PAM-STAMP

PowerPoint ReportingTool V3.1.8
Installation and User's Guide

version
2025.0

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Requirements and Limitations

Software Requirements

The ReportingTool requires at minimum PAM-STAMP for the scripting runs.

The simulation result itself could also be computed by older solver versions of PAM-STAMP. Please see section "Known Limitations" on the next page for further details.

The requirements of the Windows operating system and the PowerPoint / Excel version for the use of the reporting tool are listed in the following table:

Windows and Office version	Supported	not supported	not tested
Windows 7 32/64 Bit	x		
Windows 10	x		
PowerPoint / Excel 2007	x		
PowerPoint / Excel 2010 32 Bit	x		
PowerPoint / Excel 2010 64 Bit			x* (should work)
PowerPoint / Excel 2016 32 Bit	x		
PowerPoint / Excel 2016 64 Bit	x*		

* Special ReportingTool version for 64 Bit PowerPoint / Excel

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Known Limitations

- Autostamp projects only (No Inverse)
- No older projects from PAM-STAMP V2005 and earlier
- PAM-TUBE projects can be reported mainly manually
- Supported material laws: HILL48, HILL90, BARLAT
- Supported hardening curve definitions: POINT LIST, KRUPKOWSKY, HOLLOMON
- Supported unit systems: GPa or MPa

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Installation

Automatic Installation

An automatic installation of the ReportingTool can be done using .exe installer. It requires administrator rights and must be executed by an administrator.

1. The installer copies a PowerPoint add-in (ppam-AddIn) into the CommonApplicationData \Microsoft\AddIn directory of the current machine. It sets the rights to user = modify.

   `C:\ProgramData\Microsoft\AddIns`

2. Furthermore, the installer copies the installation directory of the ReportingTool 'PAM-STAMP_ ReportingTool_3.1.8' into:

   `C:\Program Files\ESI Group\`

3. Additionally, a folder with a link to the documentation of the ReportingTool, a link to the "Reporting_switch_version" and a link to the uninstall-file are created in the ESI-Folder on the desktop of all users:

   `C:\Users\Public\Desktop\ESI Group\`

4. The installer also sets all required System variables and enables the AddIn to be loaded by the installed Microsoft PowerPoint version. Presently all supported Microsoft Office versions are addressed by their Keys, which values are cleared during uninstallation. Customization of the language must be done via the system variable PAM-STAMP_REPORTINGLANG. The default value of the variable is English.

As a consequence, the installer sets the following registry keys:

Root: `HKEY_LOCAL_MACHINE`

- Subkey: `\SYSTEM\CurrentControlSet\Control\Session  Manager\Environment\`
  - ValueName: PAM-STAMP_REPORTINGDIR
  - ValueData: {commonprogramfiles}\ESI Group\PAM-STAMP_ReportingTool_3.1.8 (String)
- Subkey: `\SYSTEM\CurrentControlSet\Control\Session Manager\Environment\`
  - ValueName: PAM-STAMP_REPORTINGLANG
  - ValueData: English

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- Subkey: `Software\Wow6432Node\Microsoft\Office\11.0\PowerPoint\AddIns\PAM-STAMP_ReportingTool_3_1_8`
    - ValueName: path
    - ValueData: {commonappdata}\Microsoft\Addins\PAM-STAMP_ReportingTool_3_1_8.ppam

- Subkey: `Software\Wow6432Node\Microsoft\Office\11.0\PowerPoint\AddIns\PAM-STAMP_ReportingTool_3_1_8`
    - ValueName: AutoLoad (dword)
    - ValueData: 1 (hex)

5. The installer finally places an uninstall icon and a link in the Start menu inside the “All programs/ESI Group/PAM-STAMP_ReportingTool_3.1.8” group.

After the installation, a restart is needed to activate the System variables. Starting PowerPoint should either show the toolbar ESI_Reporting directly or an AddIn tab containing it. In order not to block the add-in code, the PowerPoint macro security level should be set to ‘Medium’ or ‘Low’ by the menu ‘Extras’ ► ‘Options’.

At uninstallation, these actions are rolled back.

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Change of the PAM-STAMP Version

To change the version of PAM-STAMP, which is used in the ReportingTool, the “Reporting_switch_version” is provided. This tool changes the entry in the configuration-files to the desired PAM-STAMP version. These files are located in:

```
C:\Program Files\ESI Group\PAM-STAMP_ReportingTool_
3.1.8\Configurations\LANGUAGE\PAM-STAMP_ReportingTool_3.1.8.cfg
```

If the switching of the versions with this tool does not work, the entries could also be changed by hand. In each configuration file, there are two entries:

- PAM-STAMP_DIR
- PAM-STAMP_GUI

Here, the path must be changed to the desired PAM-STAMP version.

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Configuration and Customization

Language Configuration

The default language of the ReportingTool is set to English. Any language can be defined using special language files, a special configuration file and customized PowerPoint / Excel templates. All these files must be stored in a separated language directory named by the language name (this directory is called `LANGUAGE` here after):

- Two language files for the forms and messages in the program directory `\PAM-STAMP_ReportingTool_3.1.8\Language_files\LANGUAGE`
- The ReportingTool configuration file 'PAM-STAMP_ReportingTool_3.1.7.cfg' in `\PAM-STAMP_ReportingTool_3.1.8\Configurations\LANGUAGE`
- PowerPoint and Excel templates in `PAM-STAMP_ReportingTool_3.1.8\Templates\LANGUAGE`

Any existing language set can be activated by the Windows system (environment) variable `PAM-STAMP_REPORTINGLANG`. The value of the variable must be the same as the name of the language directories.

Inside the default installation a German language set is supplied and can be activated by:

- PAM-STAMP_REPORTINGLANG = German

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Usage of Different Default Settings

Different default settings can be used in the ReportingTool.

All these settings must be defined in the file:

`PAM-STAMP_ReportingTool_3.1.8\Configurations\LANGUAGE\templates.cfg`

In each line, the name of the template must be written (see the example-file provided with this version). The default template can be marked with a '*'. If no template is marked, the default is used.

For each template, three different customizations can be done:

- Definition of a special ReportingTool configuration file: `PAM-STAMP_ReportingTool_3.1.8\Configurations\LANGUAGE\PAM-STAMP_ReportingTool_3.1.8_<TEMPLATE NAME>.cfg`
- Definition of user-defined "Contour presets" in PAM-STAMP in the PAM-STAMP configuration file: `PAM-STAMP_ReportingTool_3.1.8\Configurations\Stamp2G_GPa.cfg` or `PAM-STAMP_ReportingTool_3.1.8\Configurations\Stamp2G_MPa.cfg` or any other cfg-file defined in the ReportingTool configuration file (using the PAM-STAMP_CFG keyword).
- Definition of special PowerPoint-templates: `PAM-STAMP_ReportingTool_3.1.8\Templates\LANGUAGE\Template_XYZ_<TEMPLATE NAME>.ppt`

The ReportingTool will always try to use these configurations, but if these default configurations cannot be used, the default "Contour presets" or the default PowerPoint templates are used.

Adaptive Thickness Contour Preset

An adaptive thickness contour preset for PAM-STAMP can be used. For that, in the configuration file for PAM-STAMP (e.g. Stamp2G_GPa.cfg or Stamp2G_MPa.cfg), the "CONTOUR_OPTIONS" for "THICKNESS" must be defined.

There, the value for "RANGE_MIN" and "RANGE_MAX" must be "<thickness0.8>" or "<thickness1.2>" for example. In this case, the minimal thickness value displayed in PAM-STAMP will be 80% of the blank-thickness and the maximal value will be 120% of the blank-thickness.

Of course, other factors could be used instead. An example (`PAM-STAMP_ReportingTool_3.1.8_Example_var_thickness.cfg`) is provided as an example.

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Customization of Default Settings for the ReportingTool

Some default settings of the ReportingTool can be customized by a special configuration file `PAM-STAMP_ReportingTool_3.1.8.cfg` stored in the directory:

`\PAM-STAMP_ReportingTool_3.1.8\Configurations\LANGUAGE`

This is the default file, which must exist, but other configuration files for special templates can be defined (see "Configuration and Customization" on page 7).

The keywords used in the configuration files are described in the following table:

Keyword	Description
PAM-STAMP_DIR	Installation directory of PAM-STAMP i.e. of PAM-FORM
PAM-STAMP_GUI	Installation directory of PAM-STAMP GUI i.e. path to stamp.exe or in case of PAM-FORM form.exe
PAM-STAMP_CFG	PAM-STAMP configuration file used for the reporting. If the keyword value is set to 'DEFAULT' the reporting tool uses on of the two installed cfg files (dependent on the project unit system) in: `PAM-STAMP_REPORTINGDIR\Configurations`
POWERPOINT_TEMPLATES_DIR	Directory of the PowerPoint templates. If the keyword value is set to 'DEFAULT', the reporting tool uses the default directory: `PAM-STAMP_REPORTINGDIR\Templates`
USER	List of users. Arbitrary numbers of users can be added. The keyword *USER activates one of the users in the list as the default user. The format is: `User name | Short mark | Phone number`
INFO	Default entries for the three information boxes. The format is: `INFO | Information 1 | Information 2 | Information 3`

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Keyword	Description

DEFAULTS_	Defaults settings of the different analysis categories. The format is:
	`Name of the category |`
	`Scripting command for contour value (value 'NONE' can be exchanged by a contour value command) |`
	`Type of view for contour value (NORMAL, SMOOTHED) |`
	`Category active per default (=1) or inactive (=0) |`
	`Default layout (1-4) |`
	`Default number of pages (1-4)`
	`'X' means the value must not be changed!`
	`Do not add or delete rows with this keyword`

ANIMATION_	Generation of an animation additionally: '`NO`' = Animation toggle disabled per default '`YES`' = Animation toggle enabled per default
AUTOVIEW_	Automatic setting of the view without asking before the export of each image: '`NO`' = Ask to set view before the export of each image (Stamping) resp. before the export of the first image of each process stage (All stages) '`YES`' = Do not ask to set view before the export of the images (image export runs fully automatic)
AUTOZOOM_	Automatic definition of the view during all stages analysis: '`NO`' = The model is fitted automatically in the 3D window at the beginning of each process stage '`YES`' = Automatic determination of an optimized view (largest model size of the first and last state) in a separated scripting run and automatic activation of this view during the all-stages analysis

CONTOUR_ PROCESS	List of contour values for the all-stages analysis. The format is:
	`Element type ('SHELL' or 'SOLID') |`
	`Scripting command used in the scripting |`
	`Name of the contour value in the list`

COLORINDEX_	Colorindex for RBG space (red, green, blue) for the layout and stage type buttons in the user forms. The format is: Colorindex from 0 (black) to 255 (white) For default grey color set the values to 192 for red, green, and blue.

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Keyword	Description
PROGRESSION_ TEXTBOX	Definition of the Textbox, which can be included to show the forming-progression (time or stroke) under the corresponding picture. YES (if textbox should be added by default); NO (if not) Hight of the textbox (in pixel) Font size of the textbox
BLANK_SHOW_ MESH	Display of the mesh in the pictures for the blank (in basis-analysis); Values: `YES / NO`
BLANK_SHOW_ COS	Display of the coordinate system in the pictures for the blank (in basis-analysis); Values: `YES / NO`
PRESELECT_ TEMPLATE	Settings for the Templates & Copies Window. The preselected Checkboxes and Stages could be defined. Keywords checkboxes: Checkbox: (`BASIS, PROCESS, MANUALLY`); Value: (`YES, NO`) Keywords stages: Stagetype: (`FORM, TRIM, SPBK, GRAV`); Value (`ALL, 0, 1, 2, 3, …, -1, -2, …`) (All, none, the first, the second, ..., the last, the second last, ... stage is preselected; could be used several times)

Commands for COLORINDEX_ and DEFAULTS_

The scripting commands for the analysis (in COLORINDEX_ and DEFAULTS_) can be customized.

Some commands are already given in the example files, but to find out other commands, the scripting functionality in PAM-STAMP can be used.

With the scripting toolbar (Views → Toolbars → Scripting toolbar) actions could be recorded and will be saved in a text-file. The desired contour can be selected in PAM-STAMP and the corresponding scripting command will be given in the text-file.

Usually it looks like this, with the command in the brackets:

```
PoeView.DisplayContour(THINNING /VALUE_TYPE="ENGINEER")
```

For the “Object distance” command (see example-files provided with this version) the keyword “<replace>” must be used.

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Customization of the PowerPoint and Excel Templates

It is possible to customize the PowerPoint and Excel templates stored by default in:

`PAM-STAMP_ReportingTool_3.1.8\Templates\ LANGUAGE`

Any shape of the PowerPoint templates which is used by the reporting tool is colored in orange. These fields can be deleted or resized and can also be moved but only within each template! It is not possible to move a colored shape from one template to another. Furthermore, the slide master "___Template_ MASTER.pot" can be customized to use a special master layout and company logo.

As mentioned above, different templates can be used. Special templates must have the same name as the original template but extended with the name of this template. For example:

`Template_Cover_page_<TEMPLATE NAME>.ppt`

Examples are provided with this ReportingTool version.

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Usage of the ReportingTool

The ReportingTool can be used to create a report of a PAM-STAMP project, which ran without errors.

It reads the *.att file of the project to get information about the process and then it starts PAM-STAMP to create pictures, graphs, etc. These are then inserted into the PowerPoint templates.

Main Functions of the ReportingTool

To use the ReportingTool, the Add-In must be started inside PowerPoint (Add-Ins → PAM-STAMP_ ReportingTool_3.1.8). Then, the following Start window appears:

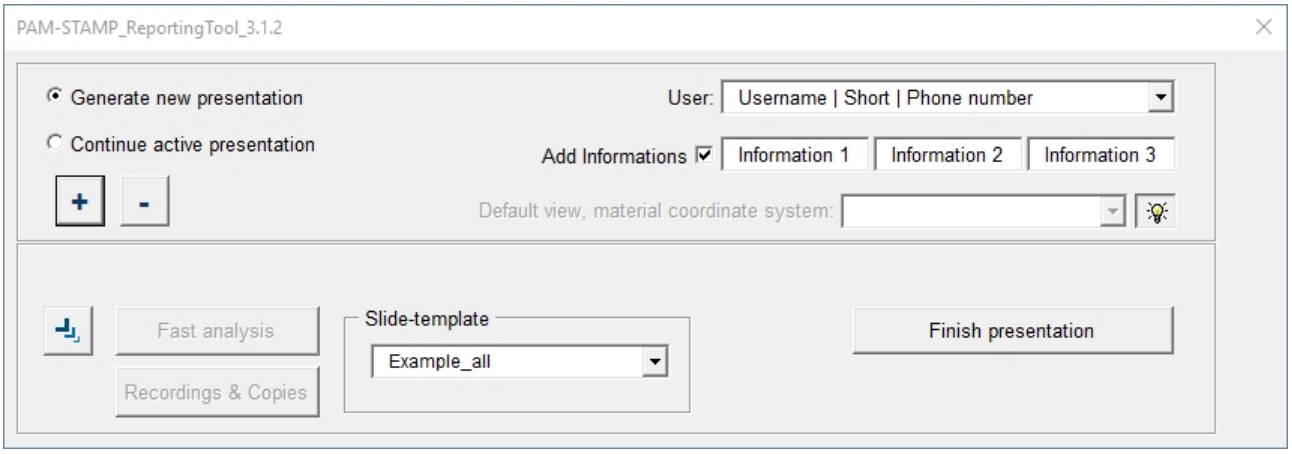

Figure 1: ReportingTool at the start

Using the “+” button the *.att-file of a PAM-STAMP project hat to be opened and the main ReportingTool window is updated and looks like this:

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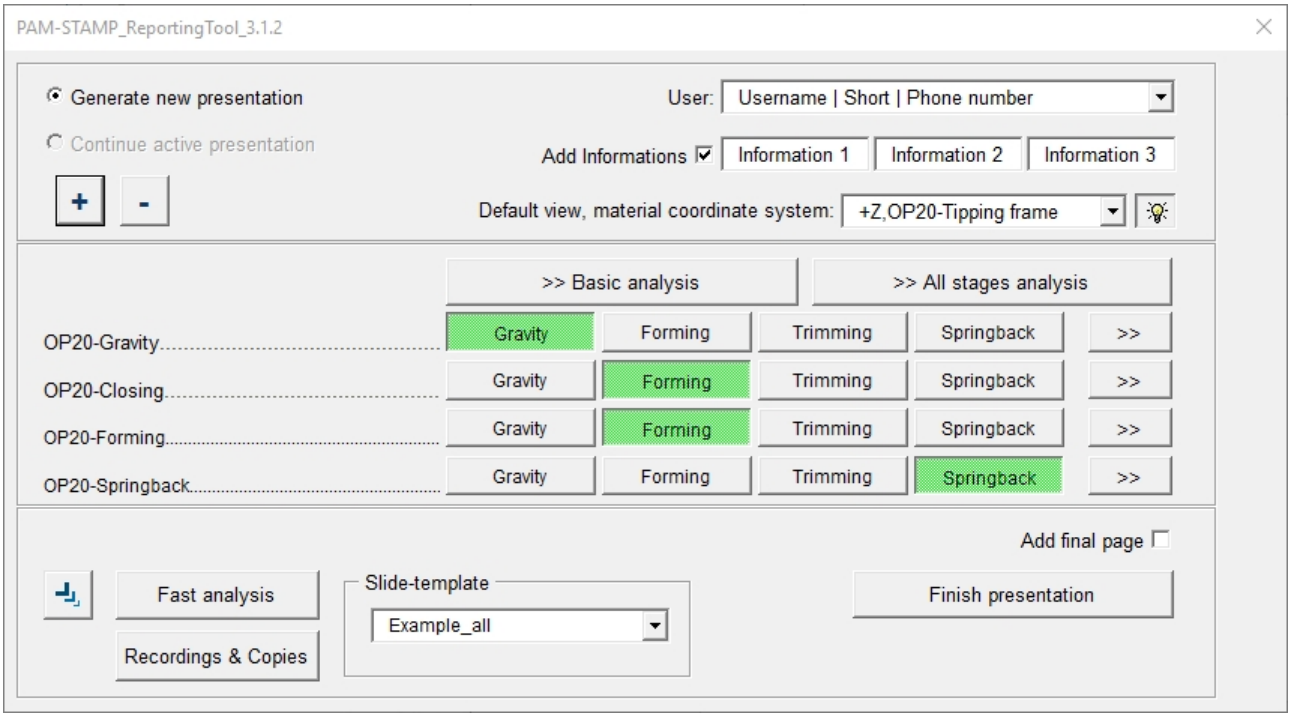

Figure 2: ReportingTool after choosing an *.att file

Information about the user (e.g. name or phone number) and some other information (e.g. the project or the part number) could be filled in. These will be added to all slides of the presentation, when the “Finish presentation” button is clicked.

The default view can be chosen, and it will be applied to all pictures in PAM-STAMP. However, the user can change the view in PAM-STAMP, if he wishes.

A basic analysis (with a cover page, blank geometry and material parameters) or an all-stages analysis can be started using the corresponding buttons.

Then all the stages of the project are listed below. The ReportingTool identified the type of each stage, but it can be changed by hand, if the wrong stage-type is selected (click on the right stage-type). With the “>>” button a new window appears, and the stage could be analyzed (see chapter "Analysis of One Stage" on the facing page).

Under “Slide-template” the template for the analysis could be changed. If it is changed, the corresponding ReportingTool configuration file, the corresponding PAM-STAMP contour preset and the corresponding PowerPoint templates will be loaded and used. This can be useful for example, if the thickness is analyzed, but different scales are used for different blank thicknesses inside PAM-STAMP. For this, these template-slides must be created and configured, as described in chapter "Configuration and Customization" on page 7.

With the “Fast analysis” button, the fast analysis can be started (see "Fast Analysis" on page 16) and with the “Recordings & Copies” button, an analysis could be recorded and copied (see "Recordings & Copies" on page 17).

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Analysis of One Stage

As an example, the window for a forming stage is displayed:

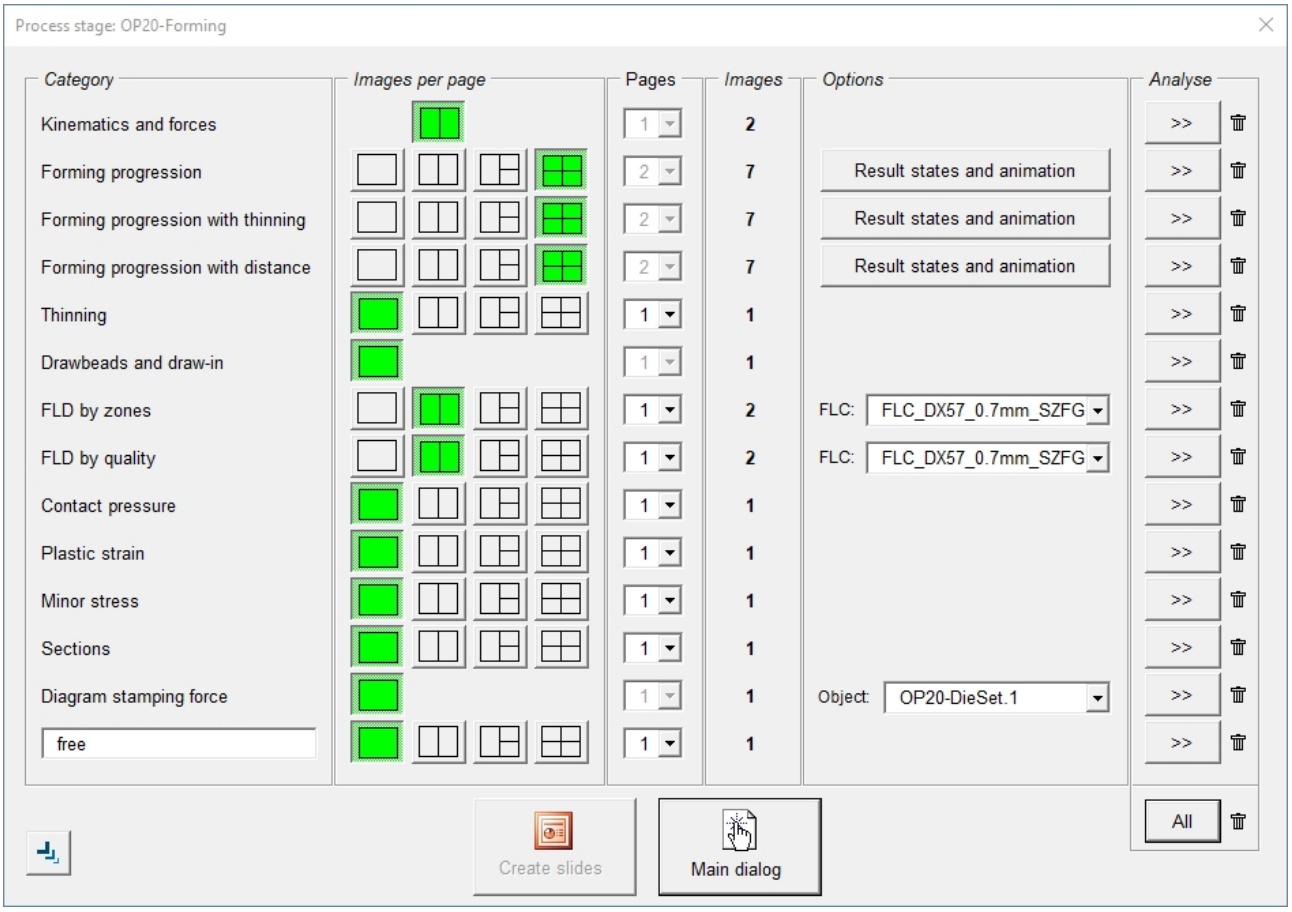

Figure 3: Analysis of the forming-stage

On the left side, all the Categories which could be analyzed are listed. The layout (the number of pictures per slide) could be chosen under “Images per page” by clicking on the buttons. Clicking on a green button will deactivate this category. The “>>” button will run PAM-STAMP and analyze this category and clicking the “All” button will run all categories. A click on the garbage can symbol will delete the results for this or for all categories.

Under “Options” some settings for the analysis could be changed, for example the object for the diagram stamping force or the FLC for the FLD analysis.

With the button in the lower left edge, pictures already inserted in the presentation, can be trimmed.

With “Create slides” the results for the analysis are inserted into the slides of the PowerPoint-presentation. “Main dialog” will lead you back to the main dialog, where another analysis could be started.

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Fast Analysis

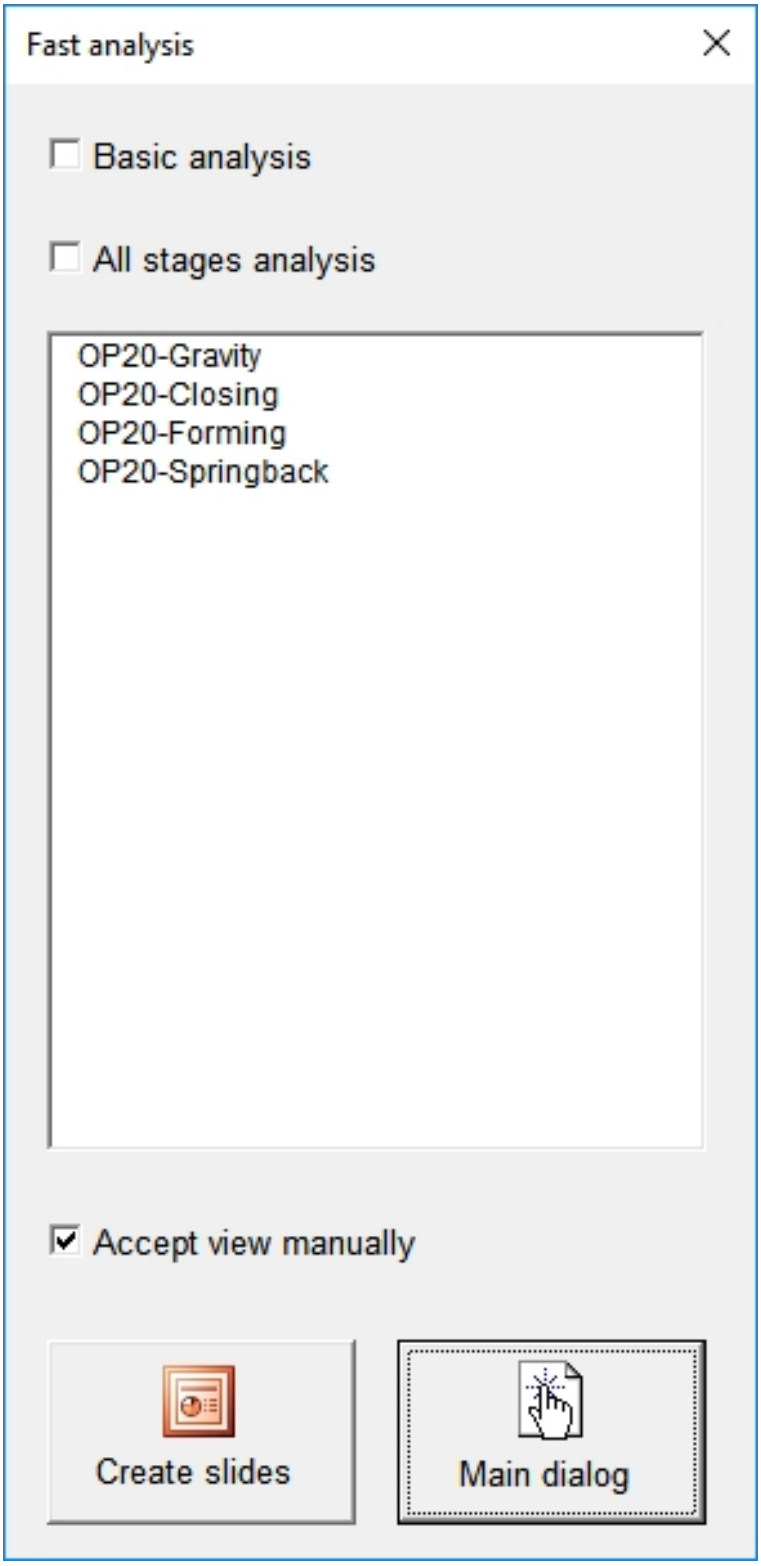

Figure 4: Fast analysis window

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In this window, a fast analysis can be started. All the selected stages (including basic analysis and the all-stages analysis) can be done at once. The stages can be selected by clicking on it. Multiple selections can be done with CTRL / SHIFT + mouse click.

In each stage, all the categories will be evaluated, which are activated by default (which can be customized). For example, if the default for a forming stage looks like "Figure 3: Analysis of the forming-stage" on page 15, all the categories displayed in black will be evaluated. The ones in gray will not be evaluated.

If the tick-box “Accept view manually” is ticked, the views in PAM-STAMP must be accepted for every evaluation. Unticking this box will run the evaluation without any other user input.

Recordings & Copies

In Record/Play the normal mode is activated by default, where nothing special happens. In the “Record mode” the analysis is recorded and with the “Copy mode” a copy could be created.

In the copy, the same stages and categories are analyzed with the same views as in the original, but a different PAM-STAMP project could be chosen. It is important to note, that the names of the tools and blanks must be the same in both projects. So, this function is only useful if variants of one process are documented (e.g. when parameters like the blankholder force are changed and the thinning at critical regions are studied).

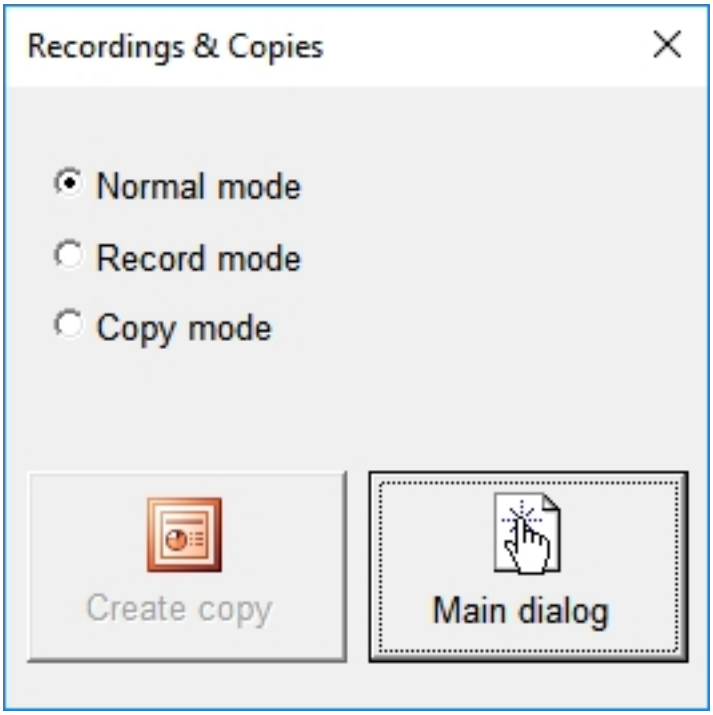

Figure 5: Templates & Copies window

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How to use the ReportingTool with PAM-STAMP

In former versions, the activation of one of the “>>“- buttons started PAM-STAMP with some script-based action.

For example, the blank was fit into the GUI window and some contour value added. Eventually a popup window appeared, which asked the user to adjust the view as preferred and then to click on the “continue”-button.

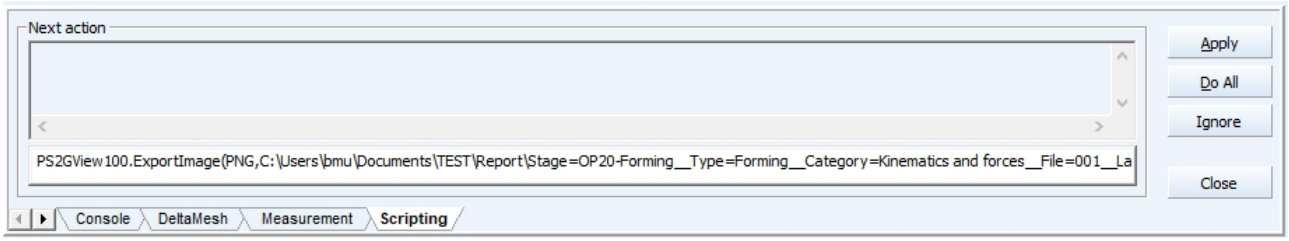

Figure 6: Output toolbar

Since the version 2017, this has changed. A new Scripting tab was added to the output bar (View → Toolbar → Output). No popup window will appear anymore. So now the user must push the “Do All” button to continue the script.

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Known Issues

If the blank is created automatically during the run, it is non-existent inside the initial setup of the master pre-file. In that case, the blank cannot be evaluated automatically with Version 3.1.8 of the ReportingTool.

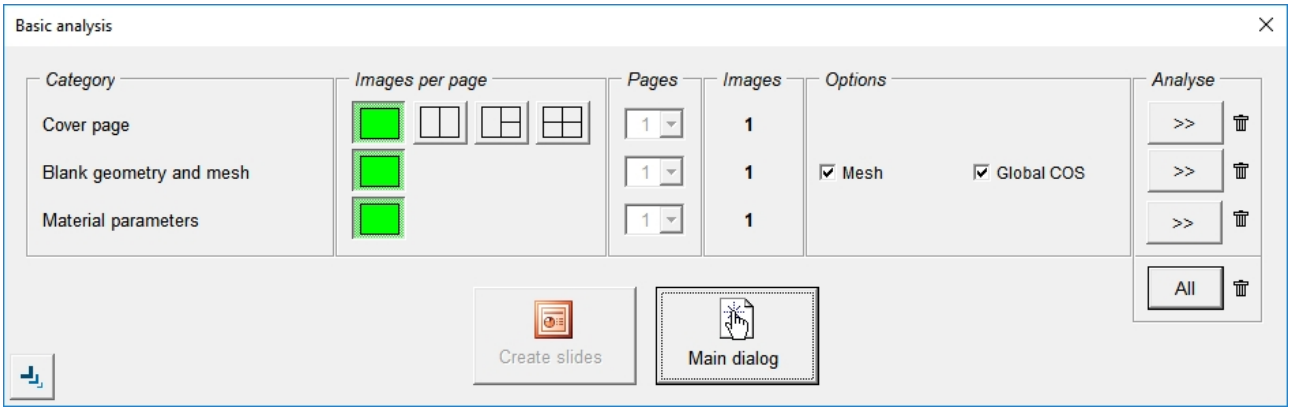

Figure 7: Blank analysis in the ReportingTool

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