

Ranking of the documentation of Validation

Summary:

The handbook of Validation gathers the tests utilisés, to make sure of nonthe regression of the features available in *Code_Aster*. These tests are proposed and maintained by the persons in charge of the features concerned.

This document presents the classification of the tests.

1 Recall of the principles of management of documentation

The handbook of Validation gathers the documentation of validation of the code. The cards of validation which it contains make it possible to specify the field of application guaranteed and to give confidence in the use of the code. They constitute an illustration of the use of the various options of modeling and are a complement essential to the training with the structural analysis.

1.1 Identification of the booklets of the handbook of validation and coding

Each booklet is identified by a key related to all the pages. This key allows a progressive management of documentation, as its drafting.

The handbook is subdivided into ten **parts**. The parts of the handbook are materialized by hard-bound guides, delivered with the sorter. They are numbered of **0** with **9**.

The parts of the handbook consist of **booklets**, notes of software under A.Q which comply with the rules of presentation of technical notes D.E.R. (notes HI, HP,...); a note can contain one or more booklets. Each part of the handbook can contain hundred booklets a priori. Each booklet is identified by a number of booklet enters **00** and **99**.

A booklet can be cut out, according to the needs, in **documents** numbered from **0**.

Key: **Manuel_Partie.Numéro_du_fascicule [. Numéro_du_document]**

V1.01 Manuel de Validation/Organization of the Validation/

V3.04.004 Linear Mechanical Manuel de Validation//
Linear statics of the voluminal structures/SSLV004

With each test of validation is associated a coded reference which is clean for him (see table Ci - joint).

This coding, resumption of guide VPCS and made up of eight alphanumeric:

- takes into account the type of with problem dealt by the test (4 alphabetical characters),
- the sequence number of the test in the list of the tests of the same type (2 or 3 digital characters).

The four alphabetical characters indicate in the order:

1 ^{er}	character	:	the scope of application,
2 ^{ème}	character	:	the type of analysis,
3 ^{ème}	character	:	the type of behavior,
4 ^{ème}	character	:	the type of model.

Example : SDLA04 will be the 4^{ème} test of the type SDLA

The numbers of document ranging between 01 and 99 correspond to tests from guide VPCS.

The numbers ranging between 100 and 299 correspond to the tests suggested by the developers.

The numbers ranging between 300 and 399 are reserved for the tests resulting from the validation independent of version 3, between 400 and 499 with that of version 4,.... For the tests resulting from the independent validation, only those integrated into the list of not-regression of *Code_Aster* are documented in Manuel de Validation.

With a test several modelings can be associated. Each modeling also is the object of a coding which is clean for him and which is made up of eight characters. The six or seven first are consisted the coded reference of the test, the last character indicates the sequence number of modeling in the list of modelings associated with the test.

By convention, one will take the numbers in the following order:

WITH, B, C,, Y, Z

Example :

SDLA04C will be coding relative to the 3^{ème} modeling studied in test SDLA04.

If only one modeling is studied in a test, it will be subscripted A.

Example : SDLA04A, SSLV101A.

By convention tests YYYY are the benchmarks and tests ZZZZ the tests making it possible to validate data-processing features. Other names not corresponding to the nomenclature exist. These tests are in general related to tools trades.

Coding of the cards of validation: 7 characters

1	2	3	4	5 6 7
Field of application	Type of analysis	Type of behavior	Type of model	Sequence number
S Mechanics of the structures	S Statics	L Linear	D Discrete	01 to 999
T Thermics	D Dynamics	NR Non-linear	L Linear (beam)	
H Thermomechanical	P Stationary	C Boundary condition non-linear	S Surface (plate hull)	
F Fluids	T Transient		P Plan (2D)	
With Acoustics	H Harmonic		With Axisymmetric	
W Porous environment	Z Tiredness		V Voluminal (3D)	
W Metallurgy			X Mixed model	

1.2 Responsibilities attached to documentation

Each booklet or document is identified, on each page, by several information, besides the key of ranking:

- a title, truncated if it is too long,
- the publication date,
- the name of the responsible author,
- the number of page, follow-up of the full number of pages,
- the number of revision of the document, which materializes the evolutions of documentation,
- the number of version and, possibly, under-version of the code for which the booklet or the document applies:
 - defect, documentation valid for the version of development,
 - 9.5 documentation valid for version 9.5.

2 Plan of the handbook of Validation

The handbook of Validation gathers all the notes of validation, which make it possible to check the scope of application of the code.

V	Manuel de Validation
V0	General information
V1	Data-processing tests (Performances,...)
V2	Linear dynamics
V3	Linear statics
V4	Thermics stationary, transitory, with radiations, metallurgy
V5	Nonlinear dynamics
V6	Nonlinear statics
V7	Thermo-hydro-mechanics
V8	Fluid, Acoustics
V9	Any other business (Tiredness,...)

3 Booklets available

Part [V0]: General information
Booklet [V0.00]: General information on the documentation of Validation
Part [V1]: Data-processing tests (Performance,...)
Booklet [V1.01]: Tests of validity of orders
Booklet [V1.10]: Benchmarks
Part [V2]: Linear dynamics
Booklet [V2.01]: Linear dynamics of the discrete systems
Booklet [V2.02]: Linear dynamics of the beams
Booklet [V2.03]: Linear dynamics of the hulls and the plates
Booklet [V2.04]: Linear dynamics of the voluminal structures
Booklet [V2.05]: Linear dynamics of the assembled structures
Booklet [V2.06]: Harmonic answer of the linear structures
Booklet [V2.07]: Harmonic answer of the voluminal structures
Part [V3]: Linear statics

Booklet [V3.01]: Linear statics of the linear structures
Booklet [V3.02]: Linear statics of the systems plans
Booklet [V3.03]: Linear statics of the hulls and the plates
Booklet [V3.04]: Linear statics of the voluminal structures
Booklet [V3.05]: Linear statics of the assembled structures
Booklet [V3.90]: Theoretical references of tests in linear statics
Part [V4]: Thermics stationary, transitory, with radiations, metallurgy
Booklet [V4.01]: Stationary thermics of the axisymmetric structures
Booklet [V4.02]: Stationary thermics of the linear structures
Booklet [V4.03]: Stationary thermics of the plates and the hulls
Booklet [V4.04]: Stationary thermics of the voluminal structures
Booklet [V4.21]: Transitory thermics of the linear structures
Booklet [V4.22]: Non-linear transitory thermics of the linear structures
Booklet [V4.23]: Transitory thermics of the systems plans
Booklet [V4.25]: Transitory thermics of the voluminal structures
Booklet [V4.41]: Stationary thermics with radiation
Booklet [V4.61]: Metallurgy
Part [V5]: Nonlinear dynamics
Booklet [V5.01]: Nonlinear dynamics of the discrete systems
Booklet [V5.02]: Nonlinear dynamics of the linear structures
Booklet [V5.03]: Nonlinear dynamics of the voluminal structures
Part [V6]: Nonlinear statics
Booklet [V6.01]: Nonlinear statics into axisymmetric
Booklet [V6.02]: Nonlinear statics of the linear structures
Booklet [V6.03]: Nonlinear statics of the systems plans
Booklet [V6.04]: Nonlinear statics of the voluminal structures
Part [V7]: Thermomechanical
Booklet [V7.01]: Thermomechanical stationary linear of the axisymmetric structures
Booklet [V7.02]: Thermomechanical stationary linear of the systems plans
Booklet [V7.03]: Thermomechanical stationary linear of the voluminal systems
Booklet [V7.11]: Thermomechanical linear statics of the plates and the hulls
Booklet [V7.21]: Thermomechanical nonlinear statics of the linear structures
Booklet [V7.22]: Thermomechanical nonlinear statics of the voluminal structures
Booklet [V7.31]: Thermo-hydro-mechanics in porous environments saturated
Booklet [V7.41]: Thermomechanical non-linear transient of the systems plans
Booklet [V7.90]: Theoretical references of tests into thermomechanical
Part [V8]: Fluid, Acoustics
Booklet [V8.01]: Fluid
Booklet [V8.21]: Modal acoustics
Booklet [V8.22]: Harmonic acoustics

Part [V9]: Any other business (Tiredness,...)
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Booklet [V9.01]: Tiredness
