

## Structure of data sd\_interf\_dyna\_clas

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### Summary:

One describes the structure of data here produced by the order `DEFI_INTERF_DYNA`.  
It defines the interfaces associated with a given macronutrient.  
A macronutrient can comprise several interfaces.

## Contents

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<a href="#">1 General information.....</a>	<a href="#">3</a>
<a href="#">2 Tree structure of the Structure of Data.....</a>	<a href="#">3</a>
<a href="#">3 Contents of the objects JEVEUX.....</a>	<a href="#">3</a>
<a href="#">3.1 General information.....</a>	<a href="#">3</a>
<a href="#">3.2 Object .IDC_REFE.....</a>	<a href="#">3</a>
<a href="#">3.3 Object.IDC_DESC.....</a>	<a href="#">4</a>
<a href="#">3.4 Object .IDC_NOMS.....</a>	<a href="#">4</a>
<a href="#">3.5 Object.IDC_TYPE.....</a>	<a href="#">4</a>
<a href="#">3.6 Object .IDC_LINO.....</a>	<a href="#">4</a>
<a href="#">3.7 Object .IDC_DDAC.....</a>	<a href="#">4</a>
<a href="#">3.8 Object .IDC_DY_FREQ.....</a>	<a href="#">4</a>
<a href="#">3.9 Object.IDC_DEFO.....</a>	<a href="#">5</a>

## 1 General information

The structure of data `sd_interf_dyna_clas` is exclusively produced by the order `DEFI_INTERF_DYNA`. This one defines the interfaces of a structure for the modal recombination or the dynamic under-structuring by modal synthesis.

## 2 Tree structure of the Structure of Data

`sd_interf_dyna_clas` (K8)

◆	<code>\.IDC_DDAC'</code>	:	OJB	XD	V	I	NUM ()	VARI
◆	<code>\.IDC_DEFO'</code>	:	OJB	S	V	I		
◆	<code>\.IDC_DESC'</code>	:	OJB	S	V	I	LONG=5	
◆	<code>\.IDC_LINO'</code>	:	OJB	XD	V	I	NUM ()	VARI
◆	<code>\.IDC_NOMS'</code>	:	OJB	S	NR		K8	
◆	<code>\.IDC_REFE'</code>	:	OJB	S	V	K24	LONG=3	
◆	<code>\.IDC_TYPE'</code>	:	OJB	S	V		K8	
◆	<code>\.IDC_DY_FREQ'</code>	:	OJB	S	V	R	LONG=1	

## 3 Contents of the objects JEVEUX

### 3.1 General information

One `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 the size `DEPL_R`). For each node of interface, the user chooses a subset of the ddls carried by this node: they are the "active" ddls of the node.

For each ddl active of `sd_interf_dyna_clas`, one will calculate (later in `DEFI_BASE_MODAL`) a static deformation.

One is interested in the size `DEPL_R`.

### 3.2 Object `.IDC_REFE`

`\.IDC_REFE' : S V LONG K24 = 3`

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

## 3.3 Object.IDC\_DESC

\.IDC\_DESC' : S V I LENGTH = 5

V (1)	1
V (2)	Many coded entreties necessary to the size DEPL_R ( nbec )
V (3)	Component count maximum for the size DEPL_R
V (4)	Number of the size DEPL_R in the catalogue of the sizes
V (5)	Many static deformations to calculate ( nb_def )

## 3.4 Object . IDC\_NOMS

\.IDC\_NOMS' : S NR LONG K8 = 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 LONG K8 = nb\_intf

V (1 with nb\_intf) : type of the interface ( ' CRAIGB ', ' MNEAL ', ' CB\_HARMO ' or ' NONE ' )

## 3.6 Object . IDC\_LINO

\.IDC\_LINO' : 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<sup>ème</sup> object of the collection

v as a dimension the number of nodes of the interface number I have ( nbno ).

v (1 with nbno) : number (in the grid) 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<sup>ème</sup> object of the collection.

v as a dimension the number of nodes of the interface number I have ( nbno ) multiplied by the number of coded entreties necessary to the description of the size DEPL\_R ( nbec ).

V (1 with nbno\*nbec) : list of the coded entreties 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 calculation of the harmonic constrained modes

## 3.9 Object.IDC\_DEFO

`.IDC_DEFO` : S V I LENGTH = (2+nbec) \*nbnot

This object describes them ( nbnot ) nodes of sd\_interf\_dyna\_clas and their active ddls. It describes also the classification of the static deformations (which one will calculate later) associated with the active ddls with sd\_interf\_dyna\_clas .

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

Each node of sd\_interf\_dyna\_clas a type has 'MNEAL', 'CRAIGB', 'CB\_HARMO', 'NONE'.

Nodes of sd\_interf\_dyna\_clas are gathered per packages in the same way standard. These nodes are arranged in the order: 'MNEAL', 'CRAIGB', 'CB\_HARMO', 'NONE'.

That is to say nmn , ncb , ncbh , nau : numbers of nodes of sd\_interf\_dyna\_clas types: 'MNEAL', 'CRAIGB', 'CB\_HARMO', 'NONE'.

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

The vector . IDC\_DEFO is made of 3 "blocks":

Numbers (in the grid) of the nodes:

V (ino) : number of ino<sup>ème</sup> node of sd\_interf\_dyna\_clas

Numbers of the 1<sup>eras</sup> deformations carried by each node:

V (nbnot+ino) : number of the 1<sup>era</sup> deformation of suddenly of sd\_interf\_dyna\_clas

This storage block is used very little in the code. One makes use of it (temporarily) in the order DEFI\_INTERF\_DYNA who creates the SD. Once the SD created, the final contents of this block is used only in the routine bmnodi.f ( REST\_GENE\_PHYS , MODE\_ITER\_CYCL )

Coded entreties describing the active ddls of the nodes:

V (2\*nbnot+ nbec\* (ino-1) : 2\*nbnot+ nbec\* (ino)) : coded entreties describing the active ddls of the ino<sup>ème</sup> node of sd\_interf\_dyna\_clas