

ZZZZ258 - Validation of the keyword ETAT_INIT of STAT_NON_LINE

Summary:

This test validates the behavior of the code when one “continues” a non-linear calculation by imposing an initial state to him (keyword `ETAT_INIT`).
In particular, it is checked that certain alarms are emitted when one changes behavior on certain elements.

Note: The code must also emit a fatal error when the behavioral change is prohibited. This is checked in the test `erreur07` (v1.01.260).

1 Principle of the test

This test is a data-processing test. It is used to validate the programming of the treatment of the keyword `ETAT_INIT` and more particularly the routine `vrcomp.F`.

To define the initial state of a non-linear calculation, the user has two possibilities:

- either it indicates a structure of data `evol_noli` and a “moment” in this `evol_noli` (keywords `EVOL_NOLI + INST`)
- either it gives 3 fields “isolated” from displacement, constraints and variables internal (keywords `DEPL`, `SIGM` and `VARI`)

The programming is different to treat these two cases. This is why they are tested both.

The difficulty which one seeks to test here is that of a continuation for which, one or more elements of the model “changes” behavior.

More precisely, the following situations are tested:

- the addition of new elements in the model
- removal of elements in the model
- following possibilities of changing behavior:
 - `'vmis_cine_line'` - > `'vmis_cine_line'`
 - `'vmis_cine_line'` - > `'nothing'` (removal of elements)
 - `'vmis_cine_line'` - > `'vmis_cine_line'`
 - `'vmis_isot_trac'` - > `'vmis_isot_line'`
 - `'vmis_isot_trac'` - > `'elas'`
 - `'vmis_isot_line'` - > `'vmis_isot_trac'`
 - `'elas'` - > `'vmis_cine_line'`
 - `'nothing'` - > `'vmis_cine_line'` (addition of elements)
 - `'nothing'` - > `'vmis_cine_line'` (addition of elements)