
Data format sd_interf_dyna_clas

Summarized:

One describes here data structure produced by the command `DEFI_INTERF_DYNA`.
It defines the interfaces associated with a given macro-element.
A macro-element can comprise several interfaces.

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1 General information

the data structure `sd_interf_dyna_clas` are exclusively produced by the command `DEFI_INTERF_DYNA`. This one defines the interfaces of a structure for the modal recombination or the dynamic substructuring by modal synthesis.

2 Tree structure of Data format

the `sd_interf_dyna_clas` (K8)

```
◆ ".IDC_DDAC"      :   OJB   XD   V   I       NUM ()       VARI
◆ ".IDC_DEFO"     :   OJB   S   V   I
◆ ".IDC_DESC"     :   OJB   S   V   I       LONG=5
◆ ".IDC_LINO"     :   OJB   XD   V   I       NUM ()       VARI
◆ ".IDC_NOMS"     :   OJB   S   N   K8
◆ ".IDC_REFE"     :   OJB   S   V   K24   LONG=3
◆ ".IDC_TYPE"     :   OJB   S   V   K8
◆ ".IDC_DY_FREQ"  :   OJB   S   V   R       LONG=1
```

3 Contained of the JEVEUX objects

3.1 General information

a `sd_interf_dyna_clas` contains one or more interfaces (`nb_intf`) named.

Each interface contains one or more nodes. Each node of interface carries a certain number of ddls (component of quantity `DEPL_R`). For each node of interface, the user chooses a subset of the ddls carried by this the node is outside the field of definition with a right profile of the EXCLU type node: they are the "active" ddls of the node.

For each active dof. of the `sd_interf_dyna_clas`, one will calculate (later in `DEFI_BASE_MODEALE`) a static deformed shape.

One is interested in quantity `DEPL_R`.

3.2 Object `.IDC_REFE`

`".IDC_REFE" : S V K24 LONG = 3`

V (1)	Name of the <code>sd_maillage</code>
V (2)	Name of the <code>sd_numd_ddl</code>
V (3)	vacuum

Warning : The translation process used on this website is a "Machine Translation". It may be imprecise and inaccurate in whole or in part and is provided as a convenience.

3.3 Object .IDC_DESC

".IDC_DESC" : S V I LONG = 5

V (1)	1
V (2)	Many coded integers necessary to quantity DEPL_R (nbec)
V (3)	maximum Number of components for quantity DEPL_R
V (4)	Number of quantity DEPL_R in the catalog of quantities
V (5)	Many static deformed shapes to calculating (nb_def)

3.4 Object .IDC_NOMS

".IDC_NOMS" : S N K8 LENGTH = nb_intf

It is the pointer of names giving the correspondence number of the interface ↔ name of the interface

V (I): name of the interface number I

3.5 Object .IDC_TYPE

".IDC_TYPE" : S V K8 LENGTH = nb_intf

V (1 with nb_intf) : type of the interface (" CRAIGB ", " MNEAL ", " CB_HARMO " or " AUCUN ")

3.6 Object .IDC_LINO

".IDC_LINO" : XD V I NUM () VARI NB_OBJ = nb_intf

This collection comprises a number D" elements equal to the numbers D" interfaces (nb_intf).

That is to say V I^{ème} object of the collection

V has as a dimension the number of nodes of the interface number I (nbno).

V (1 with nbno) : number (in the mesh) of the nodes of the interface number I

3.7 Object .IDC_DDAC

".IDC_DDAC" : XD V I NUM () VARI NB_OBJ = nb_intf

This collection comprises a number of elements equal to the numbers of interface (nb_intf)

That is to say V I^{ème} object of the collection.

V has as a dimension the number of nodes of the interface number I (nbno) multiplied by the number of integer coded necessary to the description of quantity DEPL_R (nbec).

V (1 with nbno*nbec) : list coded integers describing the active ddls of the interface number I

3.8 Object .IDC_DY_FREQ

".IDC_DY_FREQ" : S V R LONG = 1

V (1) : Value of the frequency used for the computation of the harmonic constrained modes

3.9 Object .IDC_DEFO

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".IDC_DEFO" : S V I LONG = (2+nbec) *nbnot

This object describes to them (nbnot) nodes of the sd_interf_dyna_clas and their ddls active. It describes also the classification of the static deformed shapes (which one will calculate later) associated with the active ddls with the sd_interf_dyna_clas .

The number of nodes of the sd_interf_dyna_clas (nbnot) is possibly lower than the sum of the numbers of nodes of the various interfaces composing the sd_interf_dyna_clas because the interfaces of the same type (" CRAIGB ",...) can have joint nodes (which "will then be amalgamated" in the sd_interf_dyna_clas).

Each node of the sd_interf_dyna_clas has a type "MNEAL", "CRAIGB", "CB_HARMO", "AUCUN".

The nodes of the sd_interf_dyna_clas are gathered per packages in the same way standard. These nodes are arranged in L" order: "MNEAL", "CRAIGB", "CB_HARMO", "AUCUN".

That is to say nmn , ncb , ncbh , nau : numbers of nodes of the sd_interf_dyna_clas of the types: "MNEAL", "CRAIGB", "CB_HARMO", "AUCUN".

That is to say: nbnot = nmn + ncb + ncbh + nau

the vector . IDC_DEFO is made of 3 "blocks":

Numbers (in the mesh) of the nodes:

V (ino) : number of the ino^{ème} node of the sd_interf_dyna_clas

numbers of the 1st deformed shapes carried by each the node is outside the field of definition with a right profile of the EXCLU type node:

V (nbnot+ino) : number of the 1st deformed shape of suddenly of the sd_interf_dyna_clas

This storage block is used very little in the code. One S" is useful about it (temporarily) in the command DEFI_INTERF_DYNA which creates the SD. Once the SD created, the final contents of this block N" is used that in the routine bmnodi.f (REST_GENE_PHYS, MODE_ITER_CYCL)

coded integers describing the active ddls of the nodes: V (

2*nbnot+ nbec* (ino-1): 2*nbnot+ nbec* (ino)) : coded integers describing the active ddls of the ino^{ème} node of the sd_interf_dyna_clas