

## Procedure EXTR\_TABLE

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### 1 Goal

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To extract a concept of a table.

The table can be one `table_container` exit of the order `CALCULATION`. The extracted concepts are then elementary matrices, elementary vectors or fields.

The table can be obtained by the operator `RECU_TABLE` (`NOM_TABLE = 'MATR_GENE' ...`) starting from a concept result of the operator `CALC_FLUI_STRU`.

## 2 Syntax

```
resu = EXTR_TABLE (
    ♦ TABLE = matable, [tabl_*]

# 1. Definition of the type of the result:
    ♦ TYPE_RESU = type, [KN]
    (see the types authorized with the §3.2)

# 2. Selection of the cell to be extracted:
    # 2.1 Selection of the column containing the cell to be extracted:
        ♦ NOM_PARA = para, [KN]

    # 2.2 Selection of the line containing the cell to be extracted:
        ◇ FILTER = (_F ( ♦ NOM_PARA = para, [KN]
                        / ◇ CRIT_COMP = / 'EQ', [DEFECT]
                        / ' ',
                        / 'LT',
                        / 'WP',
                        / 'IT',
                        / 'GE',
                        / 'VACUUM',
                        / 'NON_VIDE',
                        / 'MAXIMUM',
                        / 'MAXI_ABS',
                        / 'MINI',
                        / 'MINI_ABS',

                        # If CRIT_COMP among EQ , , LT , WP , , GE

                        ♦ / VALE_I = ival, [I]
                          / VALE_K = kval, [KN]
                          / VALE = rval, [R]
                          / VALE_C = cval, [C]
                        ◇ | PRECISION = / prec, [R8]
                          / 1.0D-3, [DEFECT]
                          | CRITERION = / 'RELATIVE',

[DEFECT]
                        / 'ABSOLUTE',

                        ),),

        ◇ TITLE = title, [KN]

    )
```

The result is typified according to the value provided for TYPE\_RESU .

## 3 Operands

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### 3.1 Operand TABLE

- ◆ TABLE = matable

One gives the name of the table of which one wants to extract the value from a cell.

### 3.2 Operand TYPE\_RESU

- ◆ TYPE\_RESU :

Type of the result created.

The order does not make it possible to extract all the types of concept. The authorized types are:

```
'MATR_ASSE_GENE_R', 'MATR_ELEM_DEPL_R',  
'VECT_ELEM_DEPL_R',  
'CHAM_GD_SDASTER', 'CHAM_NO_SDASTER',  
'CARTE_SDASTER', 'CHAM_ELEM',  
'MODE_MECA',  
'FONCTION_SDASTER', 'FONCTION_C', 'NAPPE_SDASTER',  
'WHOLE' .
```

### 3.3 Operand NOM\_PARA

- ◆ NOM\_PARA = para

One gives the name of the parameter identifying the column containing the cell to be extracted.

### 3.4 To extract a cell; keyword FILTER

This keyword factor (répétable at will) is used to select the line containing the cell to be extracted. The use of this keyword is described in the order IMPR\_TABLE [U4.91.03].

### 3.5 Operand TITLE

- ◆ TITLE = title

Title which one wants to give to the result of the order [U4.02.01].

## 4 Examples

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Example resulting from the case test sdll118a

One wishes to extract from the table All the matrix of mass generalized for a speed of fluid given:

```
MG = EXTR_TABLE ( TYPE_RESU = 'MATR_ASSE_GENE_R',  
                  TABLE = ALL,  
                  NOM_PARA = 'MATR_MASS',  
                  FILTER = _F ( NOM_PARA = 'NUME_VITE',  
                               VALE_I = 2 ),  
                  )
```

Example following CALCULATION

Recovery of the stress field:

```
SIGM = EXTR_TABLE (TYPE_RESU=' CHAM_GD_SDASTER',
```

```
TABLE=CONT,  
NOM_PARA=' SIEF_ELGA')
```

Recovery of the elementary matrices:

```
MATR = EXTR_TABLE (TYPE_RESU=' MATR_ELEM_DEPL_R',  
TABLE=CONT,  
NOM_PARA=' MATR_ELEM')
```