Opérateur LIRE_MAILLAGE

1 Drank

Créer a mesh by reading on a file. The file with reading must be with format “ASTER” or format “MED”. For other formats (IDEAS and GIBI), it is necessary to use as a preliminary commands PRE_IDEAS or PRE_GIBI.

Product a data structure of type mesh.

Notice important:

One can check the quality of the mesh read while using (following LIRE_MAILLAGE) , command MACR_INFO_MAIL [U7.03.02].

2 Syntax

```
my   [mesh] = LIRE_MAILLAGE

              (  ◊UNITE=             /   20 ,                    [DEFAUT]
                                   /i     ,                    [I]

                 /FORMAT       =          'ASTER' ,              [DEFAUT]
                 /FORMAT       =           "MED",
                    ◊NOM_MED           =mamed       ,           [ K*]
                    ◊INFO_MED          = / 1,                   [DEFAUT]
                                         / 2,
                                         / 3,
                    ◊RENOMME   =_F       (
                          ♦NOM_MED   =grmmed  ,                 [K*]
                          ♦NOM        =grma   ,                 [K8]),


                 ◊VERI_MAIL    =_F       (
                           ◊APLAT  = /   1.D-3  ,          [DEFAUT]
                                         /ap       ,          [R]
                           ◊VERIF  = /   "OUI"  ,          [DEFECT]
                                         /   "NON"  , ),

                 ◊ABSC_CURV    = _F   ( TOUT = /   "NON"  ,    [DEFECT]
                                               /   "OUI"  ,),

                 ◊INFO   =          /   1   ,                  [DEFAUT]
                                    /2      ,

              )
```

3 Operands

3.1 Opérande FORMAT

This key word is used to specify the format of the file to reading. Today 2 formats are available: "ASTER" and "MED".

Format "ASTER" is described in [U3.01.00]
format "MED" is described in [U7.01.21.]

3.2 Opérande UNITE

◊UNITE =i

logical Numéro of unit of the file mesh. Unit 20 by defaults.

3.3 Operand VERI_MAIL

key word VERI_MAIL starts 3 checks on the mesh:

- absence of orphan nodes,
- absence of meshes "in double",
- absence of too flattened meshes.

If these checks are not satisfied, the code emits an alarm.

By defect (i.e. in the absence of key word VERI_MAIL), the checks are made. If the user wants to avoid these checks, he will write:

```
VERI_MAIL = _F (VERIF = "NON",),
```

a node is declared orphan if it does not belong to the connectivity of any mesh.
A mesh is declared "in double", if 2 meshes (or more) have the connectivities formed by the same list of nodes.

The key word APLAT = ap makes it possible to emit alarms when the mesh contains too flattened meshes.

The flatness of a mesh is defined like the Amin report/Amax where Amin and Amax are the lengths of stop shortest and longest of the mesh. The name of the meshes whose flatness is lower than ap will be printed on file "MESSAGE".

Other quality standards for the mesh are available via command MACR_INFO_MAIL [U7.03.02].

3.4 Operands for format "MED"

◊NOM_MED = mamed,

Nom of the mesh to reading in file MED (if there is several meshes in the file).

◊RENOMME = _F (NOM_MED = grmed, NOM = grma),

This key word factor (répétable) makes it possible to re-elect a mesh group of file MED to avoid a conflict of names when this name is truncated with 8 characters to become the name of the GROUP_MA Aster.
Indeed, names MED having potentially more than 8 characters, it may be, that after truncation, 2 different names in file MED become identical in Aster.

```
◊   INFO_MED =   /1,          [DEFAUT]
                 /2 ,
                 /3 ,
```

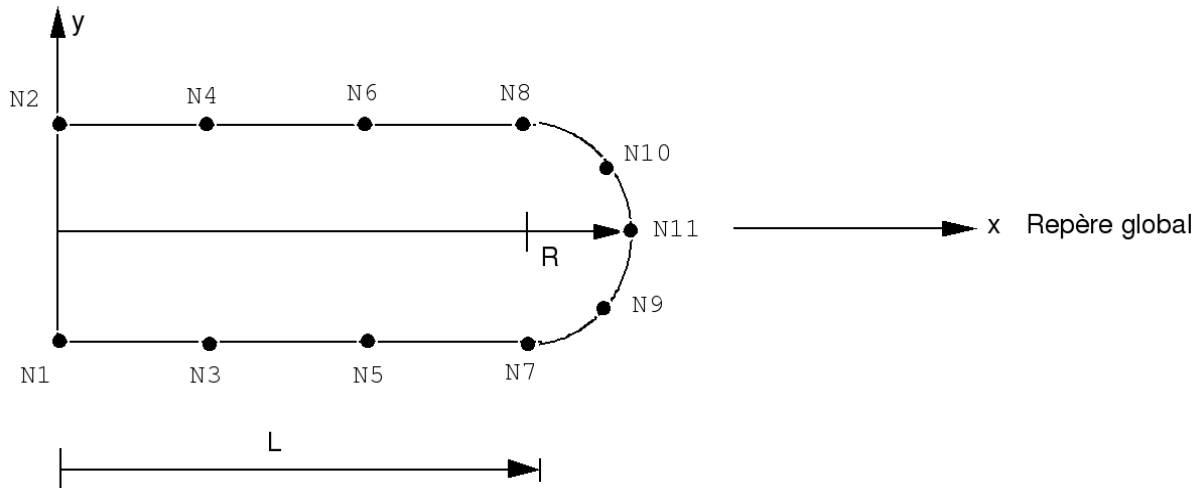
Prints information on the course of the second reading of mesh file MED (many nodes and of meshes read again, information on families MED,…) :
•INFO_MED=1 : no printing ,
•INFO_MED=2 : only printings relating to the correspondence family / group,
•INFO_MED=3 : the totality of information are printed.

3.5 Operand ABS_CURV

```
◊   ABS_CURV = _F (TOUT = "OUI"),
```

Calcule a curvilinear abscisse for the group of meshes SEG2 of the mesh. One associates with each mesh the curvilinear abscisse of the first and the second node in the meaning of path.

This option is necessary, for example, to carry out a modal computation for a tube with offsite and internal fluid, when the density of the offsite fluid is defined according to the curvilinear abscisse.



All the meshes of the mesh must be of type "SEG2".

The mesh origin is the first mesh met, during the reading of the file mesh, having only one close mesh (mesh N1 N3).

The final mesh is the last mesh met in the meaning of path having only one close mesh (mesh N4 N2).

If there exists more than one path between the first and the last mesh, computation is impossible.

Note: the computed curvilinear abscisse does not take account of the possible curvature of the segments since the elements are SEG2.

3.6 Operand INFO

```
◊INFO   = /  1   ,              [DEFAUT]
          /2     ,
```

Level of printing.

If: INFO = 1

- title of the mesh,
- many nodes,
- number of meshes,
- many nodes groups and for each one of them its name and the number of nodes of the many
- group mesh groups and for each one of them its name and the number of meshes of the group.

If: INFO = 2 one prints besides information of INFO = 1:

list nodes	number, name, coordinates,
list of the meshes	number, name, type, name of the nodes,
lists nodes groups	number, name, many nodes, names of the nodes,
lists mesh groups	number, name, number of meshes, names of the meshes.