Operator PROJ_VECT_BASE

1 Goal

To project a vector assembled on a base of mechanical clean modes or a basis of Ritz. The vector project could be used by the calculation algorithms in components generalized.

One can use PROJ_BASE [U4.63.11] for these projections.

Product a concept of the type vect_asse_gene.

2 Syntax

```
vecgene [vect_asse_gene] = PROJ_VECT_BASE

                (  ♦  BASE =    Ba,                    /   [mode_meca]
                                                       /   [mode_gene]

                   ♦  NUME_DDL_GENE =  nu_gene,            [nume_ddl_gene]


                   ♦  /   VECT_ASSE =      goes,
   [cham_no_DEPL_R]

                      /   VECT_ASSE_GENE = goes,
   [vect_asse_gene]


                   ♦  TYPE_VECT =      /   'FORC',
                                       /   'DEPL',
                                       /   'QUICKLY',
                                       /   'ACCE'

                )
```

3 Operands

3.1 Operand BASE

♦ BASE = Ba

Concept of the type mode_meca or mode_gene for under - structuring which contains the vectors defining the subspace of projection.

3.2 Operand NUME_DDL_GENE

♦ NUME_DDL_GENE = nu_gene

Classification associated with the generalized model.

3.3 Operands VECT_ASSE/VECT_ASSE_GENE

♦ / VECT_ASSE = goes

Concept of the type cham_no_DEPL_R , assembled vector which one wishes to project.

/ VECT_ASSE_GENE = goes

Concept of the type vect_asse_gene, assembled vector resulting from the under-structuring, which one wishes to project.

3.4 Operand TYPE_VECT

♦ TYPE_VECT = /'FORC',
/'DEPL',
/'QUICKLY',
/' ACCE ',

Character string describing the type of the field represented by the assembled vector. The liquid assets are 'FORC', 'DEPL', 'QUICKLY' and 'ACCE'. The treatment is different according to whether the option is used FORC or others.

- With the option FORC, simple projection is carried out $\Phi^T f$, where Φ is the base of modes and f effort.
- With the other options, one calculates by problem reverses the modal coefficients of participation associated with a given displacement. It is supposed that one can write displacement x in the form $x=\eta^T \Phi$. One calculates then $\eta=\Phi^T(\Phi^T\Phi)^{-1}x$ (use of pseudo-opposite of Moore-Penrose).