000000000000e-01 for the sequence number 120

Field stored FORC\_LIAI at time 6.000000000000e-01 for the sequence number 120

Adaptation of the time step.

For the method of adaptation of the type FIXE, the computed time step is worth 1.000000000000e-02.

On all the criteria of adaptation, the smallest time step is worth 1.000000000000e-02.

After best fit on the compulsory points of transition, the smallest time step is worth 5.000000000000e-03.

[ 75%] Instant calculé : 6.00000e-01, dernier instant archivé : 6.00000e-01, au numéro d'ordre :

120

Time of computation: 6.050000000000e-01

INCREMENT	NEWTON	RESIDU	RESIDU
RECH. LINE.	RECH. LINE.	OPTION	NEWTON
INSTANT	ITERATION	RELATIF	ABSOLU
NB. ITER	COEFFICIENT	ASSEMBLAGE	TEMPS CALCUL
		RESI_GLOB_RELA	RESI_GLOB_MAXI
RHO		VALEUR	

6.05000E-01	0	9.18272E-18	8.47513E-22
	TANGENTE		

BILAN D'ENERGIE	TRAV_EXT	ENER_TOT	ENER_CIN	TRAV_AMOR
DISS_SCH				

PAS COURANT	0.0000E+00	-8.7597E-36	-6.9911E-24	0.0000E+00

TOTAL	2.9387E-07	4.0994E-21	-1.5263E-10	0.0000E+00

Criterion (S) of convergence reached (S)

The residue of the type RESI\_GLOB\_RELA is worth 9.182724987668e-18 with the node and degree of

freedom N84749 DX

The residue of the type RESI\_GLOB\_MAXI is worth 8.475131055881e-22 with the node and degree of

freedom N84749 DX

Temps CPU consommé dans ce pas de temps : 23.431 s

\* Nombre d'itérations de Newton : 1

\* Temps total intégration comportement : 10.231 s (3 intégrations)

\* Temps total factorisation matrice : 3.328 s (1 factorisations)

\* Temps construction second membre : 5.294 s

\* Temps total résolution K.U=F : 0.141 s (1 résolutions)

\* Temps assemblage matrice : 0.990 s

\* Nombre d'itérations de recherche linéaire : 3

\* Temps autres opérations : 3.448 s

Mémoire (Mo) : 6177.50 / 3398.35 / 5648.52 / 1196.69 (VmPeak / VmSize / Optimum / Minimum)

Filing of the fields

Field stored DEPL at time 6.050000000000e-01 for the sequence number 121

Field stored SIEF\_ELGA at time 6.050000000000e-01 for the sequence number 121

Field stored VARI\_ELGA at time 6.050000000000e-01 for the sequence number 121

Field stored COMPORTEMENT at time 6.050000000000e-01 for the sequence number 121

Field stored VITE at time 6.050000000000e-01 for the sequence number 121

Field stored ACCE at time 6.050000000000e-01 for the sequence number 121

Field stored FORC\_AMOR at time 6.050000000000e-01 for the sequence number 121

Field stored FORC\_LIAI at time 6.050000000000e-01 for the sequence number 121

Adaptation of the time step.

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

1.000000000000e-02.

On all the criteria of adaptation, the smallest time step is worth 1.000000000000e-02.

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

5.000000000000e-03.

[ 75%] Instant calculé : 6.05000e-01, dernier instant archivé : 6.05000e-01, au numéro d'ordre :

121

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Time of computation: 6.100000000000e-01

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INCREMENT	NEWTON	RESIDU	RESIDU
RECH. LINE.	RECH. LINE.	OPTION	NEWTON
INSTANT	ITERATION	RELATIF	ABSOLU
NB. ITER	COEFFICIENT	ASSEMBLAGE	TEMPS CALCUL
		RESI_GLOB_RELA	RESI_GLOB_MAXI
RHO		VALEUR	

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6.10000E-01	0	8.74488E-18	8.07102E-22
	TANGENTE		

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| BILAN D'ENERGIE | TRAV\_EXT | ENER\_TOT | ENER\_CIN | TRAV\_AMOR  
| DISS\_SCH |

| PAS COURANT | 0.0000E+00 | -5.9644E-36 | -4.7568E-24 | 0.0000E+00 |  
4.7568E-24 |

| TOTAL | 2.9387E-07 | 4.0994E-21 | -1.5263E-10 | 0.0000E+00 |  
2.9403E-07 |

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Criterion (S) of convergence reached (S)

The residue of the type RESI\_GLOB\_RELAX is worth 8.744878161557e-18 with the  
node and degree of

freedom N81750 DX

The residue of the type RESI\_GLOB\_MAXI is worth 8.071023425665e-22 with the  
node and degree of

freedom N81750 DX

Temps CPU consommé dans ce pas de temps : 23.542 s

\* Nombre d'itérations de Newton : 1

\* Temps total intégration comportement : 10.301 s (3 intégrations)

\* Temps total factorisation matrice : 3.328 s (1 factorisations)

\* Temps construction second membre : 5.295 s

\* Temps total résolution K.U=F : 0.139 s (1 résolutions)

\* Temps assemblage matrice : 1.015 s

\* Nombre d'itérations de recherche linéaire : 3

\* Temps autres opérations : 3.464 s

Mémoire (Mo) : 6177.50 / 3443.78 / 5648.52 / 1196.69 (VmPeak / VmSize /  
Optimum / Minimum)

Filing of the fields

Field stored DEPL at time 6.100000000000e-01 for the sequence number 122

Field stored SIEF\_ELGA at time 6.100000000000e-01 for the sequence number 122

Field stored VARI\_ELGA at time 6.100000000000e-01 for the sequence number 122

Field stored COMPORTEMENT at time 6.100000000000e-01 for the sequence number 122

Field stored VITE at time 6.100000000000e-01 for the sequence number 122

Field stored ACCE at time 6.100000000000e-01 for the sequence number 122

Field stored FORC\_AMOR at time 6.100000000000e-01 for the sequence number 122

Field stored FORC\_LIAI at time 6.100000000000e-01 for the sequence number 122

Adaptation of the time step.

For the method of adaptation of the type FIXE, the computed time step is worth 1.000000000000e-02.

On all the criteria of adaptation, the smallest time step is worth 1.000000000000e-02.

After best fit on the compulsory points of transition, the smallest time step is worth 5.000000000000e-03.

[ 76%] Instant calculé : 6.10000e-01, dernier instant archivé : 6.10000e-01, au numéro d'ordre :

122

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Time of computation: 6.150000000000e-01

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	INCREMENT		NEWTON		RESIDU		RESIDU	
RECH.	LINE.		RECH.	LINE.		OPTION		NEWTON
	INSTANT		ITERATION		RELATIF		ABSOLU	
NB. ITER		COEFFICIENT		ASSEMBLAGE		TEMPS CALCUL		
					RESI_GLOB_RELA		RESI_GLOB_MAXI	
	RHO				VALEUR			

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| 6.15000E-01 | 0 | 6.14312E-18 | 5.66975E-22 |
|              |TANGENTE |              |
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| BILAN D'ENERGIE | TRAV_EXT | ENER_TOT | ENER_CIN | TRAV_AMOR
| DISS_SCH |
| PAS COURANT | 0.0000E+00 | -4.0605E-36 | -3.2362E-24 | 0.0000E+00 |
3.2362E-24 |
| TOTAL | 2.9387E-07 | 4.0994E-21 | -1.5263E-10 | 0.0000E+00 |
2.9403E-07 |
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Criterion (S) of convergence reached (S)

The residue of the type RESI\_GLOB\_RELA is worth 6.143121351208e-18 with the node and degree of

freedom N87269 DY

The residue of the type RESI\_GLOB\_MAXI is worth 5.669750386034e-22 with the node and degree of

freedom N87269 DY

Temps CPU consommé dans ce pas de temps : 23.590 s

\* Nombre d'itérations de Newton : 1

\* Temps total intégration comportement : 10.332 s (3 intégrations)

\* Temps total factorisation matrice : 3.330 s (1 factorisations)

\* Temps construction second membre : 5.307 s

\* Temps total résolution K.U=F : 0.141 s (1 résolutions)

\* Temps assemblage matrice : 1.012 s



\* Nombre d'itérations de recherche linéaire : 3

\* Temps autres opérations : 3.469 s

Mémoire (Mo) : 6177.50 / 3489.21 / 5648.52 / 1196.69 (VmPeak / VmSize / Optimum / Minimum)

Filing of the fields

Field stored DEPL at time 6.150000000000e-01 for the sequence number 123

Field stored SIEF\_ELGA at time 6.150000000000e-01 for the sequence number 123

Field stored VARI\_ELGA at time 6.150000000000e-01 for the sequence number 123

Field stored COMPORTEMENT at time 6.150000000000e-01 for the sequence number 123

Field stored VITE at time 6.150000000000e-01 for the sequence number 123

Field stored ACCE at time 6.150000000000e-01 for the sequence number 123

Field stored FORC\_AMOR at time 6.150000000000e-01 for the sequence number 123

Field stored FORC\_LIAI at time 6.150000000000e-01 for the sequence number 123

Adaptation of the time step.

For the method of adaptation of the type FIXE, the computed time step is worth 1.000000000000e-02.

On all the criteria of adaptation, the smallest time step is worth 1.000000000000e-02.

After best fit on the compulsory points of transition, the smallest time step is worth 5.000000000000e-03.

[ 76%] Instant calculé : 6.15000e-01, dernier instant archivé : 6.15000e-01, au numéro d'ordre :

123

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Time of computation: 6.200000000000e-01

INCREMENT	NEWTON	RESIDU	RESIDU
RECH. LINE.	RECH. LINE.	OPTION	NEWTON
INSTANT	ITERATION	RELATIF	ABSOLU
NB. ITER	COEFFICIENT	ASSEMBLAGE	TEMPS CALCUL
		RESI_GLOB_REL	RESI_GLOB_MAXI
RHO		VALEUR	

6.20000E-01	0	8.02947E-18	7.41075E-22
	TANGENTE		

BILAN D'ENERGIE	TRAV_EXT	ENER_TOT	ENER_CIN	TRAV_AMOR
DISS_SCH				
PAS COURANT	0.0000E+00	-2.7640E-36	-2.2014E-24	0.0000E+00
TOTAL	2.9387E-07	4.0994E-21	-1.5263E-10	0.0000E+00

Criterion (S) of convergence reached (S)

The residue of the type RESI\_GLOB\_REL is worth 8.029472707639e-18 with the node and degree of

freedom N80311 DX

The residue of the type RESI\_GLOB\_MAXI is worth 7.410745023754e-22 with the node and degree of

freedom N80311 DX

Temps CPU consommé dans ce pas de temps : 23.493 s

\* Nombre d'itérations de Newton : 1

\* Temps total intégration comportement : 10.290 s (3 intégrations)

\* Temps total factorisation matrice : 3.333 s (1 factorisations)

\* Temps construction second membre : 5.302 s

\* Temps total résolution  $K.U=F$  : 0.139 s (1 résolutions)

\* Temps assemblage matrice : 0.990 s

\* Nombre d'itérations de recherche linéaire : 3

\* Temps autres opérations : 3.440 s

Mémoire (Mo) : 6177.50 / 3534.64 / 5648.52 / 1196.69 (VmPeak / VmSize / Optimum / Minimum)

Filing of the fields

Field stored DEPL at time 6.200000000000e-01 for the sequence number 124

Field stored SIEF\_ELGA at time 6.200000000000e-01 for the sequence number 124

Field stored VARI\_ELGA at time 6.200000000000e-01 for the sequence number 124

Field stored COMPORTEMENT at time 6.200000000000e-01 for the sequence number 124

Field stored VITE at time 6.200000000000e-01 for the sequence number 124

Field stored ACCE at time 6.200000000000e-01 for the sequence number 124

Field stored FORC\_AMOR at time 6.200000000000e-01 for the sequence number 124

Field stored FORC\_LIAI at time 6.200000000000e-01 for the sequence number 124

Adaptation of the time step.

For the method of adaptation of the type FIXE, the computed time step is worth 1.000000000000e-02.

On all the criteria of adaptation, the smallest time step is worth 1.000000000000e-02.

After best fit on the compulsory points of transition, the smallest time step is worth  
5.000000000000e-03.

[ 77%] Instant calculé : 6.20000e-01, dernier instant archivé : 6.20000e-01, au numéro  
d'ordre :

124

Time of computation: 6.250000000000e-01

INCREMENT	NEWTON	RESIDU	RESIDU
RECH. LINE.	RECH. LINE.	OPTION	NEWTON
INSTANT	ITERATION	RELATIF	ABSOLU
NB. ITER	COEFFICIENT	ASSEMBLAGE	TEMPS CALCUL
		RESI_GLOB_RELA	RESI_GLOB_MAXI
RHO		VALEUR	

6.25000E-01	0	7.39525E-18	6.82539E-22
	TANGENTE		

BILAN D'ENERGIE	TRAV_EXT	ENER_TOT	ENER_CIN	TRAV_AMOR
DISS_SCH				

PAS COURANT	0.0000E+00	-1.8812E-36	-1.4972E-24	0.0000E+00
				1.4972E-24

TOTAL	2.9387E-07	4.0994E-21	-1.5263E-10	0.0000E+00
				2.9403E-07

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Criterion (S) of convergence reached (S)

The residue of the type RESI\_GLOB\_RELAX is worth 7.395247650495e-18 with the node and degree of

freedom N84866 DZ

The residue of the type RESI\_GLOB\_MAXI is worth 6.825391494661e-22 with the node and degree of

freedom N84866 DZ

Temps CPU consommé dans ce pas de temps : 23.609 s

\* Nombre d'itérations de Newton : 1

\* Temps total intégration comportement : 10.327 s (3 intégrations)

\* Temps total factorisation matrice : 3.373 s (1 factorisations)

\* Temps construction second membre : 5.322 s

\* Temps total résolution K.U=F : 0.139 s (1 résolutions)

\* Temps assemblage matrice : 0.991 s

\* Nombre d'itérations de recherche linéaire : 3

\* Temps autres opérations : 3.457 s

Mémoire (Mo) : 6177.50 / 3580.07 / 5648.52 / 1196.69 (VmPeak / VmSize / Optimum / Minimum)

Filing of the fields

Field stored DEPL at time 6.250000000000e-01 for the sequence number 125

Field stored SIEF\_ELGA at time 6.250000000000e-01 for the sequence number 125

Field stored VARI\_ELGA at time 6.250000000000e-01 for the sequence number 125

Field stored COMPORTEMENT at time 6.250000000000e-01 for the sequence number 125

Field stored VITE at time 6.250000000000e-01 for the sequence number 125

Field stored ACCE at time 6.250000000000e-01 for the sequence number 125

Field stored FORC\_AMOR at time 6.250000000000e-01 for the sequence number 125

Field stored FORC\_LIAI at time 6.250000000000e-01 for the sequence number 125

Adaptation of the time step.

For the method of adaptation of the type FIXE, the computed time step is worth 1.000000000000e-02.

On all the criteria of adaptation, the smallest time step is worth 1.000000000000e-02.

After best fit on the compulsory points of transition, the smallest time step is worth 5.000000000000e-03.

[ 78%] Instant calculé : 6.25000e-01, dernier instant archivé : 6.25000e-01, au numéro d'ordre :

125

Time of computation: 6.300000000000e-01

INCREMENT	NEWTON	RESIDU	RESIDU
RECH. LINE.	RECH. LINE.	OPTION	NEWTON
INSTANT	ITERATION	RELATIF	ABSOLU
NB. ITER	COEFFICIENT	ASSEMBLAGE	TEMPS CALCUL
		RESI_GLOB_RELA	RESI_GLOB_MAXI
RHO		VALEUR	

6.30000E-01	0	9.03970E-18	8.34313E-22
	TANGENTE		

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| BILAN D'ENERGIE | TRAV_EXT | ENER_TOT | ENER_CIN | TRAV_AMOR
| DISS_SCH |
| PAS COURANT | 0.0000E+00 | -1.2802E-36 | -1.0182E-24 | 0.0000E+00 |
1.0182E-24 |
| TOTAL | 2.9387E-07 | 4.0994E-21 | -1.5263E-10 | 0.0000E+00 |
2.9403E-07 |
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Criterion (S) of convergence reached (S)

The residue of the type RESI\_GLOB\_RELA is worth 9.039703251013e-18 with the node and degree of

freedom N80641 DX

The residue of the type RESI\_GLOB\_MAXI is worth 8.343130155972e-22 with the node and degree of

freedom N80641 DX

Temps CPU consommé dans ce pas de temps : 23.474 s

\* Nombre d'itérations de Newton : 1

\* Temps total intégration comportement : 10.245 s (3 intégrations)

\* Temps total factorisation matrice : 3.367 s (1 factorisations)

\* Temps construction second membre : 5.294 s

\* Temps total résolution K.U=F : 0.139 s (1 résolutions)

\* Temps assemblage matrice : 0.989 s

\* Nombre d'itérations de recherche linéaire : 3

\* Temps autres opérations : 3.439 s

Mémoire (Mo) : 6177.50 / 3625.50 / 5648.52 / 1196.69 (VmPeak / VmSize / Optimum / Minimum)

Filing of the fields

Field stored DEPL at time 6.300000000000e-01 for the sequence number 126

Field stored SIEF\_ELGA at time 6.300000000000e-01 for the sequence number 126

Field stored VARI\_ELGA at time 6.300000000000e-01 for the sequence number 126

Field stored COMPORTEMENT at time 6.300000000000e-01 for the sequence number 126

Field stored VITE at time 6.300000000000e-01 for the sequence number 126

Field stored ACCE at time 6.300000000000e-01 for the sequence number 126

Field stored FORC\_AMOR at time 6.300000000000e-01 for the sequence number 126

Field stored FORC\_LIAI at time 6.300000000000e-01 for the sequence number 126

Adaptation of the time step.

For the method of adaptation of the type FIXE, the computed time step is worth 1.000000000000e-02.

On all the criteria of adaptation, the smallest time step is worth 1.000000000000e-02.

After best fit on the compulsory points of transition, the smallest time step is worth 5.000000000000e-03.

[ 78%] Instant calculé : 6.30000e-01, dernier instant archivé : 6.30000e-01, au numéro d'ordre :

126

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Time of computation: 6.350000000000e-01

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	INCREMENT		NEWTON		RESIDU		RESIDU	
RECH.	LINE.		RECH.	LINE.		OPTION		NEWTON
	INSTANT		ITERATION		RELATIF		ABSOLU	



NB. ITER	COEFFICIENT	ASSEMBLAGE	TEMPS CALCUL	
		RESI_GLOB_RELA	RESI_GLOB_MAXI	
RHO		VALEUR		
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6.35000E-01	0	7.21696E-18	6.66084E-22	
	TANGENTE			
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BILAN D'ENERGIE	TRAV_EXT	ENER_TOT	ENER_CIN	TRAV_AMOR
DISS_SCH				
PAS COURANT	0.0000E+00	-8.7105E-37	-6.9237E-25	0.0000E+00
				6.9237E-25
TOTAL	2.9387E-07	4.0994E-21	-1.5263E-10	0.0000E+00
				2.9403E-07
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Criterion (S) of convergence reached (S)

The residue of the type RESI\_GLOB\_RELA is worth 7.216956054445e-18 with the node and degree of

freedom N80206 DX

The residue of the type RESI\_GLOB\_MAXI is worth 6.660838527572e-22 with the node and degree of

freedom N80206 DX

Temps CPU consommé dans ce pas de temps : 23.531 s

\* Nombre d'itérations de Newton : 1

\* Temps total intégration comportement : 10.329 s (3 intégrations)

\* Temps total factorisation matrice : 3.328 s (1 factorisations)

\* Temps construction second membre : 5.303 s

\* Temps total résolution K.U=F : 0.138 s (1 résolutions)

\* Temps assemblage matrice : 0.989 s

\* Nombre d'itérations de recherche linéaire : 3

\* Temps autres opérations : 3.444 s

Mémoire (Mo) : 6177.50 / 3670.93 / 5648.52 / 1196.69 (VmPeak / VmSize / Optimum / Minimum)

Filing of the fields

Field stored DEPL at time 6.350000000000e-01 for the sequence number 127

Field stored SIEF\_ELGA at time 6.350000000000e-01 for the sequence number 127

Field stored VARI\_ELGA at time 6.350000000000e-01 for the sequence number 127

Field stored COMPORTEMENT at time 6.350000000000e-01 for the sequence number 127

Field stored VITE at time 6.350000000000e-01 for the sequence number 127

Field stored ACCE at time 6.350000000000e-01 for the sequence number 127

Field stored FORC\_AMOR at time 6.350000000000e-01 for the sequence number 127

Field stored FORC\_LIAI at time 6.350000000000e-01 for the sequence number 127

Adaptation of the time step.

For the method of adaptation of the type FIXE, the computed time step is worth 1.000000000000e-02.

On all the criteria of adaptation, the smallest time step is worth 1.000000000000e-02.

After best fit on the compulsory points of transition, the smallest time step is worth 5.000000000000e-03.

[ 79%] Instant calculé : 6.35000e-01, dernier instant archivé : 6.35000e-01, au numéro d'ordre :

Time of computation: 6.400000000000e-01

INCREMENT	NEWTON	RESIDU	RESIDU
RECH. LINE.	RECH. LINE.	OPTION	NEWTON
INSTANT	ITERATION	RELATIF	ABSOLU
NB. ITER	COEFFICIENT	ASSEMBLAGE	TEMPS CALCUL
		RESI_GLOB_RELA	RESI_GLOB_MAXI
RHO		VALEUR	

6.40000E-01	0	6.84575E-18	6.31823E-22
	TANGENTE		

BILAN D'ENERGIE	TRAV_EXT	ENER_TOT	ENER_CIN	TRAV_AMOR
DISS_SCH				
PAS COURANT	0.0000E+00	-5.9261E-37	-4.7074E-25	0.0000E+00
TOTAL	2.9387E-07	4.0994E-21	-1.5263E-10	0.0000E+00

Criterion (S) of convergence reached (S)

The residue of the type RESI\_GLOB\_RELA is worth 6.845745257664e-18 with the node and degree of

freedom N81964 DX

The residue of the type RESI\_GLOB\_MAXI is worth 6.318232149149e-22 with the node and degree of

freedom N81964 DX

Temps CPU consommé dans ce pas de temps : 23.496 s

\* Nombre d'itérations de Newton : 1

\* Temps total intégration comportement : 10.263 s (3 intégrations)

\* Temps total factorisation matrice : 3.334 s (1 factorisations)

\* Temps construction second membre : 5.319 s

\* Temps total résolution K.U=F : 0.139 s (1 résolutions)

\* Temps assemblage matrice : 0.990 s

\* Nombre d'itérations de recherche linéaire : 3

\* Temps autres opérations : 3.451 s

Mémoire (Mo) : 6177.50 / 3716.36 / 5648.52 / 1196.69 (VmPeak / VmSize / Optimum / Minimum)

Filing of the fields

Field stored DEPL at time 6.400000000000e-01 for the sequence number 128

Field stored SIEF\_ELGA at time 6.400000000000e-01 for the sequence number 128

Field stored VARI\_ELGA at time 6.400000000000e-01 for the sequence number 128

Field stored COMPORTEMENT at time 6.400000000000e-01 for the sequence number 128

Field stored VITE at time 6.400000000000e-01 for the sequence number 128

Field stored ACCE at time 6.400000000000e-01 for the sequence number 128

Field stored FORC\_AMOR at time 6.400000000000e-01 for the sequence number 128

Field stored FORC\_LIAI at time 6.400000000000e-01 for the sequence number 128

Adaptation of the time step.

For the method of adaptation of the type FIXE, the computed time step is worth  
1.000000000000e-02.

On all the criteria of adaptation, the smallest time step is worth 1.000000000000e-02.

After best fit on the compulsory points of transition, the smallest time step is worth  
5.000000000000e-03.

[ 80%] Instant calculé : 6.40000e-01, dernier instant archivé : 6.40000e-01, au numéro  
d'ordre :

128

Time of computation: 6.450000000000e-01

INCREMENT	NEWTON	RESIDU	RESIDU
RECH. LINE.	RECH. LINE.	OPTION	NEWTON
INSTANT	ITERATION	RELATIF	ABSOLU
NB. ITER	COEFFICIENT	ASSEMBLAGE	TEMPS CALCUL
		RESI_GLOB_REL	RESI_GLOB_MAXI
RHO		VALEUR	

6.45000E-01	0	7.62346E-18	7.03602E-22
	TANGENTE		

BILAN D'ENERGIE	TRAV_EXT	ENER_TOT	ENER_CIN	TRAV_AMOR
DISS_SCH				

| PAS COURANT | 0.0000E+00 | -4.0312E-37 | -3.2001E-25 | 0.0000E+00 |  
3.2001E-25 |

| TOTAL | 2.9387E-07 | 4.0994E-21 | -1.5263E-10 | 0.0000E+00 |  
2.9403E-07 |

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Criterion (S) of convergence reached (S)

The residue of the type RESI\_GLOB\_RELAX is worth 7.623464020102e-18 with the  
node and degree of

freedom N78487 DX

The residue of the type RESI\_GLOB\_MAXI is worth 7.036022178268e-22 with the  
node and degree of

freedom N78487 DX

Temps CPU consommé dans ce pas de temps : 23.506 s

\* Nombre d'itérations de Newton : 1

\* Temps total intégration comportement : 10.312 s (3 intégrations)

\* Temps total factorisation matrice : 3.322 s (1 factorisations)

\* Temps construction second membre : 5.298 s

\* Temps total résolution K.U=F : 0.139 s (1 résolutions)

\* Temps assemblage matrice : 0.990 s

\* Nombre d'itérations de recherche linéaire : 3

\* Temps autres opérations : 3.445 s

Mémoire (Mo) : 6177.50 / 3761.79 / 5648.52 / 1196.69 (VmPeak / VmSize /  
Optimum / Minimum)

Filing of the fields

Field stored DEPL at time 6.450000000000e-01 for the sequence number 129

Field stored SIEF\_ELGA at time 6.450000000000e-01 for the sequence number 129

Field stored VARI\_ELGA at time 6.450000000000e-01 for the sequence number  
129

Field stored COMPORTEMENT at time 6.450000000000e-01 for the sequence number 129

Field stored VITE at time 6.450000000000e-01 for the sequence number 129

Field stored ACCE at time 6.450000000000e-01 for the sequence number 129

Field stored FORC\_AMOR at time 6.450000000000e-01 for the sequence number 129

Field stored FORC\_LIAI at time 6.450000000000e-01 for the sequence number 129

Adaptation of the time step.

For the method of adaptation of the type FIXE, the computed time step is worth 1.000000000000e-02.

On all the criteria of adaptation, the smallest time step is worth 1.000000000000e-02.

After best fit on the compulsory points of transition, the smallest time step is worth 5.000000000000e-03.

[ 80%] Instant calculé : 6.45000e-01, dernier instant archivé : 6.45000e-01, au numéro d'ordre :

129

Time of computation: 6.500000000000e-01

INCREMENT		NEWTON		RESIDU		RESIDU	
RECH. LINE.		RECH. LINE.		OPTION		NEWTON	
INSTANT		ITERATION		RELATIF		ABSOLU	
NB. ITER		COEFFICIENT		ASSEMBLAGE		TEMPS CALCUL	
				RESI_GLOB_REL		RESI_GLOB_MAXI	
RHO				VALEUR			

6.50000E-01	0	7.85357E-18	7.24839E-22
TANGENTE			

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BILAN D'ENERGIE	TRAV_EXT	ENER_TOT	ENER_CIN	TRAV_AMOR
DISS_SCH				

PAS COURANT	0.0000E+00	-2.7418E-37	-2.1752E-25	0.0000E+00
				2.1752E-25

TOTAL	2.9387E-07	4.0994E-21	-1.5263E-10	0.0000E+00
				2.9403E-07

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Criterion (S) of convergence reached (S)

The residue of the type RESI\_GLOB\_RELA is worth 7.853566497130e-18 with the node and degree of

freedom N85188 DY

The residue of the type RESI\_GLOB\_MAXI is worth 7.248393631373e-22 with the node and degree of

freedom N85188 DY

Temps CPU consommé dans ce pas de temps : 23.499 s

\* Nombre d'itérations de Newton : 1

\* Temps total intégration comportement : 10.272 s (3 intégrations)

\* Temps total factorisation matrice : 3.335 s (1 factorisations)

\* Temps construction second membre : 5.313 s

\* Temps total résolution K.U=F : 0.140 s (1 résolutions)

\* Temps assemblage matrice : 0.990 s

\* Nombre d'itérations de recherche linéaire : 3



\* Temps autres opérations : 3.448 s

Mémoire (Mo) : 6177.50 / 3807.21 / 5648.52 / 1196.69 (VmPeak / VmSize / Optimum / Minimum)

Filing of the fields

Field stored DEPL at time 6.500000000000e-01 for the sequence number 130

Field stored SIEF\_ELGA at time 6.500000000000e-01 for the sequence number 130

Field stored VARI\_ELGA at time 6.500000000000e-01 for the sequence number 130

Field stored COMPORTEMENT at time 6.500000000000e-01 for the sequence number 130

Field stored VITE at time 6.500000000000e-01 for the sequence number 130

Field stored ACCE at time 6.500000000000e-01 for the sequence number 130

Field stored FORC\_AMOR at time 6.500000000000e-01 for the sequence number 130

Field stored FORC\_LIAI at time 6.500000000000e-01 for the sequence number 130

Adaptation of the time step.

For the method of adaptation of the type FIXE, the computed time step is worth 1.000000000000e-02.

On all the criteria of adaptation, the smallest time step is worth 1.000000000000e-02.

After best fit on the compulsory points of transition, the smallest time step is worth 5.000000000000e-03.

[ 81%] Instant calculé : 6.50000e-01, dernier instant archivé : 6.50000e-01, au numéro d'ordre :

130

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Time of computation: 6.550000000000e-01

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INCREMENT		NEWTON		RESIDU
RECH. LINE.		RECH. LINE.		OPTION
				NEWTON
INSTANT		ITERATION		RELATIF
NB. ITER		COEFFICIENT		ABSOLU
		ASSEMBLAGE		TEMPS CALCUL
				RESI_GLOB_RELA
				RESI_GLOB_MAXI
RHO				VALEUR
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6.55000E-01		0		8.39792E-18
		TANGENTE		7.75080E-22
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-----				
BILAN D'ENERGIE		TRAV_EXT		ENER_TOT
				ENER_CIN
DISS_SCH				TRAV_AMOR
PAS COURANT		0.0000E+00		-1.8646E-37
				-1.4784E-25
				0.0000E+00
				1.4784E-25
TOTAL		2.9387E-07		4.0994E-21
				-1.5263E-10
				0.0000E+00
				2.9403E-07
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Criterion (S) of convergence reached (S)

The residue of the type RESI\_GLOB\_RELA is worth 8.397915994487e-18 with the node and degree of

freedom N80419 DY

The residue of the type RESI\_GLOB\_MAXI is worth 7.750797148466e-22 with the node and degree of

freedom N80419 DY

Temps CPU consommé dans ce pas de temps : 23.477 s

\* Nombre d'itérations de Newton : 1

\* Temps total intégration comportement : 10.246 s (3 intégrations)

\* Temps total factorisation matrice : 3.368 s (1 factorisations)

\* Temps construction second membre : 5.296 s

\* Temps total résolution K.U=F : 0.137 s (1 résolutions)

\* Temps assemblage matrice : 0.988 s

\* Nombre d'itérations de recherche linéaire : 3

\* Temps autres opérations : 3.442 s

Mémoire (Mo) : 6177.50 / 3852.64 / 5648.52 / 1196.69 (VmPeak / VmSize / Optimum / Minimum)

Filing of the fields

Field stored DEPL at time 6.550000000000e-01 for the sequence number 131

Field stored SIEF\_ELGA at time 6.550000000000e-01 for the sequence number 131

Field stored VARI\_ELGA at time 6.550000000000e-01 for the sequence number 131

Field stored COMPORTEMENT at time 6.550000000000e-01 for the sequence number 131

Field stored VITE at time 6.550000000000e-01 for the sequence number 131

Field stored ACCE at time 6.550000000000e-01 for the sequence number 131

Field stored FORC\_AMOR at time 6.550000000000e-01 for the sequence number 131

Field stored FORC\_LIAI at time 6.550000000000e-01 for the sequence number 131

Adaptation of the time step.

For the method of adaptation of the type FIXE, the computed time step is worth 1.000000000000e-02.

On all the criteria of adaptation, the smallest time step is worth 1.000000000000e-02.

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

5.000000000000e-03.

[ 81%] Instant calculé : 6.55000e-01, dernier instant archivé : 6.55000e-01, au numéro d'ordre :

131

Time of computation: 6.600000000000e-01

INCREMENT	NEWTON	RESIDU	RESIDU
RECH. LINE.	RECH. LINE.	OPTION	NEWTON
INSTANT	ITERATION	RELATIF	ABSOLU
NB. ITER	COEFFICIENT	ASSEMBLAGE	TEMPS CALCUL
		RESI_GLOB_RELA	RESI_GLOB_MAXI
RHO		VALEUR	

6.60000E-01	0	8.38611E-18	7.73990E-22
	TANGENTE		

BILAN D'ENERGIE	TRAV_EXT	ENER_TOT	ENER_CIN	TRAV_AMOR
DISS_SCH				

PAS COURANT	0.0000E+00	-1.2679E-37	-1.0047E-25	0.0000E+00

TOTAL	2.9387E-07	4.0994E-21	-1.5263E-10	0.0000E+00

Criterion (S) of convergence reached (S)

The residue of the type RESI\_GLOB\_RELAX is worth 8.386105387689e-18 with the node and degree of

freedom N85220 DY

The residue of the type RESI\_GLOB\_MAXI is worth 7.739896632486e-22 with the node and degree of

freedom N85220 DY

Temps CPU consommé dans ce pas de temps : 23.575 s

\* Nombre d'itérations de Newton : 1

\* Temps total intégration comportement : 10.345 s (3 intégrations)

\* Temps total factorisation matrice : 3.332 s (1 factorisations)

\* Temps construction second membre : 5.320 s

\* Temps total résolution K.U=F : 0.139 s (1 résolutions)

\* Temps assemblage matrice : 0.990 s

\* Nombre d'itérations de recherche linéaire : 3

\* Temps autres opérations : 3.449 s

Mémoire (Mo) : 6177.50 / 3898.07 / 5648.52 / 1196.69 (VmPeak / VmSize / Optimum / Minimum)

Filing of the fields

Field stored DEPL at time 6.600000000000e-01 for the sequence number 132

Field stored SIEF\_ELGA at time 6.600000000000e-01 for the sequence number 132

Field stored VARI\_ELGA at time 6.600000000000e-01 for the sequence number 132

Field stored COMPORTEMENT at time 6.600000000000e-01 for the sequence number 132

Field stored VITE at time 6.600000000000e-01 for the sequence number 132

Field stored ACCE at time 6.600000000000e-01 for the sequence number 132

Field stored FORC\_AMOR at time 6.600000000000e-01 for the sequence number

132

Field stored FORC\_LIAI at time 6.600000000000e-01 for the sequence number 132

Adaptation of the time step.

For the method of adaptation of the type FIXE, the computed time step is worth  
1.000000000000e-02.

On all the criteria of adaptation, the smallest time step is worth 1.000000000000e-02.

After best fit on the compulsory points of transition, the smallest time step is worth  
5.000000000000e-03.

[ 82%] Instant calculé : 6.60000e-01, dernier instant archivé : 6.60000e-01, au numéro  
d'ordre :

132

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Time of computation: 6.650000000000e-01

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	INCREMENT		NEWTON		RESIDU		RESIDU	
RECH.	LINE.		RECH.	LINE.		OPTION		NEWTON
	INSTANT		ITERATION		RELATIF		ABSOLU	
NB.	ITER		COEFFICIENT		ASSEMBLAGE		TEMPS CALCUL	
					RESI_GLOB_RELA		RESI_GLOB_MAXI	
	RHO				VALEUR			

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	6.65000E-01		0		8.93959E-18		8.25073E-22	
			TANGENTE					

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| BILAN D'ENERGIE | TRAV\_EXT | ENER\_TOT | ENER\_CIN | TRAV\_AMOR  
| DISS\_SCH |

| PAS COURANT | 0.0000E+00 | -8.6207E-38 | -6.8269E-26 | 0.0000E+00 |  
6.8269E-26 |

| TOTAL | 2.9387E-07 | 4.0994E-21 | -1.5263E-10 | 0.0000E+00 |  
2.9403E-07 |

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Criterion (S) of convergence reached (S)

The residue of the type RESI\_GLOB\_RELAX is worth 8.939587918578e-18 with the  
node and degree of

freedom N87473 DX

The residue of the type RESI\_GLOB\_MAXI is worth 8.250729418258e-22 with the  
node and degree of

freedom N87473 DX

Temps CPU consommé dans ce pas de temps : 23.497 s

\* Nombre d'itérations de Newton : 1

\* Temps total intégration comportement : 10.291 s (3 intégrations)

\* Temps total factorisation matrice : 3.331 s (1 factorisations)

\* Temps construction second membre : 5.303 s

\* Temps total résolution K.U=F : 0.137 s (1 résolutions)

\* Temps assemblage matrice : 0.988 s

\* Nombre d'itérations de recherche linéaire : 3

\* Temps autres opérations : 3.446 s

Mémoire (Mo) : 6177.50 / 3943.50 / 5648.52 / 1196.69 (VmPeak / VmSize /  
Optimum / Minimum)

Filing of the fields

Field stored DEPL at time 6.650000000000e-01 for the sequence number 133

Field stored SIEF\_ELGA at time 6.650000000000e-01 for the sequence number 133

Field stored VARI\_ELGA at time 6.650000000000e-01 for the sequence number 133

Field stored COMPORTEMENT at time 6.650000000000e-01 for the sequence number 133

Field stored VITE at time 6.650000000000e-01 for the sequence number 133

Field stored ACCE at time 6.650000000000e-01 for the sequence number 133

Field stored FORC\_AMOR at time 6.650000000000e-01 for the sequence number 133

Field stored FORC\_LIAI at time 6.650000000000e-01 for the sequence number 133

Adaptation of the time step.

For the method of adaptation of the type FIXE, the computed time step is worth 1.000000000000e-02.

On all the criteria of adaptation, the smallest time step is worth 1.000000000000e-02.

After best fit on the compulsory points of transition, the smallest time step is worth 5.000000000000e-03.

[ 83%] Instant calculé : 6.65000e-01, dernier instant archivé : 6.65000e-01, au numéro d'ordre :

133

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Time of computation: 6.700000000000e-01

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	INCREMENT		NEWTON		RESIDU		RESIDU	
RECH.	LINE.		RECH.	LINE.		OPTION		NEWTON
	INSTANT		ITERATION		RELATIF		ABSOLU	
NB. ITER		COEFFICIENT		ASSEMBLAGE		TEMPS CALCUL		



		RESI_GLOB_RELA	RESI_GLOB_MAXI	
RHO		VALEUR		
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6.70000E-01	0	8.56433E-18	7.90439E-22	
	TANGENTE			
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-----				
-----				
-----				
BILAN D'ENERGIE	TRAV_EXT	ENER_TOT	ENER_CIN	TRAV_AMOR
DISS_SCH				
PAS COURANT	0.0000E+00	-5.8605E-38	-4.6384E-26	0.0000E+00
				4.6384E-26
TOTAL	2.9387E-07	4.0994E-21	-1.5263E-10	0.0000E+00
				2.9403E-07
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Criterion (S) of convergence reached (S)

The residue of the type RESI\_GLOB\_RELA is worth 8.564333580357e-18 with the node and degree of

freedom N82016 DX

The residue of the type RESI\_GLOB\_MAXI is worth 7.904391081873e-22 with the node and degree of

freedom N82016 DX

Temps CPU consommé dans ce pas de temps : 23.502 s

\* Nombre d'itérations de Newton : 1

\* Temps total intégration comportement : 10.249 s (3 intégrations)

\* Temps total factorisation matrice : 3.367 s (1 factorisations)

\* Temps construction second membre : 5.307 s

\* Temps total résolution K.U=F : 0.140 s (1 résolutions)

\* Temps assemblage matrice : 0.990 s

\* Nombre d'itérations de recherche linéaire : 3

\* Temps autres opérations : 3.448 s

Mémoire (Mo) : 6177.50 / 3988.93 / 5648.52 / 1196.69 (VmPeak / VmSize / Optimum / Minimum)

Filing of the fields

Field stored DEPL at time 6.700000000000e-01 for the sequence number 134

Field stored SIEF\_ELGA at time 6.700000000000e-01 for the sequence number 134

Field stored VARI\_ELGA at time 6.700000000000e-01 for the sequence number 134

Field stored COMPORTEMENT at time 6.700000000000e-01 for the sequence number 134

Field stored VITE at time 6.700000000000e-01 for the sequence number 134

Field stored ACCE at time 6.700000000000e-01 for the sequence number 134

Field stored FORC\_AMOR at time 6.700000000000e-01 for the sequence number 134

Field stored FORC\_LIAI at time 6.700000000000e-01 for the sequence number 134

Adaptation of the time step.

For the method of adaptation of the type FIXE, the computed time step is worth 1.000000000000e-02.

On all the criteria of adaptation, the smallest time step is worth 1.000000000000e-02.

After best fit on the compulsory points of transition, the smallest time step is worth 5.000000000000e-03.

[ 83%] Instant calculé : 6.70000e-01, dernier instant archivé : 6.70000e-01, au numéro d'ordre :

134

Time of computation: 6.750000000000e-01

INCREMENT	NEWTON	RESIDU	RESIDU
RECH. LINE.	RECH. LINE.	OPTION	NEWTON
INSTANT	ITERATION	RELATIF	ABSOLU
NB. ITER	COEFFICIENT	ASSEMBLAGE	TEMPS CALCUL
		RESI_GLOB_RELA	RESI_GLOB_MAXI
RHO		VALEUR	

6.75000E-01	0	7.16633E-18	6.61411E-22
	TANGENTE		

BILAN D'ENERGIE	TRAV_EXT	ENER_TOT	ENER_CIN	TRAV_AMOR
DISS_SCH				
PAS COURANT	0.0000E+00	-3.9836E-38	-3.1511E-26	0.0000E+00
				3.1511E-26
TOTAL	2.9387E-07	4.0994E-21	-1.5263E-10	0.0000E+00
				2.9403E-07

Criterion (S) of convergence reached (S)

The residue of the type RESI\_GLOB\_RELA is worth 7.166327153882e-18 with the node and degree of

freedom N84646 DY

The residue of the type RESI\_GLOB\_MAXI is worth 6.614110942018e-22 with the node and degree of

freedom N84646 DY

Temps CPU consommé dans ce pas de temps : 23.465 s

- \* Nombre d'itérations de Newton : 1
- \* Temps total intégration comportement : 10.265 s (3 intégrations)
- \* Temps total factorisation matrice : 3.326 s (1 factorisations)
- \* Temps construction second membre : 5.301 s
- \* Temps total résolution K.U=F : 0.138 s (1 résolutions)
- \* Temps assemblage matrice : 0.988 s
- \* Nombre d'itérations de recherche linéaire : 3
- \* Temps autres opérations : 3.446 s

Mémoire (Mo) : 6177.50 / 4034.36 / 5648.52 / 1196.69 (VmPeak / VmSize / Optimum / Minimum)

Filing of the fields

Field stored DEPL at time 6.750000000000e-01 for the sequence number 135

Field stored SIEF\_ELGA at time 6.750000000000e-01 for the sequence number 135

Field stored VARI\_ELGA at time 6.750000000000e-01 for the sequence number 135

Field stored COMPORTEMENT at time 6.750000000000e-01 for the sequence number 135

Field stored VITE at time 6.750000000000e-01 for the sequence number 135

Field stored ACCE at time 6.750000000000e-01 for the sequence number 135

Field stored FORC\_AMOR at time 6.750000000000e-01 for the sequence number 135

Field stored FORC\_LIAI at time 6.750000000000e-01 for the sequence number 135

Adaptation of the time step.

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

1.000000000000e-02.

On all the criteria of adaptation, the smallest time step is worth 1.000000000000e-02.

After best fit on the compulsory points of transition, the smallest time step is worth 5.000000000000e-03.

[ 84%] Instant calculé : 6.75000e-01, dernier instant archivé : 6.75000e-01, au numéro d'ordre :

135

Time of computation: 6.800000000000e-01

INCREMENT	NEWTON	RESIDU	RESIDU
RECH. LINE.	RECH. LINE.	OPTION	NEWTON
INSTANT	ITERATION	RELATIF	ABSOLU
NB. ITER	COEFFICIENT	ASSEMBLAGE	TEMPS CALCUL
RHO		RESI_GLOB_RELA	RESI_GLOB_MAXI
		VALEUR	

6.80000E-01	0	7.92152E-18	7.31111E-22
	TANGENTE		

BILAN D'ENERGIE	TRAV_EXT	ENER_TOT	ENER_CIN	TRAV_AMOR
DISS_SCH				

PAS COURANT	0.0000E+00	-2.7075E-38	-2.1405E-26	0.0000E+00
				2.1405E-26

| TOTAL | 2.9387E-07 | 4.0994E-21 | -1.5263E-10 | 0.0000E+00 |  
2.9403E-07 |

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Criterion (S) of convergence reached (S)

The residue of the type RESI\_GLOB\_RELAX is worth 7.921516673822e-18 with the  
node and degree of

freedom N80427 DX

The residue of the type RESI\_GLOB\_MAXI is worth 7.311107766175e-22 with the  
node and degree of

freedom N80427 DX

Temps CPU consommé dans ce pas de temps : 23.479 s

\* Nombre d'itérations de Newton : 1

\* Temps total intégration comportement : 10.260 s (3 intégrations)

\* Temps total factorisation matrice : 3.339 s (1 factorisations)

\* Temps construction second membre : 5.314 s

\* Temps total résolution K.U=F : 0.140 s (1 résolutions)

\* Temps assemblage matrice : 0.988 s

\* Nombre d'itérations de recherche linéaire : 3

\* Temps autres opérations : 3.438 s

Mémoire (Mo) : 6177.50 / 4079.79 / 5648.52 / 1196.69 (VmPeak / VmSize /  
Optimum / Minimum)

Filing of the fields

Field stored DEPL at time 6.800000000000e-01 for the sequence number 136

Field stored SIEF\_ELGA at time 6.800000000000e-01 for the sequence number 136

Field stored VARI\_ELGA at time 6.800000000000e-01 for the sequence number  
136

Field stored COMPORTEMENT at time 6.800000000000e-01 for the sequence  
number 136

Field stored VITE at time 6.800000000000e-01 for the sequence number 136

Field stored ACCE at time 6.800000000000e-01 for the sequence number 136

Field stored FORC\_AMOR at time 6.800000000000e-01 for the sequence number 136

Field stored FORC\_LIAI at time 6.800000000000e-01 for the sequence number 136

Adaptation of the time step.

For the method of adaptation of the type FIXE, the computed time step is worth 1.000000000000e-02.

On all the criteria of adaptation, the smallest time step is worth 1.000000000000e-02.

After best fit on the compulsory points of transition, the smallest time step is worth 5.000000000000e-03.

[ 85%] Instant calculé : 6.80000e-01, dernier instant archivé : 6.80000e-01, au numéro d'ordre :

136

Time of computation: 6.850000000000e-01

	INCREMENT		NEWTON		RESIDU		RESIDU	
RECH.	LINE.		RECH.	LINE.		OPTION		NEWTON
	INSTANT		ITERATION		RELATIF		ABSOLU	
NB. ITER		COEFFICIENT		ASSEMBLAGE		TEMPS CALCUL		
					RESI_GLOB_REL		RESI_GLOB_MAXI	
	RHO				VALEUR			

	6.85000E-01		0		7.99334E-18		7.37739E-22	
			TANGENTE					

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| BILAN D'ENERGIE | TRAV_EXT | ENER_TOT | ENER_CIN | TRAV_AMOR
| DISS_SCH |
| PAS COURANT | 0.0000E+00 | -1.8400E-38 | -1.4538E-26 | 0.0000E+00 |
1.4538E-26 |
| TOTAL | 2.9387E-07 | 4.0994E-21 | -1.5263E-10 | 0.0000E+00 |
2.9403E-07 |
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Criterion (S) of convergence reached (S)

The residue of the type RESI\_GLOB\_RELA is worth 7.993337750114e-18 with the node and degree of

freedom N80206 DX

The residue of the type RESI\_GLOB\_MAXI is worth 7.377394520376e-22 with the node and degree of

freedom N80206 DX

Temps CPU consommé dans ce pas de temps : 23.538 s

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* Nombre d'itérations de Newton : 1
* Temps total intégration comportement : 10.304 s (3 intégrations)
* Temps total factorisation matrice : 3.336 s (1 factorisations)
* Temps construction second membre : 5.325 s
* Temps total résolution K.U=F : 0.137 s (1 résolutions)
* Temps assemblage matrice : 0.988 s
* Nombre d'itérations de recherche linéaire : 3
* Temps autres opérations : 3.448 s

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Mémoire (Mo) : 6177.50 / 4125.22 / 5648.52 / 1196.69 (VmPeak / VmSize /



Optimum / Minimum)

Filing of the fields

Field stored DEPL at time 6.850000000000e-01 for the sequence number 137

Field stored SIEF\_ELGA at time 6.850000000000e-01 for the sequence number 137

Field stored VARI\_ELGA at time 6.850000000000e-01 for the sequence number 137

Field stored COMPORTEMENT at time 6.850000000000e-01 for the sequence number 137

Field stored VITE at time 6.850000000000e-01 for the sequence number 137

Field stored ACCE at time 6.850000000000e-01 for the sequence number 137

Field stored FORC\_AMOR at time 6.850000000000e-01 for the sequence number 137

Field stored FORC\_LIAI at time 6.850000000000e-01 for the sequence number 137

Adaptation of the time step.

For the method of adaptation of the type FIXE, the computed time step is worth 1.000000000000e-02.

On all the criteria of adaptation, the smallest time step is worth 1.000000000000e-02.

After best fit on the compulsory points of transition, the smallest time step is worth 5.000000000000e-03.

[ 85%] Instant calculé : 6.85000e-01, dernier instant archivé : 6.85000e-01, au numéro d'ordre :

137

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Time of computation: 6.900000000000e-01

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	INCREMENT		NEWTON		RESIDU		RESIDU	
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RECH. LINE.	RECH. LINE.	OPTION	NEWTON
INSTANT	ITERATION	RELATIF	ABSOLU
NB. ITER	COEFFICIENT	ASSEMBLAGE	TEMPS CALCUL
		RESI_GLOB_RELA	RESI_GLOB_MAXI
RHO		VALEUR	

6.90000E-01	0	7.79720E-18	7.19637E-22
	TANGENTE		

BILAN D'ENERGIE	TRAV_EXT	ENER_TOT	ENER_CIN	TRAV_AMOR
DISS_SCH				
PAS COURANT	0.0000E+00	-1.2503E-38	-9.8734E-27	0.0000E+00
TOTAL	2.9387E-07	4.0994E-21	-1.5263E-10	0.0000E+00

Criterion (S) of convergence reached (S)

The residue of the type RESI\_GLOB\_RELA is worth 7.797204554387e-18 with the node and degree of freedom N82156 DX

The residue of the type RESI\_GLOB\_MAXI is worth 7.196374775102e-22 with the node and degree of freedom N82156 DX

Temps CPU consommé dans ce pas de temps : 23.537 s

\* Nombre d'itérations de Newton : 1

\* Temps total intégration comportement : 10.317 s (3 intégrations)

\* Temps total factorisation matrice : 3.330 s (1 factorisations)

\* Temps construction second membre : 5.313 s

\* Temps total résolution K.U=F : 0.139 s (1 résolutions)

\* Temps assemblage matrice : 0.989 s

\* Nombre d'itérations de recherche linéaire : 3

\* Temps autres opérations : 3.448 s

Mémoire (Mo) : 6177.50 / 4170.65 / 5648.52 / 1196.69 (VmPeak / VmSize / Optimum / Minimum)

Filing of the fields

Field stored DEPL at time 6.900000000000e-01 for the sequence number 138

Field stored SIEF\_ELGA at time 6.900000000000e-01 for the sequence number 138

Field stored VARI\_ELGA at time 6.900000000000e-01 for the sequence number 138

Field stored COMPORTEMENT at time 6.900000000000e-01 for the sequence number 138

Field stored VITE at time 6.900000000000e-01 for the sequence number 138

Field stored ACCE at time 6.900000000000e-01 for the sequence number 138

Field stored FORC\_AMOR at time 6.900000000000e-01 for the sequence number 138

Field stored FORC\_LIAI at time 6.900000000000e-01 for the sequence number 138

Adaptation of the time step.

For the method of adaptation of the type FIXE, the computed time step is worth 1.000000000000e-02.

On all the criteria of adaptation, the smallest time step is worth 1.000000000000e-02.

After best fit on the compulsory points of transition, the smallest time step is worth 5.000000000000e-03.

[ 86%] Instant calculé : 6.90000e-01, dernier instant archivé : 6.90000e-01, au numéro d'ordre :

138

Time of computation: 6.950000000000e-01

INCREMENT	NEWTON	RESIDU	RESIDU
RECH. LINE.	RECH. LINE.	OPTION	NEWTON
INSTANT	ITERATION	RELATIF	ABSOLU
NB. ITER	COEFFICIENT	ASSEMBLAGE	TEMPS CALCUL
		RESI_GLOB_RELA	RESI_GLOB_MAXI
RHO		VALEUR	

6.95000E-01	0	8.60872E-18	7.94536E-22
	TANGENTE		

BILAN D'ENERGIE	TRAV_EXT	ENER_TOT	ENER_CIN	TRAV_AMOR
DISS_SCH				

PAS COURANT	0.0000E+00	-8.4949E-39	-6.7047E-27	0.0000E+00
				6.7047E-27

TOTAL	2.9387E-07	4.0994E-21	-1.5263E-10	0.0000E+00
				2.9403E-07

Criterion (S) of convergence reached (S)

The residue of the type RESI\_GLOB\_RELA is worth 8.608719343827e-18 with the node and degree of

freedom N82016 DZ

The residue of the type RESI\_GLOB\_MAXI is worth 7.945356608220e-22 with the node and degree of

freedom N82016 DZ

Temps CPU consommé dans ce pas de temps : 23.639 s

\* Nombre d'itérations de Newton : 1

\* Temps total intégration comportement : 10.321 s (3 intégrations)

\* Temps total factorisation matrice : 3.381 s (1 factorisations)

\* Temps construction second membre : 5.328 s

\* Temps total résolution K.U=F : 0.142 s (1 résolutions)

\* Temps assemblage matrice : 0.996 s

\* Nombre d'itérations de recherche linéaire : 3

\* Temps autres opérations : 3.471 s

Mémoire (Mo) : 6177.50 / 4216.08 / 5648.52 / 1196.69 (VmPeak / VmSize / Optimum / Minimum)

Filing of the fields

Field stored DEPL at time 6.950000000000e-01 for the sequence number 139

Field stored SIEF\_ELGA at time 6.950000000000e-01 for the sequence number 139

Field stored VARI\_ELGA at time 6.950000000000e-01 for the sequence number 139

Field stored COMPORTEMENT at time 6.950000000000e-01 for the sequence number 139

Field stored VITE at time 6.950000000000e-01 for the sequence number 139

Field stored ACCE at time 6.950000000000e-01 for the sequence number 139

Field stored FORC\_AMOR at time 6.950000000000e-01 for the sequence number 139

Field stored FORC\_LIAI at time 6.950000000000e-01 for the sequence number 139

Adaptation of the time step.

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

1.000000000000e-02.

On all the criteria of adaptation, the smallest time step is worth 1.000000000000e-02.

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

5.000000000000e-03.

[ 86%] Instant calculé : 6.95000e-01, dernier instant archivé : 6.95000e-01, au numéro d'ordre :

139

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Time of computation: 7.000000000000e-01

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INCREMENT	NEWTON	RESIDU	RESIDU
RECH. LINE.	RECH. LINE.	OPTION	NEWTON
INSTANT	ITERATION	RELATIF	ABSOLU
NB. ITER	COEFFICIENT	ASSEMBLAGE	TEMPS CALCUL
		RESI_GLOB_RELA	RESI_GLOB_MAXI
RHO		VALEUR	

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7.00000E-01	0	8.25825E-18	7.62189E-22
	TANGENTE		

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| BILAN D'ENERGIE | TRAV\_EXT | ENER\_TOT | ENER\_CIN | TRAV\_AMOR  
| DISS\_SCH |

| PAS COURANT | 0.0000E+00 | -5.7711E-39 | -4.5524E-27 | 0.0000E+00 |  
4.5524E-27 |

| TOTAL | 2.9387E-07 | 4.0994E-21 | -1.5263E-10 | 0.0000E+00 |  
2.9403E-07 |

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Criterion (S) of convergence reached (S)

The residue of the type RESI\_GLOB\_RELA is worth 8.258245685137e-18 with the  
node and degree of

freedom N84925 DY

The residue of the type RESI\_GLOB\_MAXI is worth 7.621889424675e-22 with the  
node and degree of

freedom N84925 DY

Temps CPU consommé dans ce pas de temps : 23.519 s

\* Nombre d'itérations de Newton : 1

\* Temps total intégration comportement : 10.241 s (3 intégrations)

\* Temps total factorisation matrice : 3.378 s (1 factorisations)

\* Temps construction second membre : 5.312 s

\* Temps total résolution K.U=F : 0.141 s (1 résolutions)

\* Temps assemblage matrice : 0.992 s

\* Nombre d'itérations de recherche linéaire : 3

\* Temps autres opérations : 3.455 s

Mémoire (Mo) : 6177.50 / 4261.55 / 5648.52 / 1196.69 (VmPeak / VmSize /  
Optimum / Minimum)

Filing of the fields

Field stored DEPL at time 7.000000000000e-01 for the sequence number 140

Field stored SIEF\_ELGA at time 7.000000000000e-01 for the sequence number 140

Field stored VARI\_ELGA at time 7.000000000000e-01 for the sequence number 140

Field stored COMPORTEMENT at time 7.000000000000e-01 for the sequence number 140

Field stored VITE at time 7.000000000000e-01 for the sequence number 140

Field stored ACCE at time 7.000000000000e-01 for the sequence number 140

Field stored FORC\_AMOR at time 7.000000000000e-01 for the sequence number 140

Field stored FORC\_LIAI at time 7.000000000000e-01 for the sequence number 140

Adaptation of the time step.

For the method of adaptation of the type FIXE, the computed time step is worth 1.000000000000e-02.

On all the criteria of adaptation, the smallest time step is worth 1.000000000000e-02.

After best fit on the compulsory points of transition, the smallest time step is worth 5.000000000000e-03.

[ 87%] Instant calculé : 7.00000e-01, dernier instant archivé : 7.00000e-01, au numéro d'ordre :

140

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Time of computation: 7.050000000000e-01

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	INCREMENT		NEWTON		RESIDU		RESIDU	
RECH.	LINE.		RECH.	LINE.		OPTION		NEWTON
	INSTANT		ITERATION		RELATIF		ABSOLU	
NB. ITER		COEFFICIENT		ASSEMBLAGE		TEMPS CALCUL		
					RESI_GLOB_RELA		RESI_GLOB_MAXI	
	RHO				VALEUR			



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| 7.05000E-01 | 0 | 7.59478E-18 | 7.00955E-22 |
|              |TANGENTE |              |
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| BILAN D'ENERGIE | TRAV_EXT | ENER_TOT | ENER_CIN | TRAV_AMOR
| DISS_SCH |
| PAS COURANT | 0.0000E+00 | -3.9202E-39 | -3.0908E-27 | 0.0000E+00 |
3.0908E-27 |
| TOTAL | 2.9387E-07 | 4.0994E-21 | -1.5263E-10 | 0.0000E+00 |
2.9403E-07 |
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Criterion (S) of convergence reached (S)

The residue of the type RESI\_GLOB\_RELA is worth 7.594779117442e-18 with the node and degree of

freedom N84889 DY

The residue of the type RESI\_GLOB\_MAXI is worth 7.009547650315e-22 with the node and degree of

freedom N84889 DY

Temps CPU consommé dans ce pas de temps : 23.472 s

\* Nombre d'itérations de Newton : 1

\* Temps total intégration comportement : 10.249 s (3 intégrations)

\* Temps total factorisation matrice : 3.329 s (1 factorisations)

\* Temps construction second membre : 5.317 s

\* Temps total résolution K.U=F : 0.138 s (1 résolutions)

\* Temps assemblage matrice : 0.986 s

\* Nombre d'itérations de recherche linéaire : 3

\* Temps autres opérations : 3.453 s

Mémoire (Mo) : 6177.50 / 4307.07 / 5648.52 / 1196.69 (VmPeak / VmSize / Optimum / Minimum)

Filing of the fields

Field stored DEPL at time 7.050000000000e-01 for the sequence number 141

Field stored SIEF\_ELGA at time 7.050000000000e-01 for the sequence number 141

Field stored VARI\_ELGA at time 7.050000000000e-01 for the sequence number 141

Field stored COMPORTEMENT at time 7.050000000000e-01 for the sequence number 141

Field stored VITE at time 7.050000000000e-01 for the sequence number 141

Field stored ACCE at time 7.050000000000e-01 for the sequence number 141

Field stored FORC\_AMOR at time 7.050000000000e-01 for the sequence number 141

Field stored FORC\_LIAI at time 7.050000000000e-01 for the sequence number 141

Adaptation of the time step.

For the method of adaptation of the type FIXE, the computed time step is worth 1.000000000000e-02.

On all the criteria of adaptation, the smallest time step is worth 1.000000000000e-02.

After best fit on the compulsory points of transition, the smallest time step is worth 5.000000000000e-03.

[ 88%] Instant calculé : 7.05000e-01, dernier instant archivé : 7.05000e-01, au numéro d'ordre :

141

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Time of computation: 7.100000000000e-01

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| INCREMENT | NEWTON | RESIDU | RESIDU |
RECH. LINE. | RECH. LINE. | OPTION | NEWTON |
| INSTANT | ITERATION | RELATIF | ABSOLU |
NB. ITER | COEFFICIENT | ASSEMBLAGE | TEMPS CALCUL |
| | | RESI_GLOB_RELA | RESI_GLOB_MAXI |
| RHO | | VALEUR |

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| 7.10000E-01 | 0 | 7.89505E-18 | 7.28668E-22 |
| | TANGENTE | |

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| BILAN D'ENERGIE | TRAV_EXT | ENER_TOT | ENER_CIN | TRAV_AMOR
| DISS_SCH |
| PAS COURANT | 0.0000E+00 | -2.6627E-39 | -2.0982E-27 | 0.0000E+00 |
2.0982E-27 |
| TOTAL | 2.9387E-07 | 4.0994E-21 | -1.5263E-10 | 0.0000E+00 |
2.9403E-07 |

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Criterion (S) of convergence reached (S)

The residue of the type RESI\_GLOB\_RELA is worth 7.895048511632e-18 with the node and degree of

freedom N84894 DX

The residue of the type RESI\_GLOB\_MAXI is worth 7.286679163155e-22 with the node and degree of

freedom N84894 DX

Temps CPU consommé dans ce pas de temps : 23.501 s

\* Nombre d'itérations de Newton : 1

\* Temps total intégration comportement : 10.267 s (3 intégrations)

\* Temps total factorisation matrice : 3.347 s (1 factorisations)

\* Temps construction second membre : 5.310 s

\* Temps total résolution  $K.U=F$  : 0.138 s (1 résolutions)

\* Temps assemblage matrice : 0.990 s

\* Nombre d'itérations de recherche linéaire : 3

\* Temps autres opérations : 3.449 s

Mémoire (Mo) : 6177.50 / 4352.50 / 5648.52 / 1196.69 (VmPeak / VmSize / Optimum / Minimum)

Filing of the fields

Field stored DEPL at time 7.100000000000e-01 for the sequence number 142

Field stored SIEF\_ELGA at time 7.100000000000e-01 for the sequence number 142

Field stored VARI\_ELGA at time 7.100000000000e-01 for the sequence number 142

Field stored COMPORTEMENT at time 7.100000000000e-01 for the sequence number 142

Field stored VITE at time 7.100000000000e-01 for the sequence number 142

Field stored ACCE at time 7.100000000000e-01 for the sequence number 142

Field stored FORC\_AMOR at time 7.100000000000e-01 for the sequence number 142

Field stored FORC\_LIAI at time 7.100000000000e-01 for the sequence number 142

Adaptation of the time step.

For the method of adaptation of the type FIXE, the computed time step is worth 1.000000000000e-02.

On all the criteria of adaptation, the smallest time step is worth 1.000000000000e-02.

After best fit on the compulsory points of transition, the smallest time step is worth  
5.000000000000e-03.

[ 88%] Instant calculé : 7.10000e-01, dernier instant archivé : 7.10000e-01, au numéro  
d'ordre :

142

Time of computation: 7.150000000000e-01

INCREMENT	NEWTON	RESIDU	RESIDU
RECH. LINE.	RECH. LINE.	OPTION	NEWTON
INSTANT	ITERATION	RELATIF	ABSOLU
NB. ITER	COEFFICIENT	ASSEMBLAGE	TEMPS CALCUL
		RESI_GLOB_RELA	RESI_GLOB_MAXI
RHO		VALEUR	

7.15000E-01	0	8.19098E-18	7.55981E-22
	TANGENTE		

BILAN D'ENERGIE	TRAV_EXT	ENER_TOT	ENER_CIN	TRAV_AMOR
DISS_SCH				

PAS COURANT	0.0000E+00	-1.8083E-39	-1.4243E-27	0.0000E+00

TOTAL	2.9387E-07	4.0994E-21	-1.5263E-10	0.0000E+00

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Criterion (S) of convergence reached (S)

The residue of the type RESI\_GLOB\_RELA is worth 8.190977939232e-18 with the node and degree of

freedom N85349 DX

The residue of the type RESI\_GLOB\_MAXI is worth 7.559805134539e-22 with the node and degree of

freedom N85349 DX

Temps CPU consommé dans ce pas de temps : 23.514 s

\* Nombre d'itérations de Newton : 1

\* Temps total intégration comportement : 10.286 s (3 intégrations)

\* Temps total factorisation matrice : 3.352 s (1 factorisations)

\* Temps construction second membre : 5.310 s

\* Temps total résolution K.U=F : 0.138 s (1 résolutions)

\* Temps assemblage matrice : 0.982 s

\* Nombre d'itérations de recherche linéaire : 3

\* Temps autres opérations : 3.446 s

Mémoire (Mo) : 6177.50 / 4397.93 / 5648.52 / 1196.69 (VmPeak / VmSize / Optimum / Minimum)

Filing of the fields

Field stored DEPL at time 7.150000000000e-01 for the sequence number 143

Field stored SIEF\_ELGA at time 7.150000000000e-01 for the sequence number 143

Field stored VARI\_ELGA at time 7.150000000000e-01 for the sequence number 143

Field stored COMPORTEMENT at time 7.150000000000e-01 for the sequence number 143

Field stored VITE at time 7.150000000000e-01 for the sequence number 143

Field stored ACCE at time 7.150000000000e-01 for the sequence number 143

Field stored FORC\_AMOR at time 7.150000000000e-01 for the sequence number 143

Field stored FORC\_LIAI at time 7.150000000000e-01 for the sequence number 143

Adaptation of the time step.

For the method of adaptation of the type FIXE, the computed time step is worth 1.000000000000e-02.

On all the criteria of adaptation, the smallest time step is worth 1.000000000000e-02.

After best fit on the compulsory points of transition, the smallest time step is worth 5.000000000000e-03.

[ 89%] Instant calculé : 7.15000e-01, dernier instant archivé : 7.15000e-01, au numéro d'ordre :

143

Time of computation: 7.200000000000e-01

INCREMENT	NEWTON	RESIDU	RESIDU
RECH. LINE.	RECH. LINE.	OPTION	NEWTON
INSTANT	ITERATION	RELATIF	ABSOLU
NB. ITER	COEFFICIENT	ASSEMBLAGE	TEMPS CALCUL
		RESI_GLOB_RELA	RESI_GLOB_MAXI
RHO		VALEUR	

7.20000E-01	0	8.53593E-18	7.87818E-22
	TANGENTE		

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| BILAN D'ENERGIE | TRAV_EXT | ENER_TOT | ENER_CIN | TRAV_AMOR
| DISS_SCH |
| PAS COURANT | 0.0000E+00 | -1.2280E-39 | -9.6668E-28 | 0.0000E+00 |
9.6668E-28 |
| TOTAL | 2.9387E-07 | 4.0994E-21 | -1.5263E-10 | 0.0000E+00 |
2.9403E-07 |
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Criterion (S) of convergence reached (S)

The residue of the type RESI\_GLOB\_RELA is worth 8.535931174328e-18 with the node and degree of

freedom N79852 DY

The residue of the type RESI\_GLOB\_MAXI is worth 7.878177282187e-22 with the node and degree of

freedom N79852 DY

Temps CPU consommé dans ce pas de temps : 23.496 s

\* Nombre d'itérations de Newton : 1

\* Temps total intégration comportement : 10.295 s (3 intégrations)

\* Temps total factorisation matrice : 3.306 s (1 factorisations)

\* Temps construction second membre : 5.325 s

\* Temps total résolution K.U=F : 0.137 s (1 résolutions)

\* Temps assemblage matrice : 0.990 s

\* Nombre d'itérations de recherche linéaire : 3

\* Temps autres opérations : 3.443 s

Mémoire (Mo) : 6177.50 / 4443.36 / 5648.52 / 1196.69 (VmPeak / VmSize / Optimum / Minimum)

Filing of the fields



Field stored DEPL at time 7.200000000000e-01 for the sequence number 144

Field stored SIEF\_ELGA at time 7.200000000000e-01 for the sequence number 144

Field stored VARI\_ELGA at time 7.200000000000e-01 for the sequence number 144

Field stored COMPORTEMENT at time 7.200000000000e-01 for the sequence number 144

Field stored VITE at time 7.200000000000e-01 for the sequence number 144

Field stored ACCE at time 7.200000000000e-01 for the sequence number 144

Field stored FORC\_AMOR at time 7.200000000000e-01 for the sequence number 144

Field stored FORC\_LIAI at time 7.200000000000e-01 for the sequence number 144

Adaptation of the time step.

For the method of adaptation of the type FIXE, the computed time step is worth 1.000000000000e-02.

On all the criteria of adaptation, the smallest time step is worth 1.000000000000e-02.

After best fit on the compulsory points of transition, the smallest time step is worth 5.000000000000e-03.

[ 90%] Instant calculé : 7.20000e-01, dernier instant archivé : 7.20000e-01, au numéro d'ordre :

144

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Time of computation: 7.250000000000e-01

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	INCREMENT		NEWTON		RESIDU		RESIDU	
RECH.	LINE.		RECH.	LINE.		OPTION		NEWTON
	INSTANT		ITERATION		RELATIF		ABSOLU	

NB. ITER	COEFFICIENT	ASSEMBLAGE	TEMPS CALCUL	
		RESI_GLOB_RELA	RESI_GLOB_MAXI	
RHO		VALEUR		
-----				
7.25000E-01	0	8.46944E-18	7.81681E-22	
	TANGENTE			
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-----				
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-----				
BILAN D'ENERGIE	TRAV_EXT	ENER_TOT	ENER_CIN	TRAV_AMOR
DISS_SCH				
PAS COURANT	0.0000E+00	-8.3381E-40	-6.5605E-28	0.0000E+00
				6.5605E-28
TOTAL	2.9387E-07	4.0994E-21	-1.5263E-10	0.0000E+00
				2.9403E-07
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Criterion (S) of convergence reached (S)

The residue of the type RESI\_GLOB\_RELA is worth 8.469443181086e-18 with the node and degree of

freedom N81701 DY

The residue of the type RESI\_GLOB\_MAXI is worth 7.816812659254e-22 with the node and degree of

freedom N81701 DY

Temps CPU consommé dans ce pas de temps : 23.452 s

\* Nombre d'itérations de Newton : 1

\* Temps total intégration comportement : 10.248 s (3 intégrations)

\* Temps total factorisation matrice : 3.325 s (1 factorisations)

\* Temps construction second membre : 5.298 s

\* Temps total résolution K.U=F : 0.138 s (1 résolutions)

\* Temps assemblage matrice : 0.987 s

\* Nombre d'itérations de recherche linéaire : 3

\* Temps autres opérations : 3.456 s

Mémoire (Mo) : 6177.50 / 4488.79 / 5648.52 / 1196.69 (VmPeak / VmSize / Optimum / Minimum)

Filing of the fields

Field stored DEPL at time 7.250000000000e-01 for the sequence number 145

Field stored SIEF\_ELGA at time 7.250000000000e-01 for the sequence number 145

Field stored VARI\_ELGA at time 7.250000000000e-01 for the sequence number 145

Field stored COMPORTEMENT at time 7.250000000000e-01 for the sequence number 145

Field stored VITE at time 7.250000000000e-01 for the sequence number 145

Field stored ACCE at time 7.250000000000e-01 for the sequence number 145

Field stored FORC\_AMOR at time 7.250000000000e-01 for the sequence number 145

Field stored FORC\_LIAI at time 7.250000000000e-01 for the sequence number 145

Adaptation of the time step.

For the method of adaptation of the type FIXE, the computed time step is worth 1.000000000000e-02.

On all the criteria of adaptation, the smallest time step is worth 1.000000000000e-02.

After best fit on the compulsory points of transition, the smallest time step is worth 5.000000000000e-03.

[ 90%] Instant calculé : 7.25000e-01, dernier instant archivé : 7.25000e-01, au numéro d'ordre :

Time of computation: 7.300000000000e-01

INCREMENT	NEWTON	RESIDU	RESIDU
RECH. LINE.	RECH. LINE.	OPTION	NEWTON
INSTANT	ITERATION	RELATIF	ABSOLU
NB. ITER	COEFFICIENT	ASSEMBLAGE	TEMPS CALCUL
		RESI_GLOB_RELA	RESI_GLOB_MAXI
RHO		VALEUR	

7.30000E-01	0	7.59181E-18	7.00681E-22
	TANGENTE		

BILAN D'ENERGIE	TRAV_EXT	ENER_TOT	ENER_CIN	TRAV_AMOR
DISS_SCH				
PAS COURANT	0.0000E+00	-5.6610E-40	-4.4520E-28	0.0000E+00
TOTAL	2.9387E-07	4.0994E-21	-1.5263E-10	0.0000E+00

Criterion (S) of convergence reached (S)

The residue of the type RESI\_GLOB\_RELA is worth 7.591809193719e-18 with the node and degree of

freedom N79708 DY

The residue of the type RESI\_GLOB\_MAXI is worth 7.006806580228e-22 with the node and degree of

freedom N79708 DY

Temps CPU consommé dans ce pas de temps : 23.517 s

\* Nombre d'itérations de Newton : 1

\* Temps total intégration comportement : 10.263 s (3 intégrations)

\* Temps total factorisation matrice : 3.360 s (1 factorisations)

\* Temps construction second membre : 5.331 s

\* Temps total résolution K.U=F : 0.137 s (1 résolutions)

\* Temps assemblage matrice : 0.987 s

\* Nombre d'itérations de recherche linéaire : 3

\* Temps autres opérations : 3.439 s

Mémoire (Mo) : 6177.50 / 4534.22 / 5648.52 / 1196.69 (VmPeak / VmSize / Optimum / Minimum)

Filing of the fields

Field stored DEPL at time 7.300000000000e-01 for the sequence number 146

Field stored SIEF\_ELGA at time 7.300000000000e-01 for the sequence number 146

Field stored VARI\_ELGA at time 7.300000000000e-01 for the sequence number 146

Field stored COMPORTEMENT at time 7.300000000000e-01 for the sequence number 146

Field stored VITE at time 7.300000000000e-01 for the sequence number 146

Field stored ACCE at time 7.300000000000e-01 for the sequence number 146

Field stored FORC\_AMOR at time 7.300000000000e-01 for the sequence number 146

Field stored FORC\_LIAI at time 7.300000000000e-01 for the sequence number 146

Adaptation of the time step.

For the method of adaptation of the type FIXE, the computed time step is worth  
1.000000000000e-02.

On all the criteria of adaptation, the smallest time step is worth 1.000000000000e-02.

After best fit on the compulsory points of transition, the smallest time step is worth  
5.000000000000e-03.

[ 91%] Instant calculé : 7.30000e-01, dernier instant archivé : 7.30000e-01, au numéro  
d'ordre :

146

Time of computation: 7.350000000000e-01

INCREMENT	NEWTON	RESIDU	RESIDU
RECH. LINE.	RECH. LINE.	OPTION	NEWTON
INSTANT	ITERATION	RELATIF	ABSOLU
NB. ITER	COEFFICIENT	ASSEMBLAGE	TEMPS CALCUL
		RESI_GLOB_REL	RESI_GLOB_MAXI
RHO		VALEUR	

7.35000E-01	0	6.64628E-18	6.13414E-22
	TANGENTE		

BILAN D'ENERGIE	TRAV_EXT	ENER_TOT	ENER_CIN	TRAV_AMOR
DISS_SCH				

| PAS COURANT | 0.0000E+00 | -3.8431E-40 | -3.0208E-28 | 0.0000E+00 |  
3.0208E-28 |

| TOTAL | 2.9387E-07 | 4.0994E-21 | -1.5263E-10 | 0.0000E+00 |  
2.9403E-07 |

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Criterion (S) of convergence reached (S)

The residue of the type RESI\_GLOB\_RELAX is worth 6.646280338878e-18 with the  
node and degree of

freedom N81698 DX

The residue of the type RESI\_GLOB\_MAXI is worth 6.134137413651e-22 with the  
node and degree of

freedom N81698 DX

Temps CPU consommé dans ce pas de temps : 23.510 s

\* Nombre d'itérations de Newton : 1

\* Temps total intégration comportement : 10.287 s (3 intégrations)

\* Temps total factorisation matrice : 3.345 s (1 factorisations)

\* Temps construction second membre : 5.313 s

\* Temps total résolution K.U=F : 0.139 s (1 résolutions)

\* Temps assemblage matrice : 0.983 s

\* Nombre d'itérations de recherche linéaire : 3

\* Temps autres opérations : 3.444 s

Mémoire (Mo) : 6177.50 / 4579.65 / 5648.52 / 1196.69 (VmPeak / VmSize /  
Optimum / Minimum)

Filing of the fields

Field stored DEPL at time 7.350000000000e-01 for the sequence number 147

Field stored SIEF\_ELGA at time 7.350000000000e-01 for the sequence number 147

Field stored VARI\_ELGA at time 7.350000000000e-01 for the sequence number  
147

Field stored COMPORTEMENT at time 7.350000000000e-01 for the sequence number 147

Field stored VITE at time 7.350000000000e-01 for the sequence number 147

Field stored ACCE at time 7.350000000000e-01 for the sequence number 147

Field stored FORC\_AMOR at time 7.350000000000e-01 for the sequence number 147

Field stored FORC\_LIAI at time 7.350000000000e-01 for the sequence number 147

Adaptation of the time step.

For the method of adaptation of the type FIXE, the computed time step is worth 1.000000000000e-02.

On all the criteria of adaptation, the smallest time step is worth 1.000000000000e-02.

After best fit on the compulsory points of transition, the smallest time step is worth 5.000000000000e-03.

[ 91%] Instant calculé : 7.35000e-01, dernier instant archivé : 7.35000e-01, au numéro d'ordre :

147

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Time of computation: 7.400000000000e-01

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	INCREMENT		NEWTON		RESIDU		RESIDU	
RECH.	LINE.		RECH.	LINE.		OPTION		NEWTON
	INSTANT		ITERATION		RELATIF		ABSOLU	
NB. ITER		COEFFICIENT		ASSEMBLAGE		TEMPS CALCUL		
					RESI_GLOB_REL		RESI_GLOB_MAXI	
	RHO				VALEUR			

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7.40000E-01	0	7.70065E-18	7.10726E-22	
	TANGENTE			

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BILAN D'ENERGIE	TRAV_EXT	ENER_TOT	ENER_CIN	TRAV_AMOR
DISS_SCH				

PAS COURANT	0.0000E+00	-2.6087E-40	-2.0496E-28	0.0000E+00
2.0496E-28				

TOTAL	2.9387E-07	4.0994E-21	-1.5263E-10	0.0000E+00
2.9403E-07				

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Criterion (S) of convergence reached (S)

The residue of the type RESI\_GLOB\_RELA is worth 7.700652854304e-18 with the node and degree of

freedom N79262 DY

The residue of the type RESI\_GLOB\_MAXI is worth 7.107263066652e-22 with the node and degree of

freedom N79262 DY

Temps CPU consommé dans ce pas de temps : 23.447 s

\* Nombre d'itérations de Newton : 1

\* Temps total intégration comportement : 10.214 s (3 intégrations)

\* Temps total factorisation matrice : 3.341 s (1 factorisations)

\* Temps construction second membre : 5.323 s

\* Temps total résolution K.U=F : 0.138 s (1 résolutions)

\* Temps assemblage matrice : 0.986 s

\* Nombre d'itérations de recherche linéaire : 3

\* Temps autres opérations : 3.445 s

Mémoire (Mo) : 6177.50 / 4625.08 / 5648.52 / 1196.69 (VmPeak / VmSize /  
Optimum / Minimum)

Filing of the fields

Field stored DEPL at time 7.400000000000e-01 for the sequence number 148

Field stored SIEF\_ELGA at time 7.400000000000e-01 for the sequence number 148

Field stored VARI\_ELGA at time 7.400000000000e-01 for the sequence number  
148

Field stored COMPORTEMENT at time 7.400000000000e-01 for the sequence  
number 148

Field stored VITE at time 7.400000000000e-01 for the sequence number 148

Field stored ACCE at time 7.400000000000e-01 for the sequence number 148

Field stored FORC\_AMOR at time 7.400000000000e-01 for the sequence number  
148

Field stored FORC\_LIAI at time 7.400000000000e-01 for the sequence number 148

Adaptation of the time step.

For the method of adaptation of the type FIXE, the computed time step is worth  
1.000000000000e-02.

On all the criteria of adaptation, the smallest time step is worth 1.000000000000e-  
02.

After best fit on the compulsory points of transition, the smallest time step is worth  
5.000000000000e-03.

[ 92%] Instant calculé : 7.40000e-01, dernier instant archivé : 7.40000e-01, au numéro  
d'ordre :

148

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Time of computation: 7.450000000000e-01

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INCREMENT		NEWTON		RESIDU
RECH. LINE.		RECH. LINE.		OPTION
				NEWTON
INSTANT		ITERATION		RELATIF
NB. ITER		COEFFICIENT		ABSOLU
		ASSEMBLAGE		TEMPS CALCUL
				RESI_GLOB_RELA
				RESI_GLOB_MAXI
RHO				VALEUR
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7.45000E-01		0		6.40197E-18
		TANGENTE		5.90865E-22
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BILAN D'ENERGIE		TRAV_EXT		ENER_TOT
DISS_SCH				ENER_CIN
				TRAV_AMOR
PAS COURANT		0.0000E+00		-1.7706E-40
				-1.3905E-28
				0.0000E+00
				1.3905E-28
TOTAL		2.9387E-07		4.0994E-21
				-1.5263E-10
				0.0000E+00
				2.9403E-07
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Criterion (S) of convergence reached (S)

The residue of the type RESI\_GLOB\_RELA is worth 6.401969027958e-18 with the node and degree of

freedom N80572 DY

The residue of the type RESI\_GLOB\_MAXI is worth 5.908652017839e-22 with the node and degree of

freedom N80572 DY

Temps CPU consommé dans ce pas de temps : 23.536 s

\* Nombre d'itérations de Newton : 1

\* Temps total intégration comportement : 10.306 s (3 intégrations)

\* Temps total factorisation matrice : 3.372 s (1 factorisations)

\* Temps construction second membre : 5.296 s

\* Temps total résolution K.U=F : 0.138 s (1 résolutions)

\* Temps assemblage matrice : 0.988 s

\* Nombre d'itérations de recherche linéaire : 3

\* Temps autres opérations : 3.436 s

Mémoire (Mo) : 6177.50 / 4670.54 / 5648.52 / 1196.69 (VmPeak / VmSize / Optimum / Minimum)

Filing of the fields

Field stored DEPL at time 7.450000000000e-01 for the sequence number 149

Field stored SIEF\_ELGA at time 7.450000000000e-01 for the sequence number 149

Field stored VARI\_ELGA at time 7.450000000000e-01 for the sequence number 149

Field stored COMPORTEMENT at time 7.450000000000e-01 for the sequence number 149

Field stored VITE at time 7.450000000000e-01 for the sequence number 149

Field stored ACCE at time 7.450000000000e-01 for the sequence number 149

Field stored FORC\_AMOR at time 7.450000000000e-01 for the sequence number 149

Field stored FORC\_LIAI at time 7.450000000000e-01 for the sequence number 149

Adaptation of the time step.

For the method of adaptation of the type FIXE, the computed time step is worth 1.000000000000e-02.

On all the criteria of adaptation, the smallest time step is worth 1.000000000000e-02.

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

5.000000000000e-03.

[ 93%] Instant calculé : 7.45000e-01, dernier instant archivé : 7.45000e-01, au numéro d'ordre :

149

Time of computation: 7.500000000000e-01

INCREMENT	NEWTON	RESIDU	RESIDU
RECH. LINE.	RECH. LINE.	OPTION	NEWTON
INSTANT	ITERATION	RELATIF	ABSOLU
NB. ITER	COEFFICIENT	ASSEMBLAGE	TEMPS CALCUL
		RESI_GLOB_RELA	RESI_GLOB_MAXI
RHO		VALEUR	

7.50000E-01	0	7.10152E-18	6.55430E-22
	TANGENTE		

BILAN D'ENERGIE	TRAV_EXT	ENER_TOT	ENER_CIN	TRAV_AMOR
DISS_SCH				

PAS COURANT	0.0000E+00	-1.2017E-40	-9.4323E-29	0.0000E+00
				9.4323E-29

TOTAL	2.9387E-07	4.0994E-21	-1.5263E-10	0.0000E+00
				2.9403E-07

Criterion (S) of convergence reached (S)

The residue of the type RESI\_GLOB\_RELAX is worth 7.101521327488e-18 with the node and degree of

freedom N80206 DX

The residue of the type RESI\_GLOB\_MAXI is worth 6.554298863074e-22 with the node and degree of

freedom N80206 DX

Temps CPU consommé dans ce pas de temps : 23.521 s

\* Nombre d'itérations de Newton : 1

\* Temps total intégration comportement : 10.293 s (3 intégrations)

\* Temps total factorisation matrice : 3.344 s (1 factorisations)

\* Temps construction second membre : 5.315 s

\* Temps total résolution K.U=F : 0.138 s (1 résolutions)

\* Temps assemblage matrice : 0.985 s

\* Nombre d'itérations de recherche linéaire : 3

\* Temps autres opérations : 3.447 s

Mémoire (Mo) : 6177.50 / 4716.20 / 5648.52 / 1196.69 (VmPeak / VmSize / Optimum / Minimum)

Filing of the fields

Field stored DEPL at time 7.500000000000e-01 for the sequence number 150

Field stored SIEF\_ELGA at time 7.500000000000e-01 for the sequence number 150

Field stored VARI\_ELGA at time 7.500000000000e-01 for the sequence number 150

Field stored COMPORTEMENT at time 7.500000000000e-01 for the sequence number 150

Field stored VITE at time 7.500000000000e-01 for the sequence number 150

Field stored ACCE at time 7.500000000000e-01 for the sequence number 150

Field stored FORC\_AMOR at time 7.500000000000e-01 for the sequence number

150

Field stored FORC\_LIAI at time 7.500000000000e-01 for the sequence number 150

Adaptation of the time step.

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

1.000000000000e-02.

On all the criteria of adaptation, the smallest time step is worth 1.000000000000e-02.

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

5.000000000000e-03.

[ 93%] Instant calculé : 7.50000e-01, dernier instant archivé : 7.50000e-01, au numéro d'ordre :

150

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Time of computation: 7.550000000000e-01

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	INCREMENT		NEWTON		RESIDU		RESIDU	
RECH.	LINE.		RECH.	LINE.		OPTION		NEWTON
	INSTANT		ITERATION		RELATIF		ABSOLU	
NB.	ITER		COEFFICIENT		ASSEMBLAGE		TEMPS CALCUL	
					RESI_GLOB_RELA		RESI_GLOB_MAXI	
	RHO				VALEUR			

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	7.55000E-01		0		7.40333E-18		6.83285E-22	
			TANGENTE					

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| BILAN D'ENERGIE | TRAV\_EXT | ENER\_TOT | ENER\_CIN | TRAV\_AMOR  
| DISS\_SCH |

| PAS COURANT | 0.0000E+00 | -8.1546E-41 | -6.3979E-29 | 0.0000E+00 |  
6.3979E-29 |

| TOTAL | 2.9387E-07 | 4.0994E-21 | -1.5263E-10 | 0.0000E+00 |  
2.9403E-07 |

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Criterion (S) of convergence reached (S)

The residue of the type RESI\_GLOB\_RELAX is worth 7.403328707122e-18 with the  
node and degree of

freedom N79811 DY

The residue of the type RESI\_GLOB\_MAXI is worth 6.832849848699e-22 with the  
node and degree of

freedom N79811 DY

Temps CPU consommé dans ce pas de temps : 23.386 s

\* Nombre d'itérations de Newton : 1

\* Temps total intégration comportement : 10.189 s (3 intégrations)

\* Temps total factorisation matrice : 3.326 s (1 factorisations)

\* Temps construction second membre : 5.302 s

\* Temps total résolution K.U=F : 0.140 s (1 résolutions)

\* Temps assemblage matrice : 0.988 s

\* Nombre d'itérations de recherche linéaire : 3

\* Temps autres opérations : 3.441 s

Mémoire (Mo) : 6177.50 / 4761.75 / 5648.52 / 1196.69 (VmPeak / VmSize /  
Optimum / Minimum)

Filing of the fields

Field stored DEPL at time 7.550000000000e-01 for the sequence number 151



Field stored SIEF\_ELGA at time 7.550000000000e-01 for the sequence number 151

Field stored VARI\_ELGA at time 7.550000000000e-01 for the sequence number 151

Field stored COMPORTEMENT at time 7.550000000000e-01 for the sequence number 151

Field stored VITE at time 7.550000000000e-01 for the sequence number 151

Field stored ACCE at time 7.550000000000e-01 for the sequence number 151

Field stored FORC\_AMOR at time 7.550000000000e-01 for the sequence number 151

Field stored FORC\_LIAI at time 7.550000000000e-01 for the sequence number 151

Adaptation of the time step.

For the method of adaptation of the type FIXE, the computed time step is worth 1.000000000000e-02.

On all the criteria of adaptation, the smallest time step is worth 1.000000000000e-02.

After best fit on the compulsory points of transition, the smallest time step is worth 5.000000000000e-03.

[ 94%] Instant calculé : 7.55000e-01, dernier instant archivé : 7.55000e-01, au numéro d'ordre :

151

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Time of computation: 7.600000000000e-01

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	INCREMENT		NEWTON		RESIDU		RESIDU	
RECH.	LINE.		RECH.	LINE.		OPTION		NEWTON
	INSTANT		ITERATION		RELATIF		ABSOLU	
NB. ITER		COEFFICIENT		ASSEMBLAGE		TEMPS CALCUL		

		RESI_GLOB_RELA	RESI_GLOB_MAXI	
RHO		VALEUR		
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7.60000E-01	0	8.86081E-18	8.17802E-22	
	TANGENTE			
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-----				
-----				
-----				
BILAN D'ENERGIE	TRAV_EXT	ENER_TOT	ENER_CIN	TRAV_AMOR
DISS_SCH				
PAS COURANT	0.0000E+00	-5.5333E-41	-4.3393E-29	0.0000E+00
				4.3393E-29
TOTAL	2.9387E-07	4.0994E-21	-1.5263E-10	0.0000E+00
				2.9403E-07
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Criterion (S) of convergence reached (S)

The residue of the type RESI\_GLOB\_RELA is worth 8.860806141936e-18 with the node and degree of

freedom N85230 DY

The residue of the type RESI\_GLOB\_MAXI is worth 8.178018334919e-22 with the node and degree of

freedom N85230 DY

Temps CPU consommé dans ce pas de temps : 23.259 s

\* Nombre d'itérations de Newton : 1

\* Temps total intégration comportement : 10.191 s (3 intégrations)

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

\* Temps construction second membre : 5.234 s

\* Temps total résolution K.U=F : 0.140 s (1 résolutions)

\* Temps assemblage matrice : 0.983 s

\* Nombre d'itérations de recherche linéaire : 3

\* Temps autres opérations : 3.443 s

Mémoire (Mo) : 6177.50 / 4807.18 / 5648.52 / 1196.69 (VmPeak / VmSize / Optimum / Minimum)

Filing of the fields

Field stored DEPL at time 7.600000000000e-01 for the sequence number 152

Field stored SIEF\_ELGA at time 7.600000000000e-01 for the sequence number 152

Field stored VARI\_ELGA at time 7.600000000000e-01 for the sequence number 152

Field stored COMPORTEMENT at time 7.600000000000e-01 for the sequence number 152

Field stored VITE at time 7.600000000000e-01 for the sequence number 152

Field stored ACCE at time 7.600000000000e-01 for the sequence number 152

Field stored FORC\_AMOR at time 7.600000000000e-01 for the sequence number 152

Field stored FORC\_LIAI at time 7.600000000000e-01 for the sequence number 152

Adaptation of the time step.

For the method of adaptation of the type FIXE, the computed time step is worth 1.000000000000e-02.

On all the criteria of adaptation, the smallest time step is worth 1.000000000000e-02.

After best fit on the compulsory points of transition, the smallest time step is worth 5.000000000000e-03.

[ 95%] Instant calculé : 7.60000e-01, dernier instant archivé : 7.60000e-01, au numéro d'ordre :

152

Time of computation: 7.650000000000e-01

INCREMENT	NEWTON	RESIDU	RESIDU
RECH. LINE.	RECH. LINE.	OPTION	NEWTON
INSTANT	ITERATION	RELATIF	ABSOLU
NB. ITER	COEFFICIENT	ASSEMBLAGE	TEMPS CALCUL
		RESI_GLOB_RELA	RESI_GLOB_MAXI
RHO		VALEUR	

7.65000E-01	0	7.60860E-18	7.02230E-22
	TANGENTE		

BILAN D'ENERGIE	TRAV_EXT	ENER_TOT	ENER_CIN	TRAV_AMOR
DISS_SCH				
PAS COURANT	0.0000E+00	-3.7543E-41	-2.9429E-29	0.0000E+00
				2.9429E-29
TOTAL	2.9387E-07	4.0994E-21	-1.5263E-10	0.0000E+00
				2.9403E-07

Criterion (S) of convergence reached (S)

The residue of the type RESI\_GLOB\_RELA is worth 7.608599785333e-18 with the node and degree of

freedom N84668 DZ

The residue of the type RESI\_GLOB\_MAXI is worth 7.022303337958e-22 with the node and degree of

freedom N84668 DZ

Temps CPU consommé dans ce pas de temps : 23.445 s

\* Nombre d'itérations de Newton : 1

\* Temps total intégration comportement : 10.259 s (3 intégrations)

\* Temps total factorisation matrice : 3.376 s (1 factorisations)

\* Temps construction second membre : 5.233 s

\* Temps total résolution K.U=F : 0.139 s (1 résolutions)

\* Temps assemblage matrice : 0.991 s

\* Nombre d'itérations de recherche linéaire : 3

\* Temps autres opérations : 3.448 s

Mémoire (Mo) : 6177.50 / 4852.61 / 5648.52 / 1196.69 (VmPeak / VmSize / Optimum / Minimum)

Filing of the fields

Field stored DEPL at time 7.650000000000e-01 for the sequence number 153

Field stored SIEF\_ELGA at time 7.650000000000e-01 for the sequence number 153

Field stored VARI\_ELGA at time 7.650000000000e-01 for the sequence number 153

Field stored COMPORTEMENT at time 7.650000000000e-01 for the sequence number 153

Field stored VITE at time 7.650000000000e-01 for the sequence number 153

Field stored ACCE at time 7.650000000000e-01 for the sequence number 153

Field stored FORC\_AMOR at time 7.650000000000e-01 for the sequence number 153

Field stored FORC\_LIAI at time 7.650000000000e-01 for the sequence number 153

Adaptation of the time step.

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

1.000000000000e-02.

On all the criteria of adaptation, the smallest time step is worth 1.000000000000e-02.

After best fit on the compulsory points of transition, the smallest time step is worth 5.000000000000e-03.

[ 95%] Instant calculé : 7.65000e-01, dernier instant archivé : 7.65000e-01, au numéro d'ordre :

153

Time of computation: 7.700000000000e-01

INCREMENT	NEWTON	RESIDU	RESIDU
RECH. LINE.	RECH. LINE.	OPTION	NEWTON
INSTANT	ITERATION	RELATIF	ABSOLU
NB. ITER	COEFFICIENT	ASSEMBLAGE	TEMPS CALCUL
		RESI_GLOB_RELA	RESI_GLOB_MAXI
RHO		VALEUR	

7.70000E-01	0	8.40187E-18	7.75445E-22
	TANGENTE		

BILAN D'ENERGIE	TRAV_EXT	ENER_TOT	ENER_CIN	TRAV_AMOR
DISS_SCH				

PAS COURANT	0.0000E+00	-2.5470E-41	-1.9956E-29	0.0000E+00
				1.9956E-29

| TOTAL | 2.9387E-07 | 4.0994E-21 | -1.5263E-10 | 0.0000E+00 |  
2.9403E-07 |

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Criterion (S) of convergence reached (S)

The residue of the type RESI\_GLOB\_RELA is worth 8.401874195243e-18 with the  
node and degree of

freedom N82097 DZ

The residue of the type RESI\_GLOB\_MAXI is worth 7.754450341848e-22 with the  
node and degree of

freedom N82097 DZ

Temps CPU consommé dans ce pas de temps : 23.483 s

\* Nombre d'itérations de Newton : 1

\* Temps total intégration comportement : 10.290 s (3 intégrations)

\* Temps total factorisation matrice : 3.331 s (1 factorisations)

\* Temps construction second membre : 5.289 s

\* Temps total résolution K.U=F : 0.139 s (1 résolutions)

\* Temps assemblage matrice : 0.988 s

\* Nombre d'itérations de recherche linéaire : 3

\* Temps autres opérations : 3.445 s

Mémoire (Mo) : 6177.50 / 4898.04 / 5648.52 / 1196.69 (VmPeak / VmSize /  
Optimum / Minimum)

Filing of the fields

Field stored DEPL at time 7.700000000000e-01 for the sequence number 154

Field stored SIEF\_ELGA at time 7.700000000000e-01 for the sequence number 154

Field stored VARI\_ELGA at time 7.700000000000e-01 for the sequence number  
154

Field stored COMPORTEMENT at time 7.700000000000e-01 for the sequence  
number 154

Field stored VITE at time 7.700000000000e-01 for the sequence number 154

Field stored ACCE at time 7.700000000000e-01 for the sequence number 154

Field stored FORC\_AMOR at time 7.700000000000e-01 for the sequence number 154

Field stored FORC\_LIAI at time 7.700000000000e-01 for the sequence number 154

Adaptation of the time step.

For the method of adaptation of the type FIXE, the computed time step is worth 1.000000000000e-02.

On all the criteria of adaptation, the smallest time step is worth 1.000000000000e-02.

After best fit on the compulsory points of transition, the smallest time step is worth 5.000000000000e-03.

[ 96%] Instant calculé : 7.70000e-01, dernier instant archivé : 7.70000e-01, au numéro d'ordre :

154

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Time of computation: 7.750000000000e-01

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	INCREMENT		NEWTON		RESIDU		RESIDU	
RECH.	LINE.		RECH.	LINE.		OPTION		NEWTON
	INSTANT		ITERATION		RELATIF		ABSOLU	
NB. ITER		COEFFICIENT		ASSEMBLAGE		TEMPS CALCUL		
					RESI_GLOB_RELA		RESI_GLOB_MAXI	
	RHO				VALEUR			

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	7.75000E-01		0		8.73772E-18		8.06441E-22	
			TANGENTE					



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| BILAN D'ENERGIE | TRAV_EXT   | ENER_TOT   | ENER_CIN   | TRAV_AMOR
| DISS_SCH       |
| PAS COURANT    | 0.0000E+00 | -1.7278E-41 | -1.3532E-29 | 0.0000E+00 |
1.3532E-29 |
| TOTAL          | 2.9387E-07 | 4.0994E-21 | -1.5263E-10 | 0.0000E+00 |
2.9403E-07 |
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Criterion (S) of convergence reached (S)

The residue of the type RESI\_GLOB\_RELAX is worth 8.737715362971e-18 with the node and degree of

freedom N77874 DY

The residue of the type RESI\_GLOB\_MAXI is worth 8.064412571391e-22 with the node and degree of

freedom N77874 DY

Temps CPU consommé dans ce pas de temps : 23.441 s

\* Nombre d'itérations de Newton : 1

\* Temps total intégration comportement : 10.211 s (3 intégrations)

\* Temps total factorisation matrice : 3.352 s (1 factorisations)

\* Temps construction second membre : 5.302 s

\* Temps total résolution K.U=F : 0.138 s (1 résolutions)

\* Temps assemblage matrice : 0.990 s

\* Nombre d'itérations de recherche linéaire : 3

\* Temps autres opérations : 3.447 s

Mémoire (Mo) : 6177.50 / 4943.47 / 5648.52 / 1196.69 (VmPeak / VmSize /

Optimum / Minimum)

Filing of the fields

Field stored DEPL at time 7.750000000000e-01 for the sequence number 155

Field stored SIEF\_ELGA at time 7.750000000000e-01 for the sequence number 155

Field stored VARI\_ELGA at time 7.750000000000e-01 for the sequence number 155

Field stored COMPORTEMENT at time 7.750000000000e-01 for the sequence number 155

Field stored VITE at time 7.750000000000e-01 for the sequence number 155

Field stored ACCE at time 7.750000000000e-01 for the sequence number 155

Field stored FORC\_AMOR at time 7.750000000000e-01 for the sequence number 155

Field stored FORC\_LIAI at time 7.750000000000e-01 for the sequence number 155

Adaptation of the time step.

For the method of adaptation of the type FIXE, the computed time step is worth 1.000000000000e-02.

On all the criteria of adaptation, the smallest time step is worth 1.000000000000e-02.

After best fit on the compulsory points of transition, the smallest time step is worth 5.000000000000e-03.

[ 96%] Instant calculé : 7.75000e-01, dernier instant archivé : 7.75000e-01, au numéro d'ordre :

155

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Time of computation: 7.800000000000e-01

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	INCREMENT		NEWTON		RESIDU		RESIDU	
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RECH. LINE.	RECH. LINE.	OPTION	NEWTON
INSTANT	ITERATION	RELATIF	ABSOLU
NB. ITER	COEFFICIENT	ASSEMBLAGE	TEMPS CALCUL
		RESI_GLOB_RELA	RESI_GLOB_MAXI
RHO		VALEUR	

7.80000E-01	0	8.98875E-18	8.29610E-22
	TANGENTE		

BILAN D'ENERGIE	TRAV_EXT	ENER_TOT	ENER_CIN	TRAV_AMOR
DISS_SCH				
PAS COURANT	0.0000E+00	-1.1720E-41	-9.1746E-30	0.0000E+00
TOTAL	2.9387E-07	4.0994E-21	-1.5263E-10	0.0000E+00

Criterion (S) of convergence reached (S)

The residue of the type RESI\_GLOB\_RELA is worth 8.988748693159e-18 with the node and degree of freedom N79892 DY

The residue of the type RESI\_GLOB\_MAXI is worth 8.296102007325e-22 with the node and degree of freedom N79892 DY

Temps CPU consommé dans ce pas de temps : 23.503 s

\* Nombre d'itérations de Newton : 1

\* Temps total intégration comportement : 10.250 s (3 intégrations)

\* Temps total factorisation matrice : 3.337 s (1 factorisations)

\* Temps construction second membre : 5.315 s

\* Temps total résolution K.U=F : 0.140 s (1 résolutions)

\* Temps assemblage matrice : 0.997 s

\* Nombre d'itérations de recherche linéaire : 3

\* Temps autres opérations : 3.464 s

Mémoire (Mo) : 6177.50 / 4988.90 / 5648.52 / 1196.69 (VmPeak / VmSize / Optimum / Minimum)

Filing of the fields

Field stored DEPL at time 7.800000000000e-01 for the sequence number 156

Field stored SIEF\_ELGA at time 7.800000000000e-01 for the sequence number 156

Field stored VARI\_ELGA at time 7.800000000000e-01 for the sequence number 156

Field stored COMPORTEMENT at time 7.800000000000e-01 for the sequence number 156

Field stored VITE at time 7.800000000000e-01 for the sequence number 156

Field stored ACCE at time 7.800000000000e-01 for the sequence number 156

Field stored FORC\_AMOR at time 7.800000000000e-01 for the sequence number 156

Field stored FORC\_LIAI at time 7.800000000000e-01 for the sequence number 156

Adaptation of the time step.

For the method of adaptation of the type FIXE, the computed time step is worth 1.000000000000e-02.

On all the criteria of adaptation, the smallest time step is worth 1.000000000000e-02.

After best fit on the compulsory points of transition, the smallest time step is worth 5.000000000000e-03.

[ 97%] Instant calculé : 7.80000e-01, dernier instant archivé : 7.80000e-01, au numéro d'ordre :

156

Time of computation: 7.850000000000e-01

INCREMENT	NEWTON	RESIDU	RESIDU
RECH. LINE.	RECH. LINE.	OPTION	NEWTON
INSTANT	ITERATION	RELATIF	ABSOLU
NB. ITER	COEFFICIENT	ASSEMBLAGE	TEMPS CALCUL
		RESI_GLOB_RELA	RESI_GLOB_MAXI
RHO		VALEUR	

7.85000E-01	0	8.58360E-18	7.92217E-22
	TANGENTE		

BILAN D'ENERGIE	TRAV_EXT	ENER_TOT	ENER_CIN	TRAV_AMOR
DISS_SCH				

PAS COURANT	0.0000E+00	-7.9488E-42	-6.2200E-30	0.0000E+00

TOTAL	2.9387E-07	4.0994E-21	-1.5263E-10	0.0000E+00

Criterion (S) of convergence reached (S)

The residue of the type RESI\_GLOB\_RELA is worth 8.583600809184e-18 with the node and degree of

freedom N80427 DX

The residue of the type RESI\_GLOB\_MAXI is worth 7.922173634396e-22 with the node and degree of

freedom N80427 DX

Temps CPU consommé dans ce pas de temps : 23.502 s

\* Nombre d'itérations de Newton : 1

\* Temps total intégration comportement : 10.297 s (3 intégrations)

\* Temps total factorisation matrice : 3.315 s (1 factorisations)

\* Temps construction second membre : 5.314 s

\* Temps total résolution K.U=F : 0.138 s (1 résolutions)

\* Temps assemblage matrice : 0.990 s

\* Nombre d'itérations de recherche linéaire : 3

\* Temps autres opérations : 3.447 s

Mémoire (Mo) : 6177.50 / 5034.33 / 5648.52 / 1196.69 (VmPeak / VmSize / Optimum / Minimum)

Filing of the fields

Field stored DEPL at time 7.850000000000e-01 for the sequence number 157

Field stored SIEF\_ELGA at time 7.850000000000e-01 for the sequence number 157

Field stored VARI\_ELGA at time 7.850000000000e-01 for the sequence number 157

Field stored COMPORTEMENT at time 7.850000000000e-01 for the sequence number 157

Field stored VITE at time 7.850000000000e-01 for the sequence number 157

Field stored ACCE at time 7.850000000000e-01 for the sequence number 157

Field stored FORC\_AMOR at time 7.850000000000e-01 for the sequence number 157

Field stored FORC\_LIAI at time 7.850000000000e-01 for the sequence number 157

Adaptation of the time step.

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

1.000000000000e-02.

On all the criteria of adaptation, the smallest time step is worth 1.000000000000e-02.

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

5.000000000000e-03.

[ 98%] Instant calculé : 7.85000e-01, dernier instant archivé : 7.85000e-01, au numéro d'ordre :

157

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Time of computation: 7.900000000000e-01

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	INCREMENT		NEWTON		RESIDU		RESIDU	
RECH.	LINE.		RECH.	LINE.		OPTION		NEWTON
	INSTANT		ITERATION		RELATIF		ABSOLU	
NB. ITER		COEFFICIENT		ASSEMBLAGE		TEMPS CALCUL		
					RESI_GLOB_RELA		RESI_GLOB_MAXI	
	RHO				VALEUR			

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	7.90000E-01		0		7.97722E-18		7.36252E-22	
			TANGENTE					

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| BILAN D'ENERGIE | TRAV\_EXT | ENER\_TOT | ENER\_CIN | TRAV\_AMOR  
| DISS\_SCH |

| PAS COURANT | 0.0000E+00 | -5.3907E-42 | -4.2166E-30 | 0.0000E+00 |  
4.2166E-30 |

| TOTAL | 2.9387E-07 | 4.0994E-21 | -1.5263E-10 | 0.0000E+00 |  
2.9403E-07 |

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Criterion (S) of convergence reached (S)

The residue of the type RESI\_GLOB\_RELA is worth 7.977224527416e-18 with the  
node and degree of

freedom N82016 DX

The residue of the type RESI\_GLOB\_MAXI is worth 7.362522935495e-22 with the  
node and degree of

freedom N82016 DX

Temps CPU consommé dans ce pas de temps : 23.373 s

\* Nombre d'itérations de Newton : 1

\* Temps total intégration comportement : 10.159 s (3 intégrations)

\* Temps total factorisation matrice : 3.333 s (1 factorisations)

\* Temps construction second membre : 5.316 s

\* Temps total résolution K.U=F : 0.138 s (1 résolutions)

\* Temps assemblage matrice : 0.988 s

\* Nombre d'itérations de recherche linéaire : 3

\* Temps autres opérations : 3.439 s

Mémoire (Mo) : 6177.50 / 5079.76 / 5648.52 / 1196.69 (VmPeak / VmSize /  
Optimum / Minimum)

Filing of the fields

Field stored DEPL at time 7.900000000000e-01 for the sequence number 158

Field stored SIEF\_ELGA at time 7.900000000000e-01 for the sequence number 158



Field stored VARI\_ELGA at time 7.900000000000e-01 for the sequence number 158

Field stored COMPORTEMENT at time 7.900000000000e-01 for the sequence number 158

Field stored VITE at time 7.900000000000e-01 for the sequence number 158

Field stored ACCE at time 7.900000000000e-01 for the sequence number 158

Field stored FORC\_AMOR at time 7.900000000000e-01 for the sequence number 158

Field stored FORC\_LIAI at time 7.900000000000e-01 for the sequence number 158

Adaptation of the time step.

For the method of adaptation of the type FIXE, the computed time step is worth 1.000000000000e-02.

On all the criteria of adaptation, the smallest time step is worth 1.000000000000e-02.

After best fit on the compulsory points of transition, the smallest time step is worth 5.000000000000e-03.

[ 98%] Instant calculé : 7.90000e-01, dernier instant archivé : 7.90000e-01, au numéro d'ordre :

158

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Time of computation: 7.950000000000e-01

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	INCREMENT		NEWTON		RESIDU		RESIDU	
RECH.	LINE.		RECH.	LINE.		OPTION		NEWTON
	INSTANT		ITERATION		RELATIF		ABSOLU	
NB.	ITER		COEFFICIENT		ASSEMBLAGE		TEMPS CALCUL	
					RESI_GLOB_RELA		RESI_GLOB_MAXI	
	RHO				VALEUR			

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| 7.95000E-01 | 0 | 9.22385E-18 | 8.51309E-22 |
| |TANGENTE | |
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| BILAN D'ENERGIE | TRAV_EXT | ENER_TOT | ENER_CIN | TRAV_AMOR
| DISS_SCH |
| PAS COURANT | 0.0000E+00 | -3.6556E-42 | -2.8582E-30 | 0.0000E+00 |
2.8582E-30 |
| TOTAL | 2.9387E-07 | 4.0994E-21 | -1.5263E-10 | 0.0000E+00 |
2.9403E-07 |
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Criterion (S) of convergence reached (S)

The residue of the type RESI\_GLOB\_RELA is worth 9.223851840552e-18 with the node and degree of

freedom N85230 DZ

The residue of the type RESI\_GLOB\_MAXI is worth 8.513088793762e-22 with the node and degree of

freedom N85230 DZ

Temps CPU consommé dans ce pas de temps : 23.493 s

\* Nombre d'itérations de Newton : 1

\* Temps total intégration comportement : 10.255 s (3 intégrations)

\* Temps total factorisation matrice : 3.357 s (1 factorisations)

\* Temps construction second membre : 5.303 s

\* Temps total résolution K.U=F : 0.138 s (1 résolutions)

\* Temps assemblage matrice : 0.996 s

\* Nombre d'itérations de recherche linéaire : 3

\* Temps autres opérations : 3.444 s

Mémoire (Mo) : 6177.50 / 5124.52 / 5648.52 / 1196.69 (VmPeak / VmSize / Optimum / Minimum)

Filing of the fields

Field stored DEPL at time 7.950000000000e-01 for the sequence number 159

Field stored SIEF\_ELGA at time 7.950000000000e-01 for the sequence number 159

Field stored VARI\_ELGA at time 7.950000000000e-01 for the sequence number 159

Field stored COMPORTEMENT at time 7.950000000000e-01 for the sequence number 159

Field stored VITE at time 7.950000000000e-01 for the sequence number 159

Field stored ACCE at time 7.950000000000e-01 for the sequence number 159

Field stored FORC\_AMOR at time 7.950000000000e-01 for the sequence number 159

Field stored FORC\_LIAI at time 7.950000000000e-01 for the sequence number 159

Adaptation of the time step.

For the method of adaptation of the type FIXE, the computed time step is worth 1.000000000000e-02.

On all the criteria of adaptation, the smallest time step is worth 1.000000000000e-02.

After best fit on the compulsory points of transition, the smallest time step is worth 4.999999999999e-03.

[ 99%] Instant calculé : 7.95000e-01, dernier instant archivé : 7.95000e-01, au numéro d'ordre :

159

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Time of computation: 8.000000000000e-01

INCREMENT	NEWTON	RESIDU	RESIDU
RECH. LINE.	RECH. LINE.	OPTION	NEWTON
INSTANT	ITERATION	RELATIF	ABSOLU
NB. ITER	COEFFICIENT	ASSEMBLAGE	TEMPS CALCUL
		RESI_GLOB_RELA	RESI_GLOB_MAXI
RHO		VALEUR	

8.00000E-01	0	9.17727E-18	8.47010E-22
	TANGENTE		

BILAN D'ENERGIE	TRAV_EXT	ENER_TOT	ENER_CIN	TRAV_AMOR
DISS_SCH				
PAS COURANT	0.0000E+00	-2.4788E-42	-1.9373E-30	0.0000E+00
				1.9373E-30
TOTAL	2.9387E-07	4.0994E-21	-1.5263E-10	0.0000E+00
				2.9403E-07

Criterion (S) of convergence reached (S)

The residue of the type RESI\_GLOB\_RELA is worth 9.177274650902e-18 with the node and degree of

freedom N80419 DY

The residue of the type RESI\_GLOB\_MAXI is worth 8.470100706128e-22 with the node and degree of

freedom N80419 DY

Temps CPU consommé dans ce pas de temps : 23.377 s

\* Nombre d'itérations de Newton : 1

\* Temps total intégration comportement : 10.289 s (3 intégrations)

\* Temps total factorisation matrice : 3.279 s (1 factorisations)

\* Temps construction second membre : 5.249 s

\* Temps total résolution K.U=F : 0.142 s (1 résolutions)

\* Temps assemblage matrice : 0.985 s

\* Nombre d'itérations de recherche linéaire : 3

\* Temps autres opérations : 3.434 s

Mémoire (Mo) : 6177.50 / 5170.17 / 5648.52 / 1196.69 (VmPeak / VmSize / Optimum / Minimum)

Filing of the fields

Field stored DEPL at time 8.000000000000e-01 for the sequence number 160

Field stored SIEF\_ELGA at time 8.000000000000e-01 for the sequence number 160

Field stored VARI\_ELGA at time 8.000000000000e-01 for the sequence number 160

Field stored COMPORTEMENT at time 8.000000000000e-01 for the sequence number 160

Field stored VITE at time 8.000000000000e-01 for the sequence number 160

Field stored ACCE at time 8.000000000000e-01 for the sequence number 160

Field stored FORC\_AMOR at time 8.000000000000e-01 for the sequence number 160

Field stored FORC\_LIAI at time 8.000000000000e-01 for the sequence number 160

[100%] Instant calculé : 8.00000e-01, dernier instant archivé : 8.00000e-01, au numéro d'ordre :

160

Temps CPU consommé dans le calcul : 1 h 6 min 54 s

dont temps CPU "perdu" dans les découpes : 0.000 s

\* Nombre de pas de temps : 160

\* Nombre d'itérations de Newton : 161

\* Temps dans l'archivage : 11.726 s

\* Temps dans le post-traitement : 3 min 33 s

\* Temps total intégration comportement : 27 min 36 s (485 intégrations)

\* Temps total factorisation matrice : 8 min 57 s (161 factorisations)

\* Temps construction second membre : 14 min 10 s

\* Temps total résolution  $K.U=F$  : 22.397 s (161 résolutions)

\* Temps assemblage matrice : 2 min 39 s

\* Nombre d'itérations de recherche linéaire : 480

#1 Resolution des systemes lineaires CPU  
(USER+SYST/SYST/ELAPS): 561.10 53.65 561.15

#2 Calculs elementaires et assemblages CPU  
(USER+SYST/SYST/ELAPS): 3205.92 119.37 3206.29

#3 Dechargement de la memoire sur disque CPU  
(USER+SYST/SYST/ELAPS): 5.55 5.35 5.56

#4 Communications MPI CPU  
(USER+SYST/SYST/ELAPS): 0.01 0.00 0.03

# 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) : 8542.00 / 8542.00 / 8012.21 / 1196.69 (VmPeak / VmSize /  
Optimum / Minimum)

# Fin commande #0047 user+syst: 3793.58s (syst: 251.74s, elaps:  
4045.89s)

# -----  
-----

..\_stg1\_txt583

# -----  
-----

# Commande #0048 de fort.1, ligne 583

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'>

---



---



---

|| <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  
 ||

---



---



---

-----  
-

Concepts de la base: G

de	Nom	Type	Taille (Mo)	Nombre	Nombre
				d'objets	segments
6871	TOTAL		7919.76	5913	
9	00000001	MATER_SDASTER	0.00	9	
89	00000002	MAILLAGE_SDASTER	41.90	38	
14	00000003	MODELE_SDASTER	18.78	9	
14	00000004	CHAM_MATER	2.20	9	
5	00000005	CHAM_NO_SDASTER	2.02	5	
4	00000006	FORMULE	0.00	4	
4	00000007	FORMULE	0.00	4	
4	00000008	FORMULE	0.00	4	
12	00000009	CHAM_NO_SDASTER	10.10	10	
12	0000000a	CHAM_NO_SDASTER	10.10	10	
5	0000000b	CHAM_NO_SDASTER	2.02	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				

4	0000001c	FORMULE	0.00	4
4	0000001d	FORMULE	0.00	4
4	0000001e	FORMULE	0.00	4
5	0000001f	CHAM_ELEM	182.26	5
5	00000020	CHAM_ELEM	182.26	5
5	00000021	CHAM_ELEM	22.06	5
4	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
37	00000028	CHAR_MECA	3.35	32
37	00000029	CHAR_MECA	1.14	32
6	0000002a	LISTR8_SDASTER	0.00	6
9	0000002b	LIST_INST	0.00	9

0000002c	EVOL_NOLI	7323.12	5540
6354			
	&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 : 10915

Nombre d'enregistrements maximum : 2684354

Nombre d'enregistrements par fichier	:	15728
Longueur d'enregistrement (octets)	:	819200
Nombre total d'accès en lecture	:	7210
Volume des accès en lecture	:	5632.81 Mo.
Nombre total d'accès en écriture	:	11152
Volume des accès en écriture	:	8712.50 Mo.
Nombre d'identificateurs utilisés	:	6859
Taille maximum du répertoire	:	8000
Pourcentage d'utilisation du répertoire	:	85 %
Nom de la base	:	VOLATILE
Nombre d'enregistrements utilisés	:	3185
Nombre d'enregistrements maximum	:	2684354
Nombre d'enregistrements par fichier	:	15728
Longueur d'enregistrement (octets)	:	819200
Nombre total d'accès en lecture	:	24536
Volume des accès en lecture	:	19168.75 Mo.
Nombre total d'accès en écriture	:	6817
Volume des accès en écriture	:	5325.78 Mo.
Nombre d'identificateurs utilisés	:	1357
Taille maximum du répertoire	:	2000
Pourcentage d'utilisation du répertoire	:	67 %

<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 :  
8012.55 Mo

<I> <FIN> MAXIMUM DE MEMOIRE UTILISEE PAR LE PROCESSUS LORS DE  
L'EXECUTION : 8542.38 Mo

<I> FERMETURE DES BASES EFFECTUEE

STATISTIQUES CONCERNANT L'ALLOCATION DYNAMIQUE :

TAILLE CUMULEE MAXIMUM	:	8013 Mo.
TAILLE CUMULEE LIBEREE	:	71852 Mo.
NOMBRE TOTAL D'ALLOCATIONS	:	30945091
NOMBRE TOTAL DE LIBERATIONS	:	30945071
APPELS AU MECANISME DE LIBERATION	:	2
TAILLE MEMOIRE CUMULEE RECUPEREE	:	9133 Mo.
VOLUME DES LECTURES	:	2 Mo.
VOLUME DES ECRITURES	:	9508 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	:	8012.55 Mo
- LIMITE LES ACCES DISQUE		
- AMELIORE LA VITESSE D'EXECUTION		
MAXIMUM DE MEMOIRE UTILISEE PAR LE PROCESSUS	:	8542.38 Mo
- COMPREND LA MEMOIRE CONSOMMEE PAR JEVEUX,		
LE SUPERVISEUR PYTHON, LES LIBRAIRIES EXTERNES		

<I> FIN D'EXECUTION LE : DI-19-JANV-2025 06:17:54

DeprecationWarning: PY\_SSIZE\_T\_CLEAN will be required for '#' formats

libaster.jeux\_finalize(options)

Signature of pickled file :

d440162cef34bdc62d6e58e79391dbea512cade6303ddf2db913174590406d84

Signature of info file :

d385a9a9c129be9a50e5ef4a3b59bf4c115982fffe4be2daa132b188e168a54e

Signature of Jeux database:

0e8670e9bdc9da31d4381b9a77a4da7070348fc4389fa2e983971c4ff8fc03e4

\*\*\*\*\*

\* COMMAND : USER : SYSTEM : USER+SYS :  
ELAPSED \*

\*\*\*\*\*

* DEBUT	:	0.07 :	0.21 :	0.28 :	0.39 *
* DEFI_MATERIAU	:	0.00 :	0.00 :	0.00 :	0.01 *
* LIRE_MALLAGE	:	1.36 :	0.05 :	1.41 :	1.42 *
* DEFI_GROUP	:	0.62 :	0.00 :	0.62 :	0.63
*					
* MODI_MALLAGE	:	1.54 :	0.03 :	1.57 :	1.59
*					
* AFFE_MODELE	:	1.11 :	0.03 :	1.14 :	1.17
*					
* AFFE_MATERIAU	:	0.01 :	0.01 :	0.02 :	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 :	0.01
*					
* CREA_CHAMP	:	0.03 :	0.00 :	0.03 :	0.03
*					
* CREA_CHAMP	:	0.38 :	0.02 :	0.40 :	0.40
*					
* 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	:	0.03 :	0.01 :	0.04 :	0.04
*					
* CREA_CHAMP	:	0.39 :	0.01 :	0.40 :	0.39
*					
* CREA_CHAMP	:	0.00 :	0.00 :	0.00 :	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	:	0.02 :	0.01 :	0.03 :	0.04
*					
* CREA_CHAMP	:	0.39 :	0.01 :	0.40 :	0.40
*					
* CREA_CHAMP	:	0.01 :	0.00 :	0.01 :	0.00
*					
* CREA_CHAMP	:	0.41 :	0.12 :	0.53 :	0.53
*					
* 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 :	0.01
*					
* 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
*					
* CREA_CHAMP	:	2.31 :	0.44 :	2.75 :	2.76
*					
* CREA_CHAMP	:	15.35 :	0.66 :	16.01 :	
16.01 *					
* CREA_CHAMP	:	1.60 :	0.29 :	1.89 :	1.88
*					
* FORMULE	:	0.00 :	0.00 :	0.00 :	0.00
*					
* 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
*					
* AFFE_CHAR_CINE	:	0.30 :	0.00 :	0.30 :	0.31
*					
* AFFE_CHAR_CINE	:	0.29 :	0.01 :	0.30 :	0.30
*					
* AFFE_CHAR_MECA_F	:	0.73 :	0.05 :	0.78 :	0.79
*					
* AFFE_CHAR_MECA_F	:	17.09 :	0.22 :	17.31 :	17.31
*					
* DEFI_LIST_REEL	:	0.00 :	0.00 :	0.00 :	0.00 *
* DEFI_LIST_INST	:	0.02 :	0.00 :	0.02 :	0.01 *
* DYNA_NON_LINE	:	3793.58 :	251.74 :	4045.32 :	
4045.89 *					
* FIN	:	0.95 :	2.10 :	3.05 :	3.05 *

```

* . check syntax          :      0.05 :      0.00 :      0.05 :      0.06 *
* . fortran               :    3838.42 :    253.17 :    4091.59 :    4092.33 *

*****

* TOTAL_JOB              :    3838.66 :    256.03 :    4094.69 :    4095.49
*

*****

# Mémoire (Mo) :  8542.38 /   532.93 /  8012.55 /  1196.69 (VmPeak / VmSize /
Optimum / Minimum)

# Fin commande #0048   user+syst:      0.95s (syst:      2.10s, elaps:
3.05s)

# -----
-----

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", "ALGORITHM11_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_MALLAGE(
    MALLAGE=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) --

```

révision cf12489e9fcc - branche 'v15'

Copyright EDF R&D 1991 - 2025

Exécution du : Sun Jan 19 06:18:20 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.jeux\_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', 'ALGORITHM11\_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 : 10915  
Nombre d'enregistrements maximum : 2684354  
Nombre d'enregistrements par fichier : 15728  
Longueur d'enregistrement (octets) : 819200  
Nombre d'identificateurs utilisés : 6859  
Taille maximum du répertoire : 8000  
Pourcentage d'utilisation du répertoire : 85 %

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) :  7979.66 /  7979.66 /  7485.74 /   198.00 (VmPeak / VmSize /
Optimum / Minimum)

# Fin commande #0001   user+syst:          0.18s (syst:          4.26s, elaps:
4.47s)

# -----
-----

.._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) :  7979.66 /  7979.66 /  7485.74 /   198.00 (VmPeak / VmSize /
Optimum / Minimum)

```

```

# Fin commande #0002    user+syst:          0.00s (syst:          0.00s, elaps:
0.01s)

# -----
-----

.. _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): '<00000002e>' de type <Table>

# Mémoire (Mo) :   7979.92 /   7979.92 /   7485.82 /    198.00 (VmPeak / VmSize /
Optimum / Minimum)

# Fin commande #0003    user+syst:          0.03s (syst:          0.00s, elaps:
0.02s)

# -----
-----

.. _stg1_txt33

# -----
-----

# Commande #0006 de fort.1, ligne 33

DEFI_FICHER(ACCES='NEW',

            ACTION='ASSOCIER',

            FICHER='REPE_OUT/energy-plots',

            TYPE='ASCII',

            UNITE=30)

# Mémoire (Mo) :   7979.92 /   7979.92 /   7485.82 /    198.00 (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) :   7980.55 /   7980.30 /   7485.82 /   198.00 (VmPeak / VmSize /  
Optimum / Minimum)

# Fin commande #0007    user+syst:            0.01s (syst:            0.00s, elaps:  
0.00s)

# -----  
-----



..\_stg1\_txt51

# -----  
-----

# Commande #0008 de fort.1, ligne 51

DEFI\_FICHIER(ACTION='LIBERER',  
UNITE=30)

# Mémoire (Mo) : 7980.55 / 7980.30 / 7485.82 / 198.00 (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)

Ouverture en écriture du fichier ./vola.2

```
# Fin commande #0009    user+syst:    1341.74s (syst:    246.54s, elaps:
```

1673.84s)

# -----  
-----

.. \_stg1\_txt83

# -----  
-----

# Commande #0010 de fort.1, ligne 83

MESH\_PP = CREA\_MALLAGE(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 19/01/2025 A 06:46:20 DE TYPE

MAILLAGE\_SDASTER

NOMBRE DE NOEUDS 88282

NOMBRE DE MAILLES 288857

TETRA4 288857

NOMBRE DE GROUPES DE MAILLES 1

region1 288857

-----  
-----

# Résultat commande #0010 (CREA\_MALLAGE): MESH\_PP ('<0000002f>') de type  
<Mesh>

# Dépend de :

# - MESH ('<00000002>') de type <Mesh>

# Mémoire (Mo) : 48587.81 / 6809.47 / 48060.80 / 576.79 (VmPeak / VmSize /

Optimum / Minimum)

# Fin commande #0010      user+syst:            1.61s (syst:            0.04s, elaps:  
1.64s)

# -----  
-----

..\_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_JACOBIE='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):	0.12	0.02	0.12	

```

# Résultat commande #0011 (AFFE_MODELE): MOD_PP ('<00000030>') de type
<Model>

# Dépend de :

# - MESH_PP ('<0000002f>') de type <Mesh>

# Mémoire (Mo) : 48587.81 / 6847.05 / 48060.80 / 576.79 (VmPeak / VmSize /
Optimum / Minimum)

# Fin commande #0011    user+syst:      0.73s (syst:      0.04s, elaps:
0.78s)

# -----
-----

.._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      161 NUMEROS
D'ORDRE

LISTE DES NOMS SYMBOLIQUES:

! ----- !-----!-----!-----!-----
---!-----!-----!-----!-----!

! NUME_ORDRE !      DEPL      !      VITE      !      ACCE      !
SIGM_NOEU    !  SIEQ_NOEU    !  EPSG_NOEU    !  COMPOTEMENT  !

```

```

!-----!-----!-----!-----!-----
---!-----!-----!-----!-----!

```

```

!      0 !      DEPL_R      !      DEPL_R      !      DEPL_R      !
SIEF_R      !      SIEF_R      !      EPSI_R      !      COMPOR      !

```

```

!      ... !      ...      !      ...      !      ...      !      ...      !
...      !      ...      !      ...      !

```

```

!      160 !      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      !      |      !      R      !
K24      !      R      !

```

```

!      ... !      ...      !      ...      !      ...      !      ...      !
...      !      ...      !      ...      !      ...      !      ...      !

```

```

!      160 !      K8      !      K8      !      K8      !
K24      !      R      !      |      !      R      !
K24      !      R      !

```

```

!-----!-----!-----!-----!-----
---!-----!-----!-----!-----!

```

-----!

# Résultat commande #0012 (EXTR\_RESU): SIM\_PP ('<00000031>') de type  
<NonLinearResult>

# Dépend de :

# - MOD\_PP ('<00000030>') de type <Model>

# Mémoire (Mo) : 48587.81 / 12779.93 / 48060.80 / 576.79 (VmPeak / VmSize /  
Optimum / Minimum)

# Fin commande #0012 user+syst: 529.99s (syst: 91.62s, elaps:  
621.63s)

# -----  
-----

..\_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) : 48587.81 / 12779.93 / 48060.80 / 576.79 (VmPeak / VmSize /  
Optimum / Minimum)

# Fin commande #0013 user+syst: 0.03s (syst: 0.01s, 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_MALLAGE='NON',  
                   NOM_CHAM='DEPL',  
                   NOM_CHAM_MED='displacement',  
                   NOM_CMP=('DX', 'DY', 'DZ'),  
                   RESULTAT=SIM_PP),  
              _F(IMPR_NOM_VARI='OUI',  
                 INFO_MALLAGE='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_MALLAGE='NON',  
                 NOM_CHAM='SIEQ_NOEU',  
                 NOM_CHAM_MED='von Mises stress',  
                 NOM_CMP='VMIS',  
                 RESULTAT=SIM_PP),  
              _F(IMPR_NOM_VARI='OUI',  
                 INFO_MALLAGE='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_MALLAGE='NON',
    NOM_CHAM='VITE',
    NOM_CHAM_MED='velocity',
    NOM_CMP=('DX', 'DY', 'DZ'),
    RESULTAT=SIM_PP),
_F(IMPR_NOM_VARI='OUI',
    INFO_MALLAGE='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) : 48587.81 / 12782.75 / 48060.80 / 576.79 (VmPeak / VmSize / Optimum / Minimum)

# Fin commande #0014 user+syst: 17.57s (syst: 5.86s, elaps: 23.44s)

# -----  
-----

..\_stg1\_txt171

# -----  
-----

# Commande #0015 de fort.1, ligne 171

```

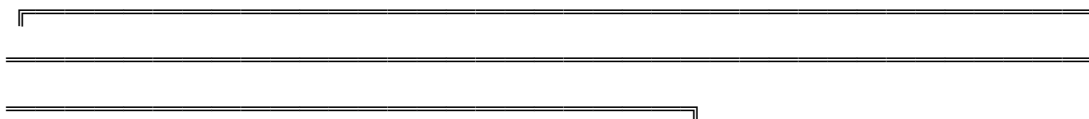
FIN(INFO_RESU='NON',
    PROC0='OUI',
    RETASSAGE='NON')

```

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'>



11

11

11

11

---

---

00000003	MODELE_SDASTER	18.78	9
----------	----------------	-------	---

14	00000004	CHAM_MATER	2.20	9
5	00000005	CHAM_NO_SDASTER	2.02	5
4	00000006	FORMULE	0.00	4
4	00000007	FORMULE	0.00	4
4	00000008	FORMULE	0.00	4
12	00000009	CHAM_NO_SDASTER	10.10	10
12	0000000a	CHAM_NO_SDASTER	10.10	10
5	0000000b	CHAM_NO_SDASTER	2.02	5
4	0000000c	FORMULE	0.00	4
4	0000000d	FORMULE	0.00	4
4	0000000e	FORMULE	0.00	4
12	0000000f	CHAM_NO_SDASTER	10.10	10
12	00000010	CHAM_NO_SDASTER	10.10	10
5	00000011	CHAM_NO_SDASTER	2.02	5
4	00000012	FORMULE	0.00	4
4	00000013	FORMULE	0.00	4

4	00000014	FORMULE	0.00	4
12	00000015	CHAM_NO_SDASTER	10.10	10
12	00000016	CHAM_NO_SDASTER	10.10	10
5	00000017	CHAM_NO_SDASTER	2.02	5
5	00000018	CHAM_ELEM	30.28	5
4	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
5	0000001f	CHAM_ELEM	182.26	5
5	00000020	CHAM_ELEM	182.26	5
5	00000021	CHAM_ELEM	22.06	5
4	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
37	00000028	CHAR_MECA	3.35	32
37	00000029	CHAR_MECA	1.14	32
6	0000002a	LISTR8_SDASTER	0.00	6
9	0000002b	LIST_INST	0.00	9
8307	0000002c	EVOL_NOLI	10545.39	7487
19	0000002e	TABLE_SDASTER	0.02	19
5678	00000031	EVOL_NOLI	4566.66	4861
52	0000002f	MAILLAGE_SDASTER	32.18	38
14	00000030	MODELE_SDASTER	14.21	9
2	&FOZERO		0.00	2
1	&&_NUM_C		0.00	1
4	&CATA.AC		0.00	2

3	&CATA.CL	0.62	1
11	&CATA.GD	0.19	4
4	&CATA.ME	0.22	2
19	&CATA.OP	0.32	4
1	&CATA.PH	0.00	1
4	&CATA.PR	0.00	2
42	&CATA.TE	28.61	17
4	&CATA.TH	0.01	2
11	&CATA.TM	0.01	7

-----  
-

Ouverture en écriture du fichier ./glob.2

Nom de la base	:	GLOBALE
Nombre d'enregistrements utilisés	:	21839
Nombre d'enregistrements maximum	:	2684354
Nombre d'enregistrements par fichier	:	15728
Longueur d'enregistrement (octets)	:	819200
Nombre total d'accès en lecture	:	18962
Volume des accès en lecture	:	14814.06 Mo.
Nombre total d'accès en écriture	:	11173
Volume des accès en écriture	:	8728.91 Mo.



Nombre d'identificateurs utilisés : 14599  
Taille maximum du répertoire : 16000  
Pourcentage d'utilisation du répertoire : 91 %  
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 : 48913  
Volume des accès en lecture : 38213.28 Mo.  
Nombre total d'accès en écriture : 68894  
Volume des accès en écriture : 53823.44 Mo.  
Nombre d'identificateurs utilisés : 1332  
Taille maximum du répertoire : 4000  
Pourcentage d'utilisation du répertoire : 33 %

<I> <FIN> ARRET NORMAL DANS "FIN" PAR APPEL A "JEFINI".

<I> <FIN> MEMOIRE JEVEUX MINIMALE REQUISE POUR L'EXECUTION :  
576.79 Mo

<I> <FIN> MEMOIRE JEVEUX OPTIMALE REQUISE POUR L'EXECUTION :  
48060.80 Mo

<I> <FIN> MAXIMUM DE MEMOIRE UTILISEE PAR LE PROCESSUS LORS DE  
L'EXECUTION : 48587.81 Mo

<I> FERMETURE DES BASES EFFECTUEE

STATISTIQUES CONCERNANT L'ALLOCATION DYNAMIQUE :

TAILLE CUMULEE MAXIMUM	:	48061 Mo.
TAILLE CUMULEE LIBEREE	:	74523 Mo.
NOMBRE TOTAL D'ALLOCATIONS	:	19731357
NOMBRE TOTAL DE LIBERATIONS	:	19731357

APPELS AU MECANISME DE LIBERATION : 2

TAILLE MEMOIRE CUMULEE RECUPEREE : 80380 Mo.

VOLUME DES LECTURES : 4 Mo.

VOLUME DES ECRITURES : 55402 Mo.

MEMOIRE JEVEUX MINIMALE REQUISE POUR L'EXECUTION : 576.79 Mo

- IMPOSE DE NOMBREUX ACCES DISQUE

- RALENTIT LA VITESSE D'EXECUTION

MEMOIRE JEVEUX OPTIMALE REQUISE POUR L'EXECUTION : 48060.80 Mo

- LIMITE LES ACCES DISQUE

- AMELIORE LA VITESSE D'EXECUTION

MAXIMUM DE MEMOIRE UTILISEE PAR LE PROCESSUS : 48587.81 Mo

- COMPREND LA MEMOIRE CONSOMMEE PAR JEVEUX,

LE SUPERVISEUR PYTHON, LES LIBRAIRIES EXTERNES

<I> FIN D'EXECUTION LE : DI-19-JANV-2025 06:57:12

DeprecationWarning: PY\_SSIZE\_T\_CLEAN will be required for '#' formats

libaster.jeux\_finalize(options)

Signature of pickled file :

010638a02303ffb72183f0ec036b5efd23a6d773ebc393b1a3d629cf52c5ecc9

Signature of info file :

2430df9d0b8b6d14052313012f791712f1f9d6516d988d3e0a59f744e2e260b5

Signature of Jeux database:

735b95d4365506160e77925f6fd1fa867851f5d9853a230fbca163c2b2035016

\*\*\*\*\*

\* COMMAND : USER : SYSTEM : USER+SYS :  
ELAPSED \*

\*\*\*\*\*

\* POURSUITE : 0.18 : 4.26 : 4.44 : 4.47

\*

```

* MODI_MODELE           :      0.00 :      0.00 :      0.00 :
0.01 *

* GET_ENERGIE           :      0.03 :      0.00 :      0.03 :      0.02 *

* DEFI_FICHIER          :      0.00 :      0.00 :      0.00 :      0.00 *

* IMPR_TABLE           :      0.01 :      0.00 :      0.01 :      0.00 *

* DEFI_FICHIER          :      0.00 :      0.00 :      0.00 :      0.00 *

* CALC_CHAMP            :    1341.74 :     246.54 :    1588.28 :
1673.84 *

* CREA_MALLAGE          :      1.61 :      0.04 :      1.65 :      1.64
*

* AFPE_MODELE           :      0.73 :      0.04 :      0.77 :      0.78
*

* EXTR_RESU             :     529.99 :      91.62 :     621.61 :     621.63
*

* DETRUIRE              :      0.03 :      0.01 :      0.04 :      0.04 *

* IMPR_RESU             :     17.57 :      5.86 :     23.43 :     23.44
*

* FIN                   :      1.31 :      4.36 :      5.67 :      5.67 *

* . check syntax        :      0.03 :      0.00 :      0.03 :      0.03 *

* . fortran             :    1893.04 :     350.11 :    2243.15 :    2328.77 *

*****

* TOTAL_JOB             :     1893.21 :     353.09 :     2246.30 :     2331.93
*

*****

# Mémoire (Mo) : 48587.81 /    530.18 / 48060.80 /    576.79 (VmPeak / VmSize /
Optimum / Minimum)

# Fin commande #0015    user+syst:      1.31s (syst:      4.36s, elaps:
5.67s)

# -----
-----

```

End of the Code\_Aster execution

Code\_Aster MPI exits normally

Exited

EXECUTION\_CODE\_ASTER\_EXIT\_12=0