ERREU10 - Validation of the stop for instability in STAT_NON_LINE

Summary:

This test validates the management of the stop on detection of instability in **STAT_NON_LINE**. For that one takes as a starting point the CAS-test SSLL105 where an instability of type buckling is observed.

1 Principle of the test

This test comprises only one modeling where one reiterates one of the resolutions non-linear of CAS-test SSLL105D.
At the time of the call to **STAT_NON_LINE**, an instability of buckling occurs and one will check here that the associated exception is well intercepted and that the test finishes properly: the base being correctly closed and would be thus exploitable in continuation.
This mode of stop on instability, that it is in **STAT_NON_LINE** or **DYNA_NON_LINE**, starts while declaring in **DEFI_LIST_INST** an event of the type **'INSTABILITY'** associated with the action **'STOP'**. Without this specific argument, the code, in its by default mode, will try to continue calculation even in the presence of instability: the non-linear algorithm follows a branch of solution then.

In practice, one will test the three possibilities of criterion of instability, which are defined *via* the value associated with the keyword **SIGN** under **CRIT_STAB** in **STAT_NON_LINE** [U4.51.03].
The critical load, during non-linear calculation, initially is lower than -2 and increases to become higher than -1: there is thus well an instability by negative values.
Thus if the criterion of stop regards as unstable any computed value ranging between -1 and 1 (**SIGN = 'POSITIF_NEGATIF'**) then calculation must stop well because of the event **'INSTABILITY'** of **DEFI_LIST_INST**.
If this criterion considers unstable the critical loads ranging between -1 and 0 (**SIGN = 'NEGATIVE'**), one will have also the same type of stop.
On the other hand, one tests that if the criterion of stop is based on the interval of instability 0 to 1 (**SIGN = 'POSITIVE'**), then non-linear calculation must continue until the end of its list of moments.