Code_Aster

Version default

Titre : Opérateur RECU_TABLE
Responsable : Mathieu COURTOIS

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Clé : U4.71.02 Révision : 9847

Operator `RECU_TABLE`

1 Goal

Allows to recover in an array the values of a parameter of a data structure result, or, to extract an array contained in another data structure for those which allow it.

The array created can then be used in other commands (`IMPR_TABLE` for example).

Product a data structure of the type `counts` .

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2   Syntax

```
table=RECU_TABLE        (

        ♦CO=nomsd             ,                    [*]
        ♦/NOM_TABLE=nomtab              ,          [kN]
         /NOM_PARA    will =lpara    ,               [l_Kn]
        ◊TITER=titr           ,                    [l_K80]
                )
```

3   Operands

♦CO=nomsd   ,

Name of the data structure in which one wants to extract an array.

♦/NOM_TABLE=nomtab   ,

Name of the array stored in data structure.

Today, the data structures containing an array which one can extract by RECU_TABLE /NOM_TABLE are the following ones:

• a data structure of the evol_noli type obtained by STAT_NON_LINE or DYNA_NON_LINE, the name of the array is then "OBSERVATION",
• a data structure of mesh type . The name of the array is then "CARA_GEOM",
• a data structure of the type cabl_precont obtained by the command DEFI_CABLE_BP. The name of the array is then "CABLE_BP",
• a data structure of type obstacle obtained by the command MODI_OBSTACLE ; the name of the array is then "OBSTACLE",
• a data structure of the type melasflu obtained by the command CALC_FLUI_STRU ; the name of the array is then "MATR_GENE".
• data structures of the evol_elas type and evol_noli containing the total estimators of error calculated by CALC_ERREUR. The name of the array is then "ESTI_GLOB".
• a data structure of the evol_noli type obtained by STAT_NON_LINE, DYNA_NON_LINE or of evol_elas type obtained by DYNA_VIBRA on physical base contains an array of name "PARA_CALC" comprising the list of really calculated times and, if the user activates his computation, the energy balance. The array contains 7 columns:
  ◦ INST: time of computation,
  ◦ TRAV_EXT : work of the external forces,
  ◦ ENER_CIN : kinetic energy,
  ◦ ENER_TOT : total strain energy,
  ◦ TRAV_AMOR : energy dissipated by damping,
  ◦ TRAV_LIAI : energy dissipated and/or stored by connections,
  ◦ DISS_SCH : energy dissipated by the numerical diagram.

will ♦/NOM_PARA=lpara   ,

List of the names of the parameters to be extracted from SD RESULTAT nomsd.

This functionality makes it possible to extract in the form of an array the evolution from certain parameters from a SD RESULTAT, for example the parameter of control ETA_PILOTAGE in the case of a SD of the evol_noli type. The extracted parameters must be of type whole, real or complex, excluding from this fact the character strings. The first column of the produced array contains the sequence numbers (NUME_ORDRE) and the following contain the evolution of the parameters will lpara.

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◊TITER=titr   ,

Title which one wants result to give to the array.

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4 Recovery

•examples of some geometrical characteristics of one mesh:

```
cargeo = RECU_TABLE (CO = mesh    ,       NOM_TABLE = "CARA_GEOM",)
```

•recovery of the values "observed" in command DYNA_NON_LINE

command DYNA__NON_LINE [U4.53.01] makes it possible to choose a set of meshes or of nodes for which one wishes to observe one or more components of certain fields (key word OBSERVATION).

```
dynl = DYNA_NON_LINE (… OBSERVATION = _F    (…)…)

tabobs = RECU_TABLE (CO = dynl, NOM_TABLE = "OBSERVATION",)
```

•recovery of the parameter of control of a SD of the type evol_noli

```
stnl = STAT_NON_LINE (… CONTROL = _F  (…)…)

etapilo = RECU_TABLE (CO = stnl  , NOM_PARA = "ETA_PILOTAGE",)
```