Operator **DEFI_LIST_ENTI**

### 1 Goal

To create a list of strictly increasing entireties.

The list can be given “in extenso” by the user, or, it can be formed from under lists defined in “constant step”.

The list can be made up by extraction of the sequence numbers of a structure of data result.

Product a structure of data of the type `list is`.
2 Syntax

Li [listis] = DEFI_LIST_ENTI

( ♦ APERTURATION= / 'CHALLENGE',
  [DEFECT]
    / 'NUMÉRIQUE_ORDRE',
  ♦ INFORMATION = / 1 ,
  [DEFECT]
    / 2 ,
  ♦ TITLE = title ,
  [l_Kn]

# If OPERATION = 'CHALLENGE':
  / ♦ VALLEY = read ,
  [l_I]
  / ♦ OFGOAL = deb. ,
  [I]
  / ♦ INTERVALLE = (_F ( ♦ JUSQU_A = yew, [I]
    ♦ / NAMEBRE = in , [I]
    ♦ / NOT = ipas, [I]
    ),),)

# If OPERATION = 'NUMÉRIQUE_ORDRE':
  ♦ RESULT = resu,
  [result]
  ♦ PARAMETER = resu,
  [KN]
  ♦ INTERVALLE = (_F ( ♦ VALE = (val1, val2),
    ♦ ) ),)

3 Operands

3.1 Definition of a list of entireties

3.1.1 Operand VALE

♦ VALE = lily
  List of the entireties which will form the structure of data listis result, one can provide any list Python.

3.1.2 Operand BEGINNING

♦ BEGINNING =
  deb. : first entirety of the list to be built.

3.1.3 Keyword INTERVAL
Keyword factor whose each occurrence makes it possible to define an interval at constant step.

3.1.3.1 Operand JUSQU_A

♦ JUSQU_A = yew
  yew is the whole end of the interval to be cut out with a constant step.

3.1.3.2 Operand NOT

♦ / NOT = ipas
  Pas de division interval.

3.1.3.3 Operand NUMBER

/ NUMBER = in
  Many steps which one wants in the interval.

3.2 Extraction of sequence numbers

This operation makes it possible to recover in a structure of data result (evol_noli exit of STAT/DYNA_NON_LINE for example) sequence numbers corresponding to certain criteria. The list of the sequence numbers thus obtained can then be used in all the orders having the keyword LIST_ORDRE.

For the moment, the only programmed criterion is the extraction of a parameter in a given interval.

3.2.1.1 Operand PARAMETER

Name of the structural parameter of data result which one wants to extract the value.

3.2.1.2 Keyword factor INTERVALE

One defines as many occurrences of the keyword factor INTERVAL that one wishes intervals of research. Research is made on the union of these intervals.

VALE = (val1, val2)

Definition of S terminals of each interval to which of which to belong the parameter to be extracted (terminals understood).

3.3 Operand INFORMATION

♦ INFORMATION = I
  Indicate the level of impression of the results of the operator:
  1 : no impression,
  2 : impression of the list of entireties created.

3.4 Operand TITLE

♦ TITLE = title
  Title attached to the concept produced by this operator [U4.03.01].
4 Remarks

- it is checked that the list is increasing.
- caution: the structure of data of the type list is cannot be used behind a keyword expecting one l_I (continuation of entireties written between brackets).

5 Examples

5.1 Case OPERATION = ‘CHALLENGE’

To build the list of entireties to constant step:

```
      1  4  7  10  13 16
```

```python
listi = DEFI_LIST_ENTI ( BEGINNING = 1,
                        INTERVAL = (_F ( JUSQU_A = 16,
                                        NOT = 3 ),),
                        )
```

To build the list of entireties with two values different from the step:

```
      1  2  3  4  5 10 15
```

```python
listi = DEFI_LIST_ENTI ( BEGINNING = 1,
                        INTERVAL = (_F ( JUSQU_A = 5,
                                        NOT = 1 ),,
                                        _F ( JUSQU_A = 15,
                                        NOT = 5 ),),
                        )
```

or

```python
listi = DEFI_LIST_ENTI ( BEGINNING = 1,
                        INTERVAL = (_F ( JUSQU_A = 5,
                                        NUMBER = 4 ),,
                                        _F ( JUSQU_A = 15,
                                        NUMBER = 2 ),),
                        )
```

or, from object does not import lists Python:

```
listi = DEFI_LIST_ENTI ( VALE = arranges (10) ,)
```

5.2 Case OPERATION = ‘NUMÉRIQUE_ORDRE’

```
linuor = DEFI_LIST_ENTI (OPERATION=' NUMÉRIQUE_ORDRE',
                        RESULTAT=DEPLTRAN,
                        PARAMETRE=' INST',
                        INTERVALLE= ( _F (VALE= (1.36, 1.37)),
                                        _F (VALE= (1.45, 1.46)),
                                        ))
```
The list of the sequence numbers will contain of which the value of the moment (parameter INST) is in the intervalS givenS.