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

```plaintext
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’

)
```

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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.

3.4Operand 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 $\Phi$ 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 $x = \eta \Phi$. One calculates then $\eta = \Phi^T (\Phi^T \Phi)^{-1} x$ (use of pseudo-opposite of Moore-Penrose).