

Module EUROPLEXUS of salome_meca

Summary:

Card of validation of the operation of the Europlexus module of the platform Salomé-Meca on a CAS-test of Aster2EPX conversion.

Contents

1 Files.....	3
2 Loading of the study in module EUROPLEXUS.....	3
3 Visualization of command fileS EUROPLEXUS.....	4
4 Execution of Europlexus (Launching of calculation).....	5
5 Data of the study.....	5
6 Return in Asterstudy.....	6
Appendix 1: Capacities of the Aster2EPX converter.....	7

1 Files

test of validation is based on the conversion of a test code_aster plexu03a which is provided in the repertoire test of the Europlexus module. Three files are used for this test of validation:

```
plexu03a.COM  
plexu03a.e-mail  
plexu03a.export
```

2 Loading of the study in module EUROPLEXUS

Several opportunities are given for the launching of a study since module EUROPLEXUS available in the IHM Salomé_méca.

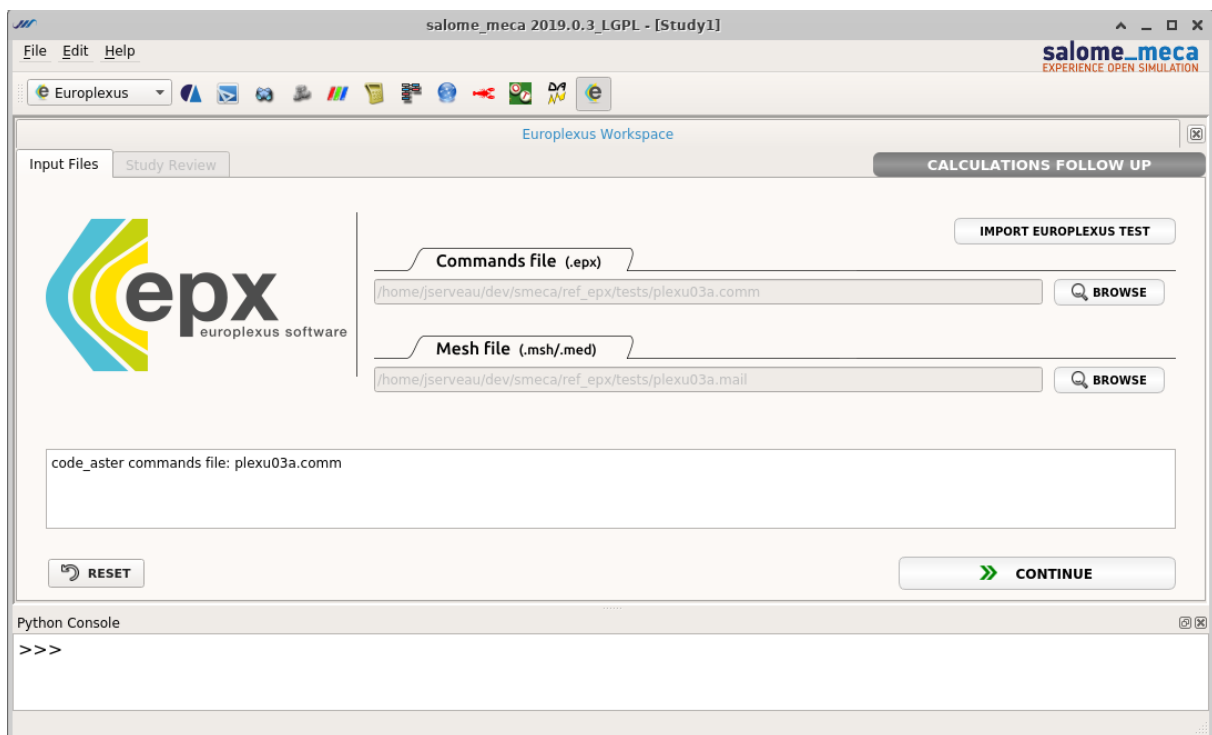


Figure 2-1: Module EUROPLEXUS, mitre Input Files

1. If the user has a file **export** including the names of the command files code_aster as well as grid, it is enough to charge it in “commands slips by”, those are automatically turned over in “commands slips by” and “Mesh slips by”.
2. The user can inform directly a command file code_aster in “commands slips by” as well as a grid in “Mesh slips by”
3. If the command file of study EUROPLEXUS were generated beforehand, it can be directly indicated in “commands slips by” and the grid associated in “Mesh slips by”.

In the first both cases, the transformations necessary to launch a calculation EUROPLEXUS will be carried out, for this purpose a command file EUROPLEXUS (.epx) as well as a file of grid (.msh) will be generated starting from the abundant data, in the same repertoire as those.

During the loading of a study, if keyword ETAT-INIT is present, EUROPLEXUS will begin calculation starting from an initial state resulting from a concept result of Code_Aster. The fields provided to Europlexus are those corresponding to the last moment of calculation of the concept result given. The fields are added in the file of grid “.msh” intended for EUROPLEXUS.

D years the case of the case test plexu03a, “plexu03a.export” is indicated in “Commands slips by”, “plexu03a.comm” and “plexu03 a.mail” is then charged. One supports on “CONTINUOUS” makes it possible to generate the command file EUROPLEXUS.

3 Visualization of command fileS EUROPLEXUS

In the mitre “Review Study”, Lpart “Commands spins editor” poster has the contents of the command file EUROPLEXUS generated starting from the command file code_aster and of the provided grid.

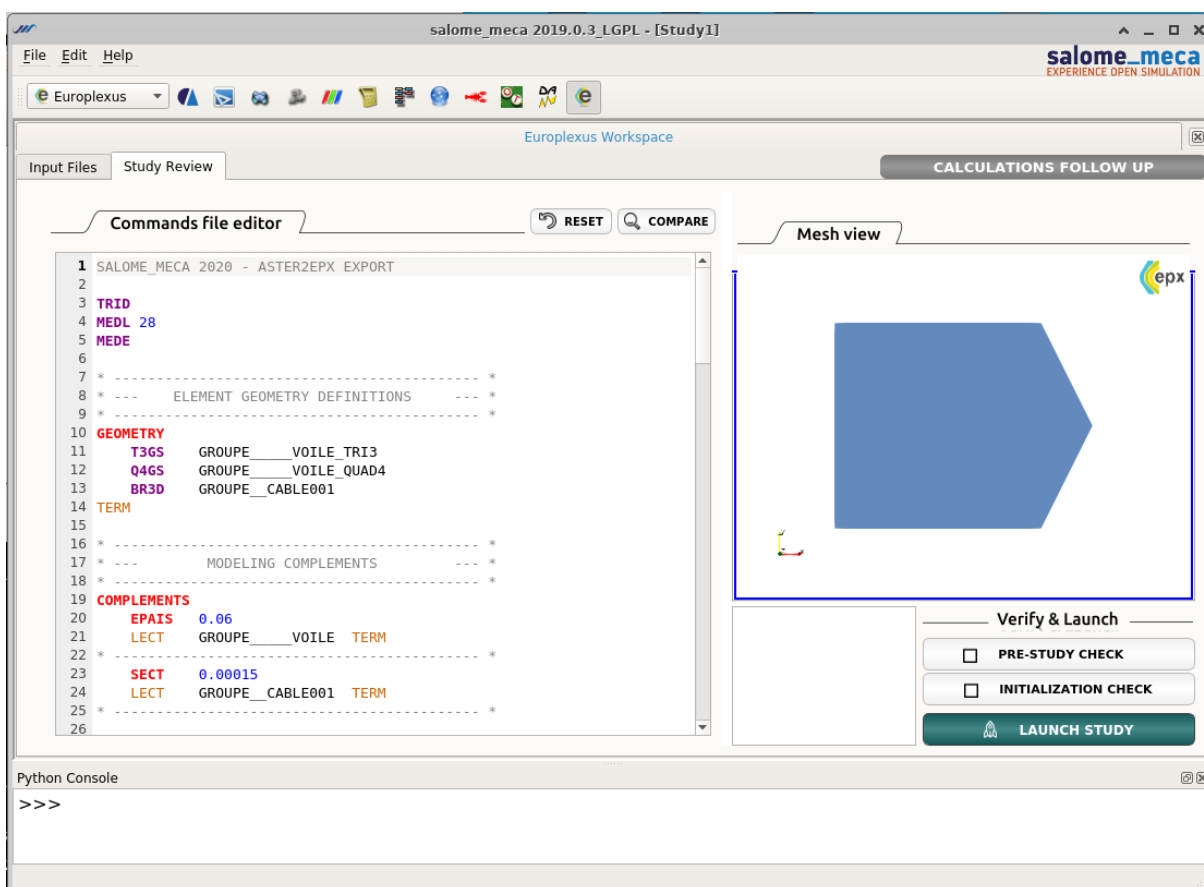


Figure 3-1: Module EUROPLEXUS: mitre Review Study

For a complete modeling, keywords: GEOMETRY, MATERIALS, LOAD, WRITING and OPTIONS are necessary.

The optional keywords are COMPLEMENTS, LINK, INIT MEDL, INTERFACE, STRUCTURE, RESULT, EXIT depend on the cases and the user.

Three actions are then possible:

- PRE-STUDY-CHECK checks the total structure of the command file generated and syntax.
- INITIALIZATION CHECK tests each order and its arguments.
- LAUNCH STUDY makes it possible to launch study EUROPLEXUS.

When “LAUNCH STUDY” is carried out, it is possible to define the name of the study, to choose the waiter, the version of EUROPLEXUS as well as the type of execution. One supports on “SUBMIT” launches study EUROPLEXUS.

4 Execution of Europlexus (Launching of calculation)

After launching of calculation, the module passes to the work method called “Calculations follow-up”. In this mode, the zone “Calculations follow-up-table” makes it possible to find the name of the study, its identifier, the waiter, the version of EUROPLEXUS, as well as the progression. When the study is finished, “Successful” appears in “Progress” or “Failed” in the event of error.

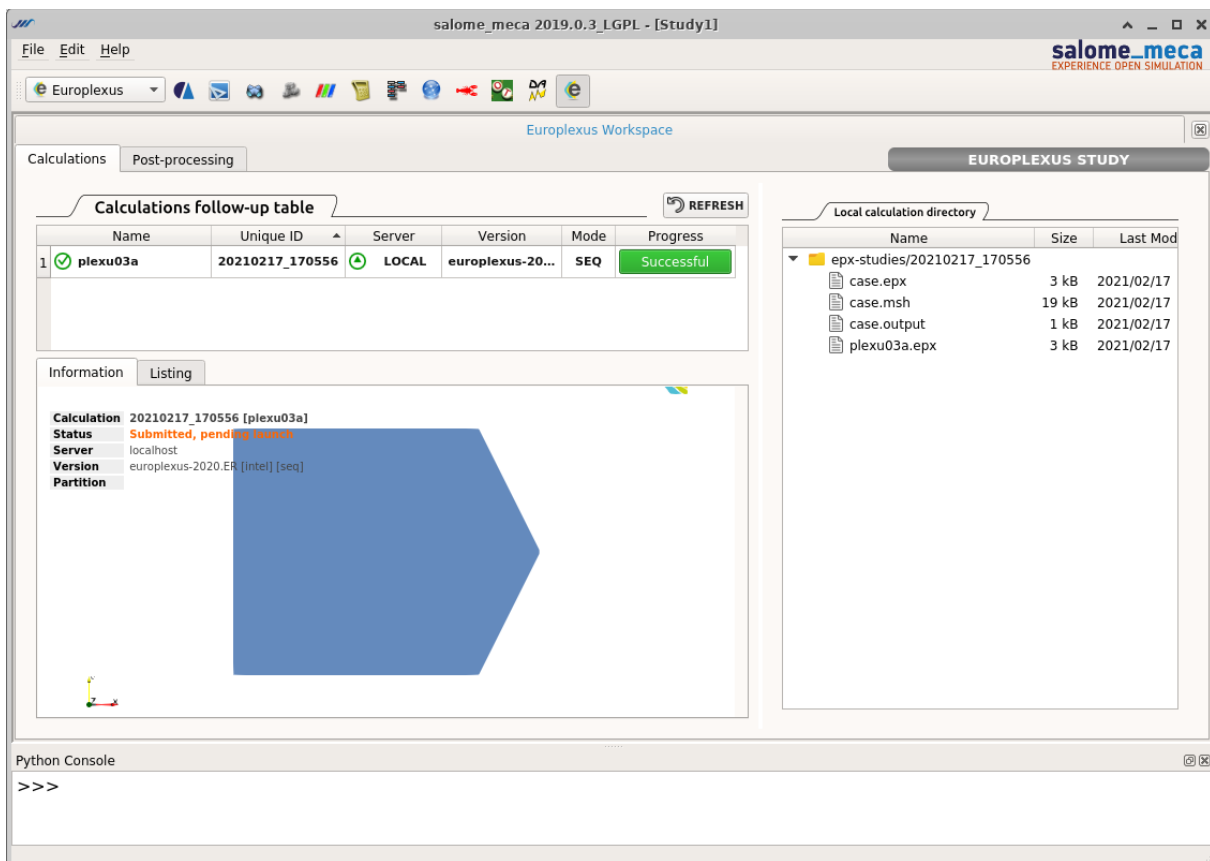


Figure 4-1: Module EUROPLEXUS: follow-up of calculations in “Followup Calculations”

5 Data of the study

In the mitre calculation, the data of the study (local repertoire) are displayed in the zone “Room calculation directory”. This repertoire is created after the launching of calculation in the file epX-studies of the repertoire staff of the user (/home/<nom of utilisateur>).

Will be present in this file:

- the command file EUROPLEXUS “case.epx”
- information on the execution of calculation “case.listing”
- the file including the grid and the results of the study EUROPLEXUS “case.med”
- The file of grid resulting from code_aster interpreted “case.msh”
- Steps of time to which calculation was carried out “case.output”
-

Optionnellement:

- The file courbe.pun if the exit “CURVES” was required.

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.

Copyright 2021 EDF R&D - Licensed under the terms of the GNU FDL (<http://www.gnu.org/copyleft/fdl.html>)

A command file code_aster allowing the second reading of the file .med containing the results of the study EUROPLEXUS is generated, it acts of "Commandes_reprise.comm". This file makes it possible to read again the fields resulting from the study, to recover information concerning the shutters grid, model, CARA_ELEM. For the CAS-test in question, plexu03a, we find the files "case.epx", "case.listing", "case.med", "case.msh", "case.output" and "plexu03.epx" in the file "epx-studies/date_heure".

6 Return in Asterstudy

The command file can be charged by "Add Internship from File". It is then necessary to inform the site of the file of grid result "case.med" as source file for the whole of the fields except the grid where one will inform the initial grid "plexu03a.mail".

Postprocessings can then be carried out following the second readings of the fields whose whole is saved in the table "resu".

Appendix 1: Capacities of the Aster2EPX converter

Modelings

Q4GG	DKT	DKTG
POU_D_E	BAR	
DIS_T	DIS_TR	
3D	3D_SI	

Characteristics of the elements

HULL	BEAM
BAR	DISCRETE

Matériaux

ELAS	ECRO_LINE
BETON_ECRO_LINE	ECRO_COOK
BPEL_ACIER	TRACTION
BETON/DEFI_GLRC	TABLECLOTH
LINER	CABLE_PREC

Loadings/blockings

DDL_IMPO	RELA_CINE_BP
LIAISON_MAIL	LIAISON_DDL
FORCE_COQUE	PRES_REP
FORCE_NODALE	GRAVITY