



# SMARTElectrode 14.0.2.0

*What's New*



# Enhancement

## What

- Edit properties of multiple objects in user interface
- <https://redmine.buw-soft.de/issues/12842>



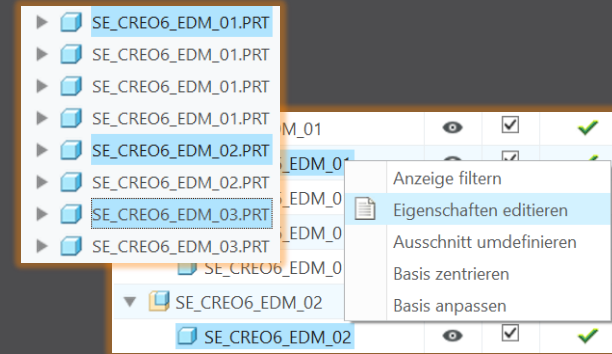
Eigenschaften

## Why

- Helpful if especially technology settings have to be updated

## How

- Access Properties UI with several selected objects from modeltree or Burnsheat UI.
- Only parameters available in all objects are are.
- Parameters with different values will be displayed as **<Status quo>**.
- Edited values will be updated for all selected objects.
- Make sure to select all relevant objects before editing.



|  |              |              |               |
|--|--------------|--------------|---------------|
|  | PRIORITAET   | <Status quo> | Very low wear |
|  | BRENNFLAECH  | <Status quo> | <Status quo>  |
|  | ANZAHL       | 3            | 3             |
|  | ▼            | <Status quo> | 0.5           |
|  | ANZ_UNTERMAS | 2            | -             |

# Enhancement

## What

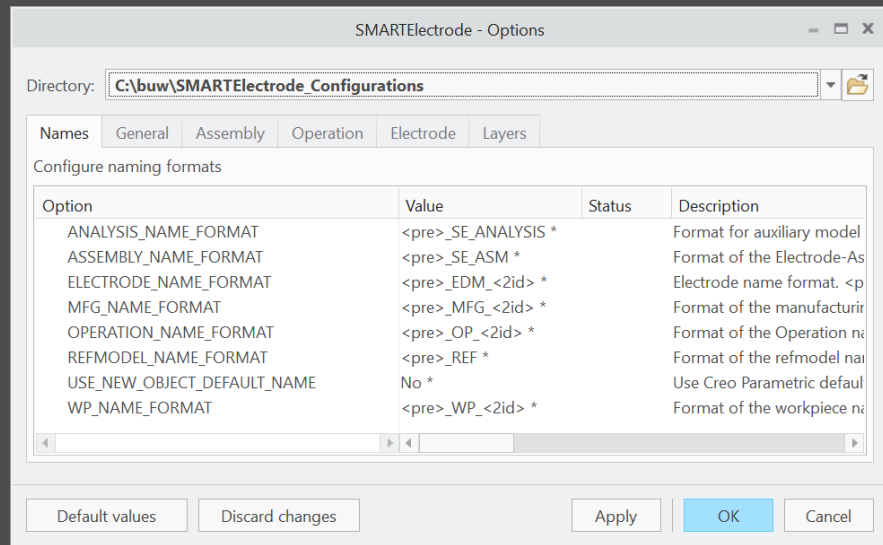
- Overhauled Options UI
- <https://redmine.buw-soft.de/issues/12059>

## Why

- Appearance adjusted to PTC options look & feel

## How

- Only changed values are saved
- Option file includes option value descriptions
- Easier discard and reset to defaults



# Improvement

## What

- Base UI - allow overwriting of calculated values.
- <https://redmine.buw-soft.de/issues/12517>

## Why

- Until now base dimensions calculated by SMARTElectrode have been disabled
- In some cases, users still need access to values after SMARTElectrode initially calculated them

## How

All base dimensions are now accessible after SE placed the base group


### 1. Blank unlocked

Keep absolute Z position of blank length. Change of D2 changes LENGTH accordingly to keep position. Change of Z position changes LENGTH accordingly to keep position. Change of LENGTH changes D3 (top offset) accordingly.

### 2. Blank locked

Blank (A\_BASE, B\_BASE, LENGTH and D2) are disabled and can't be changed. Changes to D1, D3 or Z position change the other two dependent values accordingly

**Blank**


LOCKED 

TYPE: RECTANGULAR\_BASE

SIZE: D2\_VARIABEL

|        |        |    |        |
|--------|--------|----|--------|
| A_BASE | 15.000 | D1 | 5.150  |
| B_BASE | 15.000 | D2 | 42.000 |
| LENGTH | 50.000 | D3 | 0.000  |

**Blank**

LOCKED 

TYPE: RECTANGULAR\_BASE

SIZE: LAENGE\_VARIABEL

|        |        |    |        |
|--------|--------|----|--------|
| A_BASE | 15.000 | D1 | 5.150  |
| B_BASE | 15.000 | D2 | 20.000 |
| LENGTH | 28.000 | D3 | 0.000  |

# Enhancement

## What

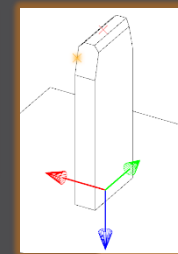
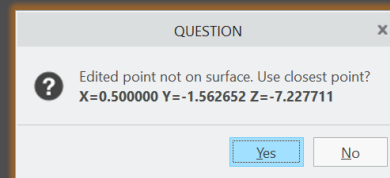
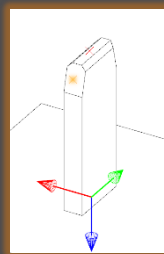
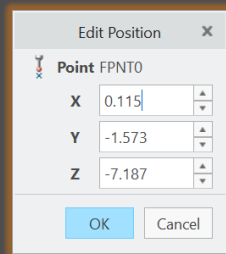
- Edit CMM points in user interface
- <https://redmine.buw-soft.de/issues/12392>

## Why

- Move measuring points to even value

## How

- Open “CMM points”
- Select point to edit in table
- Start edit on double-click or press “Edit”
- Point will be automatically moved to new position or reachable coordinates are suggested if point is out of bounds
- Original coordinates are restored on cancel



# Enhancement

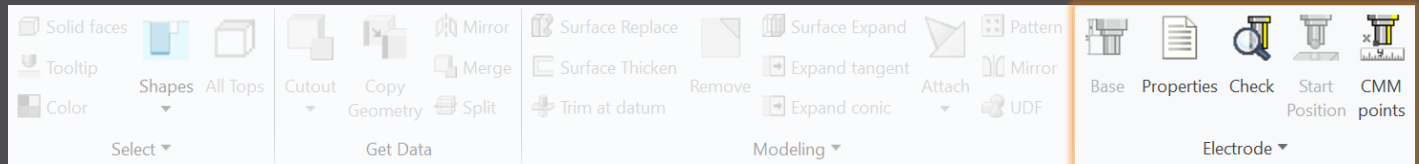
## What

- Allow CMM points in workpiece models
- <https://redmine.buw-soft.de/issues/12327>

## Why

- Enable definition and output of measuring points for CMM in workpieces

## How

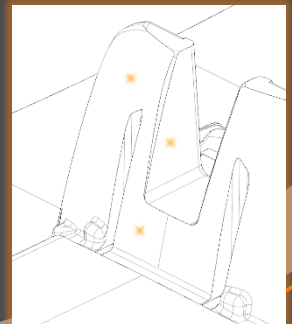


Workflow and functionality is the same as for electrodes

- Activate component
- Open “CMM points”
- “Add” measuring points on pick position till loop is cancelled with MMB
- Confirm or discard points

The screenshot shows a dialog box titled 'Measuring Points' with a table of data. The table has columns for ID, X, Y, Z, I, J, and K. The data is as follows:

| ID | X     | Y    | Z     | I    | J    | K    |
|----|-------|------|-------|------|------|------|
| 1  | 26.17 | 5.98 | 2.57  | 0.81 | 0.26 | 0.95 |
| 2  | 29.11 | 2.26 | 83.16 | 0.97 | 0.99 | 0.74 |
| 3  | 26.32 | 2.11 | 5.24  | 0.80 | 1.00 | 0.85 |



# Improvement

## What

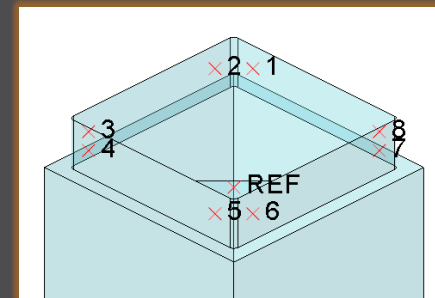
- Measuring points can be added to template.
- <https://redmine.buw-soft.de/issues/11335>

## Why

- For easier measuring of preset

## How

- Each point feature has to carry a parameter "SE\_QMM\_POINTS" for identification.
- Use field points or general datum points.
- General datum point features may include multiple points.
- General datum points can't be edited in UI and are highlighted with a yellow background.
- **Note:** deletion of point in UI always deletes the whole feature.
- Use command "Save custom base" to update templates.



| Name          | Type    | Value |
|---------------|---------|-------|
| SE_QMM_POINTS | Integer | 1     |

Measuring Points

+ Add Edit X Delete Save

| ID | X    | Y     | Z    | I     | J    | K     |
|----|------|-------|------|-------|------|-------|
| 1  | 5.00 | 6.50  | 1.50 | -0.00 | 1.00 | -0.00 |
| 2  | 6.50 | 5.00  | 1.50 | 1.00  | 0.00 | 0.00  |
| 3  | 6.50 | -5.00 | 1.50 | 1.00  | 0.00 | 0.00  |
| 4  | 5.00 | 6.50  | 1.50 | 0.00  | 1.00 | 0.00  |

# Improvement

## What

- Export additional information for quality measuring to Z&K Alphamoduli.
- <https://redmine.buw-soft.de/issues/12839>

## Why

- Enables an easier setup of CMM.

## How

| Name                  | Type     | Description                                   | Parameter Rule     |
|-----------------------|----------|---|--------------------|
| TolMin                | Float    | Allowed lower tolerance for quality measuring | &qm_tol_min        |
| TolMax                | Float    | Allowed upper tolerance for quality measuring | &qm_tol_max        |
| PresetStylus          | Char(32) | Stylus name for preset                        | &qm_preset_stylus  |
| PresetTip             | Char(32) | Tip name for preset                           | &qm_preset_tip     |
| PresetPrehitDistance  | Float    | Prehit distance during preset                 | &qm_preset_prehit  |
| PresetRetractDistance | Float    | Retract distance during preset                | &qm_preset_retract |
| QMStylus              | Char(32) | Stylus name for measuring                     | &qm_stylus         |
| QMTip                 | Char(32) | Tip name for measuring                        | &qm_tip            |
| QMPrehitDistance      | Float    | Prehit distance during measuring              | &qm_prehit         |
| QMRetractDistance     | Float    | Retract distance during measuring             | &qm_retract        |



# Improvement

## What

- Introduced workpiece naming format for Z&K Alphamoduli.
- <https://redmine.buw-soft.de/issues/12324>

## Why

- Valid Creo name length of 31 characters may not available depending on EDM setup.
- Allow generation of short workpiece names.

## How

- Use option SE\_CORE\_NAME\_FORMAT to define a format for short names.
- CAD model name is used if options is undefined or empty.
- Any workpiece parameter from configuration can be used in format.
- Example setting in export.cfg:

```
! naming format for workpiece models in XML file  
SE_CORE_NAME_FORMAT WP_<ID>
```

- Result in XML:

```
<LogWrk>  
  <Name>WP_1</Name>  
  <CadModel>.\WORKPIECE\JS748100_AS.STP</CadModel>  
  <Remark>JS748100_AS</Remark>  
</LogWrk>
```

# Improvement

## What

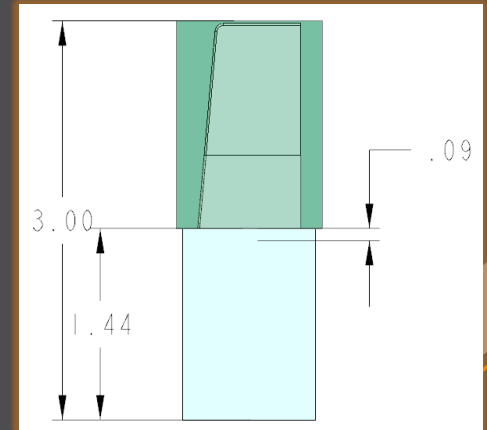
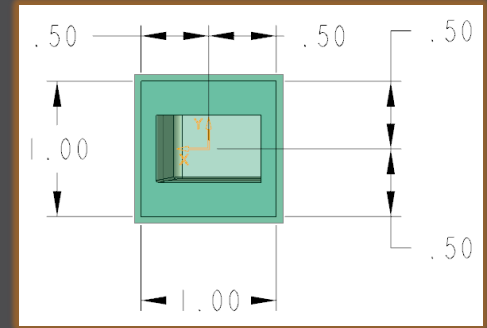
- Automatic creation of dimensions on manufacturing drawing.
- <https://redmine.buw-soft.de/issues/12475>

## Why

- Create a more complete NC drawing.

## How

- Automatically add dimensions on NC drawing sheet similar how it works for electrode part drawings.
- Dimensions are created when drawing is copied from template.
- Edit configuration file `my_drawing_format.cfg` to add dimensions in list.
- Use MFG template name in 1<sup>st</sup> column.
- Refer to <https://www.buw-soft.de/en/news/add-workiece-dimensions-automatically/> for more information.



# Improvement

## What

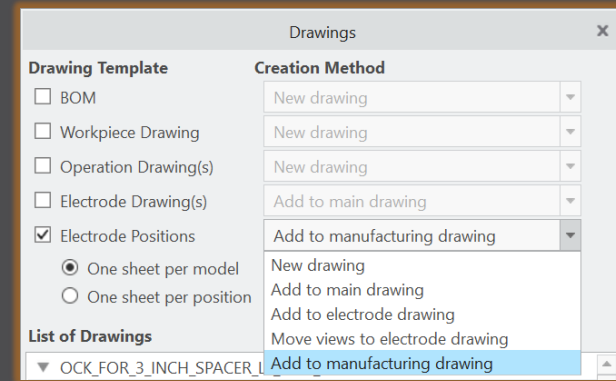
- Drawing UI: new option to add positioning sheet to NC drawing sheet.  
<https://redmine.buw-soft.de/issues/11270>

## Why

- Add electrode position sheet to existing NC drawing sheet similar how it works for electrode part drawings.

## How

- Info: NC drawing sheet can be part of manufacturing template which is assigned in Manufacturing UI and copied during creation of new manufacturing assembly.
- Set option  
`MERGE_EDM_POSITION_SHEETS = 5`  
to enable this behavior.



# Fixed error

## Description

- Different behavior for interference check in Creo 4 vs. 6, 7, 8 in active component mode.

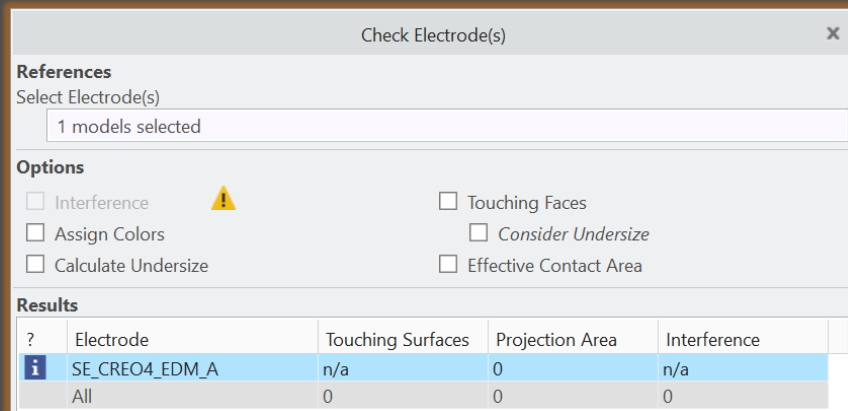
- <https://redmine.buw-soft.de/issues/12837>

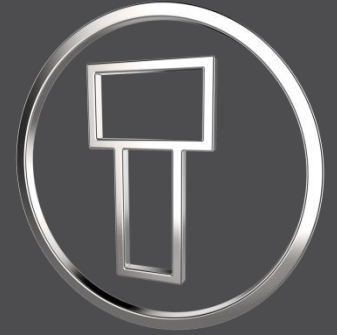
## Cause

- Current releases of Creo Parametric 6, 7 and 8 **don't** support computation of interferences in active component mode.
- Behavior should be fixed in Creo 7.0.8.0, Creo 8.0.4.0 and Creo 9.0.0.0.
- Error won't be fixed in Creo 6.0.

## Solution

- Interference check will be disabled in active component mode in affected Creo Parametric versions till fix is available.





# SMARTElectrode 14.0.1.0

*What's New*



# Enhancement

## What

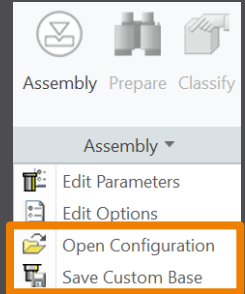
- Added new command to “Save Custom Base” to save userdefined feature (UDF) and data file for electrode blank.
- <https://redmine.buw-soft.de/issues/12001>

## Why

- New command simplifies creation of customized base and saves a valid data file for it.

## How

- Use command "Open Configuration" to browse to "electrode\*<supplier>*\base\_templates“ and select part to customize.
- Incorporate changes.
- Select "Save Base Template" to create UDF and data file.
- Customize data file.
- Copy UDF and DAT to supplier directory to activate template
- **NOTE:** All variable dimensions to be controlled in data file require a custom symbol name.
- **NOTE:** Open “Getting-Started” document for more information.



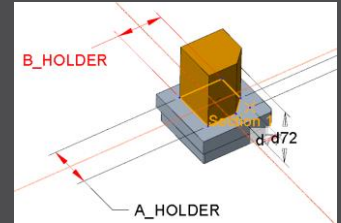
# Enhancement

## What

- Allow additional variable dimensions and parameters in blank data file (\*.dat)
- <https://redmine.buw-soft.de/issues/9953>

## Why

- Customer specific templates sometimes need to control additional dimensions or parameters – for example if holder or order number are part of electrode blank



## How

- To use additional parameters with data file an additional line “VALUETYPE” has to be added between “INSTANCE” and blank sizes.

| INSTANCE  | A_BASE | B_BASE | FRAME_WIDTH | FRAME_HEIGHT | A_HOLDER | B_HOLDER | PARAMINT | PARAMSTRING | PARAMDOUBLE |
|-----------|--------|--------|-------------|--------------|----------|----------|----------|-------------|-------------|
| VALUETYPE | DIM    | DIM    | DIM         | DIM          | DIM      | DIM      | INTEGER  | STRING      | DOUBLE      |
| E-15-15   | 15     | 15     | 1           | 3.2          | 15       | 15       | 1515     | E-15-15     | 15.15       |

- Available types:
  - DIM → Creo dimensions like A\_BASE, B\_BASE, LENGTH, base height D2 and additional dimensions
  - INTERN → internal values used for calculation and advanced settings like D1, D3, MATERIAL, MFG\_TEMPLATE, HOLDER, ...
  - INTEGER → integer parameter
  - STRING → string parameter
  - DOUBLE → double parameter
- **NOTE:** more information can be found in “Getting-Started” presentation

# Improvement

## What

- Adjusted behavior for default values from parameter configuration.
- <https://redmine.buw-soft.de/issues/12025>

## Why

- Until now there have been two different behaviors for default values if...
  - defined in sel\_list.txt or

```
SPARK_MODE ... &priority
```

```
#PRIORITY  
Normal wear  
Low wear  
Normal wear  
High removal
```

- defined in parameter.cfg directly

```
SPARK_MODE ... Normal wear
```

## How

Now in both cases...

- default value defined in parameter.cfg and
- default value defined in sel\_list.txt

...the value from SMARTElectrode configuration will be used now. The value will be set regardless whether the parameter already exists in template for new electrodes or not.



# Improvement

## What

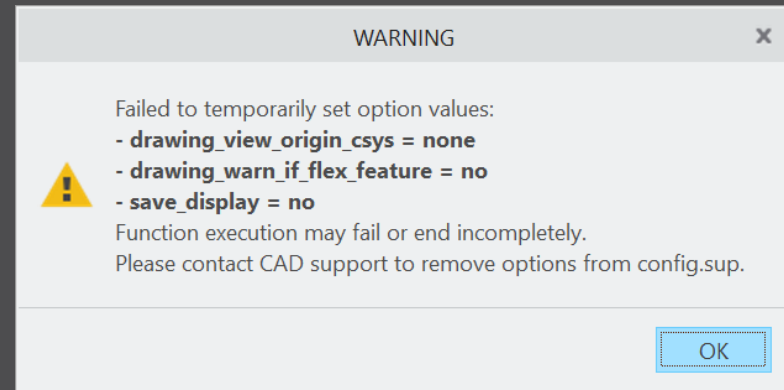
- Check and update mandatory options before drawings are created.

## Why

- Drawing creation may fail if following options can't be set temporarily by SMARTElectrode
  - start\_model\_dir
  - drawing\_view\_origin\_csys
  - drawing\_warn\_if\_flex\_feature
  - save\_display

## How

A warning will be displayed.



# Fixed error

## Description

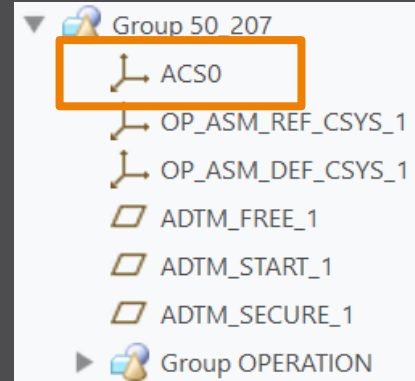
- Operations/origins unreadable if group changed.
- <https://redmine.buw-soft.de/issues/12010>

## Cause

- SMARTElectrode expects a fixed sequence order in operation groups:
  - Reference Csys (this is the selected csys)
  - Default Csys (orientation like selected csys on assembly default; used to assemble new electrodes on)
  - Freeface datum plane (default position of electrode base)
  - Default start datum plane (default start position of electrode if not defined otherwise)
  - Default secure datum plane (default secure position of electrode if not defined otherwise)
  - Operation cosmetic for drawing (optional)

## Solution

- SMARTElectrode tries now to identify features in group, but it's still recommended to keep the group unchanged.





# SMARTElectrode 14.0.0.0

*What's New*



# Enhancement

## What

- Disabled commands to convert electrode assemblies to Inseparable Assemblies
- <https://redmine.buw-soft.de/issues/11929>

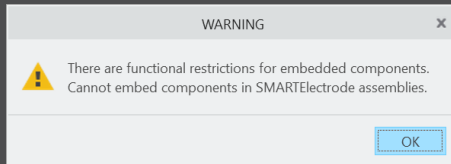
## Why

Commands are disabled because of limitations:

- Drawing creation / repeat regions for electrodes may fail
- Potential issues with userdefined features
- No reuse of embedded electrodes in other projects

## How

- A warning appears if user executes >Inseparable Assemblies >Embed or >Model >Operations >Inseparable Assemblies >Make Inseparable



- SMARTElectrode does not process components already embedded in electrode assembly. Embedded components are not listed in burnsheets nor exported. A warning will be displayed in message window:  
„Embedded component *<component name>* not processed in SMARTElectrode.“

# Enhancement

## What

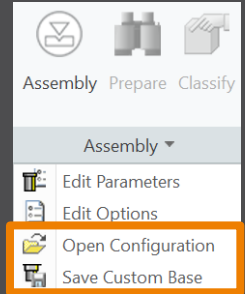
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- Use command "Open Configuration" to browse to "electrode\*<supplier>*\base\_templates“ and select part to customize.
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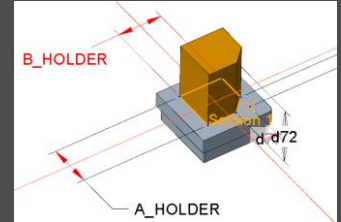
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- Allow additional variable dimensions and parameters in blank data file (\*.dat)
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## Why

- Customer specific templates sometimes need to control additional dimensions or parameters – for example if holder or order number are part of electrode blank



## How

- To use additional parameters with data file an additional line “VALUETYPE” has to be added between “INSTANCE” and blank sizes.

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# Fixed error

## Description

- Operations/origins unreadable if group changed.
- <https://redmine.buw-soft.de/issues/12010>

## Cause

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  - Reference Csys (this is the selected csys)
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