Operator LIRE_MAILLAGE

1 Drank

To create 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 mesh type .

Notice important:

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

2 Syntax

```
   my   [mesh] = LIRE_MAILLAGE

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

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


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

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

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

                 )
```

3 Operands

3.1 Operand 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 Operand 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 mesh:

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

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

By default (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 he does not belong to the connectivity of any mesh.
A mesh is declared "in double", if 2 meshes (or more) nodes list have the connectivities formed by the same one.

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

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

Name of the mesh to reading in med file (if there are 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 the MED file to avoid a conflict of names when this name truncated to 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 med file become identical in Aster.

◊ INFO_MED = /1, [DEFAULT]
/2 ,
/3 ,

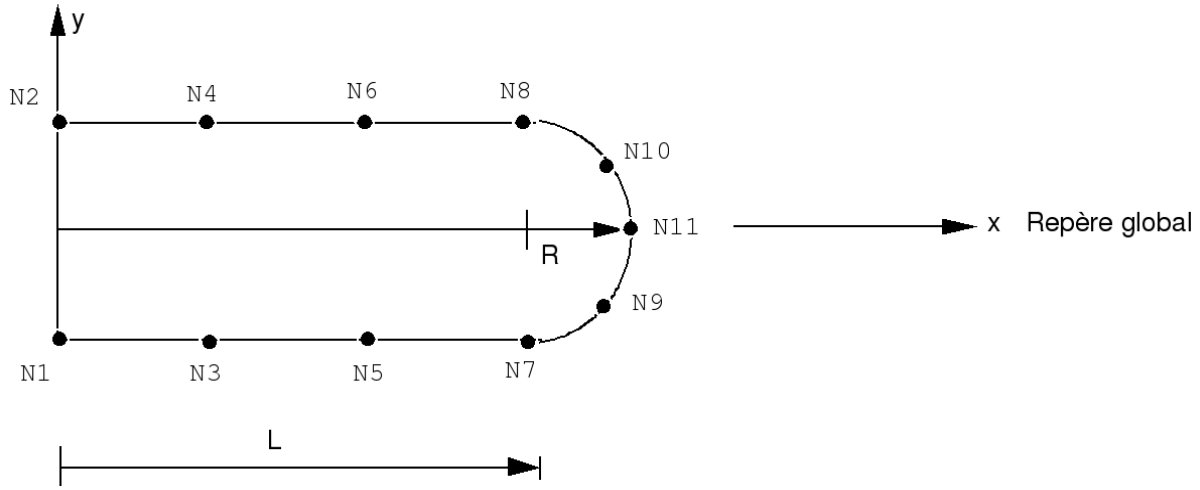
mesh file Prints information on the course of the relecture of the MED (many nodes and of meshes read again, information on families MED,…) :
•INFO_MED=1 : no printing ,
•INFO_MED=2 : only printings relating to the correspondence family/group,
•INFO_MED=3 : the totality of information are printed.

3.5 Operand ABS_CURV

◊ ABS_CURV = _F (TOUT = "OUI'),

meshes Calculates a curvilinear abscisse for all the 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 external fluid and intern, when the density of the external fluid is defined according to the curvilinear abscisse.



All 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 calculated curvilinear abscisse does not take account of the possible curvature of the segments since the elements are SEG2.

3.6 Operand INFO

```
◊INFO   =/1          ,              [DEFAULT]
          /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 meshes	the 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 meshes.