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## Procedure TEST\_FICHER

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### 1 Goal

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This macro-order makes it possible to test to it not regression of files produced by the Code\_Aster orders, mainly `IMPR_RESU`, but one can use it on any textual file.

To test a file, one extracts the list from the real numbers and whole present in the file, the cardinal of this list, and the whole of the remaining text (once extracted numbers).

For the numbers, one checks to it not regression of the sum, the absolute sum or the min/max of the values except for a precision.

To test the text of the file, the module Python `md5` is used which provides a "signature" of the text (called `md5sum`).

Turn over `OK` if the file is identical, with the round-offs of the real numbers close, with the file which was used as reference, `NOOK` if not.

This order is used primarily by the cases tests to validate the not-regression of the results.

## 2 Syntax

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```
TEST_FICHER (
    ◆ FILE = fich, [KN]
    ◇ EXPR_IGNORE = regexp, [1_Kn]
      TYPE_TEST = / 'SOMM', [DEFECT]
                  / 'SOMM_ABS',
                  / 'MAXIMUM',
                  / 'MINI',
                  / 'MAXI_ABS',
                  / 'MINI_ABS',
    ◆ NB_VALE = nbval, [I]

    # Definition of the value of reference:
    # to see TEST_RESU [u4.92.01]

    ◇ INFORMATION = / 1,
      [DEFECT]
                  / 2,

    )
```

## 3 General information

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This procedure makes it possible to test to it not regression of files produced by the orders Aster, mainly IMPR\_RESU, but one can use it on any textual file.

To test a file, one extracts the list from the real numbers and whole present in the file, the cardinal of this list, and the whole of the remaining text (once extracted numbers).

For the numbers, one checks to it not regression of the sum, the absolute sum or the min/max of the values except for a precision.

One also checks (and it is the only obligatory test) the cardinal of the list of the real numbers and entreties identified in the file.

To test the text of the file, the module Python is used md5 who provides a "signature" of the text (called md5sum). Thus, any variation of a text (title, name of a component) compared to a file of reference will involve a change of the signature of the file.

### Notice 1:

| The file must be closed so that the value is reliable (with for example DEFI\_FICHIER, ACTION = 'TO RELEASE').

### Notice 2:

| The order does not give a relevant information about binary files.

The function `test_file` can be called out of *Code\_Aster* to obtain the value of `md5sum` of a file after round-offs:

```
iret, sum = test_file (filename=' nom_fichier',  
                      type_test=' SOMM',  
                      verbose=True)
```

## 4 Operands

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### 4.1 Operand FILE

◆ FILE = fich,

One provides the name of the file here to be analyzed with his access path into relative compared to the repertoire of execution or absolute. Examples: 'fort.37' or './REPE\_OUT/resultats.pos'.

### 4.2 Operand EXPR\_IGNORE

◇ EXPR\_IGNORE = regexp

The lines of the file satisfying the regular expressions given behind this keyword will be ignored in the analysis of the file.

Example: \*

```
EXPR_IGNORE = ( 'DATE= [0-9] {2}/[0-9] {2}/[0-9] {4}',  
               '^VERSION' )
```

Here lines containing DATE=jj/mm/aaaa where *j*, *m*, *a* are figures or starting with VERSION are ignored.

## 4.3 Operand TYPE\_TEST

Type of the test made on the actual values and whole of the file. The possible values are:

- SOMM : nap of the values
- SOMM\_ABS : nap of the absolute values
- MAXIMUM : maximum value
- MINIS : minimal value
- MAXI\_ABS : maximum of the absolute values
- MINI\_ABS : minimum of the absolute values

## 4.4 Operand NB\_VALE

It acts amongst values (real and whole) expected in the file. It is the only obligatory test.

## 4.5 Keywords common to the orders TEST\_XXX

The definition of the values of nonregression and reference, as well as acceptable tolerances, the comparison criterion is detailed in the documentation [u4.92.01] of the order TEST\_RESU.

Specificities of TEST\_FICHER are:

- pas de values whole or complex,
- pas de test in absolute value (except with TYPE\_TEST),
- VALE\_CALC and VALE\_CALC\_K can be provided together,
- pas de tolerance on the value of the parameter (TOLE\_MACHINE and CRITERION takes only one value).
- VALE\_CALC provides the value of reference expected for the test on the actual values and whole (the sum or maximum or...).
- VALE\_CALC\_K the signature md5 text of the file provides after the all actual values and whole were withdrawn. To obtain the value on the file of reference, it is enough to launch the order TEST\_FICHER and to record the displayed value (it is about a continuation of 32 hexadecimal natures).

## 4.6 Operand INFORMATION

◇ INFORMATION = inf

Specify the detail of the information printed in the file message.

If inf=1, there is the following summary:

(extracted from ssls108a)

Name of the file : ./REPE\_OUT/DEP12.pos

	FILE	REFERENCE	
Many values	10551	10551	
Somme of the values	1.6431683837230e+04	1.6431700000000e+04	
md5sum of the texts	e5050b2a3517728c4cc0e23af2b16ba5	not tested	

If inf=2, there is the list of the all values recorded in the file (10551 values in the example):

Real numbers and entiereties:

```
['0.0000000000000000E+00', '-', 5.5000001200000004E-01', '0.0000000000000000E+00',  
'0.0000000000000000E+00', '5.5000001200000004E-01', ...
```

as well as the whole of the text remaining once all extracted numbers:

Text:  
\$NOD\$ENDNOD\$ELM\$ENDELM