VALIMAT™ User Meeting
02.03.2020
Werfenweng, Austria

IMPETUS

VALIMAT

AGENDA

13:30 – 14:00 VALIMAT® - What's new

14:00 – 14:30 User defined material cards

14:30 – 14:45 Templates and reports

14:45 – 15:00 Coffee break

15:00 – 15:15 User defined specimen

15:15 – 16:00 Python interface

16:00 – 16:30 Q&A

4a ENGINEERING

VALIMAT ® – New Features

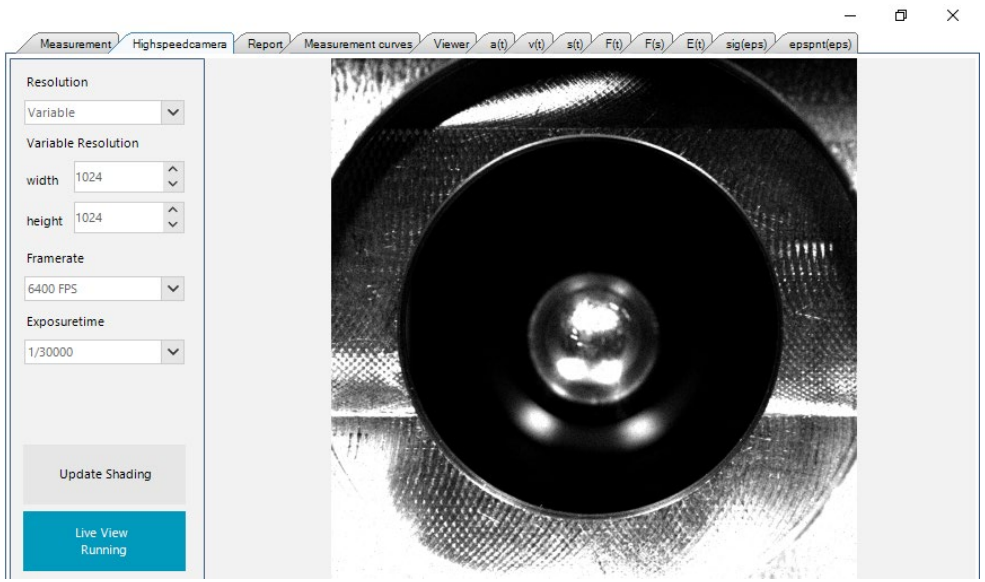
- VALIMAT® 3.7
- VALIMAT® 3.8

VALIMAT

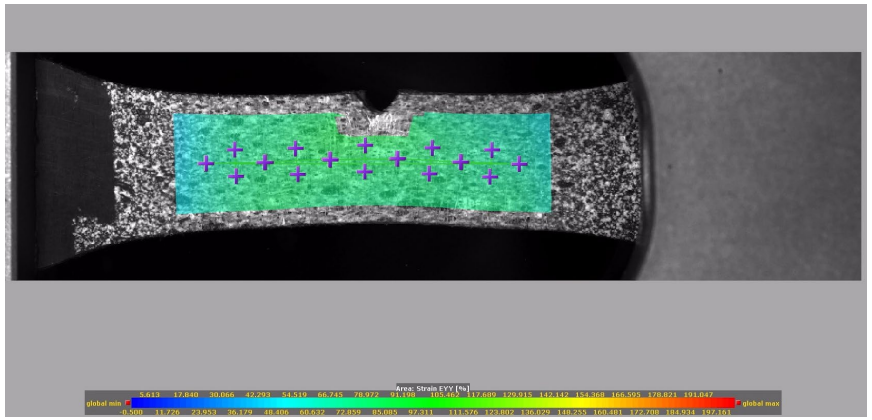
Updates in 3.7

VALIMAT® 3.7

- Photron Highspeed camera implementation
  - Enabled in the settings
    Machine parameter → Highspeed camera
    Automatic highspeed video creation
    IP-Address of the highspeed camera
  - Images will be automatically transferred to the correct curve store folder

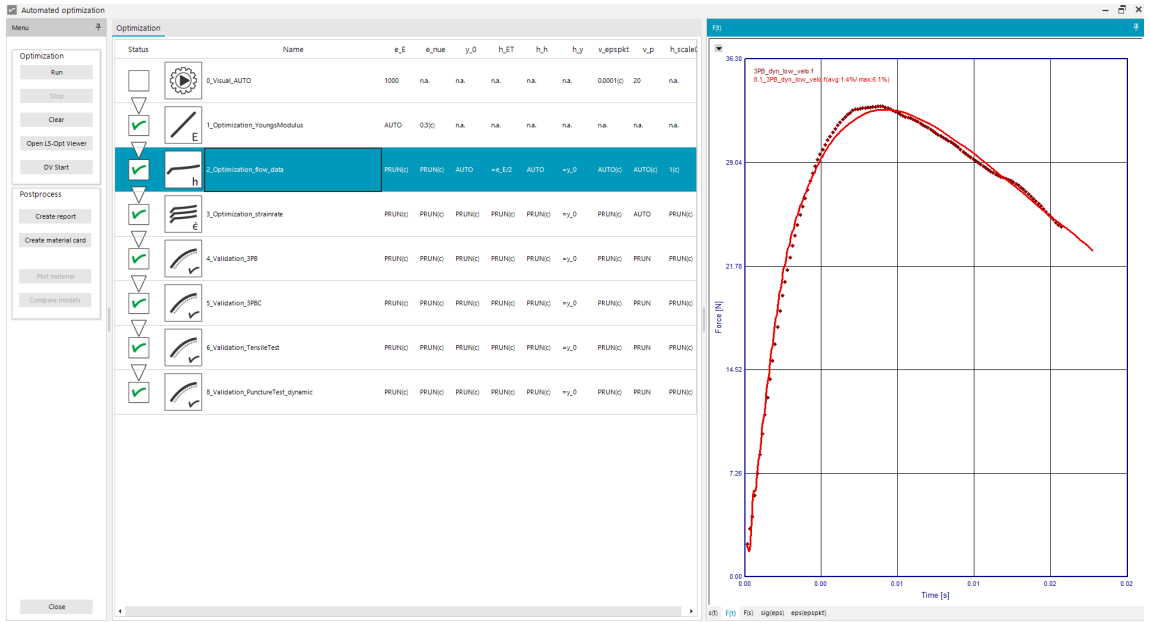


- MercuryRT DIC evaluation implementation
  - When the Software MercuryRT is available it can be used for automatic DIC evaluation (Please contact 4a for more information)



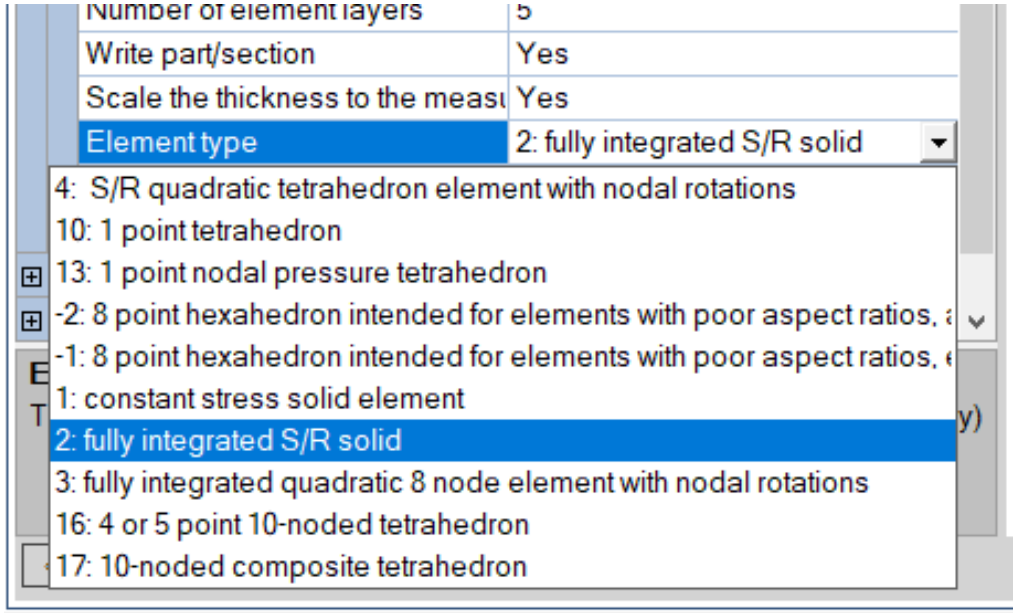
VALIMAT® 3.7

- New Autofit (visibility triggered by license-feature)
- Automatic report creation by setting the PPT-Template into the comment of the model
  - Usage: PPT-Template:xxx or PPT-Template:None
  - Name of the template-file that must be present in the report folder set in the Valimat settings
- Reference other models by index in all text replacements
  - Usage: <<A_NAME;index:3>>



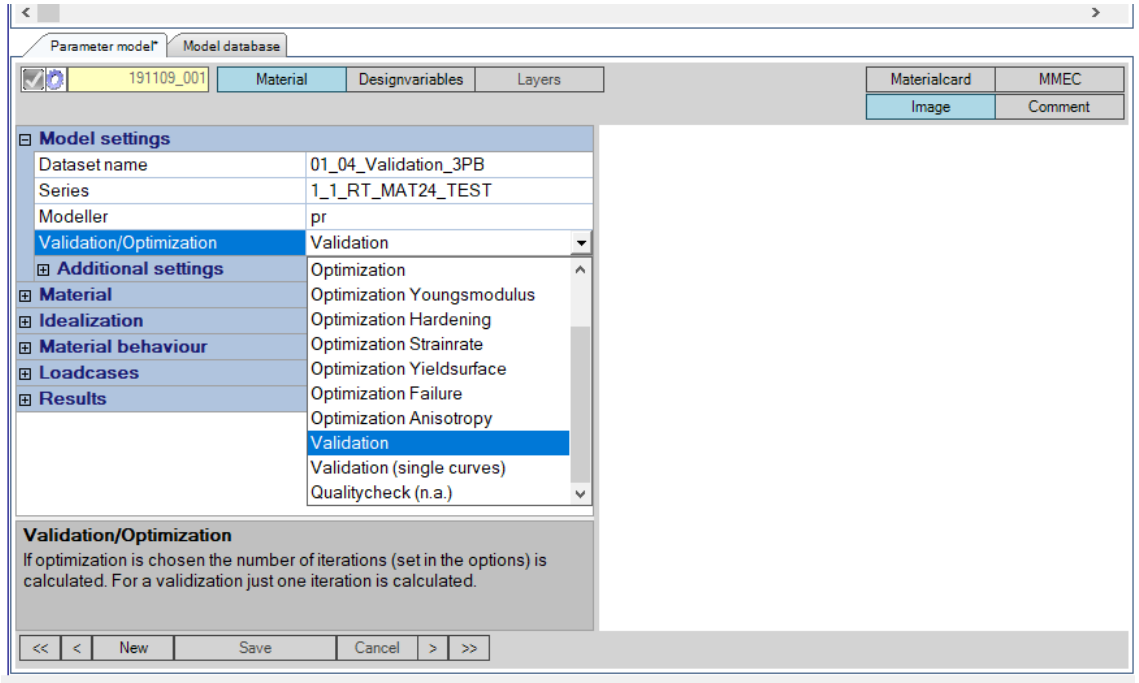
VALIMAT® 3.7

- 1-Element simulations for Abaqus 2019
- Tensile test simulations for Abaqus returns a force again
- Updated PAM-Crash to new standards at Audi
- New Element forms for LS-Dyna solids (Type -1, -2 and 3)
- On the old import allow to save more than one setting
- Added new options to “curve up to” in the cases
  - Maximum t-end in the tests
- All time based “curve up to” can now have a scaling-factor >1.0
- When importing external QS data into Valimat and the dataset has a manual filter set, then
  reset it to 0 (no filter)



VALIMAT® 3.7

- Open / Collapse group rows by pressing shift and clicking with the left mouse-button on a group row
- Added new options to the Validation/Optimization dropdown
  - Also the recommended settings for the selected options are set
- New default values for number of points (100) and biasing (unbiased)
- Added *MAT_123, *MAT_187 logarithmic R9.3+
- New folder browser dialogue



VALIMAT

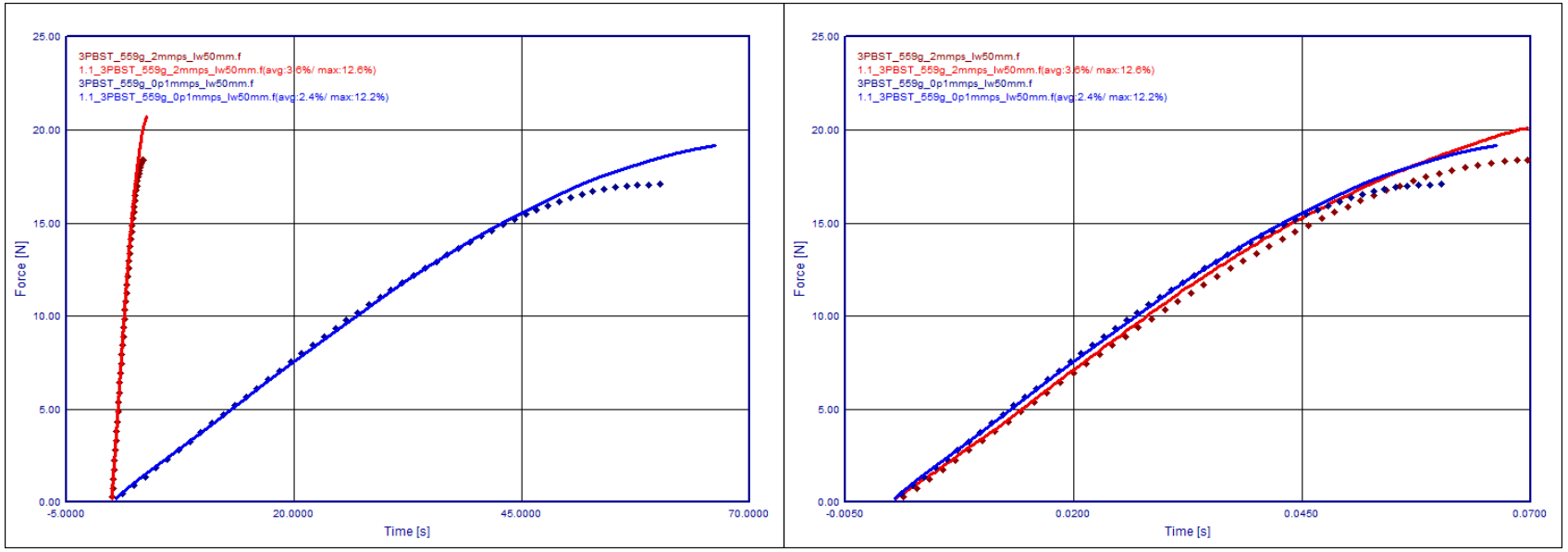
Preview 3.8

VALIMAT®

- New Autofit with failure optimization
- 3PB-XX specimen test option available
- Quick-filter in database view

VALIMAT® - Added non-scaled graphing on time-scaled simulations

Feature to properly plot time-scaled and non time-scaled curves in one graph



Postprocessing	
Deviation	1
Number of animation plots	10
Trim resultcurves?	False
Plot resultcurves timescaled?	True
Averaging	True
4a Solver Settings	False
Links/references	

VALIMAT® 3.8 – Changes

- “Optimization Anisotropy” behaves similar to “Optimization Elastic”
- Deliver a Python package with Valimat®. No installation of Python is needed anymore. (Python 3.8.1)
- ***MAT_187** uses LCID-P for all cases. Change the custom variables (xm_nuep_plat and xm_nuep_pres) to be dependent on y_nuep. This makes it behave like a constant nuep over the strain.
- All the MAT_ADD_EROSION implementations use logarithmic strain-rate interpolation now.
- Add a different implementation of the Cowper-Symonds strain-rate definition

VALIMAT® 3.8 - Bugfixes

- Reference to wrong curve for the yield-shear curve
- ***MAT_024** + Bilinear option had missing variables
- Correct the clamping length in Tensile test-simulations (in some cases it could happen that the specimen was clamped asymmetric)
- ***MAT_187** in the “vonMises (non associated)” option y_nuep was missing
- ***MAT_262** (added missing variables, ETAN, PFL and SOFT)
- Initial penetration of shell puncture test (in Abaqus and Pam-Crash)