spGauge

Latest Features in spGauge 2025.1

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ARMONICOS

INDEX (spGauge 2025.1)

— Latest Features —

1. Unification Fit: Resizable Dialog
2. Unification Fit: Conditions displayed in a list
3. Selection method: Double-click to select a point cloud
4. Selection method: Contiguous surfaces within an angle
5. Selection method: Select all
6. View Clip: Specify a point
7. Mid-Plane
8. Cross-section: Display max and min annotations alone
9. Viewer: Added spot welding position inspection object
10. Half-rotation matrix
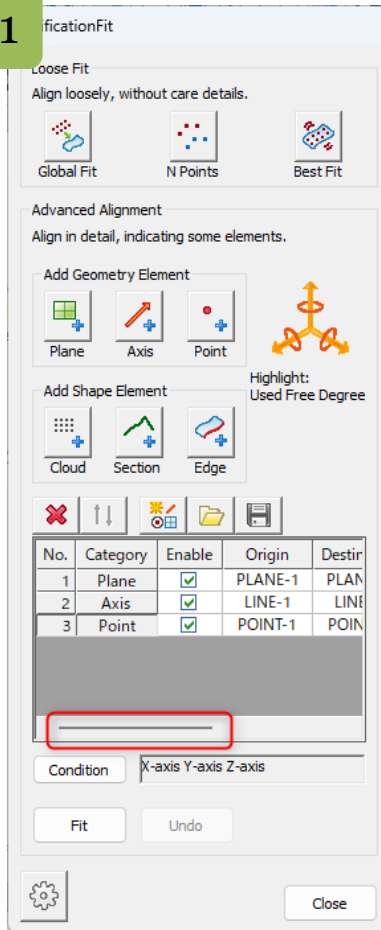
— Others —

Improved Items

Addressed Issues

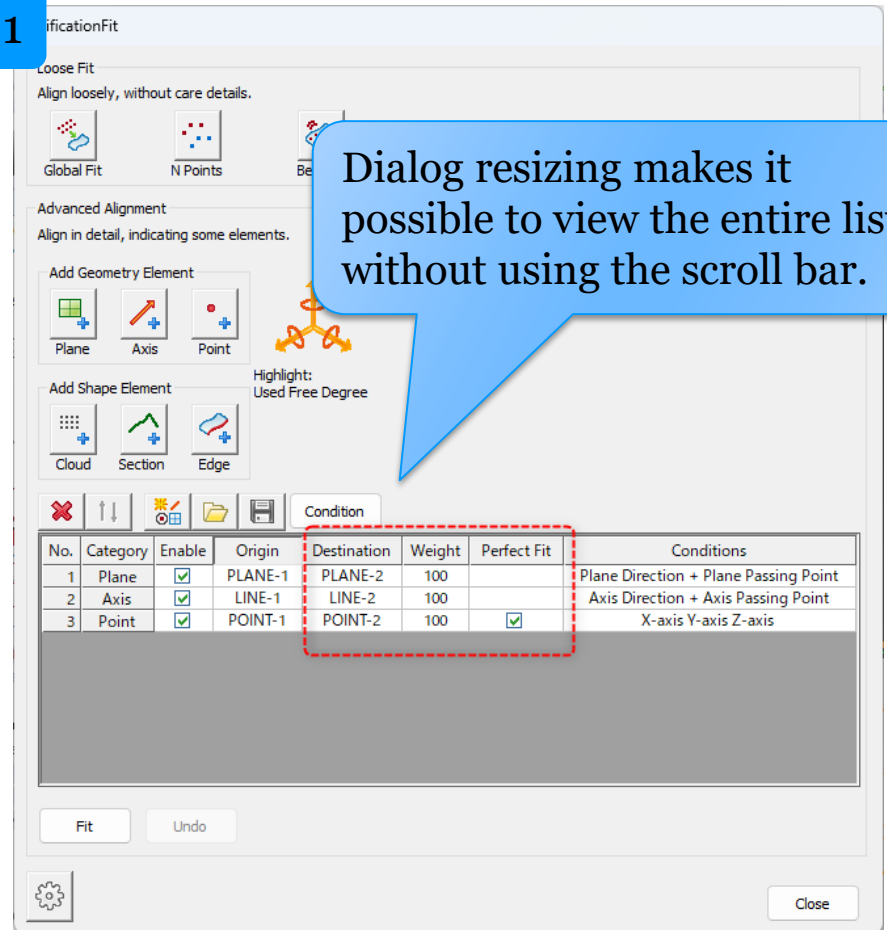# 1. Unification Fit: Resizable Dialog

Improved the dialog to allow resizing, making it easier to view geometric and shape elements when adding them during detailed alignment.
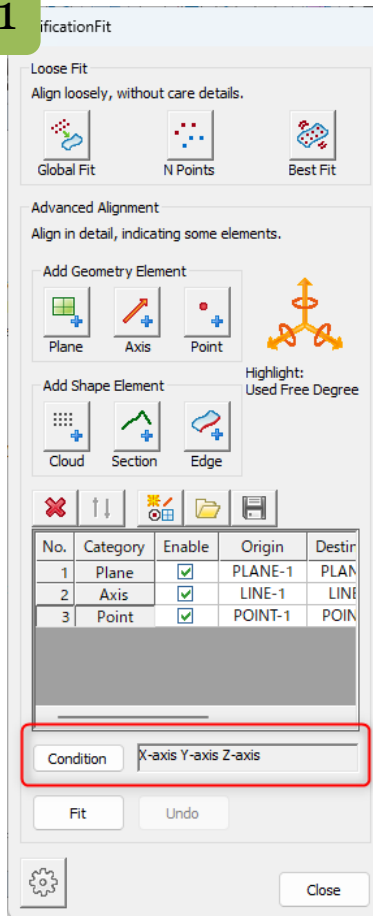
Menu [Alignment]-[Unification Fit]

Dialog resizing makes it possible to view the entire list without using the scroll bar.
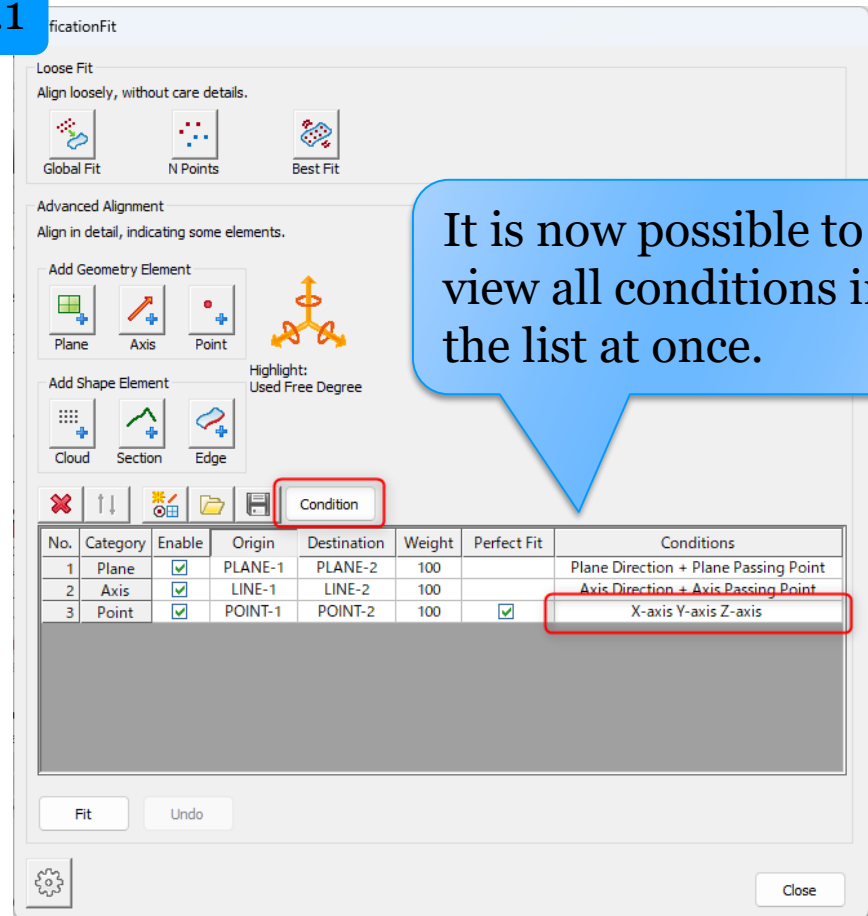
2. Unification Fit: Conditions displayed in a list

This allows reviewing of alignment conditions for registered geometric and shape elements in Advanced Alignment.

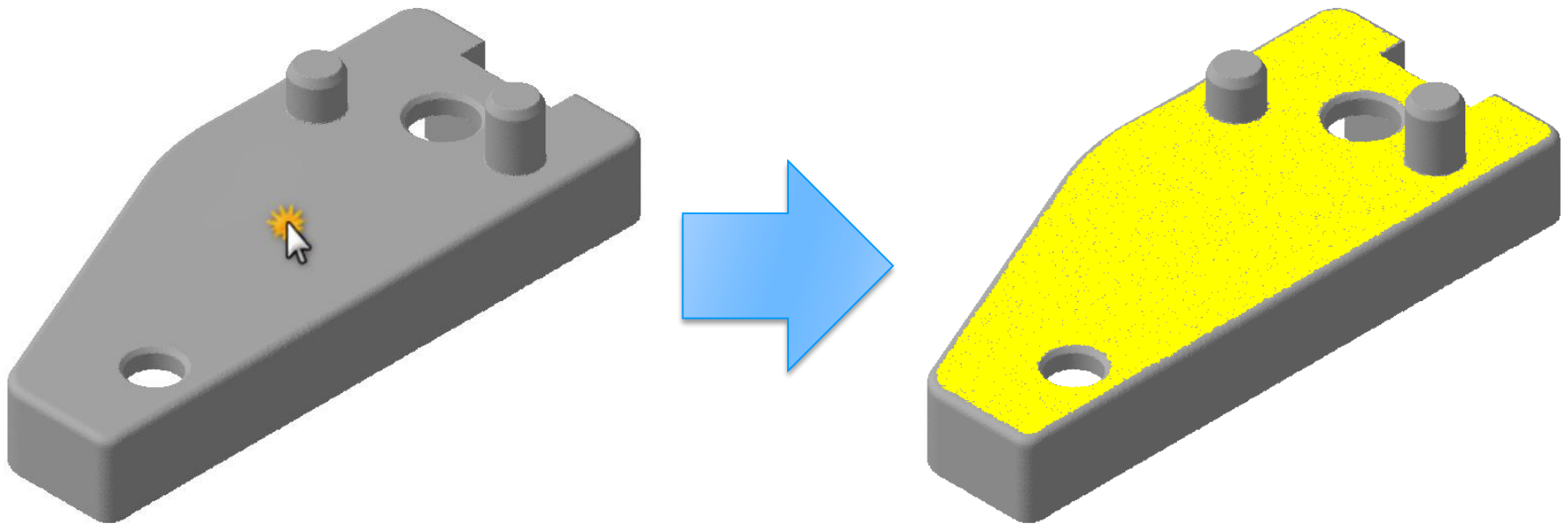**Menu [Alignment]-[Unification Fit]**

It is now possible to view all conditions in the list at once.

3. Selection method: Double-click to select a point cloud

When selecting a point cloud, double-clicking now allows selecting point cloud up to the location where the polygon bends.
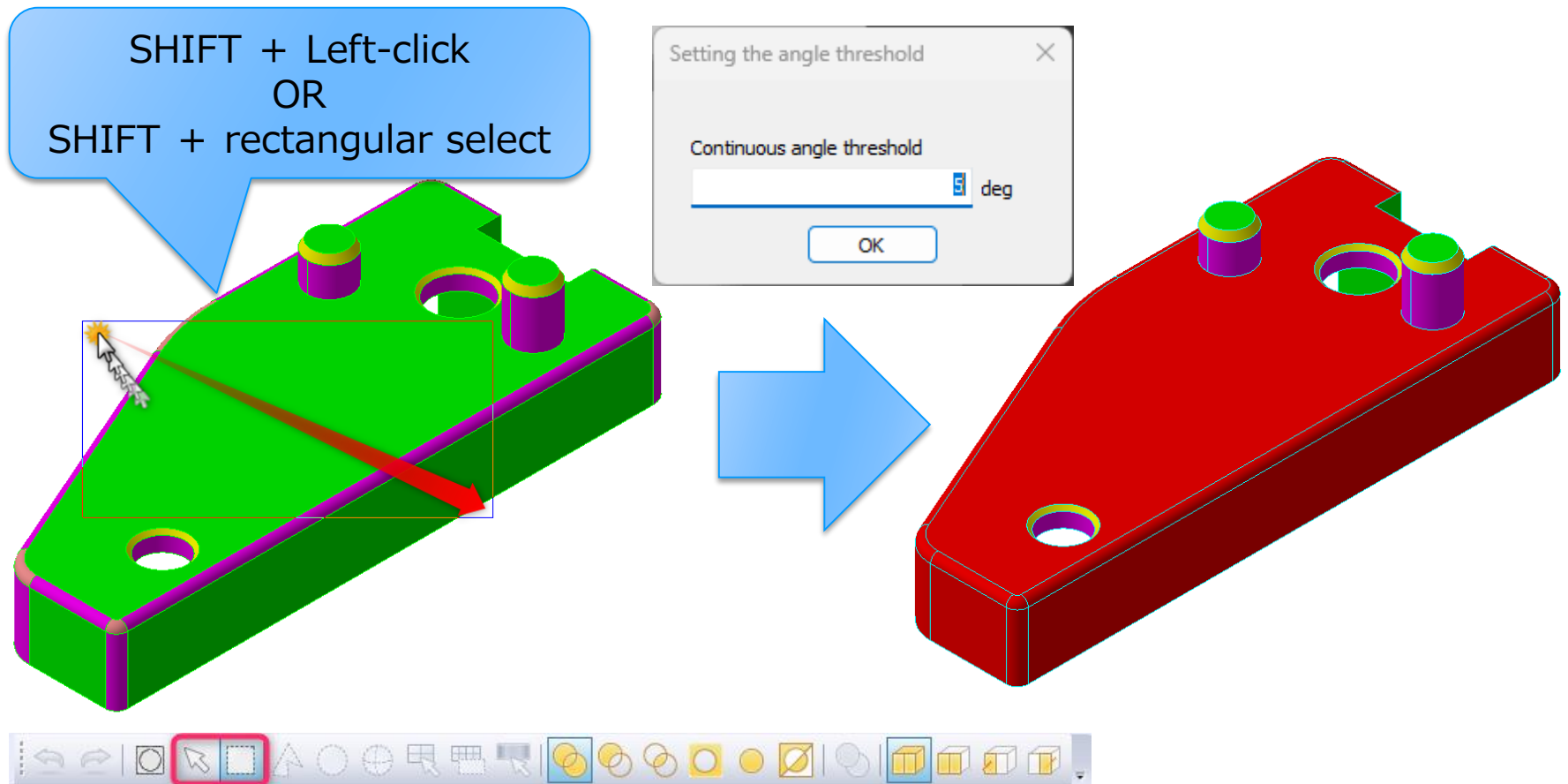
Menu   **[Tool]-[Point Cloud Tool]-[Copy]**
[Tool]-[Point Cloud Tool]-[Delete Selected] etc.

4. Selection method: Contiguous surfaces within an angle for CAD

It is now possible to select contiguous surfaces within a specified angle from the selected CAD surface.

Menu   **[Edit]-[Delete]**
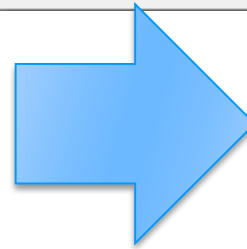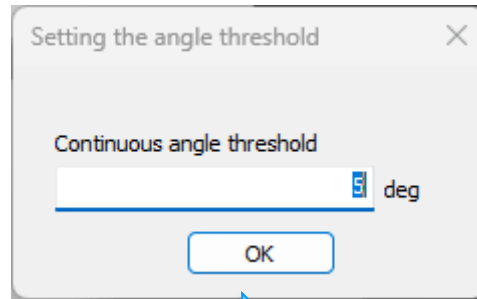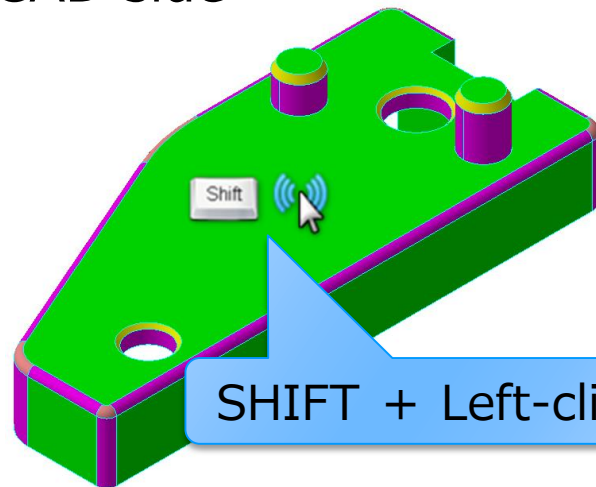   **[Tool]-[CAD Tool]-[Offset CAD Surf] etc.**

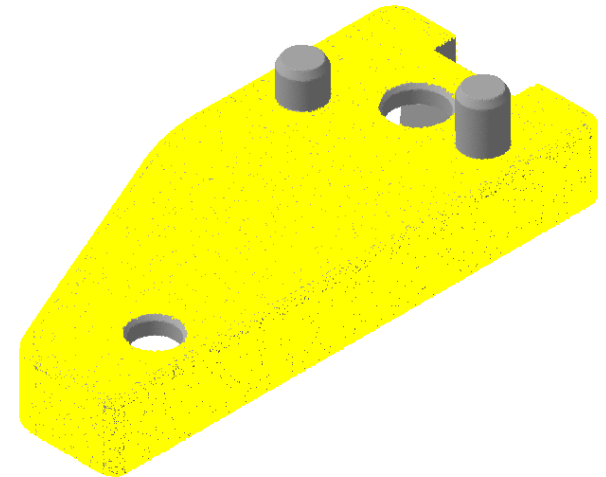# 4. Selection method: Contiguous surfaces within an angle for Point Cloud

After selecting a CAD surface using the [Specify by Faces] tool and specifying an angle, it is now possible to select point clouds near those CAD surfaces.

Menu   **[Tool]-[Point Cloud Tool]-[Delete Selected]**
[Tool]-[Point Cloud Tool]-[Copy] etc.

CAD side

Setting the angle threshold ✕

Continuous angle threshold

5 deg

OK

Point cloud side

Shift ((( )))

SHIFT ＋ Left-click
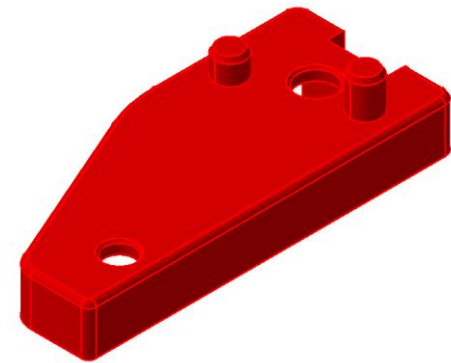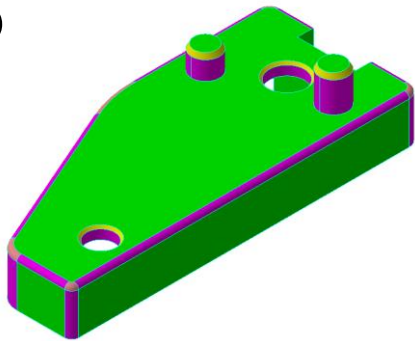
Selection toolbar: Use Specify by Faces
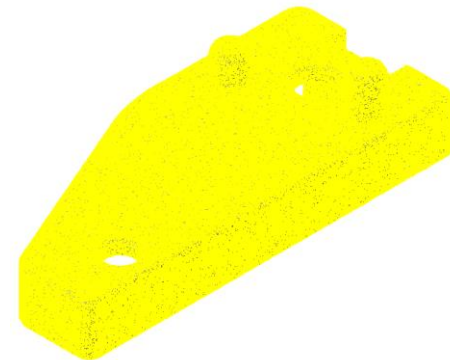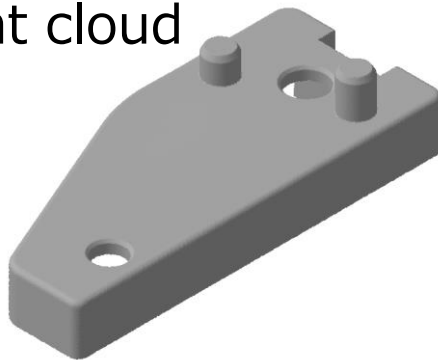
5. Selection method: Select all

You can now select all CAD surfaces and point clouds at once.

Menu　　**[Tool]-[Point Cloud Tool]-[Copy]**
[Tool]-[Point Cloud Tool]-[Delete Selected]
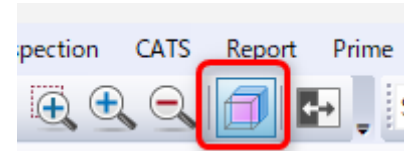**[View]-[Show/Hide]-[Show->Hide] etc.**

For CAD

For point cloud

　8

6. Clip View: Specify using a point

Now you can clip at an indicated point.
Menu **[View]-[Clip View]**

2024.1

2025.1
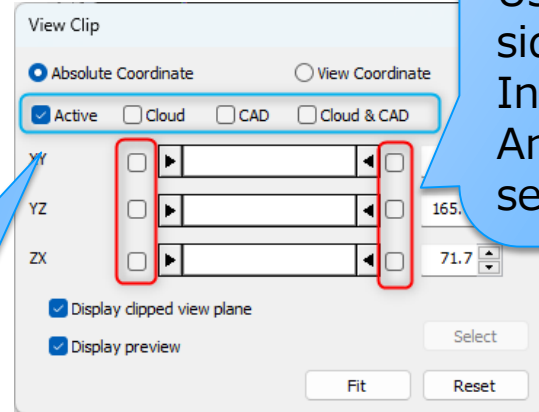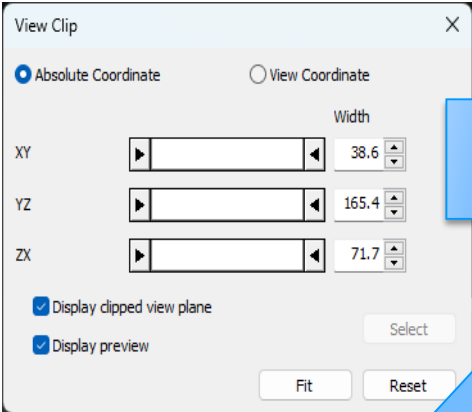
How to clip at a point:
Use the checkbox to specify the side for clipping.
Indicate a point using the dialog.
An existing point can also be selected.
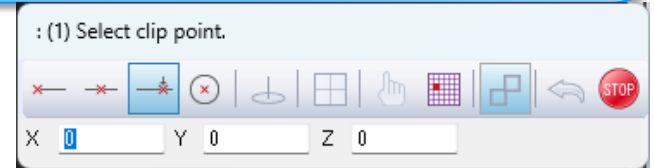
You can now specify the view in which to execute the clipping.
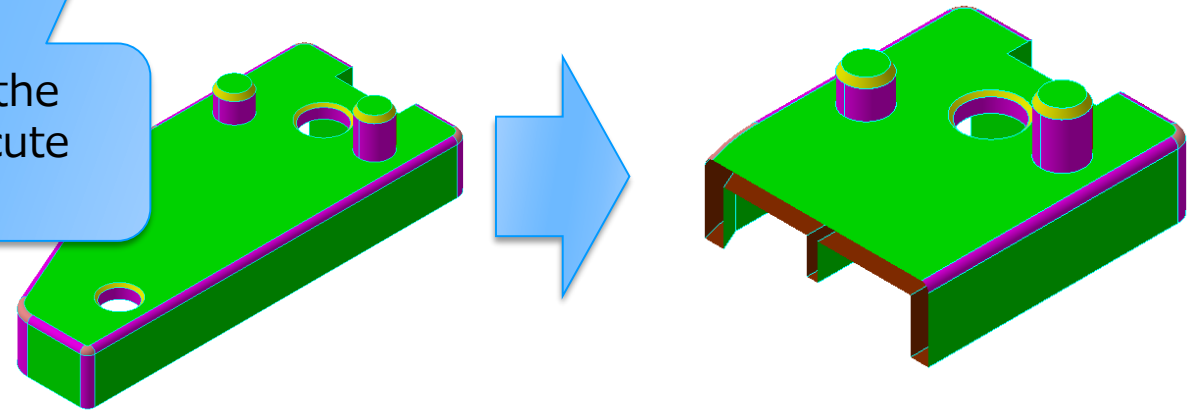
7. Mid-Plane

Added a feature to create a mid-plane between two planes.

Menu   **[Tool]-[Drawing Tool]-[Plane]-[Mid-Plane]**
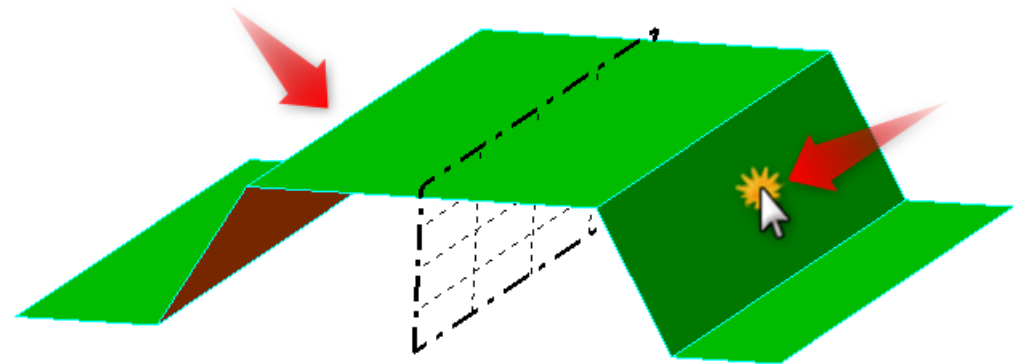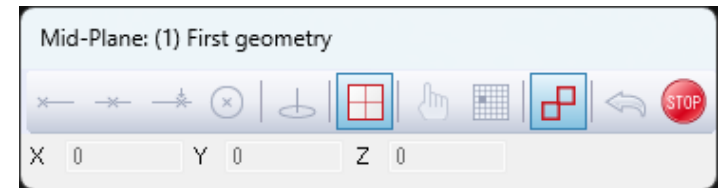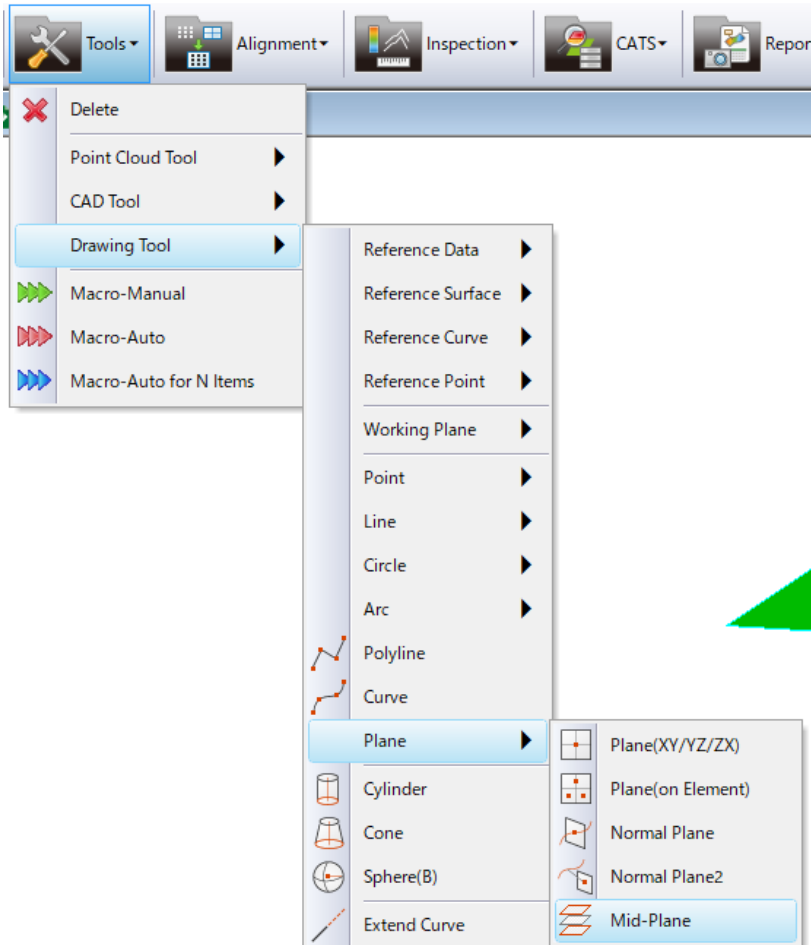
8. Cross-section: Display max and min annotations alone

Now you can display maximum and minimum deviations alone in the cross-section inspection.

Menu [Inspection]-[Section]-[Set Condition & Inspect]
[System Settings]: [Annotation Contents]
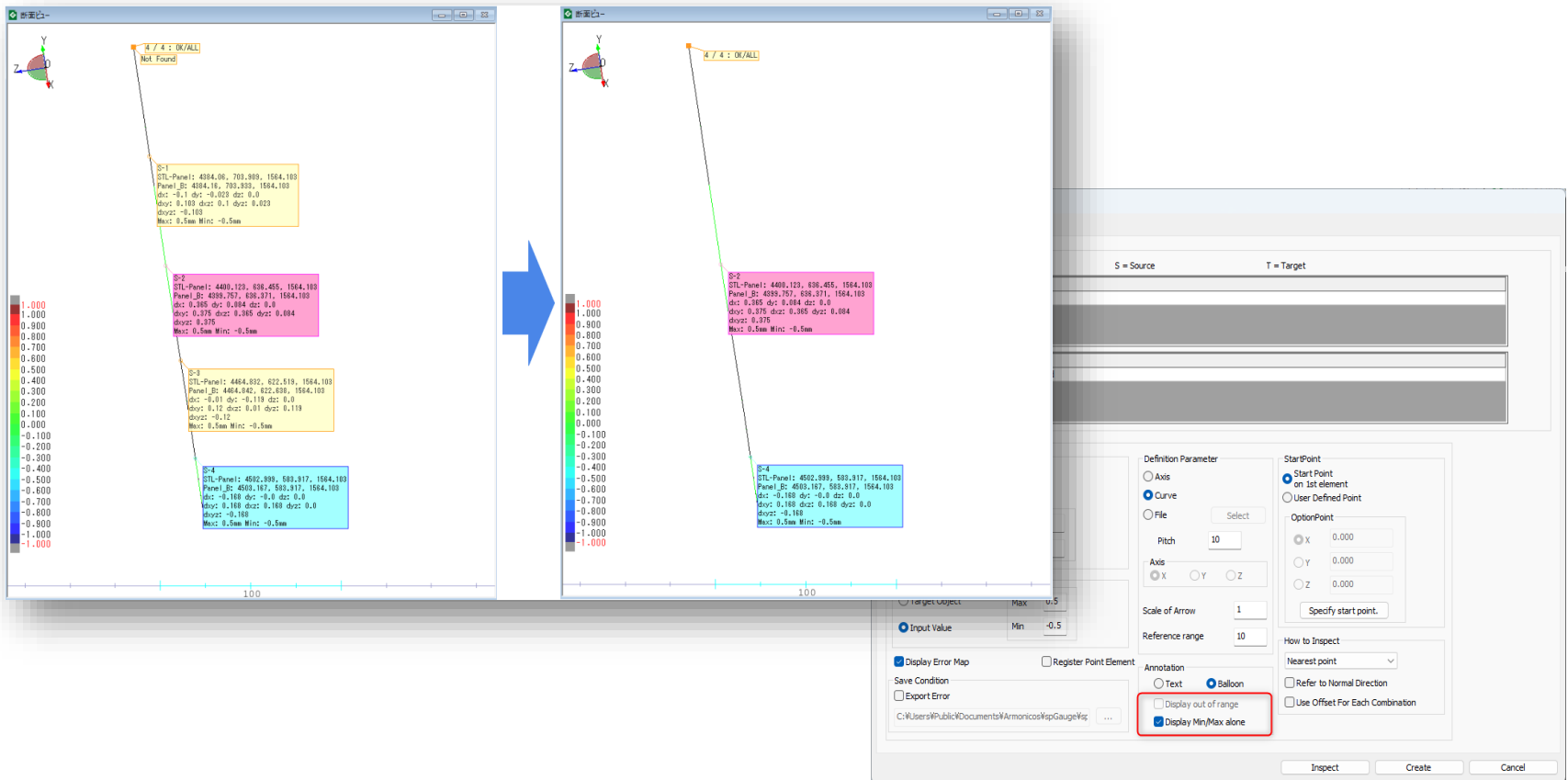
Welding point inspection results can now be exported to spGauge Viewer Light.

Menu **[Inspection]-[Welding Point]-[Set Condition & Inspect]**
[Report]-[Save as ViewerLight DSLX]

In spGauge:
Run welding point inspection

In spGauge Viewer Light:
Check welding point inspection results
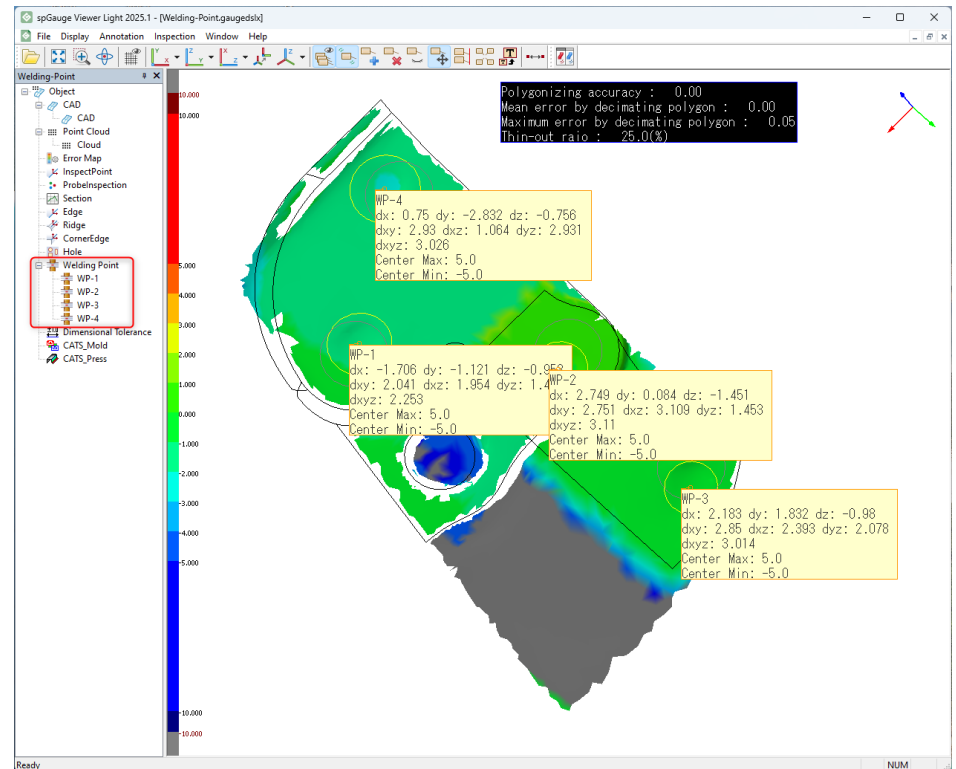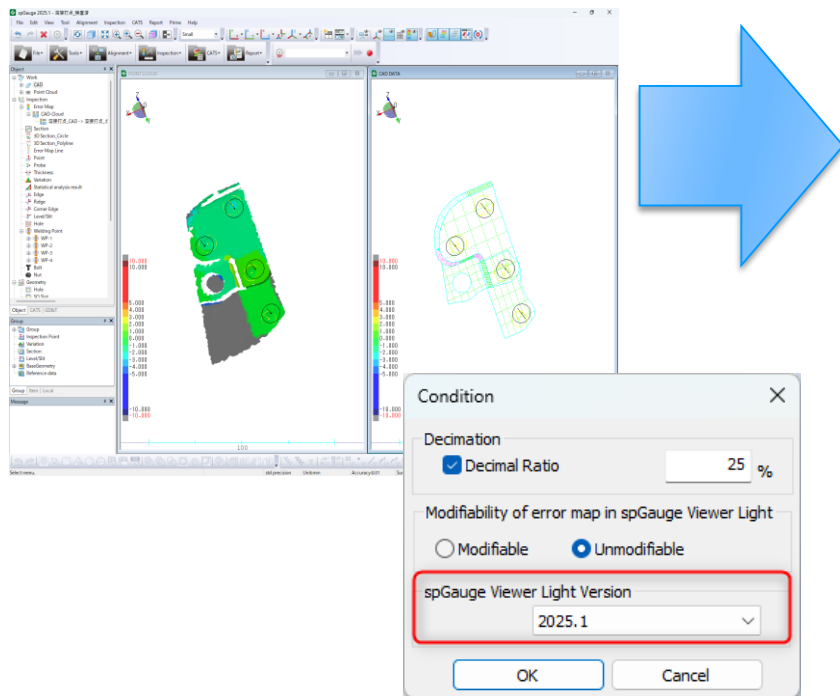
10. Half-rotation matrix

A useful tool for alignment of symmetrical point clouds using mirrors.

Tree <Item>-<Matrix>-<(Matrix Object)>, [Create Half-Rotation Matrix]
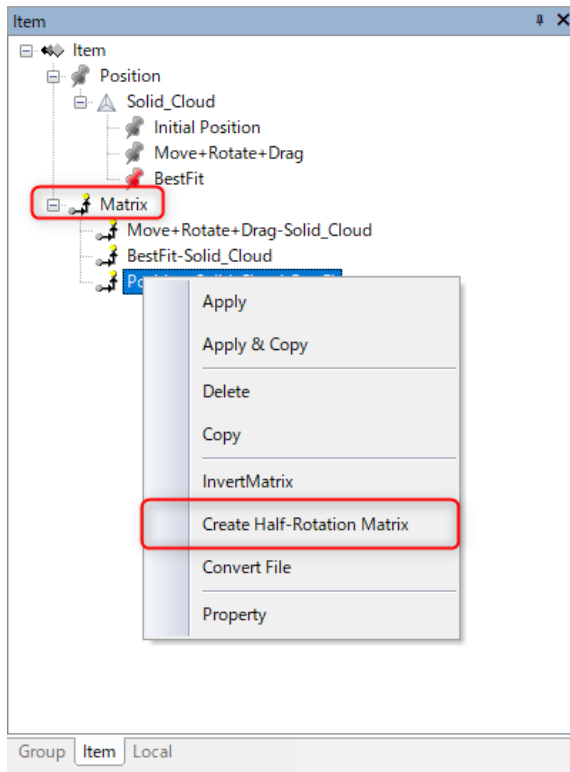
Mirror Plane Creation Procedure

1. Create a temporary mirror plane at an approximate position.
2. Use the temporary mirror plane to copy and generate a mirrored point cloud.
3. Create an alignment matrix from the mirrored point cloud to the original point cloud.
4. [Create Half-Rotation Matrix] from the alignment matrix.
5. Apply the half-rotation matrix to the temporary mirror plane.
6. The plane with the applied half-rotation matrix becomes the true mirror plane.

Improved Items

✓ **Now you can register reference data when defining dimensional tolerance: [Normal] - [Radius]/[Diameter]. (16551)**

✓ **Enhanced GD&T Support Item: Datum for Profile of a line can now be specified. (16582)**

✓ **Viewer: The display order of objects during file output is now sorted by name. (16542, 16547)**

Addressed Issues

- ✓ Addressed an issue where selected objects were not highlighted in menus under the Drawing Tool. (16541)

- ✓ Addressed an issue in [Welding Point]-[Extract Manually] where the keyboard's up and down keys could not navigate the list. (16632)

- ✓ Addressed an issue where the properties of Error Map objects were always calculated as 3D values. (16564)

- ✓ Addressed an issue in [Minimum Thickness] where deleting a point cloud would remove the min thickness object but not the annotations. (16625)

- ✓ Addressed an issue in [Minimum Thickness] where an access violation could occur after clicking Apply in the Minimum Thickness Evaluation dialog and picking contour lines. (16613)

Note: The numbers in parentheses are for internal use.

Addressed Issues

- ✓ [Thickness Error Map Line][Contour Lines]Addressed an issue where annotations remained even after deleting from the tree. (16612)

- ✓ Addressed an issue in [Thickness Error Map Line] where deleting an inspection result object from the tree after displaying annotations via picking would also delete other objects. (16611)

- ✓ Updated the messages in the Shape Tool dialog to more user-friendly expressions. (16597)
  - ✓ Previous message: "Unselectable element" → Updated to: "Circle (3-point pass): (2) Second point," etc.

- ✓ Addressed an issue where icons turned hidden when executing the "Thickness Contour" menu, depending on the data. (16592)

Note: The numbers in parentheses are for internal use.

Addressed Issues

- ✓ Improved error messages for errors occurring during [File]-[Import]-[Point Cloud]-[PLY]. (16585)

- ✓ Modified message for <Inspection>-<Welding Point>, [Export]. (16558)
  - ✓ If no objects exist: "There is no inspection data to export."
  - ✓ Fixed inappropriate messages displayed when canceling.

- ✓ Addressed an issue in [Welding Point]-[Set Condition & Inspect] where the checkboxes in the Welding Point Settings dialog did not adapt to size changes. (16556)

- ✓ Addressed an issue in [Inspection]-[GD&T]- [Geometric Tolerance]-[Define] where the diameter could not be retrieved from an existing Position Tolerance's diameter. (16328)

- ✓ Changed the maintenance expiration message for [Prime] from a dialog pop up to a text message in the message pane. (16566)

Note: The numbers in parentheses are for internal use.

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