

Operator REST_REDUIT_COMPLET

The goal of the operator is to rebuild the solutions on a complete model starting from a scale model.

The operator rebuilds one `evol_ther` or one `evol_noli` starting from an empirical base (see [U4.67.01], Operator `DEFI_BASE_REDUIRE`) and of the result of a reduced calculation.

Contents

1 Syntax.....	3
2 Operands.....	4
2.1 OperandS PHENOMENON and MODEL.....	4
2.2 OperandS BASE_PRIMAL.....	4
2.3 Operand REST_DUAL.....	4
2.3.1 Operand BASE_DUAL.....	4
2.3.2 Operand CORR_COMPLET.....	4
2.3.3 Operand GROUP_NO_INTERF.....	4
2.4 Operand RESULTAT_REDUIT.....	4
2.4.1 Operand TABL_COOR_REDUIT.....	5
2.5 Structure of output data.....	5

1 Syntax

```
evol = REST_REDUIT_COMPLET (  
  
    ♦ PHENOMENON      =  / 'MECHANICAL'          [DEFECT]  
                        / 'THERMAL'  
  
    ♦ MODEL           =  modele                  [modele_sdaster]  
  
    ♦ RESULTAT_REDUIT =  base2,                  [resultat_sdaster]  
  
    ♦ BASE_PRIMAL     =  baseprim,               [mode_empi]  
  
    ◇ REST_DUAL       =  / 'NOT',                [DEFECT]  
                        / 'YES',  
        # if REST_DUAL=' OUI'  
    ♦ BASE_AL        =  base dual,               [mode_empi]  
    ♦ GROUP_NO_INTERF =  grno,                  [grno]  
  
    ◇ CORR_COMPLET    =  / 'NOT'                [DEFECT]  
                        / 'YES'  
  
    ◇ TABL_COOR_REDUIT =  tabl_coor,             [table]  
  
    ◇ TITLE           =  title,                  [l_Kn]  
  
    ◇ INFORMATION     =  = /1,                  [DEFECT]  
                        /2,  
  
    )
```

2 Operands

2.1 OperandS PHENOMENON and MODEL

◆ PHENOMENON = / 'MECHANICAL' [DEFECT]
/ 'THERMAL'

Type of treated phenomenon: mechanics or thermics. The choice of the phenomenon will typify the structure of output data: `evol_ther` for THERMICS or `evol_noli` for MECHANICS .

◆ MODEL = model [modele_sdaster]

NRom of the model on which will be rebuilt the structure of data result.

2.2 OperandS BASE_PRIMAL

◆ BASE_PRIMAL = baseprim, [mode_empi]

The primal base will use to rebuild the primal fields: `DEPL` for mechanics and `THER` for thermics. It is necessary that this base was built on the model given by the keyword `MODEL` .

2.3 Operand REST_DUAL

◇ REST_DUAL = / 'NOT', [DEFECT]
/ 'YES',

By defaults, the duaux fields are not restored (`REST_DUAL='NON'`).
Keywords `BASE_DUAL` and `GROUP_NO_INTERF` are necessary to restore the duaux fields.

2.3.1 Operand BASE_DUAL

◆ BASE_AL = base dual , [mode_empi]

The dual base is necessary to rebuild the duaux fields: `SIEF_NOEU` for mechanics and `FLUX_NOEU` for thermics. It is necessary that this base was built on the model given by the keyword `MODEL`.

2.3.2 Operand CORR_COMPLET

◇ CORR_COMPLET = / 'NOT' [DEFECT]
/ 'YES'

When one did a calculation with correction finite element (see [U4.51.03]), the use of this keyword makes it possible to improve quality of the fields.

2.3.3 Operand GROUP_NO_INTERF

◆ GROUP_NO_INTERF = grno, [grno]

Group of nodes defining the interface the reduced field and the rest of the model.

2.4 Operand RESULTAT_REDUIT

◆ RESULTAT_REDUIT = base2, [resultat_sdaster]

This keyword gives the structure of data result (`evol_ther` or `evol_noli`) who comes from the calculation reduced with `THER_NON_LINE` or `STAT_NON_LINE`. This structure of data contains all the necessary information to rebuild the results on model given by the keyword `MODEL`.

2.4.1 Operand `TABL_COOR_REDUIT`

◇ `TABL_COOR_REDUIT = tabl_coor ,`

Lorsqu'one carry out a gappy-POD by `REST_REDUIT_COMPLET`, it is necessary to have the reduced coordinates of calculation. These coordinates are stored in a structure of data `table` of name '`COOR_REDUIT`' who is attached to structure of data result. One can recover it via the operator `RECU_TABLE`. For example:

```
coorredp=RECU_TABLE (CO=resun1, NOM_TABLE=' COOR_REDUIT')
```

But if you recover the empirical base previously calculated by an operator like `LIRE_RESU` (in particular with format `MED`), this table is not available. The operator `TABL_COOR_REDUIT` thus allows to give it to `REST_REDUIT_COMPLET`.

It is thus necessary to have saved this table upstream at the same time as the non-linear result (by one `IMPR_TABLE`), then to recover it (by one `LIRE_TABLE`) to give it to `REST_REDUIT_COMPLET`.

2.5 Structure of output data

The structure of output data is one `sd_resultat` standard of `code_aster`. It is complete for a resumption of calculation in thermics, on the other hand, in mechanics, it will miss the field of internal variables (`VARI_ELGA`). It will thus be necessary to supplement calculation with `ETAT_INIT/VARI` in `STAT_NON_LINE` .