Welcome to the CEMAT Libraries for SIMATIC PCS 7 V8.0
MODULE CEMAT Version V8.0

Notes on Installation and Usage

These notes take precedence over information provided in other documents.

These notes should be considered more up-to-date than the information in other documents.
Read the notes carefully, they contain information on installing and using the V8.0 blocks.

Security information:

Siemens offers IT security mechanisms for its automation and drive product portfolio in order to support the safe operation of the plant/machine. Our products are also continuously developed further with regard to IT security. We therefore recommend that you keep yourself informed about updates and upgrades for our products and always use the latest version of each product. You can find information on this at: http://support.automation.siemens.com. You can register for a product-specific newsletter here.

For the safe operation of a plant/machine, however, it is also necessary to integrate the automation components into an overall IT security concept for the entire plant/machine, which corresponds to the state-of-the-art IT technology. You can find information on this at: http://www.siemens.com/industrialsecurity. Products used from other manufacturers should also be taken into account here.

Contents of the Readme file

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1. Installation

1.1 Scope of supply

With this delivery you received the following product:

PCS 7 Minerals Automation Standard CEMAT V8.0

This package consists of 1 DVD

1.2 Hardware and Software Requirements

- HW PCS 7 CPU S7-416 or bigger, PCS7 OS Hardware according to actual PCS7 specifications
- SW **PCS 7 V8.0 Update 1**

1.3 Tips for Installation

If you already have an installed CEMAT version please remove this version first (Settings, control panel, Add/Remove Programs).

From Cemat V7.0 the installation directory has been changed in difference to Cemat V6. In case of an upgrade from V6.x to V8.x it is recommended to set up based on a new installed System Image.

Before you start the setup close all applications and reboot the computer.

Open the folder "Installation CEMAT Software" in the main directory with the Explorer and start the application "Setup.exe". This command installs CEMAT V8.0, including all entries in Microsoft Windows files. Important operating instructions will be given to you during setup.

Select the correct project key for your project:

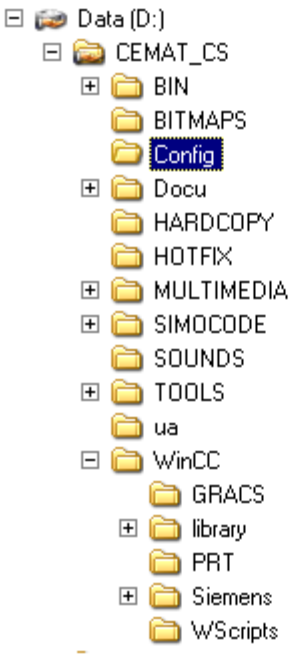
000 = CEMAT Standard
001 = CEMAT Minerals
004 = Holcim
006 = Dyckerhoff
007 = Heidelberger Zement
023 = Vigier
024 = Bushehr
025 = Caima
026 = Alsen
028 = Rossi

The Installation is always carried out on D:\CEMAT_CS. (The Selection of another destination is no longer possible)!)

As a standard, the following installation steps are carried out.

- the S7 library **ILS_CEM** is copied into the directory **C:\...\Siemens\Step7\s7libs**
- in case of the project version 001 additionally the S7 library **Mineral_Cemat** is copied into directory C:\...\Siemens\Step7\s7libs.
- in case of a project version (Project-ID > 001) additionally the S7 library **PRO_CEM** is copied into directory C:\...\Siemens\Step7\s7libs.

  Attention NEW for 001 : FAMILY = CEMAT and AUTOR = AdvLibCE
- On drive D:\ the following file structure is created:



- Active-X Components for Faceplates are copied into directory **D:\CEMAT_CS\BIN** and registered.
- Bitmap's for background pictures are copied into directory **D:\CEMAT_CS\bitmaps**. Default Bitmaps are stored in zip file.
- Module-, System documentation and Engineering manuals are copied into **D:\CEMAT_CS\Docu**.
- Standard pictures are copied into directory **D:\CEMAT_CS\WinCC\GraCS** (Copy later to project directory).
- The project scripts are copied into directories **D:\CEMAT_CS\WinCC\library** (Copy later to project directory).
- The print layout is copied into directories **D:\CEMAT_CS\WinCC\PRT** (Copy later to project directory).
- System scripts are copied into **D:\CEMAT_CS\WinCC\Siemens**.
- Online Help function will be installed in directory **C:\...\Siemens\Step7\s7libs\ILS_CEM**

For additional information regarding installation and parameterization refer to the Engineering Manual (chapter 3). If you want to upgrade you system, please also refer to the Upgrade description (chapter 15).

2 Information about the Product

2.1 What is new compared to the previous version

CEMAT V6.0

- Module parameter expanded with attributes for Process object view
- C_Server, Infodialog and Alarm line adapted to PCS7 V6
- Faceplate call up from CEMAT PCS7 V6 Symbols
- CEMAT-Symbols for automatic generation of block icons (Attention: don't use Symbols from CEMAT V5.03 or lower; from CEMAT V5.03 new Symbols are used)
- KCS AS Modules and Faceplates included

CEMAT V6.0 SP1

- Show plant selection messages and also the system messages in the Alarm line
- CEMAT in French.
- Script modification for the add-on Migration_S5_V3
- GRUZU modification for the add-on Migration_S5_V3
- help in the controller faceplate
- demo mode possible
- MAX_PLC increased to 50
- User rights for the Faceplate buttons can be defined per Instance.
- Additional symbols for C_GROUP, C_ROUTE and C_SELECT.
- Comment length changed to 24 signs per line.
- Project standard 007 (HZ), 024 (Busher) and 025 (Caima) integrated.

CEMAT V6.0 SP2

- Project Standard 006 (Dyckerhoff), 026 (Alsen), 027 (Lafarge) and 028 (Rossi) now available. The project standards will be installed automatically, using the right project key.
- Cemat V6 SP2 uses the controller blocks CTRL_PID and CTRL_S from the PCS7 library V60. Please consider the following:
  - Messages:
    The message text for Event includes the block comment and the fault type because the message format is different from the message format for CEMAT blocks (no additional texts possible).
    The fault type has been copied to the left side, do enable the display in the alarm line.
  - GraCS Directory:
    The Objects @C_Template01.pdl, ReglerSymbol1.pdl, RegerlSymbol2.pdl and @PG_C_Pid.pdl have been removed from the GraCS Directory, because the OCX technique is no longer used.
  - OCX Controller:
    The files C_IX_PID.ocx and C_PID_DLG.ocx are not delivered any more. The batches for (un)register RegCtrls.bat and UnRegCtrls.bat have been adapted accordingly.

  - Documentation:
    Overview and C_PID_e.pdf is new.

- Modifications under WinCC\Library
  - Faceplate Positioning and Button texts:
    With the new Script PCS7_OpenGroupDisplay_V6_CEMAT.fct the button texts can be transmitted from the Symbol property to the Faceplate property.
    There the possibility to display the faceplates at a pre-defined position, entering the X- /Y-coordinates.
  - If the standard facplate (..._Standard.pdl) is extended through additional functions (e. g. Info Button) the faceplate is positioned in that way that it fits into the working area. New script C_SetFaceplate.fct.
  - No application error will be generated on ENG or Single Station while reading variable @RM_SERVER_NAME.
    Modification for scipt C_ReadServerName.fct.
- Group instance list: The objects which are switched "Simulation" mode can be identified in the Group instance list through a different color.
- CEMAT message system (C_AlarmList.pdl), Online display/ Status field
  - Status field in the WinCC Dialog is now visible.
  - The display of the messages is actualized online.
  - Message display for actual messages shows incoming and Acknowledged.
  - Sporadical fault for refresh button now solved (sometimes the first line was selected instead of the last line). The display is being updated immediately with the change of archive - refresh is not required.
- The symbols for the project versions (except Lafarge) are not integrated in the template pictures @C_PCS7Typicals.pdl and @C_Template.pdl.
  - In all symbols the script PCS7_OpenGroupDisplay_V6_CEMAT.fct is used for opening the facaplate.
  - Controller symbols for the PCS7 Controllers and example symbols for button text (Index 300) have been added.
- Positioning function for C_DAMPER
  When entering the setpoint for damper position, the bar has been active immediatly (without any confirmation). The bar has been deleted. Instead of this an additional box opens with an input bar and limits.
- Correction of a fault for the actualization of the measure bar of C_MEASUR.
  In the Alarm-Faceplate the bar didn't change colors. It remained red. Actualization changed and new bar object.
- Modification of diagnostic pictures for C_DRV_1D, C_DRV_2D, C_DAMPER, C_VALVE, C_VAL_2D, C_ANNUNC, C_ANNUN8, C_MEASUR, C_GROUP and C_SILOP:
  - Adaptation of ranges for process values according to documentation.
  - Adaptation of the ToolTips in German, English and French
  - Adaptation of the units for the process values in all three languages.
    The modification has been carried out in the normal standard, and in the project versions for Alsen, Bushehr, Caima, Dyckerhoff and HZ.
- Modification of the description texts for the following interfaces of the route module in order to avoid misunderstanding: WVWT, WVWE, WVWA, WVWL and WUUS. The modification implies Documentation, diagnostic pictures and blocks.

- Template pictures for system information available.
  The PDLs C_System_Overview.pdl and C_System_DIAG_xxx.pdl can be used as templates for system information in combination with the system diagnostic tools from I&S ITPS.

CEMAT V6.0 SP3

- Diagnose pdl for C_DRV_2D EVSP
- Date fields in CEMAT Message system
- Lizenzcheck Lafarge
- Faceplate position top/left
- New curve template
- UserText for group-, route-, select- and damper symbol
- Analog value M2B (Lafarge)
- Modify @C_LF_PCS7Typicals.pdl und @C_LF_Tewmplate.pdl (Lafarge).
- C_DIB - bit DV connected (Lafarge)
- Standard-GRINZ (Obj) and -GRUZU (State) with Lafarge function.
- Button CSIGQuit.pdl with CEMAT function.

CEMAT V6.1

AS:

- **C_DRV_1D, C_DRV_2D**
  - Speed monitor must now directly connected to parameter "SW_SPEED".
  - Display motor current with connection of the point "C_MEAS ". In addition a new parameter "REL_MVC" must be released with 1-signal.
- **C_DRV_1D , C_DRV_2D, C_DAMPER, C_VALVE**
  - Connection SIMOCODE with module C_SIMO_A
- **C_ANNUN8**
  - Has now only 7 alarms. The 8th Alarm is used for the alarm repetition.
    The demeanors of INH and the corresponding delay time is total new (see Docu).
- **C_ANNUNC**
  - New Interface OKS (Signal level for OK). Therewith now also positively logic can be used. Presetting is still "LOG0". With an update is then no program change necessary
- **C_MEASURE**
  - There is the bypass function now in 2 characteristics.
    Measured value is frozen, state of the output signals is taken over.
    Measured value is further read, output signals are bridged
  - The release for square, root extraction etc. can be only modified in the CFC
    This is necessary, because it is not possible to write back the initial parameters of multiinstances from inside.
- **Message acknowledgement AS**
  - Now the Message acknowledgement from the OS is directly sent by the message line to the announcing module. Then an "AS-wide" acknowledge is initiated by this module.
  - By parameter setting in the AS system module can be toggled from "AS wide“ to "group" acknowledgement. Then the acknowledgement can be only given by the Group faceplate. (With the "group acknowledgement", all blocks belonging to the group has to be connected with the group acknowledgement signal).
- **All modules**
  - The comments of the module connections are meaningfully abbreviated with thus they German connection abbreviations in the representation "comment" also in English are useful.
  - The events of the modules are changed to long texts same as in "config files". The re-arrangement is necessary to have an identically text in "group status call" and message system.
- **System**
  - The minimum cycle time is to be set on 100ms into the Hardware config, because, otherwise, the software speed monitor does not work.

OS:

- new Faceplates with the following additional functions:
  - The web ability of the standard dialogs, diagnosis dialogs, info dialogs and alarm dialogs.
  - Area-dependent user administration in all input fields
  - instancespecific operating releases for "START", "STOP" pushbutton in the Operating Faceplates of all properties about the styling property "Processcontrolling_backup".
  - instancespecific operating releases for "switch limits" and "warning limits" of the analogous values with properties "Processcontrolling_backup" and "HigherProcesscontrolling_backup"
- Faceplates "can be fixed" on the picture
- The Faceplate of announcing modules can be called with "Info pushbutton" from the Alarm line.
- Message area selections can be carried out **no more** with the CEMAT specific choice dialog, but are dependent from the user's right "release for area" and "process operations".
- The user authorizations must be released in future specific for area.
- The sound expenditure must be used in future by PCS7. Now Sounds are determinable for different message classes and layout areas.
- There is a new overview dialog to show the rights and released areas of the current user as well as a list of available users.
- **Attention!** Right allocation in the diagnosis dialogs was changed. Please read up in the documentation (project planning).
- new template picture @C_PCS7Typicals_V61
  - all icons have additional " Faceplate-positionier-properties " topPos, leftPos, defaultPos
  - the active object can be highlighted by colored border
  - additional icons
  - the state display of the damper was changed, no blink and new icon for single and locally mode of operation.
- The new properties and the tool tip text will no more overwritten with a delta generate of the picture. A configuration file @PCS7Typicals.cfg is available in the directory "WScripts".
- Message masks CEMAT are decorated completely anew.
  - new functions and operation see system description
- Config reworks files for the properties

WEB:

- The CEMAT Faceplates as well as diagnosis dialogs, info dialogs and alarm dialogs and functions are published. A list of the CEMAT PDLs and functions witch are not able to be published is deposited on the DVD under CEMAT_V6_WEB in file “read.me”
- On the DVD CEMAT under CEMAT_V6_WEB\CEM_V6\BINthe OCXèn for WEB clients stored.
- On a CEMAT WEB client the functions for help, group state call and property list are not available.

Projectstandards:

- **PS 006 Dyckerhoff**
  - Extensions and Hotfixes with the single modules see documentation.
  - In general: Suited for web, new user authorization like with the standard CEMAT
- **PS 007 HZ**
  - **C_MEASURE**
    There is the bypass function now in 2 Characteristics. With HZ the parameter BYPB_ACT must be put on signal 1.
  - Extensions and Hotfixes with the single modules see documentation.
  - In general: Suited for web, new user authorization like with the standard CEMAT.
- **PS 024 Bushehr**
  - Extensions and Hotfixes with the single modules see documentation.
  - In general: Suited for web, new user authorization like with the standard CEMAT.
- **PS 025 Caima**
  - Extensions and Hotfixes with the single modules see documentation.
  - In general: Suited for web, new user authorization like with the standard CEMAT.
- **PS 026 Alsen**
  - Extensions and Hotfixes with the single modules see documentation.
  - In general: Suited for web, new user authorization like with the standard CEMAT
- **PS 027 Lafarge**
  - Extensions and Hotfixes with the single modules see documentation.
- **PS 028 Rossi**
  - Extensions and Hotfixes with the single modules see documentation.
  - In general: Suited for web, new user authorization like with the standard CEMAT.

DVD

- Additionaldirectory "Additional_Information" with the following subdirectories:
  - CEM_Drafts (Project return flows consisting of bitmaps, Pdl`s, photos)
  - Clear_WinCC (quits the WinCC application)
  - Modificationlist (Changes of the AS modules)
  - Language (Dictionary CEMAT German, English, French, Spanish....)
  - User's archive (Import tool around the CEMAT INFO user's archive to supply data from “Hardware config” and “process object list” to user archive "info".

CEMAT V6.1 Sp1

AS:

- **C_VALVE**

  New functionality for 000 key only

  - The direction 2 normal is active. When setting the parameter DI1A=1 the direction 1 is active.
  - Valves without limit switches can be operated with separate monitoring for the limit switches and move time.
  - Changes of interface requires a PLC Stop

- **C_DRV_1D , C_DRV_2D, C_DAMPER, C_VALVE**
  - VISO_OS Byte erased from Status word (internal modification for group status call and group instance list)

- **C_ANNUNC**
  - Status call can now also show Individual fault texts for C_ANNUNC (max. 16 characters). Text must be entered under property "Shortcut" of parameter IN_DEL. (You have to take care that this text matches with the text for the alarms in the used block in CFC.)
  - In the config file C_ANUNNC_009.cfg under [Fault] the Comment must be set to "?".
  - Must not be modified for already existing plants (in this case change "?" to "Fault".)

- **C_SILOP**
  - new VSTATUS for a new Style.

OS:

- Revision of license code
  ENG License works also with multi user project, Client works with ENG license on Engineering Station.
- OCX for group status call and group instance list is extended
- Hardcopy Function is useable in all Faceplates (R- Mouse on TAG field -> OK).
- C_MEASURE, new Trigger for bar graph, Unit will be shown in Alarm line
- C_CTRL_PID, new call for user rights.
- New curve templates @TRG_Default_C8.Pdl and @TRG_Default_C12.Pdl with additional Grid function.
- Modification and enhancements in @C_PCS7Typicals.pdl and @PCS7Typicals.cfg.
- Config files for objects restyled

Project Standards:

- **PS 004 HOLCIM**
  - Complete new Holcim Project standard (Description see Documentation).
- **PS 027 Lafarge**
  - revision of user rights

General

Revision of Documentation

New Example Project

CEMAT V6.1 Sp2

AS:

- **C_PUSHB**
  - The module didn't match to the other compiled modules -> updating at CFC
- **C_DAMPER**
  - New function "inching in positioning mode". see Documentation
  - if the damper was in positioning mode KPOS =1 and simultaneous KEB1/KEB2 was "1" (Pulse already sufficed) it could be that the damper blocked.
- **C_SIMO_A**
  - Double information's, if e.g. the SIMOCODE switched off the drive with Overload, the drives Stills generated Faulty
- **C_PID3**
  - New object FB1008 + Subroutine FC1008 controller with 3 parameter set's for GAIN, TN, TV (see documentation)

OS:

- **License**
  - Revision of the CEMAT license query. There was not always the right amount of AS connections if OPC was in use.
  - A 14 day license was reported if the TH-PO license was removed on ENG stations. This report is suppressed now.
- **C_GROUP**
  - OCX for group status and group instance list was enlarged. If an object is switched to simulation (Bypass), the display changes to white on red. At Holcim it is black on orange (color selection about C_GROUP_xxx.cfg)
- **C_ROUTE**
  - State text changed by replace "deselected" with "not selected"
- **C_DRV_1D, C_DRV_2D**
  - to use the unit individual for each instance the variable CURR_OS has now the Attribute "shortcut". Presetting is **I =**
  - In the Faceplate the symbol was connected to .STATUS, it changed to VISU_OS
  - Display „fault Subcontrol" in diagnosis dialog
  - new "Subcontrol button" in the Drive Faceplate to call up an existing Subcontrol Faceplate
- **C_DAMPER**
  - - the Input for Set point was not usable in mode Ext. Setpoint+ tracking

- **C_SIMO_A**
  - **In** and **I** changed from % in A. In addition, the fields enlarged to 9999.9.
- **C_PID3**
  - Controller with 3 Parameter sets for GAIN, TN,TV with additional Symbol in @C_PCS7Typical.pdl
- There was no cascading interlock dialog call on Clients possible, because the server prefix was missing.
- Customizations and expansions in @C_PCS7Typicals.pdl and @PCS7Typicals.cfg
- The LoopInAlarm.fct was extended by the standard function:
  if no picture entry exists (or only ".") in the user archives the function change over to the PCS7 standard function.
- There are used different names in property “StyleTag“ from group, route, selection. Therefore Wscript-File could not safe the settings of Style in the pictures.
- Fault at the area selection, if client is connected to several servers.
- The CEMAT Alarm system was enlarged as follows:
  - 32 Selection button for Sections (before 16)
  - Event filter
  - User files with a 80 signs long comment field.
- To be able to recognize server failures in the system, CEMAT has an additional package of Lifebeat monitoring. See instructions in Additional_Information

WEB:

- Faceplates, pictures and template pictures were revised to make the web clients faster. This happens mainly by leaving project functions out at the publishing. The following functions are still necessary :

  C_ChangeView_Bt.fct

  C_OpenInterlok.fct

  C_SetCommandBtn.fct

  C_ShowPictureInPictureWindow.fct

  CematDateTime\ShowDateFormat.fct

  CematDateTime\Time_MakeLong.fct

  CematUA*.fct

  FD_CEM\C_SetDiagDlg.fct

  FD_CEM\PCS7_OpenGroupDisplay_V6_CEMAT.fct

  FD_CEM\PCS7_UpdateGroupTagName_V6_CEM.fct

Project standards:

- **PS 004 HOLCIM**
  supplementary functions according on request of Holcim project standard (see documentation and DVD description CD:\ Additional_Information/ModificationList)

  AS

  - **C_GROUP**
    STANDBY as new Parameter. With “1” signal at this Parameter it is possible to preset the group to “stand-by” mode
  - **C_ANNUNC**
    The annunciation module generates now → ‘warning’ and then after a time ‘alarm’ + switch off.

  OS

  - **C_SELECT**
    Event – Object event – Group Display. Object modification, Function deleted.
  - **C_MEASUR**
    Color "orange" for "Override" wasn't correct.
  - **@C_HOLCIM_Symbole.pdl**
    The symbols are connected now again to the extended state display. With STATUS2, the direct Inputs for run or stop position are visualized.

- **PS 027 Lafarge**
  supplementary functions according on request of Lafarge project standard see documentation and DVD description. (CD: \ Additional_Information/ModificationList)

  AS

  - All blocks have been included in SP2.

  OS

  - **C_DIB**
    - In the standard dialog the status texts were wrong (in case of "frozen" black/black.
    - In the diagnostic picture Interface DV was wrongly connected and FRV was not green.
  - **C_AIB**
    The button Graph could not be operated.
  - **Lizenzen**
    In the context of the V6.2 SP2 license strategy it became necessary to create the demo mode also for 027 Lafarge.

- **PS 025 CAIMA**

  AS

  - Local stop was shown in Local mode as fault.

  OS

  - LST as fault was not visible

- **PS 006 Dyckerhoff**

  AS

  - **C_ROUTE**
    At WBVG = 0 there was no interlock shown. The state ‚interlock' was only shown in STATUS word with 'start up interlock and not with 'operation interlock'

  OS

  - **C_DRV_1D + C_DRV_2D**
    - Diagnosis. KAB2 was wrong connected
    - Standard.pdl: Symbol was wrong connected.

- **PS 007 HZ**

  OS

  - The operation release for set point up, down with function PCS7_CheckPermission(tagname,…) is released.
    Tagname is the TAG with Server Prefix. Only TAG was used before (without Server Prefix)
    Therefore the entry on MC did not work.

General

- Documentation customized
- New example project
  The Example for Lafarge was of updated with the functions and pictures CEMAT V6.1 SP2.
- The interlock modules in the charts are wrong named M01_ESVG instead of M01_ESVG1

CEMAT V6.1 Sp3

AS:

- **C_DAMPER**
  - - There was only two times mechanic direction 1 and no direction 2 in English language.
  - - There was only two times torque direction 2 and no direction 1 in French language.
- **C_DRV1D**
  - The additional text $$AKZ$$ Comment to TAG was missing. Message identifier SIG7 was missing.
  - ESVA (protection interlock only in automatic mode) seems no more in local mode.
  - The function “sporadic running” works only in automatic mode.
  - If a subcontrol has a fault and stops the drive, only the subcontrol should create an alarm. In this case the acknowledgement was not working, because the common signal QTST was not created. Now a new alarm from C_DRV_1D will be created "Subc. General fault".
- **C_DRV2D**
  - The function “sporadic running” works only in automatic mode.
- **C_Measure**
  - Message Configuration: The column “Acknowledgment group” must be set to “1” (as for all the other blocks). In this case all alarms are acknowledged if one alarm of the block will be acknowledged.
- **C_Valve**
  - The function “sporadic running” works only in automatic mode.
  - Message identifier SIG5 was incomplete.
  - Limit Position Error if VE1 and VE2 are active.
- **C_SIMO_A**
  - Function extension: display of power
  - Thermistor value will not be displayed anymore, because SIMOCODE_Pro doesn't provide it.

OS:

- **C_TREE.OCX**
  - The status display "run" in the object list for damper and valve has been adapted.
    The status bits for Holcim are arranged different to the other project standards.
    The OCX now differs by means of the entry “type=” in Config files, if Holcim is installed or not and according to this, the OCX analyses the bits.
- **C_DRV1D**
  - The fault display local stop LST was missing.

- **C_MEASURE**
  - If the measured value faceplate is not called from the process symbol, the value is displayed with one position after decimal point (Example: Call up from motor faceplate or from group object list).
  - LimitMin from “lower limit 2” was not connected right to ".VAL_.SCB". It’s now connected to “SCB”.
  - The default setting for the user rights are: “18 Modify Warning Limits“ and “20 Modify switching limits “. This are also the default settings for the faceplate call from the process symbol.
    Background information:
    If the faceplate is called from the object list of the group, the user rights can not be taken over from the process symbol.
- **C_GROUP**
  - In some project standards in the group face plates the group acknowledge button was missing. This button works just like the AS acknowledge button, only the labeling is different. If only one group or the whole AS is being acknowledged is decided by the group module in the AS.
- **FD_CEM / C_ExitView1.fct**
  - If the diagnose faceplate was closed with the close button and the info dialog was opened directly after that, it came to many fault entries.
- **FD_CEM / PCS7_OpenGroupDisplay_V6_CEMAT.fct**
  - The button text for sub controls was changing to 20 characters.
- **@C_PCS7Typicals_V61.pdl**
  - The hot spot of the symbols is modified. Now the click event works only directly on the symbol.
- **Online Kurven template: @TRG_Default_C8_FS.pdl, @TRG_Default_CEMAT.pdl, CematDateTime / ConvertDateTimeString.fct**
  - Trend controls “one click“ handling:

Weekday button:	Switch to the weekday (offline)
Time range button:	Switch to the time range (offline)
Online button:	Change to online mode.
Full screen button:	Change the display between full screen and normal size. (@TRG_Default_C8_FS.pdl only)

- **@TopAlarmNew.pdl**
  - The extended alarm line (is being opened with the alarm-button in @AlarmOneLine) has been adapted to the CEMAT-set points for alarm lines.

    After the OS project editor has been executed, the file has to be copied into the project directory/GraCS once again, because the OS project editor overwrites them.

Project standards:

- **PS 004 HOLCIM**
  - Supplementary functions according to the request of HOLCIM project standard (see description in the documentation and CD:\ Additional_Information/ModificationList).

- **PS 027 Lafarge**

  Supplementary functions according on request of LAFARGE project standard see documentation and DVD description (CD: \ Additional_Information/ModificationList).

  OS:

  - **CONFIG FILES**
    Adapted to CEMAT V6.1.

- **PS 006 DYCKERHOFF**

  OS

  - **C_GROUP**
    In the group faceplate the acknowledge button group was missing. (This button works similar to the AS Acknowledge button, only the label is different. In the AS it is decided what is acknowledged, group or AS.)

- **PS 007 HZ**

  AS:

  - **C_DRV_1D**
    - The parameter EEE (Single mode unlocked) was not updated.
  - **C_DRV_2D**
    - ENOT (emergency mode) was not set to bit13 of INTFC_OS (os_if_35)
    - EVSZ=0 switches EVS1/EVS2 (Motor running) to 0 (Single Mode unlocked).
    ..EVSZ=1 switches to 1.
  - **C_VALVE**
    - VNOT (emergency mode) was not set to bit7 of INTFC_OS (os_if_47).

- **PS 026 Alsen**

  AS:

  - **C_DAMPER**
    The parameter KBV (Local Mode) was not updated.

General

- Documentation customized
- Interlock/Interlock5 description completed. At one interface only one type of interlock possible.

CEMAT V7.0

General extensions:

- New Auto Setup, modified license query
- Additional License for Single Station with 6 AS
- Bundle PCS7 BOXPC with CEMAT Single Station AS3
- Italian and Spanish language extension of the CEMAT OS dialogs
- **O**bject **D**ata **A**cquisition module
- Statistic & Maintenance information for all drive functions
- KCS OS modules as open version with Faceplate Designer
- Additional I/O information in the Info dialog
- Supporting of the 1600x1200 screen resolution (pdl and symbols)
- Extended route control with new AS and OS blocks prepared for project standard 000 and 006 (Function will be released with SP1).
- CEMAT simulation types for SIMBA/SIMIT
- Drive functions can show the associated groups/routes

AS:

- **C_DRV_1D, C_DRV_2D, C_DAMPER, C_VALVE**
  - In these AS blocks the maintenance functionality has been implemented.
  - New interface for the route administration (see block description) (only for Project versions 000 and 006)
- **C_DRV_1D**
  - Setpoint input OS or External for the transmission to VSD blocks.
  - New output DLY_CNT to display of the remaining on/off delay time.
- **C_DRV_2D**
  - New output DLY_CNT to display of the remaining on/off delay time.
- **C_DAMPER**
  - If RTMONTIM (Runtime Supervision in sec) connected with 0, the supervision is switched off.

- **C_VALVE**
  - New output DLY_CNT to display of the remaining on/off delay time.
  - The limit switch monitoring via LSMONTIM now operates also onto VVSx and not only onto the alarms.
- **C_SIMOS**
  - New block for the SIMOCODE link with current and power output (this block replaces the C_SIMO_A) (see block description).
    Both blocks cannot be used at the same time. If you want to use the C_SIMO_A further on you have to change the request in @PG_C_xxxxx.STANDARD.PDL.
    (refer to Upgrade description in the Engineering Manaul, chapter 16)
- **C_INTERL, C_INTER5**
  - Loss of the RLO through Download for changes. This is a system property of PCS7.
    Warning added in Object description.

OS:

- **Faceplates in general:**
  - @PG_C_xyz_STANDARD.pdl, @PG_C_xyz_VIEWLIST.pdl
    The ComboControl (display of which faceplate is open - diagnose, help, etc.) now gets the text from ToolTipText of buttons (_STANDARD) or from the static text (_VIEWLIST).
  - With left click on the TAG in the STANDARD-Faceplate the window @C_Grouplist.pdl will be opened, which shows the dedicated groups and routes for the TAG
    (As a precondition that the object list for groups and routes must be saved in the user archive C_DriveList).
  - If the block is part of an active route control, "material name“, "Jobname“, "route name“ will be shown (for future Route Selection function), the material name can be removed.
  - @PG_C_X.DIAG.pdl, DLY_CNT display
    In the diagnosis faceplate the current counter for remaining on/off delay time will now be shown.
  - @PG_C_MAINT.pdl, @C_MAINT_OV.pdl, @C_MAINT.pdl, @CEMAT_MSOperartion.pdl, @CEMAT_MSSelectInterval.pdl
    Overviews in the maintenance area (see system description).
- **C_DRV1D**
  - @PG_C_DRV_1D_STANDARD.pdl
    Dislplay of the setpoint and the actual value of subordinate blocks.

- **C_MEASURE**
  - @PG_C_MEASURE_DIAG.pdl
    In the diagnosis faceplate the input for the Property Assignments was missing.
    Type 0, parameter fault
    Type 10, physical value as REAL
    Type 77, all S7 periphery modules.
- **C_ANNUNC, C_ANNU8**
  - @PG_C_ANNUNC_DIAG.pdl,@PG_C_ANNUN8_DIAG.pdl
    The operating message for Simulation On/Off had been exchanged and masked falsely.
- **C_GROUP, C_ROUTE**
  - C_GROUP_STATE.ocx
    The state request is logged in the file D:\CEMAT_CS\bin\C_GroupState.ini.
  - C_TREE.OCX
    In the object list a button was added in order to stop the display/initialization.
- **C_CTRL_PID**
  - @PG_C_CTRL_PID_OVERVIEW.pdl, @PG_C_PID3_OVERVIEW.pdl
    Locked messages are used in CEMAT. The button MSG_Lock in the overview faceplate has been removed.
- **FCT revision**
  - CematMessages\C_OpenMsgSystem.fct, cmsg_GetPlantZoneFilter.fct
    If in the OS-Project Editor under "Areas in the Overview" empty buttons are inserted, the CEMAT Message system showed wrong button descriptions (duplications).
    The order of the area buttons in the message system now complies with the order in the Overview Area.
  - PCS7_OpenGroup-Display_V6_CEMAT.fct
    Additional license query V3/V4 on C_614_GROUP and C_631_GROUP (migration)
  - C_GetPermissionOnArea.fct
    In the script the limit was set on 32 instead on 16 areas.
  - C_ChangeView_Bt.fct
    Sporadically appearing memory leak is eliminated.
  - WScripts\@PCS7Typicals.cfg, WScripts\TemplateControl.cfg
    With Create/Update Block Icons the Property UserText\Visible1 (display of User text in the symbols G, R, AW) will not be overwritten with "no" anymore.
  - C:\…\loopinal.fct
    It came to a General Protection Fault with the variable type LPCMN_ERROR (long Pointer on Errorhandler) on the output of the Errortext.
  - WEB-ability expanded
  - Migration V3/V4-V6, "Info-Button" in alarm line activated.
  - HighlightBlockIcon will now be proved before the composition, if the Property generally exists.
  - C_GetDebugMode.fct
    In the C_Config.cfg a new section exists which switches on/off Debug-Prints in the APDiag-OutputWindow.

- **@Overview1.pdl**
  - In the upper right corner for the MultiClients the Server name is displayed, from the Server which is currently connected (the MC gets the data from this Server). For the other station types (ES or Server the own station name is displayed.
- **Meldesystem**
  - @C_AlarmFilter.pdl, C_SetMsgFilter.fct, cmsg_SetMsgList.fct
    By now it is also possible to filter for system messages.
- **C_@PCS7Typicals_CemV7.pdl (new)**
  - Motor symbol 33. Property Index was missing for connection to VISU_OS.
  - new symbols for the Route Control function (future)
  - new symbol for the system supervision (C_ANNUNC)
  - If the symbol has the functionality "Highlight Bloc Icon“ it will be “highlighted” at opening the faceplate, at closing it will be "normal" again
- **Online Kurven template:**
  - @TRG_Default_C8_FS.pdl, @TRG_Default_C8.pdl, @TRG_Default_C12.pdl
    From curve 7 the current value of the curve 6 was always displayed in the value display.
- **@TopAlarmNew.pdl**
  - The advanced message line (will be opened with the alarm button in @AlarmOneLine) has been adapted to the CEMAT parameters for message lines.
    After operating of the OS Project Editor you must copy this file into the project directory/GraCS once more because the OS Project Editor overwrites it.
- **@Buttons11.pdl**
  - The display of analog and digital TAGs in the flow chart can now be switched on/off through 2 additional buttons in the footer (button11.pdl). With that you save the additional buttons in the flow charts.
  - The footer has been expanded by the languages Spanish and Italian.
- **@Buttons12.pdl**
  - Locked messages are not designed for CEMAT. The buttons CSIG_Lock and CSIG_Unlock have been switched "invisible" therefore.
- **@PG_C_INFO.pdl**
  - The data preparation for the user archive has been optimized.
  - In the multimedia directory the new directory "periphery" exists. There you can deposit text files TAG.txt (Chart_Block.txt - "/" is replace by "_") with additional I/O information (e.g. absolute addresses of all I/O, belonging to an object). The (unmodified) text file can be opened from the info dialog.
- **C_UserInfo.pdl, C_GetPermissionOnArea.fct**
  - For the maintenance functions the new authorization 29 has been introduced. In order to display this chart and C-functions have been modified.
  - Authorization 8 is not used any more in the message window.
- **@CSIGQuit.pdl**
  - Message Acknowledgement with F9.
- **@HornQuit.pdl**
  - Horn Acknowledgement with F8.

- **4 Monitors**
  - Cemat administrates 4 monitors with this version.

Project standards:

- **PS 004 HOLCIM**

  (description see documentation and CD:\Additional_Information\ ModificationList)

  AS:

  - **C_VALVE**
    Bug at reset of the operating time removed

  OS:

  - **@PG_C_HELP**
    The help for the type C_PROFB has been added.
  - **@PG_C_***_DIAG.pdl, pcs7_openinputboxanalog_v6_CEMAT.fct**
    Operator message in Italian and Spanish
  - **C_@PCS7Typicals_CemV7_Holcim.PDL (new)**
    The new template picture replaces the @C_Holcim_PCS7Typicals.PDL. The block icons are identical with the block icons in @C_Holcim_PCS7Typicals.PDL

- **PS 027 Lafarge**

  AS:

  - **C_AIB**
    Smoothing, gradient supervision and the overshoot outputs LG_P and LG_N have only been actualized in the sleeping mode.
    A modification in the "awake" mode has not been displayed because this instruction block was missing in this mode.

  OS:

  - **C_@PCS7Typicals_CemV7_LF.PDL (new)**
    The new template picture replaces the @C_LF_PCS7Typicals.PDL. The block icons are identical with the block icons in @C_LF_PCS7Typicals.PDL
    The three first block icons of @C_M2B had the false object type.
  - **@AlarmOneLine**
    Display of date, time, TAG, event, TAG comment, FCL, area
  - Spare displays removed.

- **PS 007 HZ**

  AS:

  - **C_DRV_1D**
    ESPO (sporadical ON/OFF) only acts in the automatic modus. If ESPO=0 and transfer is Auto <---> Single the command storage EKS will be cleaned up and therefore unintended start-up warning will be prevented.
  - **C_DRV_1D, C_DRV_2D, C_DAMPER, C_VALVE**
    The Alarm priority has been changed from ESB-EVO-EBM to ESB-EBM-EVO. Furthermore the prioritization of the fault display has been abolished in the diagnosis faceplate for this version. If now ESB-EBM and EVO fail at the same time, all 3 failure bits are displayed in the diagnosis

  OS:

  - **C_DRV_2D**
    The Simocode button had been positioned false.
  - **C_VALVE**
    @PC_C_VALVE_DIAG.pdl the display VEE (Un-interlocked single-start mode) was missing.

General

- Modifications in the documentation
  - The documentation directory was restructured.
  - The directories German and English have been removed. (All languages are now located in the same directory)
  - The filenames consist of the CEMAT Object Type and the Language ID, e. g. C_VALVE_009.pdf (similar to the config files).
- From CEMAT V7.0 the functions and pictures fort he V60_MessageSelection and for the Migration are no longer installed.
  On the CEMAT DVD you find a directory Alarmline_MessageSelection_V60 with Pictures and Functions.

CEMAT V7.0_SP1

General modifications:

- Russian and Chinese language expansion of the CEMAT OS dialogs and partial documentation are available on request

- Subcontrol Templates (AS und OS) for
  - Masterdrive CBP2
  - Micromaster 4xxSeries
  - Robicon PH

  available on request for project standard „000“.

- Monitor resolution 1600
  C_@PCS7Typicals_CemV7_1600.PDL and greater bitmaps under
  CD:\Cemat_AddOn\CEMAT_1600

- As an example only the „000“ project is on the DVD.
  Lafarge or HOLCIM projects are available on request.

- The CEMAT HDRS engineering tool was improved fundamentally

- A new CEMAT engineering tool is available, build similar than the HDRS tool, with example projects for all project standards.
  The tool is free of cost available. One day training is obligatory.

AS:

- **C_DRV_1D, C_DRV_2D, C_DAMPER, C_VALVE**
  - In the „Sequence Mode“ the runtime counter was always running
  - DSIG_SIM is showing the status „Simulation“ of the channel driver
- **C_DRV_1D**
  - Display of the dimension for „Set point „ was changed to #unit

- **C_MEASURE**
  - MV-I output for the present analogue value (not for simulation- or bypass mode)
  - Bad Quality annunciation also from C_MEASURE
  - MV_PERC was frozen in „Service Mode“
  - RA_OI interface for release of fault limiting bits
  - With message release „0“ at the following interfaces (RA_HH, RA_H, RA_L, RA_LL) the collective fault annunciation is inhibited.
- **C_PID3, CTRL_PID**
  - LMN_HLM, LMN_LLM are displayed
- **C_COUNT**
  - for counter input of REAL value is also possible.
    (ATTENTION the counting rang is limited and for large numbers inaccurate)
  - The new “reset output” is active for one cycle
- **C_ANNUN8**

- DSIG_SIM is displaying the status „Simulation“ of the cannel driver

- **C_RUNNT**
  - RT_OS_H (display of hours) and RT_OS_M (display of minutes)
- **C_SELECT**
  - NON_INTL high if no interlock is active
- **C_SIM_AD**
  - A new function block for SIMOCODE with current and power measuring function (replacement for function block C_SIMO_A) (please refer function block description).
    It is in general not possible to us the two function blocks at the same time. If the C_SIMO_A is still used, the call must be changed in @PG_C_xxxxx.STANDARD.PDL.
    The function block is available in „Cemat_Addon“.

OS:

- **Faceplates general:**
  - **INFO Dialog**
    can now display documents of formats .DOC, .XLS and .DWG
    Additionally there are the following buttons:
    - LOOP DIAGRAM BUTTON,
    - EL DRAWING BUTTON,
    - MCC BUTTON

    The config files must contain the program name and the class name in order to open the corresponding file from folder Service (see OS_Engineering.pdf).
  - TRG_defaultxxxxxx.PDL’s Correction of defect: Time range, curves
    (please all curve compositions made till now delete and newly arrange).
  - Message selection
    - Channel driver messages was not shown,
    - Auto scrolling and sorting by column heading were activated
    - An operation was not possible in the report window at open Faceplate
  - New curve picture presentations C_Curve01.pdl
  - Internal CEMAT variables are created automatically
    C_Servername, C_Empty, C_View_Tag_A, C_View_Tag_D
- **C_DRV_1D, C_DRV_2D, C_DAMPER,C_VALVE, C_ANNU8**
  - Faceplate shows „Cannel driver in simulation mode”
- **C_MEASUR**
  - Additional indication of the input value at simulation or by-pass mode
  - Annunciation interface in diagnosis dialog
  - Indication of the Quality code in the diagnosis dialog
- **C_SELECT**
  - .new Styles @C_SELECT/5 und @C_SELECT/6
- **CTRL_PID, C_PID3**
  - .Display of the output limits

- **C_@PCS7Typicals_CemV7.pdl**
  - New sorting of the styles

- **C_SIM_AD**

  A new function block for SIMOCODE with current and power measuring function as well acyclic additional data (this function block can be used instead of C_SIMOS, please refer also the function block description).

Projectstandards:

- **PS 004 HOLCIM**

  (For the description please refer documentation and CD:\Additional_Information\ ModificationList)

  For the new HMI representation guidelines of HOLIM an example project exists, you can this request with us.

  AS:

  - C_DRV_1D,C_DRV_2D,C_DAMPER,C_VALVE
    REL_SC , The SIMOCODE adapter name can be typed in freely now, different types can be used
  - C_GROUP
    - Double assignments in the command word cleared
    - French station codes were mixed up
  - C_VALVE
    - Message „U Local isolated“

  OS:

  - New presentation pictures in accordance with HOLCIM HMI definition.
    - @C_Alarmlisting
    - @Button11
    - @Screen_CEM_1600
    - C_Curve_Groups.pdl
    - for process pictures refer xls under 004 Docu
    - C_@PCS7Typicals_CemV7_Holcim.PDL
  -
  - C_GROUP

    - Start/Stop button can be switched invisibly with IStyle=1

- **PS 027 Lafarge**

  AS:

  - C_M2B
    - REL_MVC switched visible

  OS:

  - @PG_C_M2B.STANDARD.pdl
    -Release analogue button changed.
    @PG_C_AIB_DIAG.pdl
    -Display LG_P and LG_N only if EN_GRAD is high “1”.

  - @AlarmOneLine, @Overview1
    High monitor resolution 1600x1200

- **PS 007 HZ**

AS:

- **C_DRV_1D, C_DRV_2D, C_DAMPER,C_VALVE,**
  - driver in simulation mode is shown
- C_DAMPER
  - It was not possible to remove KDR1/KDR2 with KVT2/KVT1

OS:

- **C_DRV_1D, C_DRV_2D, C_DAMPER,C_VALVE,**
  - Driver in simulation mode is displayed

- **PS 026 ALSEN**

AS:

- **C_DRV_1D, C_DRV_2D, C_DAMPER,C_VALVE, C_VALVE_2D**
  - Driver in simulation mode is displayed t
  - Alarm priority was changed to ESB-EBM-EVO
  - Feedback signal ERM, KWE2/1,VE1/2 are executed as an OS variable and therefore can be archived
  - EIZ is executed as an output signal
  - ESD is executed as an output signal
- C_DAMPER
  - It was not possible to remove KDR1/KDR2 with KVT2/KVT1

OS:

- **C_DRV_1D, C_DRV_2D, C_DAMPER,C_VALVE,**
  - „Driver in simulation mode“ is displayed
  - The buttons can be removed completely about additional styles

General

- Documentation customizations
  - New structure in the multimedia list. (refer OS_Engineering.pdf)

CEMAT V7.1

General Modifications:

- **PCS7 APL Look & Feel and use of Structure Inputs and Outputs:**
  - „Jump“ functions between CEMAT Faceplates and APL Faceplates.
  - Display of the signal status

- **New structure input s and outputs:**
  - All block interlocks (Start interlock, Operation interlock, Switch-off interlock, Protection interlock and Manual interlock) can be programmed via structure connections. The advantage is that beside the RLO also the Signal Status can be shown in the diagnosis picture (always the worst status is displayed and bad quality does not switch off anything).
    Beside this the structure connection allows jumping to the source of the signal. Via a button in the faceplate of the objects the previous object (e. g. Intlk02 or another Cemat Object) can be called.
    The Interfaces for binary interlocks are still available and can be used parallel (AND function).
  - All block outputs which are normally used for interlocks to other blocks are available parallel as structure outputs. These can be used for connections to the structure inputs.
  - Some interfaces (Set point input of C_DRV_1D, Damper Positioner function and Group/Route links) have been changed to structure format (additional functions) and are no more available in the original format.
    This has to be considered during migration! An Excel tool exists for replacing the signal connections by structure connections. See migration description!

- **Process pictures and Block icons:**
  - Default Screen Resolution 1680x1050
    Possible screen resolutions are 1920x1200 and 1280x1024
    C_@PCS7Typicals_CemV7_1680_1920.pdl contains bigger bitmaps
    Small bitmaps still available in CD:\Cemat_AddOn\CEMAT_1280
  - Summarizing indication of group and route distinguish faults and warnings.
  - Dynamic fault is also displayed if group is not started.

- **Faceplate Functions:**
  - Direct faceplate-call for related Group, related Route and related Object.
  - Opening a user faceplate directly from the faceplate of C_DRV_1D, C_DRV_2D, C_DAMPER, C_VALVE, C_ANASEL, C_ SELECT, C_ROUTE, C_GROUP
  - Highlight all objects belonging to a group or route.
  - Via interrupt button the group start and stop can be interrupted.

- **System settings/Display:**
  - Additionally to the AS-wide and group-wide acknowledgement there is the possibility to acknowledge only the object which produced the alarm (setting in the system chart).
  - Through system setting (system chart) it can be decided if group start is interrupted in case of a warning or not.
  - List of simulated objects within the AS.

- **New functions of the drive blocks:**
  - Start-up-warning can also be given in local mode
  - Damper in Positioning mode can be switched to inching mode
  - Valve can be controlled into direction 1 (close) when activated.

- **New functions of the annunciation block:**
  - Warning mode and two-level-alarm
  - Release Supervision
  - Save fault until acknowledgement

- **New functions of the measured value:**
  - Release limit supervision
  - Save fault until acknowledgement

- **New blocks:**
  - Block Analog Value Selection C_ANASEL allows the display of various measures together with the drive function.
  - With block C_RelMod a list of digital and analog process signals can be displayed with the drive.

- **General:**
  - Project standard code available in AS blocks and OS faceplates.
  - Use of new curve and alarm controls of PCS7 V7.1
  - Message selection can be carried out for each OS. On each operator station it can be selected from which plant section (area) the message shall be displayed (similar to Cemat V6.0).

AS:

- **C_DRV_1D**
  - New structure inputs for start, operation and protection interlock. The inputs IntStart (corresponds to EEVG), IntOper (corresponds to EBVG), IntProtG (corresponds to ESVG) and IntProgA (corresponds to ESVA) are used in the block additionally to the binary inputs (AND function) and can be used optional.
  - New structure output RunSig (corresponds to EVS) with status information. The output exists parallel to the binary output.
  - External set point SP_EX, Actual value PV_IN and set point output SP_O have been changed to structure inputs and outputs. **Has to be considered in the Migration!**
  - Default for set point upper limit changed to "100".
  - Via interface GFSO the drive can be deselected from the group summarizing indication and the status call.
  - Link to one or various analog values.
    Via structure input PV (Value) and PV_Stat (Status) the drive can be linked to a measured value and the faceplate of the measure can directly be called from the faceplate of the drive. Instead of a single analog value, the drive can also be linked to an analog value selection block C_ANASEL. With the analog value selection block different measures (e. g. current, power, bearing and wingding temperature) can be displayed together.
  - In the acknowledge mode "Single Acknowledgement" (setting in system chart), each drive must be acknowledged individually. Caution: In case the drive is stopped via protection interlock an additional acknowledgement is required from the drive faceplate.
  - Structure input "UserFace“ for the direct call of a user faceplate.
  - Start-up-warning is also possible in local mode (configuration via L_STA_WA).
  - Output of the balanced time for start delay, stop delay and start-up-warning (output DLY_CNT)
  - Entry of the instance-DB no. for simulated speed monitors (for function "Show simulated objects).
  - New "GALA-WALA“ block calls, similar for all project versions.
  - GR_LINK1, GR_LINK2 and MUX_LINK changed to structure inputs. Required fort he function "Call related Group). **Has to be considered in the Migration!**

- **C_DRV_2D**
  - New structure inputs for start, operation and protection interlock. The inputs IntStrt1 (corresponds to EEVG1), IntStrt2 (corresponds to EEVG2) IntOper1 (corresponds to EBVG1), IntOper2 (corresponds to EBVG2), IntProtG (corresponds to ESVG) and IntProgA (corresponds to ESVA) are used in the block additionally to the binary inputs (AND function) and can be used optional.
  - New structure outputs RunSig1 and RunSig2 (correspond to EVS1 and EVS2) with status information. The outputs exist parallel to the binary outputs.
  - Via interface GFSO the drive can be deselected from the group summarizing indication and the status call.
  - Link to one or various analog values.
    Via structure input PV (Value) and PV_Stat (Status) the drive can be linked to a measured value and the faceplate of the measure can directly be called from the faceplate of the drive. Instead of a single analog value, the drive can also be linked to an analog value selection

block C_ANASEL. With the analog value selection block different measures (e. g. current, power, bearing and wingding temperature) can be displayed together.

- In the acknowledge mode "Single Acknowledgement" (setting in system chart), each drive must be acknowledged individually. Caution: In case the drive is stopped via protection interlock an additional acknowledgement is required from the drive faceplate.
- Structure input "UserFace“ for the direct call of a user faceplate.
- Start-up-warning is also possible in local mode (configuration via L_STA_WA).
- Output of the balanced time for start delay, stop delay and start-up-warning (output DLY_CNT)
- Entry of the instance-DB no. for simulated speed monitors (for function "Show simulated objects).
- New "GALA-WALA“ block calls, similar for all project versions.
- GR_LINK1, GR_LINK2 and MUX_LINK changed to structure inputs. Required fort he function "Call related Group). **Has to be considered in the Migration!**

- **C_DAMPER**
  - New structure inputs for start, operation and protection interlock. The inputs IntStrt1 (corresponds to KEV1), IntStrt2 (corresponds to KEV2) IntOper1 (corresponds to KBV1), IntOper2 (corresponds to KBV2), IntProt1 (corresponds to KSV1) and IntProg2 (corresponds to KSV2) are used in the block additionally to the binary inputs (AND function) and can be used optional.
  - New structure outputs PosSig1 and PosSig2 (correspond to KVS1 and KVS2) with status information. The outputs exist parallel to the binary outputs.
  - External set point KWEX, position value POS_IN and set point output X_POS_OS have been changed to structure inputs and outputs. **Has to be considered in the Migration!**
  - Via interface GFSO the damper can be deselected from the group summarizing indication and the status call.
  - Link to one or various analog values.
    Via structure input PV (Value) and PV_Stat (Status) the drive can be linked to a measured value and the faceplate of the measure can directly be called from the faceplate of the drive. Instead of a single analog value, the drive can also be linked to an analog value selection block C_ANASEL. With the analog value selection block different measures (e. g. current, power, bearing and wingding temperature) can be displayed together.
  - In the acknowledge mode "Single Acknowledgement" (setting in system chart), each drive must be acknowledged individually. Caution: In case the drive is stopped via protection interlock an additional acknowledgement is required from the damper faceplate.
  - Structure input "UserFace“ for the direct call of a user faceplate.
  - Start-up-warning is also possible in local mode (configuration via L_STA_WA).
  - In all project versions the inching mode can be released during positioning.
  - Output of the balanced time for run time supervision and start-up-warning (output DLY_CNT)
  - New "GALA-WALA“ block calls, similar for all project versions.
  - GR_LINK1, GR_LINK2 and MUX_LINK changed to structure inputs. Required fort he function "Call related Group). **Has to be considered in the Migration!**

- **C_VALVE**
  - New structure inputs for start, operation and protection interlock. The inputs IntStart (corresponds to VEVG), IntOper (corresponds to VBVG) and IntProtG (corresponds to VSVG) are used in the block additionally to the binary inputs (AND function) and can be used optional.
  - New structure outputs PosSig1 and PosSig2 (correspond to VVS1 and VVS2) with status information. The outputs exist parallel to the binary outputs.
  - Instead of direction 2 (default setting) via parameter RI1A direction 1 can be defined as "active" direction. In this case the valve is controlled to direction 1 (close) if it is activated.
  - Via interface GFSO the valve can be deselected from the group summarizing indication and the status call.
  - In the acknowledge mode "Single Acknowledgement" (setting in system chart), each valve must be acknowledged individually. Caution: In case of a stop via protection interlock an additional acknowledgement is required from the damper faceplate.
  - Structure input "UserFace“ for the direct call of a user faceplate.
  - Start-up-warning is also possible in local mode (configuration via L_STA_WA).
  - Output of the balanced time for start delay, stop delay, run time supervision and start-up-warning (output DLY_CNT)
  - New "GALA-WALA“ block calls, similar for all project versions.
  - GR_LINK1, GR_LINK2 and MUX_LINK changed to structure inputs. Required fort he function "Call related Group). **Has to be considered in the Migration!**

- **C_MEASURE**
  - New structure input PV for reading the analog value. This input is used if TYP = 20 is set. The structure input contains value and status.

    TYP = 10 still reads input PV_PHYS, while the default setting for the quality code QC is changed form "99" to "FF" (not used). The old QC "99“ still works.

    TYP = 77 still reads input PV_CARD (directly form the S7 Input card).
  - New structure outputs PV_Out (Wert) and PV_Stat (Unit and Status) contain the physical value, including status and unit.

PV_Out	Value	Real
	ST	Byte = B#16#80
PV_Stat	UNIT	String (8)
	STATUS	DWORD

    PV_Out.Value corresponds to output MV, which is still available.
    ST contains the Quality Code.
    The structure outputs can be connected to an analog value selection block or directly to a drive (for the display of related Measure(s)).
    Caution: the Attribute „S7_m_C“ for UNIT and STATUS has been removed and the information is included in structure PV_Out. This requires an adaptation of the existing block icons.
  - Output MV_I (Raw value) has been changes to structure output. **Has to be considered in the Migration!**

- Via interface GFSO the measured value can be deselected from the group summarizing indication and the status call.
- New interface RELS for the release of the limit supervision and additional parameter REL_DEL for presetting the release supervision time.
  If "RELS" is set to 0-Signal, no limit supervision is carried out. Existing limit violations are reset, which means outgoing messages are created. Which a rising edge on "RELS" timer REL_DEL is started. After this time has elapsed, the limit value supervision and the messages get activated.
  With the new function the start-up behavior can be suppressed.
- New interface MTRIP for memorizing of the limit violation.
  If MTRIP = 1 the outgoing message is entered into the alarm system only if the alarm is acknowledged (and not if the signal is ok again).
- Via parameter REL_SUC, in case of a suction measurement the bar indication of the measure can be adapted in a way that the bar grows from top to the bottom.
- Output of the balanced time for release supervision time (output DLY_CNT)
- GR_LINK1, GR_LINK2 and MUX_LINK changed to structure inputs. Required fort he function "Call related Group). **Has to be considered in the Migration!**

- **C_ANNUNC**
  - New structure input PV for reading the process value (corresponds to MST0). PV has higher priority than MST0. If the structure input is connected, the same will be evaluated. If PV is not connected, the block evaluates MST0.
  - New structure outputs QutSig (corresponds to MAU) and Warn with status information. The outputs exist parallel to the binary outputs.
  - New binary outputs for static fault (MST) and dynamic fault (MSO).
  - Via interface GFSO the annunciation block can be deselected from the group summarizing indication and the status call.
  - Through adding GR_STP and output AWA it is possible to use the same annunciation block for all project versions (except Lafarge). The functions however are only used in Holcim standard and can remain in the default settings for other customers.
  - In the acknowledge mode "Single Acknowledgement" (setting in system chart), each valve must be acknowledged individually. Caution: In case of a stop via protection interlock an additional acknowledgement is required from the drive faceplate.
  - New function "warning mode"
    In the warning mode (WMOD = 1) the block only created warning messages.
    Caution: The alarm activation is not active for warnings.
  - New function "two-level-alarm" (first warning message, then fault message).
    Via parameter AWAN the function will be activated, e. g. as soon as the drive is running. Via parameter WARN_DEL the delay between warning and fault (drive stop) can be configured.
  - New interface RELS for the release of the signal supervision and additional parameter REL_DEL for presetting the release supervision time.
    If "RELS" is set to 0-Signal, no signal supervision is carried out. Which a rising edge on "RELS" timer REL_DEL is started. After this time has elapsed, the signal supervision and the messages get activated.
    With the new function the start-up behavior can be suppressed.

- New interface MTRIP for memorizing of dynamic faults.
  If MTRIP = 1 the outgoing message is entered into the alarm system only if the alarm is acknowledged (and not if the signal is ok again).
- Output of the balanced time for release supervision time, delay for incoming and outgoing faults, warning time and annunciation repeat time (output DLY_CNT)
- Entry of the instance-DB no. for simulated signals (for function "Show simulated objects).
- New "GALA-WALA“ block calls, similar for all project versions.
- GR_LINK1, GR_LINK2 and MUX_LINK changed to structure inputs. Required fort he function "Call related Group). **Has to be considered in the Migration!**

- **C_ANNUN8**
  - Via interfaces WARN1 – WARN7 the inputs can be configured as warning. This effects the status indication in the block icon, the summarizing indication in group and route and the status call (yellow indication). The messages have to be configured accordingly. The default setting is 'Alarm'.
    Caution: The alarm activation is not active for warnings.
  - New binary output WX for summarizing warning.
  - Via interface GFSO the annunciation block can be deselected from the group summarizing indication and the status call.
  - The message text for status call function will be taken from an internal text variable.
  - New "GALA-WALA“ block calls, similar for all project versions.
  - GR_LINK1, GR_LINK2 and MUX_LINK changed to structure inputs. Required fort he function "Call related Group). **Has to be considered in the Migration!**

- **C_SELECT**
  - New structure inputs for selection and deselection interlock. The inputs IntStart (corresponds to AEVG) and IntSwOff (corresponds to AAVG) are used in the block additionally to the binary inputs (AND function) and can be used optional.
  - New structure output Select (corresponds to AZE) with status information. The outputs exist parallel to the binary outputs.
  - Structure input "UserFace“ for the direct call of a user faceplate.
  - Operation messages for selection and deselection are only generated in the AS if the selection is carried out via program. In this case the information of the User is not available. In case of a selection/deselection via faceplate the User is entered.

- **C_ROUTE**
  - New structure inputs for selection and deselection and manual interlock the inputs IntStart (corresponds to WEVG), IntOper (corresponds to WBVG) and IntManu (corresponds to WHVR) are used in the block additionally to the binary inputs (AND function) and can be used optional.
  - New structure outputs PreSel (corresponds to WVE) and Select (corresponds to WVW) with status information. The outputs exist parallel to the binary outputs.
  - Structure input "UserFace“ for the direct call of a user faceplate.

- Via button "O" in the faceplate of the route, in the process picture all related objects will be marked for the duration of timer MARK_TIM.
- Operation messages for selection and deselection are only generated in the AS if the selection is carried out via program. In this case the information of the User is not available. In case of a selection/deselection via faceplate the User is entered.
- Summarizing warning in the block icon of the route if any warning in a related C_ANNUNC, C_ANNU8 or C_MEASUR exists.
- New "GALA-WALA“ block calls, similar for all project versions.
- G_LINK and R_LINK have been changed to structure signals. **Has to be considered in the Migration!**

- **C_GROUP**
  - New structure inputs for start, operation and switch-off interlocks. The inputs IntStart (corresponds to GEVG), IntOper (corresponds to GBVG) and IntSwOff (corresponds to GAVG) are used in the block additionally to the binary inputs (AND function) and can be used optional.
  - New structure outputs RunSig (corresponds to GRE) and OffSig (corresponds to GRA) with status information. The outputs exist parallel to the binary outputs.
  - Structure input "UserFace“ for the direct call of a user faceplate.
  - Via button "O" in the faceplate of the group, in the process picture all related objects will be marked for the duration of timer MARK_TIM.
  - Operation messages for group start and stop are only generated in the AS if the start/stop is carried out via program. In this case the information of the User is not available. In case of a start/stop via faceplate the User is entered.
  - Via an additional button in the faceplate of the group start and stop can be interrupted.
  - Summarizing warning in the block icon of the group if any warning in a related C_ANNUNC, C_ANNU8 or C_MEASUR exists.
  - Dynamic fault is also indicated in the group block icon if the group was not started.
  - In the acknowledge mode "Group-wise acknowledgement", by pressing button "AS-ACK“ the dynamic interlock of the group is acknowledged as well. The additional connection (output ACK to input GQIT) is no longer needed.
  - The start-up behavior can be influenced via system setting (Parameter REL_WSTP at block C_FB_PLC in the system chart)
- REL_WSTP = 1: in case of a warning message the start is interrupted (default setting)
- REL_WSTP = 0: warning messages do not influence the start command.
  - Output of the balanced time for start-up-warning horn, waiting time and release time (output DLY_CNT)
  - New "GALA-WALA“ block calls, similar for all project versions.
  - G_LINK has been changed to a structure output. **Has to be considered in the Migration!**

- **C_SILOP**
  - GR_LINK1, GR_LINK2 and MUX_LINK changed to structure inputs. Required fort he function "Call related Group). **Has to be considered in the Migration!**

- **C_COUNT**
  - New structure input "PV_Puls" additonally to CNZS. If "PV_Puls" is connected, CNZS will be ignored.
  - New structure inputs "PV_Int" and "PV_Real" additionally to VAL_CNT. If "PV_Int" is connected, "PV_Real" and VAL_CNT are ignored. If "PV_Real" is connected, VAL_CNT is ignoredt.
  - Additional structure outputs PV_Out (corresponds to RT_OS_O) and PV_OutH (corresponds to RT_H_O), Quality Code is taken from the inputs.
  - The input in not read directly form Periphery Input any more. The block reads the process image. **Has to be considered in the Migration**

- **C_RUNNT**
  - New structure input "PV" additionally to RTLS. If "PV" is connected, RTLS will be ignored.
  - Additional structure outputs PV_Out (corresponds to RT_OS_O) and PV_OutH (corresponds to RT_H_O), Quality Code is taken from the inputs.

- **C_PID3, CTRL_PID**
  - No modifications

- **C_SIM_AD**
  - No modifications

- **C_ANASEL (new block)**
  - The block can read up to 16 Analog Structures (In01.Value und In01.ST) and if available also the dimension and status (In01Stat.UNIT und In01Stat.STATUS).
    From this 16 inputs, one can be transferred to the output:
    The limits and of the status structures are transmitted to summarizing limit outputs and are available at the output of the block.
  - Additionally the worst quality code is transferred to output ST_Worst.
  - Via output "InSelect" the selected input number can be read.
  - Structure input "UserFace“ for the direct call of a user faceplate.

- **C_RelMod (new block)**
  - With this block object related information like digital or analog signals can be displayed together. The block has 20 inputs (ANY) and creates only the "JUMP" variables in order to open the connected objects.

- **C_SIMU_L (new block)**
  - With this block, also non-Cemat blocks as e. g. the interlock block Intlk02 can be entered into the list of simulated signals.

OS:

- **Faceplates general:**
  - **@AlarmEmergency**
    (@AlarmEmergency_CEMAT_1280)
    (@AlarmEmergency_CEMAT_1680_1920)
  - **@AlarmEmergencyOP**
    (@AlarmEmergencyOP_CEMAT_1280)
    (@AlarmEmergencyOP_CEMAT_1680_1920)
  - **@AlarmOneLine.pdl**
    (@AlarmOneLine_CEMAT_1280x1024.PDL)
    (@AlarmOneLine_CEMAT_1680x1050.PDL)
    (@AlarmOneLine_CEMAT_1920x1200.PDL)
  - **@C_AlarmListing.PDL**
    (@C_AlarmListing_1680x1050.PDL)
    (@C_AlarmListing_1920x1200.PDL)
  - **@C_ObjBrowser.pdl** New pdl with CematObjectBrowser.ocx
    @C_PlantSelection.pdl New pdl for hiding messages from Alarm line. (show/hide alarms per area)
  - **@Overview1.pdl**
    (@Overview1_CEMAT_1280x1024.PDL)
    (@Overview1_CEMAT_1680x1050.PDL)
    (@Overview1_CEMAT_1920x1200.PDL)
  - **@PG_C_ALARM.PDL** New Alarm Controls (AxAlarmControl) incorporated.
    Bitmaps in the title bar actualized.
    Refresh - Button added
    Filter-Button added
    Multilingualism
  - **@PG_C_OBJEKTE.pdl** (Display of the object list – group instances) New pdl with C_ObjectList.ocx
    Considerable Performance Improvements
    ToolTipTexte of the OCX-Buttons are multilingual.
    Replaced by the pdl's:
    @PG_C_GROUP_OBJEKTE.pdl
    @PG_C_ROUTE_OBJEKTE.pdl
  - **@PG_C_STATUS.pdl** (Display of the status list – Group status)
    Considerable Performance Improvements
    ToolTipTexte of the OCX-Buttons are multilingual.
    ANNUN8 reads fault texts from (.FLS1#string1 - .FLS7#string1), if "?" is entered in Config-File " (same principle as in C_ANNUNC).
    ANNUN8 warning in yellow color
    Replaces the pdl's:
    @PG_C_GROUP_STATUS.pdl
    @PG_C_ROUTE_STATUS.pdl

- **@TopAlarmNew.pdl**
  (@TopAlarmNew_CEMAT_1280)
  (@TopAlarmNew_CEMAT_1680_1920)
  New Control
  MessageList in the Control adapted
  Size changed to 1674x496 (applicable for screen resolution 1920x1200 and 1680x1050)
  Tested with settings in alarm logging.
- **@TRG_Cemat08_FS** New Cemat TrendControl with WinCC - AxOnlineTrendControl Cemat08
  8 Curves (Trends)
  FS (Fast Selection)
  Offline selection via day of the week and time frame button
- **@TRG_Cemat08** New Cemat TrendControl with WinCC - AxOnlineTrendControl Cemat08
  8 Curves (Trends)
- **@TRG_Cemat_FS** New Cemat TrendControl with WinCC - AxOnlineTrendControl
  FS (Fast Selection)
  Offlinea selection via day of the week and time frame button
- **C_@PCS7Typicals_CemV7_1680_1900.PDL**
  Template picture for Screen Resolution 1680 and 1920
  Mark for 'related Object' (Group command) as blue frame or TagName
  Look and size for most of the block icons reviewed.
  Group, Route- and Selection symbols available as "multilingual"
  All blue labeled symbols have the full V7.1 functionality.
  HZ (007), Dyckerhoff (006) and Alsen (026) have been adapted.
  Some of the measured value block icons with "dynamic Color definition"
  Annunciation block icon with additional warning indication in yellow color.
- **New curve template C_Curve01.pdl**
- **Internal CEMAT Variables are created automatically**
- **C_XXX.PDL's new for all objects**
- **C_XXX_Overview.pdl**
  Representation adapted to APL and dependent on the object type the following information is displayed:
  -worst signal status
  - Authorization 5 for 'process operations' not available
  - Maintenance supervision and Maintenance request
  - Speed Monitor simulated
- **Single acknowledgement dependent on settings in the system chart.**

- **C_DRV_1D**
  - The textual status display was extended. In case of a fault the fault type is displayed.
  - The interlocking conditions are already visible in the Standard Faceplate and even from there it is possible to open the previous object via button-click (previous Cemat object or interlock block).
  - Button "U" opens a user faceplate if connected.
  - Button "G“ opens the group or route which is linked to GR_LINK1.
  - Current or Power in % only for display (no direct call of the measure any more).
  - Display of an additional analog value, coming from a C_MEASUR or from a C_ANASEL block. The analog value selector C_ANASEL allows the selection of one out of 16 Analog values and provides this value at the block output. C_MEASUR or C_ANASEL can be opened via drive faceplate directly.
  - In case of a set point display the external set point is marked in green color and if a structure object is connected this object can be directly called via the drive faceplate.
    The Object which delivers the feedback from Set Point can directly be opened as well.
  - In the diagnosis picture the signal status of the interlocking conditions is displayed. It is a combination of the signal status of the binary input and the signal status of the structure input. The color indication shows whether it is only a binary connection or if a structure input is used.
    Through click on the corresponding interface, the interlock block C_INTERL or C_INTER5 as well as the previous object of the structure input (e.g. Intlk02 or another Cemat block) is opened.
  - In the diagnosis picture, behind each interlocking input the symbol of the signal status is displayed.
  - The worst signal status of all inputs is additionally displayed as text and transferred to the block output.
  - Display of balanced time for start delay, stop delay and start-up-warning.

- **C_DRV_2D**
  - The textual status display was extended. In case of a fault the fault type is displayed.
  - The interlocking conditions are already visible in the Standard Faceplate and even from there it is possible to open the previous object via button-click (previous Cemat object or interlock block).
  - Button "U" opens a user faceplate if connected.
  - Button "G“ opens the group or route which is linked to GR_LINK1.
  - Current or Power in % only for display (no direct call of the measure any more).
  - Display of an additional analog value, coming from a C_MEASUR or from a C_ANASEL block. The analog value selector C_ANASEL allows the selection of one out of 16 Analog values and provides this value at the block output. C_MEASUR or C_ANASEL can be opened via drive faceplate directly.

- In the diagnosis picture the signal status of the interlocking conditions is displayed. It is a combination of the signal status of the binary input and the signal status of the structure input. The color indication shows whether it is only a binary connection or if a structure input is used.
  Through click on the corresponding interface, the interlock block C_INTERL or C_INTER5 as well as the previous object of the structure input (e.g. Intlk02 or another Cemat block) is opened.
- In the diagnosis picture, behind each interlocking input the symbol of the signal status is displayed.
- The worst signal status of all inputs is additionally displayed as text and transferred to the block output.
- Display of balanced time for start delay, stop delay and start-up-warning.

- **C_DAMPER**
  - The textual status display was extended. In case of a fault the fault type is displayed.
  - The interlocking conditions are already visible in the Standard Faceplate and even from there it is possible to open the previous object via button-click (previous Cemat object or interlock block).
  - Button "U" opens a user faceplate if connected.
  - Button "G“ opens the group or route which is linked to GR_LINK1.
  - Display of an additional analog value, coming from a C_MEASUR or from a C_ANASEL block. The analog value selector C_ANASEL allows the selection of one out of 16 Analog values and provides this value at the block output. C_MEASUR or C_ANASEL can be opened via drive faceplate directly.
  - In the diagnosis picture the signal status of the interlocking conditions is displayed. It is a combination of the signal status of the binary input and the signal status of the structure input. The color indication shows whether it is only a binary connection or if a structure input is used.
    Through click on the corresponding interface, the interlock block C_INTERL or C_INTER5 as well as the previous object of the structure input (e.g. Intlk02 or another Cemat block) is opened.
  - In case of a positioning function the external set point is marked in green color and if a structure object is connected this object can directly be called via the damper faceplate.
    If the set point output is connected to a structure object this object can directly be called via damper faceplate.
  - In the diagnosis picture, behind each interlocking input the symbol of the signal status is displayed.
  - The worst signal status of all inputs is additionally displayed as text and transferred to the block output.
  - Display of balanced time for start delay, stop delay and start-up-warning.

- **C_VALVE**
  - The textual status display was extended. In case of a fault the fault type is displayed.
  - The interlocking conditions are already visible in the Standard Faceplate and even from there it is possible to open the previous object via button-click (previous Cemat object or interlock block).
  - Button "U" opens a user faceplate if connected.
  - Button "G“ opens the group or route which is linked to GR_LINK1.
  - In the diagnosis picture the signal status of the interlocking conditions is displayed. It is a combination of the signal status of the binary input and the signal status of the structure input. The color indication shows whether it is only a binary connection or if a structure input is used.
    Through click on the corresponding interface, the interlock block C_INTERL or C_INTER5 as well as the previous object of the structure input (e.g. Intlk02 or another Cemat block) is opened.
  - In the diagnosis picture, behind each interlocking input the symbol of the signal status is displayed.
  - The worst signal status of all inputs is additionally displayed as text and transferred to the block output.
  - Display of balanced time for start delay, stop delay and start-up-warning.

- **C_MEASUR**
  - Button "G“ opens the group or route which is linked to GR_LINK1.
  - Display of signal source (measured value type) and the signal status

    TYP = 10 reading from input MV_PHYS (REAL Format)
    TYP = 20 reading from input PV (STRUKTUR Format)
    TYP = 77 reading from S7-Periphery

    The signal status is displayed as symbol and text
  - The signal status is also shown at the block output (symbol)
  - If the limit value supervision is disabled and/or the supervision delay time has not elapsed, the limit value supervision is suppressed.
    With a rising edge on "RELS" timer REL_DEL is started. After this time the limit value supervision gets activated.
    If RELS = "0" all existing limit violations are reset, outgoing messages are created.
  - Possibility of memorizing the limit violation until the acknowledgement of the alarm.
    With MTRIP = 1 the outgoing message will be created after acknowledgement only.
  - Via parameter REL_SUC, in case of a suction measurement the bar indication of the measure can be adapted in a way that the bar grows from top to the bottom.
  - For suction measurements the bar display can be adapted. The high value is still on top but the button will grow from top to bottom. An additional text is displayed as a reminder that this is a suction measurement.
  - Display of the balanced time for release supervision.

- **C_ANNUNC**
  - The textual status display was extended. In case of a fault the fault class is displayed.
  - Buton "O“ opens the object to which the block is connected (Interlock or CEMAT-Object).
  - Button "G“ opens the group or route which is linked to GR_LINK1.
  - New Function "Warning mode"
    In the warning mode (WMOD = 1) the block only creates warning messages.
  - New Function "Two-level-alarm" (first warning message then fault message).
    Via parameter WARN_DEL the delay between warning and fault (drive stop) can be configured.
  - If the signal supervision is disabled and/or the supervision delay time has not elapsed, the signal supervision is suppressed.
    With a rising edge on "RELS" timer REL_DEL is started. After this time the signal supervision gets activated.
    If RELS = "0" all existing faults are reset, outgoing messages are created.
  - Possibility of memorizing the faults until the acknowledgement of the alarm.
    With MTRIP = 1 the outgoing message will be created after acknowledgement only.
  - In the diagnosis picture behind the input the symbol of the signal status is displayed.
  - The signal status is displayed as text and as symbol at the block output.
  - Display of balanced time for supervision delay, delay for incoming faults, delay for outgoing faults, warning time and annunciation repeat time.

- **C_ANNU8**
  - The textual status display was extended. In case of a fault the fault class is displayed.
  - Button "O“ opens the object to which the block is connected (Interlock or CEMAT-Object).
  - Button "G“ opens the group or route which is linked to GR_LINK1.
  - Each of the 7 inputs can be configured as warning or fault message. In case of a fault the status indication of the symbol is red; in case of a warning the status indication is yellow. The summarizing indication in group and route and the status call function behave similarly (yellow indication). A warning is entered into the message system.

- **C_SELECT**
  - The interlocking conditions are already visible in the Standard Faceplate and even from there it is possible to open the previous object via button-click (previous Cemat object or interlock block).
  - Button "U" opens a user faceplate if connected.
  - In the diagnosis picture the signal status of the interlocking conditions is displayed. It is a combination of the signal status of the binary input and the signal status of the structure input. The color indication shows whether it is only a binary connection or if a structure input is used.
    Through click on the corresponding interface, the interlock block C_INTERL or C_INTER5 as well as the previous object of the structure input (e.g. Intlk02 or another Cemat block) is opened.
  - In the diagnosis picture, behind each interlocking input the symbol of the signal status is displayed.

- The worst signal status of all inputs is additionally displayed as text and transferred to the block output.

- **C_GROUP**
  - The interlocking conditions are already visible in the Standard Faceplate and even from there it is possible to open the previous object via button-click (previous Cemat object or interlock block).
  - Button "U" opens a user faceplate if connected.
  - Button "R“ marks all objects, related to the group in the process picture.
  - Via an additional button in the group faceplate the group start and stop can be interrupted.
  - Summarizing warning in the group display if a warning exists for C_ANNUNC, C_ANNU8 or C_MEASUR.
  - Through a system setting the group start will be interrupted in case of a warning (default setting) of not interrupted.
  - The dynamic fault is indicated in the group symbol even if the group is not started.
  - In the diagnosis picture the signal status of the interlocking conditions is displayed. It is a combination of the signal status of the binary input and the signal status of the structure input. The color indication shows whether it is only a binary connection or if a structure input is used.
    Through click on the corresponding interface, the interlock block C_INTERL or C_INTER5 as well as the previous object of the structure input (e.g. Intlk02 or another Cemat block) is opened.
  - In the diagnosis picture, behind each interlocking input the symbol of the signal status is displayed.
  - The worst signal status of all inputs is additionally displayed as text and transferred to the block output.
  - Display of balanced time for start-up-warning horn, waiting time and release time.

- **C_ROUTE**
  - The interlocking conditions are already visible in the Standard Faceplate and even from there it is possible to open the previous object via button-click (previous Cemat object or interlock block).
  - Button "G“ opens the group which is linked to GR_LINK1.
  - Button "U" opens a user faceplate if connected.
  - Button "R“ marks all objects, related to the route in the process picture.
  - Summarizing warning in the route display if a warning exists for C_ANNUNC, C_ANNU8 or C_MEASUR.
  - In the diagnosis picture the signal status of the interlocking conditions is displayed. It is a combination of the signal status of the binary input and the signal status of the structure input. The color indication shows whether it is only a binary connection or if a structure input is used.
    Through click on the corresponding interface, the interlock block C_INTERL or C_INTER5 as well as the previous object of the structure input (e.g. Intlk02 or another Cemat block) is opened.

- In the diagnosis picture, behind each interlocking input the symbol of the signal status is displayed.
- The worst signal status of all inputs is additionally displayed as text and transferred to the block output.

- **C_SILOP**
  - Only display adaptations

- **C_COUNT**
  - Only display adaptations

- **C_RUNNT**
  - Only display adaptations

- **CTRL_PID, C_PID3**
  - Only display adaptations

- **C_ANASEL (new block)**
  - New

- **C_RelMod (new block)**
  - New

- **C_@PCS7Typicals_CemV7_1280.pdl und C_@PCS7Typicals_CemV7_1680_1920.pdl**
  - The template pictures have been adapted for the different screen resolutions and extended by the function "Mark related object".

Project standards:

The functional extensions described above have been carried out for all project versions except 027 Lafarge. Also the subroutines for group status call and object list (GALA-WALA Function) are equal for all project versions.

Nevertheless, for each project version an S7 library PRO_CEM with adapted blocks exists. But the number of different blocks has decreased.

- **PS 004 HOLCIM**

  AS:

  The following blocks contain project specific adaptations:

  C_DRV_1D
  C_DRV_2D
  C_DAMPER
  C_VALVE
  C_PROFB (Process Feedback Block, additional block)
  C_ROUTE
  C_GROUP
  C_SILOP Dummy-block, not used in Holcim plants)
  C_TIS_B (Bool Variable for Holcim TIS, additional block)
  C_TIS_N (Integer Variable for Holcim TIS, additional block)
  C_TIS_S (String Variable for Holcim TIS, additional block)

  The functions of C_ANNUNC, C_MEASUR, C_ANNUN8 and C_ADAPT have been built-in into the normal standard and the special blocks in the PRO_CEM have therefore been removed.

  Important: In the system chart at block C_FB_PLC via parameter REL_WSTP the behavior of the group start in case of a warning must be configured..
  If REL_WSTP = 1-Signal (default) the group start is interrupted in case of a warning. In Holcim Projects parameter REL_WSTP must therefore be changed to 0-Signal.

  OS:

C_@PCS7Typicals_CemV7_Holcim.PDL	Block icons and bitmaps have been adapted to the new functions.

  No project specific faceplates for C_ANNUNC and C_MEASUR any more. The display adaptations are derived from the project code.

- **PS 006 DYCKERHOFF**

  AS:

  The following blocks contain project specific adaptations:

  C_DRV_1D
  C_DRV_2D
  C_DAMPER
  C_VALVE
  C_ROUTE
  C_GROUP

  OS:

C_@PCS7Typicals_CemV7_1680_1920.PDL	Dyckerhoff Symbols adapted to new functions

- **PS 007 HZ**

  AS:

  The following blocks contain project specific adaptations:

  C_DRV_1D
  C_DRV_2D
  C_DAMPER
  C_VALVE

  OS:

  C_@PCS7Typicals_CemV7_1680_1920.PDL HZ Symbols adapted to new functions

- **PS 023 Vigier**

  AS:

  The following blocks contain project specific adaptations:

  C_DRV_1D
  C_DRV_2D
  C_DAMPER
  C_VALVE

  The functions of C_GROUP have been built-in into the normal standard and the special blocks in the PRO_CEM have therefore been removed.

  OS:

- **PS 024 Bushehr**

  AS:

  The following blocks contain project specific adaptations:

  C_DRV_1D
  C_DRV_2D
  C_DAMPER
  C_VALVE

  OS:

- **PS 025 Caima**

  AS:

  The following blocks contain project specific adaptations:

  C_DRV_1D
  C_DRV_2D
  C_DAMPER
  C_VALVE

  OS:

- **PS 026 Alsen**

  AS:

  The following blocks contain project specific adaptations:

  C_DRV_1D
  C_DRV_2D
  C_DAMPER
  C_VALVE
  C_VAL_2D (Two-direction valve, additional block)
  C_GROUP

  OS:

  C_@PCS7Typicals_CemV7_1680_1920.PDL Alsen Symbols adapted to new functions

- **PS 027 Lafarge**

  AS:

  The following blocks contain project specific adaptations:

  C_M2B
  C_DAB
  C_DABMAB
  C_AAB
  C_BPB
  C_DIB
  C_AIB
  C_SSB
  C_SSDB

  In the Lafarge blocks only the group links have been changed to structures. Everything else remains unchanged.

  OS:

  - The standard faceplates have been adapted to the Look & Feel of the APL, including the new Alarm and Curve controls.
  - @AreaButtons.pdl has been adapted for the Overview Range with two lines.

- **PS 028 Rossi**

  AS:

  The following blocks contain project specific adaptations:

  C_DRV_1D
  C_DRV_2D

  OS:

CEMAT V7.1 SP1

General Modifications for all Project Standards:

- **Process picture and Module symbols:**
  - Resolution dependent Cemat picture extended
    - @C_AlarmListing
    - @AlarmEmergencyOp_CEMAT
    - @AlarmEmergency_CEMAT
    - @TopAlarmNew_CEMAT
    - @Overview1_CEMAT
    - @AlarmOneLine_CEMAT
  - Standard monitor resolution 16:9 - with 1920 X 1080 Pixel. The picture names are partly modified and @C_AlarmListing_1920x1080 is new.
    Also the WEB- description is updated.
  - New template picture C_@PCS7Typicals_CemV7.pdl for all monitor resolutions. C_@PCS7Typicals_CemV7_1280.pdl and C_@PCS7Typicals_CemV7_1680_1920.pdl will be not installed anymore.

- **Faceplate- Functions:**
  - A Print-Button is included in **OVERVIEW.pdl's**. With this button the actual Faceplate will be sending to a standard printer and printed out in Landscape orientation.
  - **@C_ObjBrowser.pdl**: The OCX has got also a Print-Button to print out all objects with Simulation status.
  - **C_INFO** has a Print- Button, which called up at first the template C_INFO_PRINT.pdl. From this picture it is possible to start the print out to the Standard printer.
  - **Property Faceplates**: the presetting of Processcontrolling_backup and HigherProcesscontrolling_backup is now the same as the presetting of the Symbols .
  - **@C_PlantSelection.pdl, @C_Alarmlisting.pdl**
    The Area Buttons are in the same sequence as in the overview area.
  - **'@PG_Intlk0x_Sandard.pdl, C_XXX_Overview.pdl**
    the font size of the Origin- TAG is shown a little bit smaller as before.(to fit in)
  - **@AlarmOneLine*.pdl**
    The user right of button "Acknowledge" and "alarm logging" is changed from 2 (authorization for area) to 5 (process controlling).

- **Button11.pdl**
  to be synchronizes the color change of more then one monitor the function is running now on the event of C_VIEW_TAG_A / C_VIEW_TAG_D.
  The user right of button "Acknowledge" and "alarm logging" is changed from 2 (authorization for area) to 5 (process controlling).

- **Functions**
  - Special treatment of block type CTRL_PID
    From CTRL_PID the CEMAT Type C_CTRL_PID will be created, otherwise the PCS7 Standard faceplate of Controller goes open and not the CEMAT Faceplate.
  - Up to now the new function C_LoopInAlarm.fct will be used, to call up the LoopInAlarm and Info. That means, there is no reason to overwrite the PCS7 function in the system directory anymore.
  - C_OpenMsgSystem.fct If the user don't have the right 5, automatically the Long-term archive list will be opened. The actual Alarm list is locked.
  - C_ChangeArchive.fct, C_DefaultArchive.fct, C_OpenMsgSystem.fct, cmsg_SetMsgList.fct
    The CEMAT Alarm system can be opened with user right 2. If no user right 5 is available, the alarms can not be acknowledge.
  - C_GetAreaPermissionOnLevel.fct read the user right for each area.

- **System settings / view :**
  - request where CEMAT is running with SFC6 = RD_SINFO.. Is CEMAT is running in OB35=100ms or in OB34=200ms-Takt, the flickering flags LBL, SBL, FBL will be not created from Hardware cycle in MB0..

- **Elimination of errors on drives, damper, valves for all Project Standards:**
  - Reset Maintenance Fault if there is no fault. After a dynamic fault, the hour counter has always further counted.
  - Setpoint Output W_ACT_O (Damper)
    If in Positioning mode of the Damper a fault appears the Setpoint Output W_ACT_O was wrong. A random value was shown.
  - New arrow symbols for tip buttons in the DAMPER Standard Faceplate.

- **New modules:**
  - '@PG_C_POLY3 Polygon with 3 Output Values
  - @PG_C_STO_MA Storage module for Multi chamber silos
  - @PG_C_STORAGE Storage module
  - @PG_C_PARAM Parameter Values (only with APF, as AddOn)
  - '@C_INFO_PRINT.pdl There is a new Print button in C_INFO which calls the preliminary information Dialog C_INFO_PRINT..

- **General:**
  - FC_GRUZU_WEGZU
    If a group had several routes and an object was part of more routes, then the object was listed only in the first routes. The group and the remaining routes have not listed the disturbed objects.
  - The new screen resolutions can process with CematProjectUpdate.exe and CematHotfixUpdate.exe.
  - The C_ADAPT can now pass warnings and alarms to the group . The status display was enlarged and CematObjectList.ocx enlarged.
  - @CSIGQUIT.pdl, @HornQuit.pdl
    The two acknowledge buttons have no more CEMAT expression. The originals of PCS7 are not overwritten by CEMAT.

Expansions/ Changes Project standard 000

AS:

- **C_MEASURE**
  - user right for Simulation as module interface **SimRight**
    Is the value "0", no simulation can be started

  - New Interface GR_STP
    is GR_STP = “1“ and a fault is still there, the Symbol will shown then in Violet.
    (only used with PS 004)
  - The function MTRIP was modified to also store the fault if RELS = "0".
  - With a PT100 a negative CARD_SCB can be adjusted . In this case FFFFH is a normal value and not QBAD. It is checked now whether CARD_SCB is negative. In this case the code FFFFH is not evaluated..
  - With an invalid initial value (type 10 or 20) NaN (not a number) the value was just transferred to the Output..
    MV_PERC was more then 100 %. Now the Output value will be set to SCE and the Quality will be 0 = bad quality = live zero.
  - the Release- time was not shown.

- **C_ANNUNC**
  - user right for Simulation as module interface **SimRight**
    Is the value "0", no simulation can be started.
    Attention, at an update must be checked that the simulation rights were changed in the OS symbol. (See update description.)

- **C_ANNUN8**
  - user right for Simulation as module interface **SimRight**
    Is the value "0", no simulation can be started.
    Attention, at an update must be checked that the simulation rights were changed in the OS symbol. (See update description.)

- **C_ANASEL**
  - OutStat_STATUS was supplemented with the bit of collective warning. Drives can now shown that the assigned measurements are disturbed.

OS:

- **C_MEASUR**
  - In the PS 004 the bar colour for a "good" measurement is always brown.
  - The using right to simulation comes now from the AS and is no longer firmly predefined. Through this it is possible to switch the simulation release off (SimRight = "0") or process conditional rights to provide. The right is reported in the DIAG.
  - The texts at simulation were adapted for the PS004. (general simulation/Override, without flash.)
  - Color adapted to the simulation advertisement..
    With right click on a measurement symbol the archive curve of the measurement opens directly. It is adapted to the PDL resolution 1280 x 1024

- **C_ANNUNC**
  - The using right to simulation comes now from the AS and is no longer firmly predefined. Through this it is possible to switch the simulation release off (SimRight = "0") or process conditional rights to provide. The right is reported in the DIAG..
  - The texts at simulation were adapted for the PS004. (general simulation/Override, without flash.)
  - By moving the simulation advertisement on Y= 146 the comment is not concealed any more.

- **C_ANNUN8**
  - The using right to simulation comes now from the AS and is no longer firmly predefined. Through this it is possible to switch the simulation release off (SimRight = "0") or process conditional rights to provide. The right is reported in the DIAG.
  - The texts at simulation were adapted for the PS004. (general simulation/Override, without flash.)
  - By moving the simulation advertisement on Y= 146 the comment is not concealed any more.

Project Standards:

The function expansions described above where done in all Project Standards. (without 027 Lafarge)

Of course a S7 library PRO_CEM exists for every project standard furthermore in which less modules are different now.

- **PS 004 HOLCIM**

  AS:

  The following modules contain project-standard-specific customizations:

C_PROFB	User right for simulation as a module parameter **SimRight** Presetting "24" like till now in the OS symbol. If the value is "0" no simulation can be done. **Attention**, at an update must be checked that the simulation rights were changed in the OS symbol. (See update description.) Alarms and displays of the C_PROFB do not go together: If in Automatic mode the Group is stopped , the drive is in stop and the Process Feedback Signal will be “1” (somebody has bypassed the signal) then after the “off delay time“ is over the displayed symbol changed to violet and an Alarm is created. -> no Alarm should generated. If in Single mode the drive is in stop and the Process Feedback Signal will be “1” (somebody has bypassed the signal) then after the “off delay time“ is over the displayed symbol changed to violet and an Alarm is created. -> no Alarm should generated. If in Local mode the drive is in stop and the Process Feedback Signal will be “1” (somebody has bypassed the signal) the “off delay time“ will not run and there is no change of displayed symbol to violet and no Alarm is created. -> that there is no Alarm is ok, but the displayed symbol has to changed to violet.
C_GROUP	- to show the “Group not empty” indication, all SST Signals of the relevant Object must be connected to the new Interface FLT_MAT. - Module Output “Standby Mode” - If GQSP has steady signal, now only a pulse is given to the Output GQS. (GQS is used for changing the drives back on automatic system).
C_SIMOS	- new functions and interlocks if the SIMOCOD Adapter is used.

The modifications of C_ANNUNC, C_MEASUR, C_ANNUN8 and C_ADAPT are done in the Normal Standard (000). These modules could therefore be removed from the PRO_CEM.

OS:

C_PROFB	The using right to simulation comes now from the AS and is no longer firmly predefined. Through this it is possible to switch the simulation release off (SimRight = "0") or process conditional rights to provide. The right is reported in the DIAG The texts at simulation were adapted for the PS004. (general simulation/Override, without flash.)
C_SIMOS	- new functions and interlocks if the SIMOCOD Adapter is used.

- New Symbols for C_MEASUR in C_@PCS7Typicals_CemV7_Holcim.PDL

- **PS 006 DYCKERHOFF**

  AS:

  The following modules contain project-specific customizations:

  C_ROUTE:
  If the startup interlock signal disappeared in that time where the Route is completely running and then the Route was stopped, the Interlock was not shown.

  OS:

  C_ROUTE:
  The buttons SELECT and DESELECT have not created any operation report.

- **PS 007 HZ**

  AS:

  The following modules contain project-specific customizations:

  C_DRV_2D
  in non interlocked sporadic mode with running drive (EKS =1) EVSP = 1 was shown , even EVSZ = 0. Now with EVSZ = 0 is EVSP = 0, even EKS = 1.

  OS:

  C_DRV_1D, C_DRV_2D, C_DAMPER,C_VALVE
  now the start key is getting inactive into the Faceplates at missing process interlocks.

- **PS 023 Vigier**

  AS:

  Only general changes in all standards.(see page 50):

  OS:

  Only general changes in all standards.(see page 50)

- **PS 024 Bushehr**

  AS:

  Only general changes in all standards.(see page 50):

  OS:

  Only general changes in all standards.(see page 50)

- **PS 025 Caima**

  AS:

  Only general changes in all standards.(see page 50):

  OS:

  Only general changes in all standards.(see page 50)

- **PS 026 Alsen**

  AS:

  AS:

  Only general changes in all standards.(see page 50):

  OS:

  Only general changes in all standards.(see page 50)

- **PS 027 Lafarge**

  AS:

  Keine Änderungen:

  OS:

  Keine Änderungen:

- **PS 028 Rossi**

  AS:

  Only general changes in all standards.(see page 50):

  OS:

  Only general changes in all standards.(see page 50)

CEMAT V8.0

General Modifications for Project Standards 000, 004, 006, 007, 023, 024, 025, 026, 027, 028 :

- **Process pictures and block icons:**
  - @C_MaintenaceBrowser.pdl, @C_MAINT.pdl, @PG_C_MAINT.pdl, C_GetSetUA.fct, CematGetSelectedTags.ocx
    The synchronization of maintenance data between AS and OS is now possible.
    (in case the User Archive was changed).
  - @C_SetTrendCurves.pdl,@C_CurveGroup.pdl,C_@PCS7Typicals_CemV7.pdl
    C_GetArchiveName.fct, C_CURVE.uap, C_CURVE.csv
    new function “Quick Trend”: with right mouse click on the unit of a measured value, the new Quick Trend dialog will be shown. (see System description).
  - @PG_C_ALARM.pdl
    Filtering is now possible for both versions of PCS7: V7+SP1 and V8.
  - @PG_C_CTRL_PID_PARAMETER.pdl, @PG_C_PID3_PARAMETER.pdl
    The checkboxes in the faceplate are now compatible to PCS7 V8.
  - @Overview1.PDL
    Level texts adapted to PCS7 V8.
  - @PG_C_INFOWEB.pdl, @PG_C_HELP.pdl
    Dialog and functions are now compatible with PCS7 V8 and V7.1 SP3
  - C_ANNUNC
    If annunciation release MMFR = 0 and warning mode WMOD = 1 the block icon is red instead of yellow. After a rising edge of MAMV during a warning, no dynamic warning and no alarm was created. If annunciation release MMFR = 0 or MAMV = 0 and warning mode (WMOD = 1) the status of output signal (MAU) and the status of the warning signal WARN was not always correct.
  - @PG_C_ANNUNC_DIAG.pdl, @PG_C_ANNUNC_STANDARD.pdl
    text in French and Spanish was changed

- **Faceplate-functions:**
  - pcs7_openinputboxanalog_v6_CEMAT.fct
    In @pcs7_bedanalog.pdl the inching mode buttons -/+1 and -/+5 are now working proper..
  - cmsg_GetTagFilter.fct
    Filter Selection in Cemat annunciation system: Filtering now possible for both versions of PCS7 V7+SP1 and PCS7 V8.

- **System programs**
  - CEMATRS.exe, CematRSCl.dll
    CEMATRS is now compatible with PCS7 V8.

- **General:**
  - New Cemat check tool "CEMAT CHECK TOOL.XLS".
    Replaces the already existing tool C_CHECK_G_LINK.XLS. Additional check functions..
  - C_INFO_V71.xls
    If the inputs of a drive are separated onto different DP addresses, then all IOs are listed now in the TXT file of the drive.
  - The following documents had to be changed because of the new Cemat check tool:
    05_Projektierungsbeispiele_007.pdf
    05_Projektierungsbeispiele_009.pdf
    06_AS_Projektierung_007.pdf
    06_AS_Projektierung_009.pdf
    10_Checkliste_007.pdf
    10_Checkliste_009.pdf
    15_Update_Informationen_007.pdf
    15_Update_Informationen_009.pdf
    06_AS_Projektierung_009.pdf (Holcim)
    10_Checkliste_009.pdf (Holcim)
    06_AS_Projektierung_009.pdf (Lafarge)
    15_Update_Informationen_009.pdf (Lafarge) .

Additional expansions/ changes for CEMAT Standard 000
AS: none
OS: none

Additional expansions/ changes for the Project Standards:

Of course a S7 library PRO_CEM exists for every Project Standard – now containing less modules (as various functions of the Project Standards have been made available globally within V8).

No *additional* changes in AS- and OS had to be made within the following Project Standards:

- **PS 006 DYCKERHOFF**
- **PS 007 HZ**
- **PS 023 Vigier**
- **PS 024 Bushehr**
- **PS 025 Caima**
- **PS 026 Alsen**
- **PS 027 Lafarge**
- **PS 028 Rossi**

A*dditional* changes in AS- and OS had to be made within the Project Standard

- **PS 004 HOLCIM**

  AS:

  - C_SIMOS is now as HOLCIM type available

  OS:

  @PG_C_DRV_1D_DIAG.pdl, @PG_C_DRV_2D_DIAG.pdl, @PG_C_DAMPER_DIAG.pdl, @PG_C_VALVE_DIAG.pdl, @PG_C_MAINT.pdl
  French text was changed in the pdl's.

  - C_SIMOS is now as HOCIM type available

  @PG_C_DRV_1D.STANDARD.pdl, @PG_C_DRV_2D.STANDARD.pdl, @PG_C_DAMPER.STANDARD.pdl, @PG_C_VALVE.STANDARD.pdl

  Wrong permission at button btSingle: permission was changed from level 5 to level 24.

- **PS 001 CEMAT Minerals**

With Cemat V8.0 a new Project Standard is released: **001 = CEMAT Minerals.**
This Project Standard comprises the requirements of Cement and Mining Industry.

A migration from an other Project Standard to Project Standard 001 is not possible as the interfaces differ.

The main characteristics of the new standard are:

- naming entirely in English
- OS functions and Look & feel like PCS7 - APL
- Mode change is possible groupwise as well as individually module per module (depending on the setting of feature- and OS-Permission bits).
- - Additional types of „Manual Mode“ are available:
  - not interlocked
  - only certain interlocks are required.
  - only the protection interlocks are necessary
- Various types of local switches can be selected by Feature bit setting.
- New Mode: “Out of Service”
- New process interlock type „essential“ for start and operation (also valid in local mode)
- New block to receive and control the process feedbacks
- The annunciation blocks, measurements and process feedbacks can directly be linked with a drive (instead with the group).
- Groups may have objects in more than one PLC
- Group interlocks can be bypassed.
- Detection of „Group has not been emptied“(i.e. of belts)
- Contactor feedback monitoring also for dampers and valves.
- Switch of devices and group (after operator release) by the power management
- Automatic calibration for dampers
- Simulation of a position switch at a valve.
- “Emergency-Off” available at faceplates.
- External command interface (i.e. for communication to a panel).
- Cemat Object browser to show objects with simulation, manual mode, local mode, PM released, memo info’s, emergency-off or bypass.
- New block icons, i.e. displaying the full set of status information

for details pls. refer to the Cemat manuals „System“ or „Objects”

2.2 Migration

Upgrade instructions from CEMAT V5.02 / V5.03 to CEMAT V8.0 on enquiry.

2.3 Further Information

Detailed installation instructions you will find in the Engineering manual (path D:\CEMAT_CS\docu or on the DVD).

You can find detailed change information for the AS modules on the DVD in the directory “Additional_Information/Modificationlist”

In Directory **cd:\example** you can find an example project. The Project contains 3 AS where the PLC-PLC-Communication is already prepared. PLC1 contains furthermore a small engineering example with CEMAT Objects, CFCs and a process picture. (Two transport groups, one example for an uninterrupted route change-over and an example for a PID controller).

- CEM_mp.zip contains a PCS7-Project with 3 AS, one engineering station, one server, one standby- server and two multiclients.

Multimediaserver:

The multimedia files can be kept in the project network now on any PC. Fill in C_Config.cfg the name under [multimedia server].

There are the following options:

- empty - -> Reading files locally (how till now - downward compatible)
- Servername e.g. CLIENT62 -> The files are read from the CLIENT62
- @RM_SERVER_NAME -> Files are read from the current server

Projekt Update:

A new application "CematProjectUpdate.exe" is available to carry out an update on existing OS-projects.
You can find these in the directory CEMAT_CS.
A description is available under "CEMAT_CS/DOCU/update".

In the directory cd:\Hotfixe_Tools\Clear_WinCC you can find a tool to terminate the WinCC application.