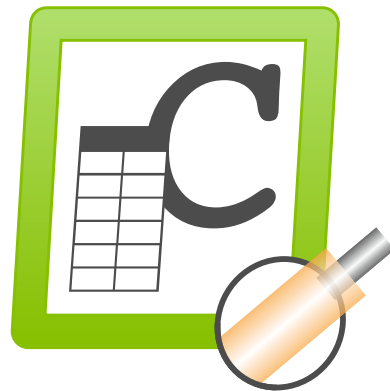


Manual



Software CWL-JobTool

Version 1.5.0

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iret

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1 Overview

1.1 Program Description

The CWL-JobTool software connects a Schleuniger cable processing machine to an ERP system. For the operation of CWL-JobTool, the cable processing software "Cayman" from Schleuniger must be installed on the same PC.

CWL-JobTool converts the incoming orders from WPCS to Cayman format and also manages the orders, as the Cayman software does not have its own order management.

1.2 Data transfer

The ERP system creates 2 files per order:

- An order file "<order> job.dds"
- A cable file "<order> article.dds",

where the character string <order> is largely freely selectable.

Restrictions are:

- Only characters allowed by the Windows file system (e.g. no ? question mark).

Valid file names are e.g:

"2019-06-15 order 001 job.dds and 2019-06-15 order 001 article.dds" or

"machine27_itemABC job.dds" and "machine27_itemABC article.dds".

These files automatically generated by the ERP system are stored in a job directory (transfer directory) provided for the Schleuniger machine.

CWL-JobTool checks this directory at short intervals (approx. 5 seconds) and updates its order list.

1.2.1 Peculiarities of job and cable file names

The data transfer described in section requires that both the job and cable file contain only *one* entry ('[NewJob]' or '[NewArticle]') and that the ArticleKey = ...' entries in both files match.

If the job or cable file contains more than one entry, they must have the *exact* names '**job.dds**' or '**article.dds**'. In this case, the files are split into individual files before they are displayed in the job list. For details, please refer to chapter .4.1.

2 Installation and licensing

2 Installation and licensing

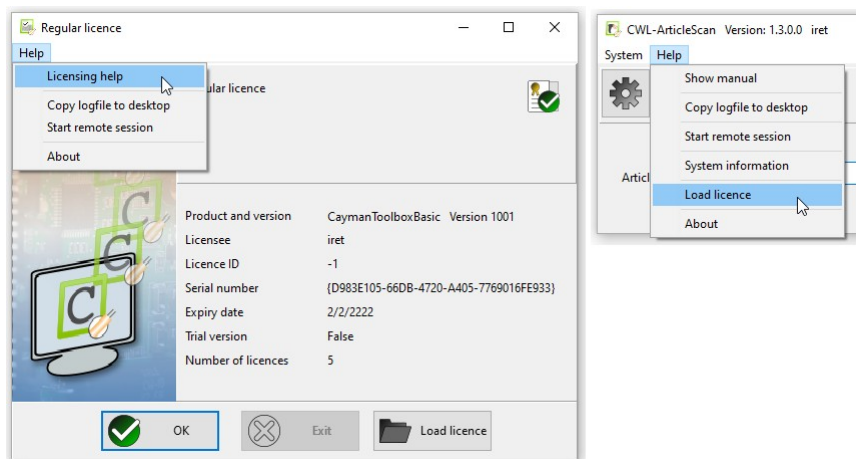
2.1 Installation

The setup installs all components of the software collection. The recommended installation location is a directory in the root directory of c:, e.g. c:\CaymanToolbox\. The installation directory can be created during the installation.

2.2 Licensing

The licensing of the CaymanToolbox software is described in a separate document. You can display this document in the license dialog (menu 'Help', menu item 'Licensing help').

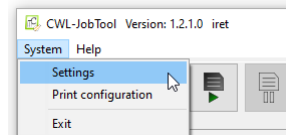
The license dialog is displayed in the demo version of the Toolbox at program start. You can also reach it via the program main menu 'Help', menu item 'Load licence'.



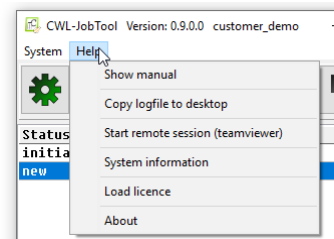
3 Main menu

3.1 Main menu

The main menu contains the items "System" and "Help":



Function	Description
System: Settings	Opens the settings menu. See chapter 3.2
System : Prit configuration	Opens the 'Print configuration' dialog., see chapter 3.4.
System: Exit	Exits the program.

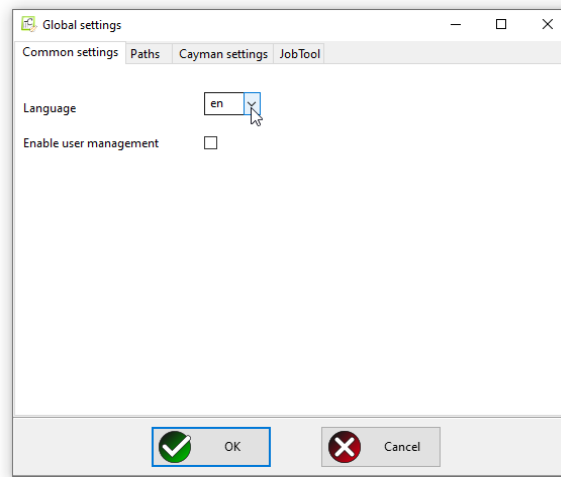


Function	Description
Help: Show manual	Shows this document. A PDF viewer must be installed.
Help: Copy logfile to desktop	Copies a logfile of the previous program run to the computer desktop..
Help: Start remote session	Starts remote maintenance (teamviewer).
Help: System information	Shows information (e.g. paths) to required system files.
Help: Load licence	Opens the dialog window for loading a license.
Help: About	Shows program and licensing information.

3 Main menu

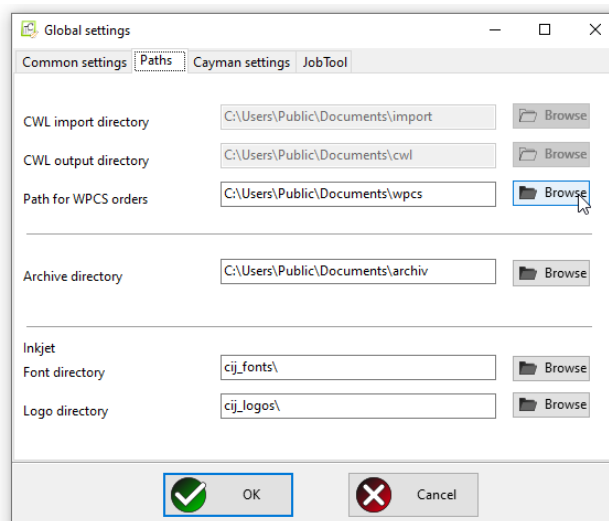
3.2 Menu „Global settings“

3.2.1 Common settings



Function	Description
Language	The selection of the user language can be found here. So far English (EN) and German (DE) are supported. After changing the language, the program must be restarted.
Enable user management	<p>Disabled (unchecked): The user management is disabled. Each user has access to all program settings (this window). → This is the setting after program installation!</p> <p>Enabled (checked): The next time the "Global settings" menu is called up, a user name and password will be requested. If they are entered correctly, all settings can be edited, otherwise they can only be read (read only).</p>

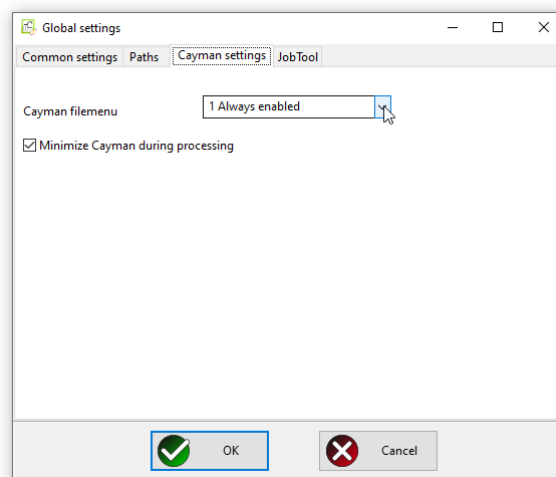
3.2.2 Paths settings



Function	Description
(CWL import directory)	The settings for further directories are without function in the CWL-JobTool

	and therefore grayed out.
(CWL output directory)	The settings for further directories are without function in the CWL-JobTool and therefore grayed out.
Path for WPCS orders	In this directory CWL-JobTool expects the incoming jobs and WPCS article files
Archive directory	Article (WPCS) files are moved here after conversion, deleted job and cwl files are moved here..
Font directory	Directory for inkjet fonts.
Logo directory	Directory for logos.

3.2.3 Cayman settings

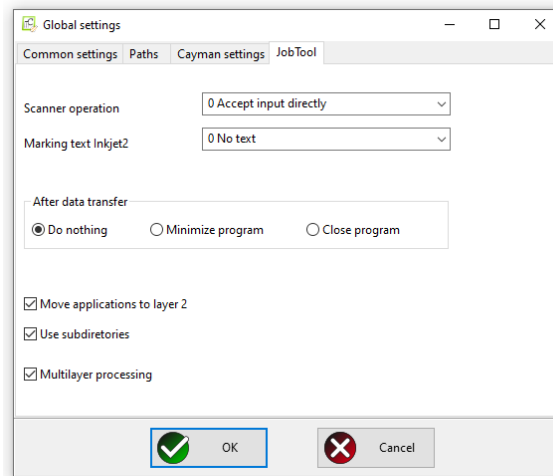


Function	Description
Cayman-file menu active	This option activates / deactivates the Cayman file menu. It must be activated if you want to save article lists from within Cayman.
Minimize Cayman during processing	The conversion of large job lists can be accelerated by minimizing the Cayman window during processing. After processing is complete, the original size of the Cayman window is restored.

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Main menu

3.2.4 JobTool settings










Function	Description
Scanner operation	Defines the action after scanning a job name (e.g. via barcode scanner): <ul style="list-style-type: none"> 0 Load existing job list immediately or 1 Wait for <ENTER> - key press
Marking text Inkjet2	Defines the action for the marking texts of Inkjet2: <ul style="list-style-type: none"> 0 No text: No text is copied. 1 Text normal: All Inkjet1 marking texts are copied to Inkjet2 including all text attributes. 2 Text vertical mirrored: In addition to (1) the attribute "mirror vertically" is set for all inkjet2 texts.
After data transfer	Action after data transfer to Cayman:
<ul style="list-style-type: none"> Do nothing Minimize program Close program 	<ul style="list-style-type: none"> The JobTool program window remains on the screen The program window minimizes to the tray bar CWL-JobTool is closed
Move applications to layer 2	If this option is selected, the applications ('slit', 'strip') will be moved from a layer further outside to the innermost layer (2). Prerequisites are: <ul style="list-style-type: none"> there is a maximum of one application per cable end the applications are on the same layer
Use subdirectories	Allows handling jobs in import directory and subdirectories. Subdirectories can be chosen on the left. As for now searching the subdirectories only works on expanded elements.
Multilayer processing	Changes the cut strip processing sequence for items with more than 2 layers (1 conductor + 1 insulator), see Chap. 4.3

3.3 Toolbar

The program functions are controlled via the buttons of a toolbar:

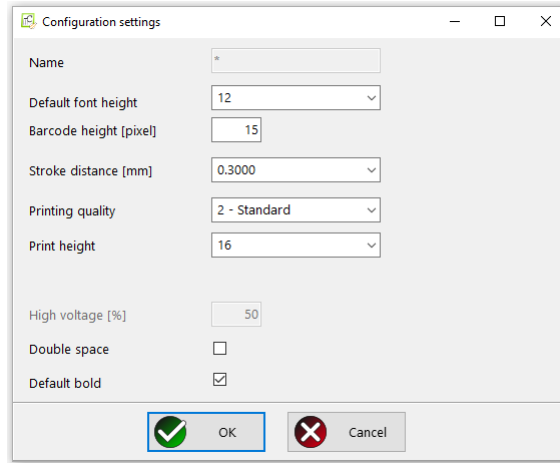


Symbol	Description	
	Open the ,Settings“ menu.	Same as ,Settings‘ in the ,System‘ menu.
	Opens the ‘Print configuration‘ menu.	Same as ‘Print configuration‘ in the ‘System‘ menu
	Show manual.	Same as ,Show manual‘ in ,Help‘ menu.
	Start job.	Starts the selected job: The job is loaded in Cayman. If the job is in WPCS format, the job will be converted first and stored in Cayman format.
	Pause job.	Pauses the running Cayman-job: Saves the Cayman wirelist (including production state) and unloads Cayman. The job can be continued later.
	Delete job.	Moves the selected job to the archive directory and refreshes the joblist. If the archive directory already contains a job with the same name, the job is <i>not</i> deleted from the cwl output directory and an error is logged. In this case, first delete the job from the archive directory (e.g. using Windows Explorer) and repeat the process.
	Update the joblist.	Updating the order list from the order directory (see Settings / Paths) is done automatically at short intervals (approx. 5 seconds). In addition, the update can be triggered by pressing this button.

3

Main menu

3.4 Print configuration

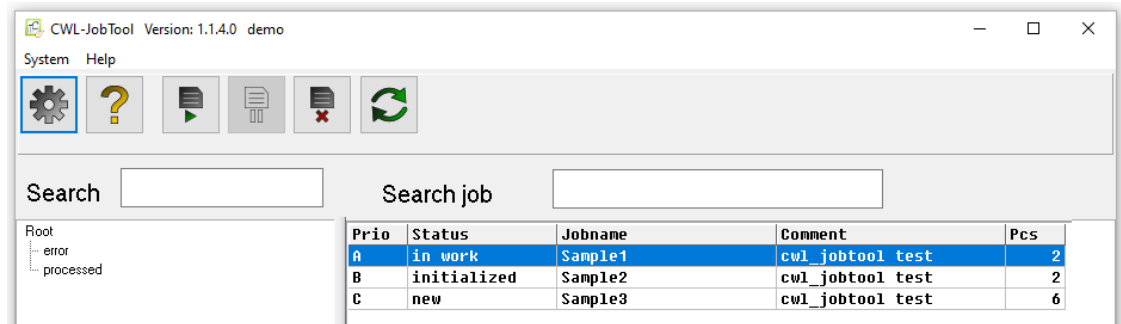


Function	Description
Name	("*", cannot be changed at present)
Default font height	Internal value for calculating actual marking text widths. If a font of a <i>different</i> size is used, this value must be adjusted accordingly in order to print marking texts with the correct distance to the left end of the cable.
Barcode height [pixel]	Here the height of the barcode can be set independently of the height of the character set. <ul style="list-style-type: none">• Large height ==> lower speed
Stroke distance [mm]	This value determines the horizontal distance between the ink drops: <ul style="list-style-type: none">• Larger values mean wider font
Printing quality	Used to set the print mode: <ul style="list-style-type: none">• High quality ==> lower speed
Print height	Also used to determine the print mode: <ul style="list-style-type: none">• Large height ==> lower speed Note: The height must be at least as high as the barcode and font height of the character set.
High voltage [%]	("50", cannot be changed at present)
Double space	If this option is selected, spaces in the text are doubled for better readability.
Default bold	If this option is selected, the text will be printed in bold, i.e. in double width.

3.5 Joblist

The current jobs are listed in the job list below the toolbar. Priority, Status, Jobname, Comment and quantity (Pcs) are specified.

The tree structure of the import directory subfolders (to the left of the job list) is only visible if this option has been selected in the settings (see Chapter 3.2.4).



The "Status" indication informs about the current state of each job:

Status	Description
in work	The job currently loaded in Cayman.
initialized	A job that has already been converted from WPCS to Cayman format.
new	A new job that is (still) in WPCS format.

A mouse click in the job list marks a job (the line is highlighted in blue). This job can now be loaded or deleted via the toolbar in Cayman. A double click on a job loads it immediately in Cayman.

A job can also be loaded by entering the job name in the search field "Search job" above the job list. The input can be done via keyboard or e.g. a barcode scanner. The input is **not** case sensitive.

The entry of the job name is highlighted:

- Red: There is no job that matches the input.
- Yellow: The input can be added to an existing job.
- Green: There is a job with exactly this name.

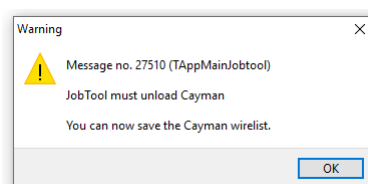
If "Jobtool / Scanner operation / 0 Load matching list immediately" is selected in the setup, this job is loaded immediately into Cayman.

As soon as a job has been loaded, the button "Start job", the job list and the search field are locked. The job must first be paused or deleted before another job can be sent to Cayman.



Note:

When JobTool is started, it checks whether Cayman is already running and whether articles (cables) are loaded into Cayman. In this case JobTool now enables saving. Afterwards all articles loaded in Cayman will be deleted.

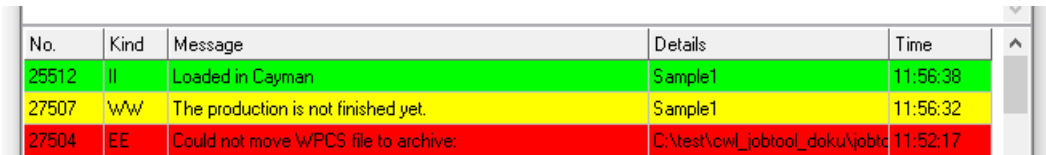


3

Main menu

3.6 Event log

Below the job list, program logs (errors, notes) are displayed in a table



No.	Kind	Message	Details	Time
25512	II	Loaded in Cayman	Sample1	11:56:38
27507	WW	The production is not finished yet.	Sample1	11:56:32
27504	EE	Could not move WPCS file to archive:	C:\test\cwl_jobtool_doku\jobtc	11:52:17

Column	Description
No.	Internal error number, used for error diagnosis.
Kind	Type of message: <ul style="list-style-type: none">• II: Information (green background)• WW: Warning (yellow background)• EE: Error (red background)
Message	The message text.
Details	Further explanations, e.g. job or file where the error occurred.
Time	Time of message event.

When JobTool is closed, the error log of the current program run is saved in the archive directory (see JobTool Settings). The file name is generated from date/time in the format "log_yyyymmdd_HHMMSS.txt".

Example: "log_20190614_124322.txt": Log file created when leaving JobTool on June 14, 2019 at 12.43 (and 22 seconds). The entries are saved in CSV (CommaSeparatedValue) format and could look like this:

```
2019/06/14 12:42:45,II,Loaded in Cayman: ,NAV10311
2019/06/14 12:42:46,WW,The production is not finished yet.,NAV10311
2019/06/14 12:42:47,II,In Cayman geladen: ,NAV10310
2019/06/14 12:42:47,II,Converting WPCS-Job: ,C:\temp\190306\100130 190306 084705 loko2 article.dds
2019/06/14 12:42:52,WW,The production is not finished yet.,NAV10310
2019/06/14 12:42:53,II,The job was deleted,NAV10311
```

4 Technical documentation

4.1 Format of the WPCS input files (job and cable file)

Job files must end with 'job.dds', cable files with 'article.dds' in order to be recognized by JobTool. JobTool distinguishes between two cases based on the additional <job name> in front:

4.1.1 Case1: There are file name parts before 'job.dds' or 'article.dds':

In this case, <job name> must be identical.

Example: 'A12345M_job.dds' or 'A12345M_article.dds'.

In this case, JobTool assumes that exactly one job ('[NewJob]') is defined in the 'job.dds' and exactly one article ('[NewArticle]') in the 'article.dds', which match via the articleKey.

After the import, exactly one (additional) job is displayed in the job list of the JobTool. The displayed job name corresponds to the entry 'Job = ' in the 'job.dds' file.

4.1.2 Case2: The files are named exactly 'job.dds' or 'article.dds'

JobTool checks the files for multiple [NewJob] or [NewArticle] entries. For each [NewJob] entry found in 'job.dds' and matching [NewArticle] entry in 'article.dds', a new pair of job and cable files with consecutive job numbers is created in the transfer directory. Each new job file contains exactly one job from the original 'job.dds', each new cable file contains the corresponding article description from the original 'article.dds'. The new files have the following format:

- Timestamp + <consecutive order number> + ' job.dds' or ' article.dds'.

Example:

The 'job.dds' contains 2 jobs (2 x '[NewJob]') each with a different article ('ArticleKey = ...'), the 'article.dds' contains the two article descriptions (2 x '[NewArticle]', 'ArticleKey = ...').

'2024 10 02 13 45 31 1 job.dds'

'2024 10 02 13 45 31 1 article.dds'

'2024 10 02 13 45 31 2 job.dds'

'2024 10 02 13 45 31 2 article.dds'

The date of the **time stamp** here is 2.10.2024, 13:45:31. The **consecutive job numbers are '1' and '2'**.

Two (additional) jobs are displayed in the job list of the CWL-JobTool. The displayed job names correspond to the entries 'Job = ' of the generated job files '... job.dds'.

Note:

In the source files, the order of the '[NewJob]' entries (job file) or the '[NewArticle]' entries (cable file) is irrelevant. The assignment in the newly created files is made by matching 'ArticleKey = ...' - entries.

Behavior in case of ambiguity:

If article descriptions occur more than once in the cable file, the first matching article description found is always used for each newly created cable file.

4 Technical documentation

If several orders in the order file use the same article from the cable file, a new cable file is always created for each new order file, as the consecutive order numbers in the file names must match.

If the original files are copied back into the transfer directory, they are split again and new order and cable files are created. These now have a newer time stamp and may appear twice in the JobTool job list under the same job name. A check for identical job or cable files with only different time stamps does not take place. The operator may have to delete duplicate jobs from the job list.

4.1.3 The following errors are recognized when splitting files:

Error number	Error message	Remedy
48802	An order does not contain an article description	Supplement WPCS file ' job.dds'
48801	An order contains an article designation that does not exist in the cable file.	Supplement WPCS file ' article.dds'
27520	File cannot be processed.	<ul style="list-style-type: none">• Another program has opened this file or• CWL-JobTool needs write permissions for the transfer folder
27521	File cannot be deleted': The file was processed but could not be removed from the transfer directory	<ul style="list-style-type: none">• Another program has opened this file or• CWL-JobTool requires write permissions for the transfer folder
48805	The split file <XYZ> could not be created'	<ul style="list-style-type: none">• CWL-JobTool requires write permissions for the default transfer folder or• A file with the same name already exists

4.2 Integrating logos in marking texts

4.2.1 Logos in the WPCS marking text:

The inclusion of a logo in a marking text is marked in the 'article.dds' file with the character string `#[Logo,<LogoFilename>]`. The <LogoFilename> file must be available as an uncompressed black and white bitmap file with the extension .bmp in the logo directory (see section).

Example:

- MarkingTextBegin = 30, "ABC #[Logo,PIC1]XYZ"

The marking text "ABC ' begins 30 mm from the right-hand end of the cable, followed by the logo from the file 'PIC1.bmp' and then the characters 'XYZ'.

4.2.2 Conversion to Cayman:

CWL-JobTool replaces the logo tag `#[Logo,PIC1]` with the Cayman control sequence `\&FPIC1\&`. The text displayed in Cayman is "ABC \&FPIC1\& XYZ"

where `\&` is the start or end of a Cayman control sequence, `F` is the start of a logo within the sequence and `PIC1` is the logo file name.

4.3 Multilayer processing

If more than one layer is stripped on an article in multiple stages (cut strip), the processing operations are created in Cayman from 'outside' to 'inside', i.e. after the article has been cut, the outermost layer is stripped first, then the second outermost, and so on.

If the 'Multilayer application' option is activated, the outermost layer is always processed last. The example shows the processing of a coax cable (4 layers) with partial stripping:

After cutting, layer 3 (shield) is stripped first, then layer 2 (dielectric). Finally, layer 4 (sheath) is partially stripped to protect the underlying shield from fraying until the next production step. Due to the partial stripping, this processing step must take place last.

Global settings dialog box showing 'Multilayer processing' checked. The 'After data transfer' section has 'Do nothing' selected. The 'Move applications to layer 2', 'Use subdirectories', and 'Multilayer processing' options are checked.

Diagram showing the stripping sequence for a multi-layer material. The stripping sequence is defined by the following table:

Order	1	2	3
Layer	3: Shield	2: Dielectric	4: Sheath
Operation/Sequence	Strip	Strip	Strip
Position	20.0	10.0	30.0
Length	30.0	5.0	5.0
Direction	To the right	To the right	To the right

WPCS code: StrippingBegin = 2,10,5
StrippingBegin = 3,20,30
StrippingBegin = 4,30,5

Fig. Option processing sequence for multi-layer material

- Option 'Multilayer processing'
- Part of WPCS code
- Cayman output