

Operator LIRE_MAILLAGE

1 Goal

To create a grid by reading on a file. The file with reading must be with the format "ASTER" or format "MED". For the other formats (IDEAS and GIBI), the orders should be used as a preliminary PRE_IDEAS or PRE_GIBI.

Product a structure of data of the type `grid`.

Notice important:

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

2 Syntax

```
my [grid] = LIRE_MAILLAGE

( ◇ UNIT = / 20 , [DEFECT]
  / I , [I]

  / FORMAT = 'ASTER' , [DEFECT]
  / FORMAT = 'MED' ,
  ◇ NOM_MED = mamed , [ K*]
  ◇ INFO_MED = / 1 , [DEFECT]
  / 2 ,
  / 3 ,

  ◇ RE-ELECT = _F (
    ◆ NOM_MED = grmmed, [K*]
    ◆ NAME = grma, [K8]),

  ◇ VERI_MAIL = _F (
    ◇ FLAT TINT = / 1.D-3 , [DEFECT]
    / ap , [R]
    ◇ VERIF = / 'YES' , [DEFECT]
    / 'NOT' , ),

  ◇ INFORMATION = / 1 ,
  / 2 ,

)

[DEFECT]
```

3 Operands

3.1 Operand **FORMAT**

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

The format 'ASTER' is described in [U3.01.00]

The format 'MED' is described in [U7.01.21.]

3.2 Operand **UNIT**

◇ UNIT = I

Logical number of unit of the file grid. Unit 20 by defaults.

3.3 Operand **VERI_MAIL**

The keyword VERI_MAIL start 3 checks on the grid:

- 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 default (i.e. in the absence of the keyword VERI_MAIL), the checks are made. If the user wants to avoid these checks, he will write:

```
VERI_MAIL = _F (VERIF = 'NOT',),
```

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) have the connectivities formed by the same list of nodes.

The keyword FLAT TINT = ap allows to emit alarms when the grid contains too flattened meshes.

The flatness of a mesh is defined like the report Amin/Amx where Amin and Amx 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 the file 'MESSAGE'.

Other quality standards for the grid are available via the order MACR_INFO_MAIL [U7.03.02].

3.4 Operands for the format 'MED'

◇ NOM_MED = mamed,

Name of the grid to reading in file MED (if there are several grids in the file).

◇ RE-ELECT = _F (NOM_MED = grmed, NAME = grma),

This keyword factor (répétable) makes it possible to re-elect a group of meshes of file MED to avoid a conflict of names when this name is truncated with 8 characters to become the name of 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, [DEFECT]
/ 2,
/ 3,

Print information on the course of the second reading of the file of grid MED (many nodes and of meshes read again, information on families MED,...) :

- INFO_MED = 1 : no impression ,
- INFO_MED = 2 : only impressions relating to the correspondence family/group,
- INFO_MED = 3 : the totality of information are printed.

3.5 Operand INFORMATION

◇ INFORMATION = / 1 , [DEFECT]
/ 2 ,

Level of impression.

If: INFORMATION = 1

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

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

list of the nodes	number, name, coordinated,
list of the meshes	number, name, type, name of the nodes,
list of the groups of nodes	number, name, many nodes, names of the nodes,
list of the groups of meshes	number, name, many meshes, names of the meshes.