

Inspection Add-on

(for Polygon Editing Tool)

Instruction Manual



KONICA MINOLTA

Safety Symbols

The following symbols are used in this manual to prevent accidents that may occur as result of incorrect use of the instrument.



Denotes a sentence regarding safety warning or note.

Read the sentence carefully to ensure safe and correct use.



Denotes an instruction.

The instruction must be strictly adhered to.

Notes on This Manual

- This manual explains the method of the installation of the Inspection Add-on software, the Inspection functions by using the added-on software to the Polygon Editing Tool, and the details of the additional commands.
- This manual describes only the functions that are mentioned above and added to Polygon Editing Tool. For each command of Polygon Editing Tool, refer to Polygon Editing Tool Instruction Manual and Basic Operation Guide.
- Copying or reproduction of all or any part of the contents of this manual without KONICA MINOLTA SENSING's permission is strictly prohibited.
- The contents of this manual are subject to change without prior notice.
- Every effort has been made in the preparation of this manual to ensure the accuracy of its contents. However, should you have any questions or find any errors, please contact the sales outlet you purchased the software or a counter described in the Service Information section.
- KONICA MINOLTA SENSING will not accept any responsibility for consequences arising from the use of the software.

Safety Precautions

When using this software, the following points must be strictly observed to ensure correct and safe use. After you have read this manual, keep it in a safe place so that it can be referred to easily whenever it is needed.



WARNING

Failure to adhere to the following points may result in death or serious injury.



To ensure correct and safe use of this software, please read this manual and the instruction manual of each model of the VIVID (VI) series digitizer, and personal computer in addition to this manual before operating. Incorrect operation of the software may result in fire or electric shock.

Software Restrictions

- Copying or reproduction of all or any part of the contents of this software and manual without KONICA MINOLTA SENSING's permission is strictly prohibited.
- The specifications of the software are subject to change without prior notice.
- KONICA MINOLTA SENSING will not take any responsibility for damage caused as result of use of this software.

Notes on Use

- When inserting a CD-ROM into the CD-ROM drive, make sure that it is placed straight in the right direction, and inserted it gently.
- Keep the CD-ROM clean. If it becomes dirty, a reading or writing error may result.
- Pay attention to rapid temperature changes and dew condensation.
- Keep the CD-ROM away from direct sunlight or heaters.
- Do not let the CD-ROM drop or be exposed to strong shocks.
- Keep the CD-ROM away from water, alcohol, thinner etc.

Notes on Storage

- Do not store the CD-ROM in a hot area, for instance, in direct sunlight or near heaters.

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About the Inspection Add-on software

This software is add-on software for adding the Inspection functions to Polygon Editing Tool. After installation, it will be possible to compare the shapes between the scanned data with VIVID (VI) series digitizer and 3-D CAD data of the scanned object, and inspect the design dimension of specific part.

Installation / Uninstallation of the software

This software is add-on software for Polygon Editing Tool.

Before installing, it is necessary to install the Polygon Editing Tool to the computer correctly and connect the protection key VI-A23 to the parallel port (printer-port) of the computer.

Note In the case of installing the software without connecting the protection key of the Inspection Add-on software correctly, there is a possibility that the installing can not be complete properly. In this case, uninstall the software once, connect the protection key to the parallel port (printer-port) of the computer correctly, and try to install the software again.

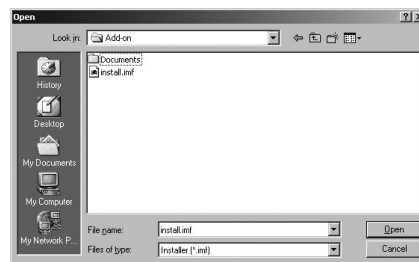
- Ref.**
- For details of the method of installing the Polygon Editing Tool and the required environment, refer to the Polygon Editing Tool Instruction Manual.
 - For the method of uninstallation of the software, please refer to 4 page on this manual.

Installing the software

To install the software, use the [Tool - Menu Add] command of the Polygon Editing Tool.

Operating Procedure

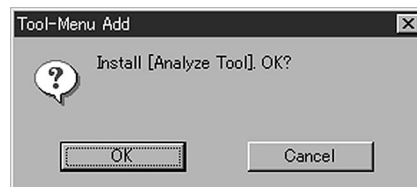
- 1 Start Windows and the Polygon Editing Tool, and then insert the Polygon Editing Tool's CD-ROM into the CD-ROM drive.
- 2 From the [Tool] menu of the Polygon Editing Tool, select [Menu Add].
The [Open] dialog box will appear.
- 3 Click the "Look in" pull-down menu, access the CD-ROM drive path, and select "Install.imf" from the file name list.



Note Operation is guaranteed only for well-formed menu- addition files. Operation may not proceed correctly if select the wrong type of file.

4 Click the [Open] button.

A dialog box asking whether to install this software or not will appear.



5 Click the [OK] button.

Installation will be completed and the inspection functions will be added on Polygon Editing Tool.

Memo [Analyze - Compare] and [Analyze - Inspection] are added to the [Tool] menu of the Polygon Editing Tool.

Ref. For details of the Tool - Analyze - Compare command and the Tool - Analyze - Inspection command, read next chapter "Additional Command Reference."

Uninstalling the Software

To uninstall this software, use the [Tool - Menu Del] command of the Polygon Editing Tool.

Operating Procedure

1 Start Windows and the Polygon Editing Tool.

2 From the [Tool] menu of the Polygon Editing Tool, select [Menu Del].

The [Tool - Menu Del] dialog box will appear.

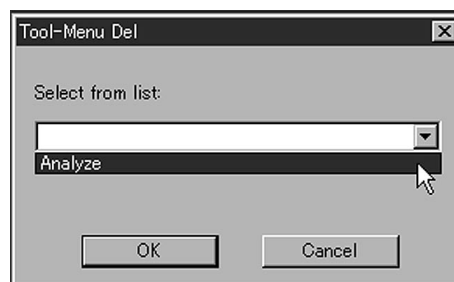
3 Select "Analyze" from the pull-down list.

Note Operation is guaranteed only for well-formed deletion lists. Operation may not proceed correctly if select an improper list.

4 Click the [OK] button.

Uninstallation will be completed and the inspection functions will be deleted from the Polygon Editing Tool.

[Analyze - Compare] and [Analyze - Inspection] will be deleted from the [Tool] menu of the Polygon Editing Tool.



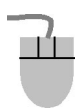
Additional Command Reference (Tool Menu)

Analyze - Compare	6
Analyze - Inspection	8

Tool - Analyze - Compare

Shape Comparing of Elements

This command is used to compare the two elements selected from the element list.



- Left : Displays the details of the clicked-on point.
- Middle([Shift] + Left) : Changes the comparison result displayed on the screen.
- Right : Displays the [Tool - Analyze - Compare] dialog again (for re-setting the Detail and Error items).

Operating Procedure

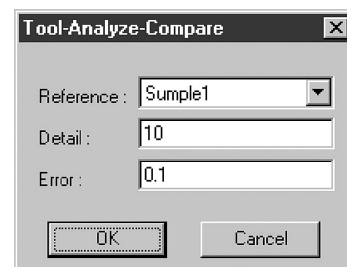
1 Select the two elements.

Memo It is possible to select two or more elements by clicking them while holding the [Shift] or [Ctrl] key.

2 From the [Tool] menu, select [Analyze] and then click [Compare].

The [Tool - Analyze - Compare] dialog box will appear.

- All element windows will disappear.

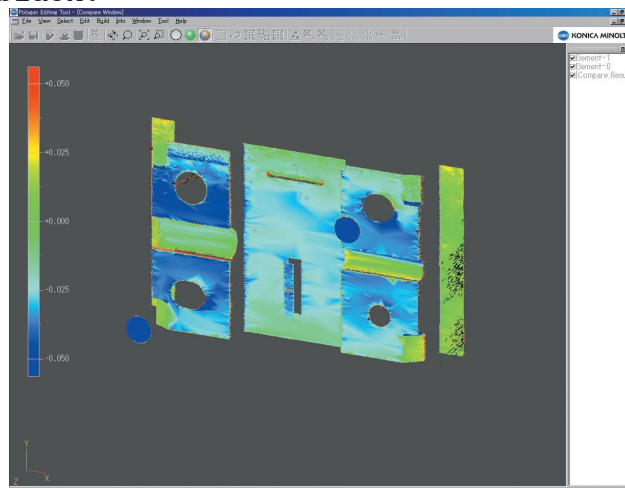


3 From the "Reference" pull-down menu, select one of two elements that is used as the datum for comparing.

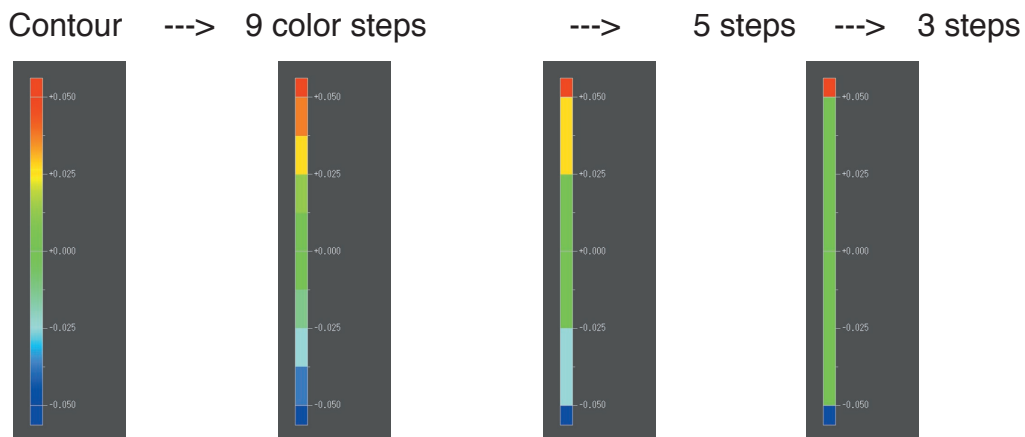
4 Set Detail and Error, and then click the [OK] button.

The result of comparing between the two elements will be displayed as a contour according to the specified value of the Detail and the Error fields in the temporary window.

- As like the bottom figure, a color-scale-bar of contour will be displayed at the left side of the temporary window.
- In the case that the compared result was bigger than the 5 times of the set value as the "Error" item of the [Tool - Analyze - Compare] dialog box, or by the angle from the datum, the contour will be displayed in black.



- By clicking the Middle mouse button (or [Shift] +Left), the display mode of the temporary window will be switched from contour display to 9 color steps, 5 steps and 3 steps.



- By clicking the Left mouse button on the point, the detail of the clicked point will be displayed.
- By clicking the Right mouse button, the [Tool - Analyze - Compare] dialog box will appear. If change the Detail or Error setting, the compared result will be displayed according to the new setting.

Note It is impossible to change the "Reference" setting.

5 Press the [ESC] key.

A message asking whether to exit the command will appear.

6 Click the [OK] button.

The Tool - Analyze - Compare mode will be canceled.

Parameters for Tool - Analyze - Compare Dialog Box	
Reference	Element name used as a comparison datum
Detail	Detailed level of a comparison element If a small value were set to the Detail field, resource memory may be insufficient.
Error	Distance for comparing (unit: mm)

Parameters for Comparison Data of Clicked-on Point	
Pos.	Coordinate (x, y, z) of a clicked-on point
Ref.	Coordinate (x, y, z) of a point on a datum element
---	Coordinate difference against a datum element (Pos. - Ref.)
Error	Distance between the two points of Pos. and Ref., and an angle between a datum element face and the clicked-on point (normally 90°)

Tool - Analyze - Inspection

Dimension Inspection of Elements

This command is used to inspect whether the dimension of a scanned element conforms to the designed value or not.

Operating Procedure

- 1 Select an element and align the coordinate system with a drawing using the [Build - Move - To X-Y-Z] command.

Ref. For details of the Build - Move - To X-Y-Z command, refer to page 140 of Polygon Editing Tool Instruction Manual.

Memo It is possible to set the position to the new user coordinate after creating them. For the detail, read “Regarding the setting of coordinate” (page 16).

- 2 From the [Tool] menu, select [Analyze] and then click [Inspection].

The [Inspection] dialog will appear.

- 3 If necessary, set Coordinate, Datum, and Tolerance table.

Ref.

- For the setup of Coordinate, refer to page 16.
- For the setup of Datum, refer to page 18.
- For the setup of Tolerance Table, refer to page 19.

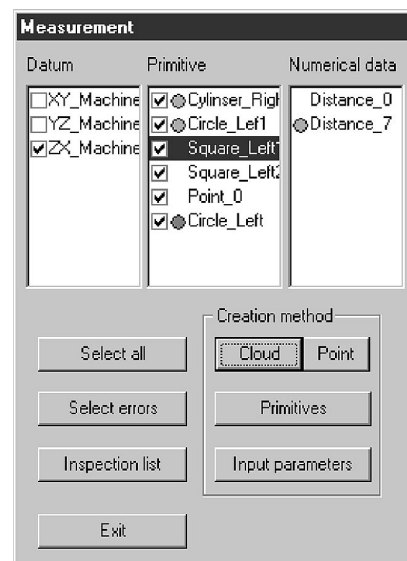
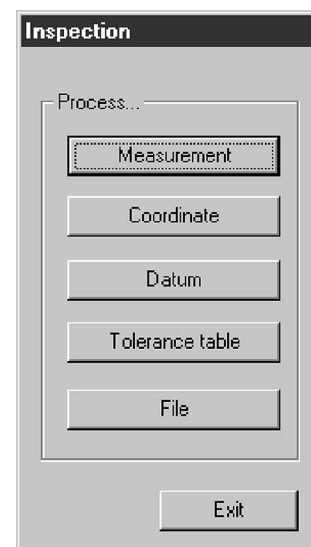
- 4 Click the [Measurement] button.

The [Measurement] dialog will be displayed.

- 5 Create measurement objects to inspect dimension.

Ref. For creating objects, refer to page 11.

- Clicking the [Select all] button will select all the measurement objects.
- Clicking the [Select errors] button will select all the failed measurement objects.
- Clicking the [Inspection list] button will list the inspection results and measured values of the selected measurement objects.

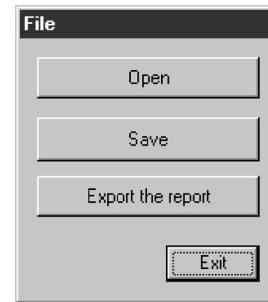


6 Click the [Exit] button.

The [Measurement] dialog box will be closed and the [Inspection] dialog box will appear.

7 Click the [File] button.

The [File] dialog box will appear.

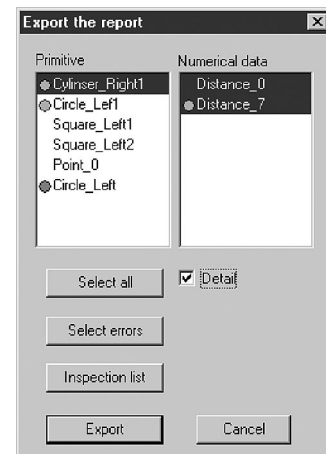


8 To create an inspection report, click the [Export the report] button.

The [Export the report] dialog box will appear.

9 Select the object to export.

- Clicking the [Select all] button will select all the measurement objects.
- Clicking the [Select errors] button will select all the failed measurement objects.
- Clicking the [Inspection list] button will list the inspection results and measured values of the selected measurement objects.



10 Click the [Export] button.

The [Save as] dialog box will appear.

11 Select a folder to save the file, enter a file name, and then click the [Save] button.

A confirmation message will appear.

12 Click the [OK] button.

The report will be saved.

Memo The contents exported are as follows:

- Inspection results and measured values of measurement objects
- Coordinate system
- Datum
- Primitive
- Numerical data

Note To export detailed data of Coordinate, Datum, Primitive, and Numerical data check the [Detail] check box.

13 To save data of dimension inspection, click the [Save] button.

The [Save as] dialog box will appear.

14 Select a folder to save the file, enter a file name, and then click the [Save] button.

A confirmation message will be displayed.

15 Click the [OK] button.

The data of dimension inspection (Inspection file) will be saved.

- To open the saved data of dimension inspection, follow the procedure given below on the [File] dialog box.
 - 1) Click the [Open] button.

The [Open] dialog box will appear.
 - 2) Specify a Inspection file (*.mis) to open, and then click the [Open] button.

16 Click the [Exit] button.

The [File] dialog box will be closed and the [Inspection] dialog box will appear.

17 Click the [Exit] button.

A message asking whether to exit the command will appear.

18 Click the [OK] button.

The Tool - Analyze - Inspection mode will be canceled.

Creating Objects

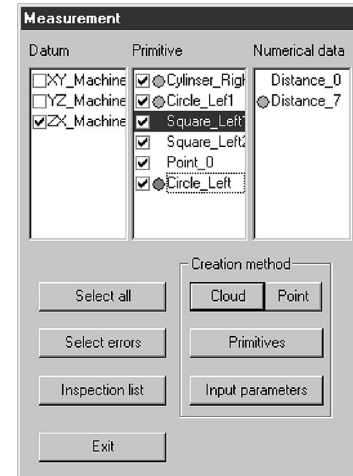
This function create objects for dimension inspection from points of elements.

Operating Procedure

Follow the procedure when the [Inspection] dialog box is displayed.

1 Click the [Measurement] button.

The [Measurement] dialog box will appear.



2 Select points to create an object.

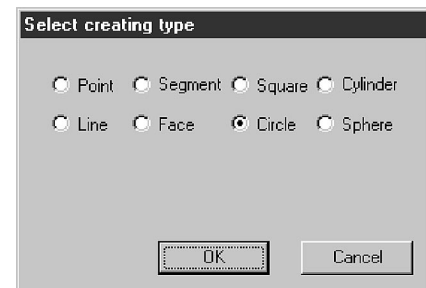
- Memo**
- Select points using the Select and View menu command.
 - After operation, please cancel the Select or View menu command.

- A primitive or a numerical data can be created from a datum or primitive. In this case, select two items from Datum list or Primitive list and then click the [Primitives] button at operation step 3.
- A primitive can be created by entering parameters. In this case, click the [Input parameters] button at operation step 3.

3 Click the [Cloud] button.

The [Select creating type] dialog box will appear.

- Note** A button corresponding to the primitive created the last time is displayed aside of the [Cloud] button. To create the same primitive, clicking this button to display the [Set up] dialog box.

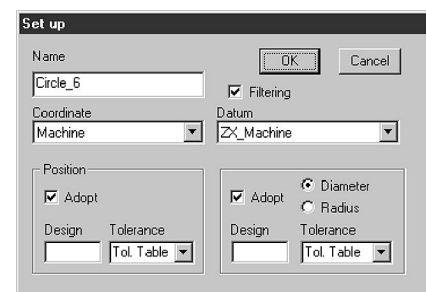


4 Specify a primitive and then click the [OK] button.

The [Set up] dialog box will appear.

5 Set parameters.

Set Datum, Coordinate, Design and Tolerance.

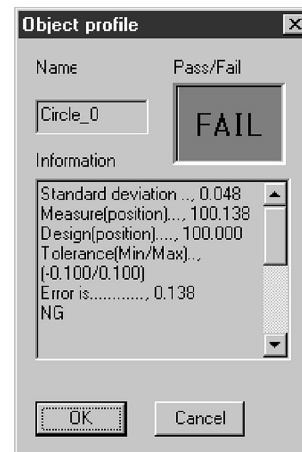


Parameters for Set up Dialog Box		
Name		Enter a primitive name.
Filtering		Selected points are filtered out to a line or a face when Line, Segment or Face, Square, Circle is extracted from selected points.
Coordinate		Select a coordinate system to which the primitive belongs.
Datum		Select a datum to which the primitive belongs.
Position	Adopt	A position from the datum is inspected.
	Design	Enter a design value of a position from the datum. Memo When no design value is entered, a position is not inspected.
	Tolerance	Set tolerance for the design value. When a numerical value is entered, tolerance is defined as "± (entered value)." If the tolerance upper limit differs from the lower limit, delimit them with a comma like "(lower limit), (upper limit)." In addition, "Tol. table"(Tolerance Table) can be selected as well. Memo When "Tol. table" is selected, the tolerance table is used.
Diameter /Radius	Adopt	The diameter is inspected.
	Diameter/Radius	Specify whether the design value is a diameter or a radius.
	Design	Enter a design value of a diameter or a radius. Memo When no design value is entered, a diameter is not inspected.
	Tolerance	Set tolerance for the design value. When a numerical value is entered, tolerance is defined as "± (entered value)." If the tolerance upper limit differs from the lower limit, delimit them with a comma like "(lower limit), (upper limit)." In addition, "Tol. table"(Tolerance Table) can be selected as well. Memo When "Tol. table" is selected, the tolerance table is used.

6 Click the [OK] button.

The [Object profile] dialog box will appear.

Memo If fill a design value in the [Set up] dialog, the result of dimension inspection is displayed in the [Object profile] dialog box.



7 Click the [OK] button.

An object will be created.

Memo Primitives set a design value are color-coded according to the inspection result.

<Color-coding of inspection result of the Object profile dialog box>

- Green: An object to which an error is within permissible limits. (The error reaches less than 70% of the set tolerance.)
- Yellow: An object to which an error is within permissible limits. (The error reaches 70% or more of the set tolerance.)
- Red: An object to which an error is out of permissible limits.

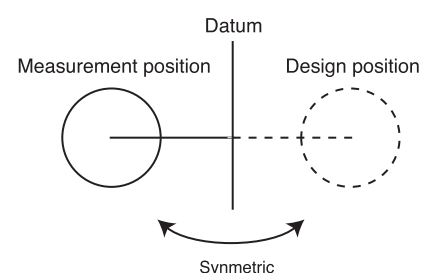
<Color-coding of objects displayed on the element window>

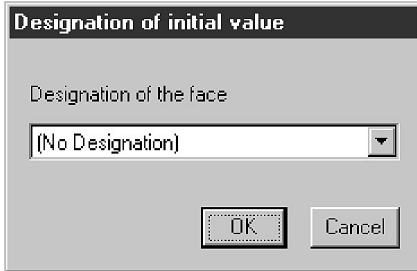
- Yellow: An object to which an error is within permissible limits, or both position and radius are not set a design value.
- Red: An object to which an error is out of permissible limits, or a Circle/Sphere/Cylinder to which a position error is out of permissible limits and a radius error is within permissible limits.

- Light blue: A Circle/Sphere/Cylinder to which a position error is within permissible limits and radius error is out of permissible limits.
 - Purple: A Circle/Sphere/Cylinder to which both a position error and a radius error are out of permissible limits.
- <Color-coding of the inspection result marker displayed on the primitive list and numerical data list>
- Green: An object to which an error is within permissible limits.
 - Red: An object to which an error is out of permissible limits.
 - No marker: An object to which no design has been set.
- To confirm the contents of an object, follow the procedure given below on the [Measurement] dialog box.
 - 1) Select an object.
 - 2) Right-click on the list and select [Property] in the popup menu.
The [Primitive property] dialog box or the [Numerical property] dialog box will be displayed.
 - 3) Click the [OK] button.
 - To edit the contents of an object, follow the procedure given below on the [Measurement] dialog box.
 - 1) Select an object.
 - 2) Right-click on the list and select [Edit] in the popup menu.
The [Edit] dialog box will be displayed.
 - 3) Edit parameters.
 - 4) Click the [OK] button.
 - To delete an object, follow the procedure given below on the [Measurement] dialog box.
 - 1) Select an object.
 - 2) Right-click on the list and select [Delete] in the popup menu.
A message asking whether to delete the object will be displayed.
 - 3) Click the [OK] button.
The object will be deleted.
 - To list the inspection results and measured values of object, follow the procedure given below on the [Measurement] dialog box.
 - 1) Select an object.
 - 2) Click the [Inspection list] button.
The [Inspection result] dialog box will be displayed and a list of inspection results and measured values will be displayed.
 - 3) Click the [OK] button.

Memo It is possible to operate even while the [Inspection list] dialog box is displayed.
 Clicking the [Select all] button will select all the object.
 Clicking the [Select error] button will select all the failed objects.

Note Whether the primitive passes or fails is judged according to distance from the datum, and direction from the datum is not cared. Hence even when the position where the primitive is measured against the design value is symmetric to the datum like the diagram below, the primitive is judged as passed.



Characteristics of Objects	
Point	<p>Extraction: points cloud (center of gravity), Point-Point (median), Point-Face (Square) (projection point to a face), Line (Segment)-Line (Segment) (intersection), Line (Segment)-Face (Square)</p> <p>Definition of a position from the datum: Distance from the datum to the Point.</p> <p>Creation from parameters: Available</p> <p>Memo Segment is treated as Line. (Alike Square as Face)</p> <p>Memo When try to call for the intersection of a Line-Line, if the two lines do not intersect (in a skewed position), the median of the portion in which the two lines are closest to each other is output as a calculated value.</p>
Line	<p>Extraction: points cloud, Point-Point, Face(Square)-Face(Square)</p> <p>Definition of the position from the datum: N/A</p> <p>Create from inputting parameters: Available</p> <p>Memo Segment elements and rectangle elements are handled in the same way as applied to line elements and face elements.</p>
Segment	<p>Extraction: points cloud, Point-Point</p> <p>Definition of a position from the datum: Either the maximum or minimum distance between the datum and Segment, whichever shows a larger displacement from the tolerance.</p> <p>Creation from parameters: Available</p>
Face	<p>Extraction: points cloud, Point-Face(Square) (offset face)</p> <p>Definition of a position from the datum: N/A</p> <p>Creation from parameters: Available</p>
Square	<p>Extraction: points cloud</p> <p>Definition of a position from the datum: Either the maximum or minimum distance between the datum and Square, whichever shows a larger displacement from the tolerance.</p> <p>Creation from parameters: Available</p>
Circle	<p>Extraction: points cloud</p> <p>Definition of a position from the datum: The distance from the datum to center of a Circle</p> <p>Creation from parameters: Available</p>
Sphere	<p>Extraction: points cloud</p> <p>Definition of a position from the datum: the distance from the datum to center of a Sphere</p> <p>Creation from parameters: Available</p>
Cylinder	<p>Extraction: points cloud</p> <p>When extract a cylinder, select a face almost parallel to the cylinder bottom on the [Designation of initial value] dialog box.</p> <p>When select "(No Designation)", extract a cylinder without specifying a face.</p> <p>Definition of a position from the datum: Either the maximum or minimum distance between the datum and axis of Cylinder, whichever shows a larger displacement from the tolerance.</p> <p>Creation from parameters: Available</p> <p>Memo When the Cylinder can not be extracted, select a face again on the [Designation of initial value] dialog box.</p> 

Characteristics of Objects	
Distance	<p>Extraction: Point-Point, Point-Line, Point-Segment, Point-Face, Point-Square, Segment-Line, Segment-Face</p> <p>Error check: Available</p>
Angle	<p>Extraction: Line (Segment, Cylinder)-Line (Segment, Cylinder), Line (Segment, Cylinder)-Face (Square, Circle), Face(Square, Circle)- Face(Square, Circle)</p> <p>Error check: Available</p> <p>Memo An angle against the axis is calculated for Cylinder, and an angle against the normal of a circle face is calculated for Circle.</p>
Parallelism	<p>Extraction (from the datum to the object): Line-Segment (Cylinder), Line-Square, Face-Square, Face-Segment (Cylinder)</p> <p>Error check: Available</p> <p>Memo For a Line-Square, parallelism is confirmed only in the gate direction,</p> <p>Memo A cylinder is inspected with the center axis regarded as a segment</p>
Squareness	<p>Extraction (from the datum to the object): Line-Segment (Cylinder), Line-Square, Face-Square, Face-Segment (Cylinder)</p> <p>Error check: Available</p> <p>Memo For Face-Square, right angle is confirmed only in the gate direction.</p> <p>Memo The cylinder is inspected with the center axis regarded as a segment.</p>

Setting Coordinate System

This function sets a new coordinate system from primitives. And, it is possible to set the new created coordinate system as the “machine coordinate”; changing the machine coordinate system.

Note In advance, it is necessary to create primitives by which a coordinate system can be set (one or more Point, Sphere, or Circle, one or more Segment or Line, and one or more Square or Face).

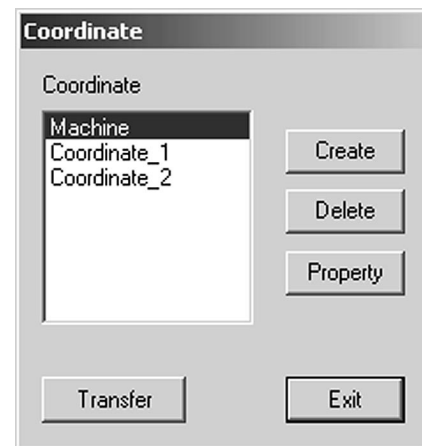
Operating Procedure

Follow the procedure given below when the [Inspection] dialog box is displayed.

1 Click the [Coordinate] button.

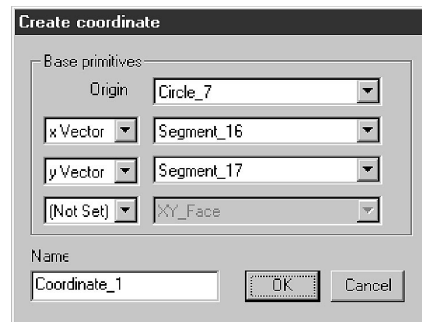
The [Coordinate] dialog box will appear.

Memo A machine coordinate system has been set beforehand.



2 Click the [Create] button.

The [Create coordinate] dialog box will appear.



3 Set parameters.

4 Click the [OK] button.

A new coordinate system will be created.

- To confirm contents of the coordinate system, follow the procedure given below on the [Coordinate] dialog box.
 - 1) Select a coordinate system.
 - 2) Click the [Property] button.

The [Coordinate property] dialog box will appear.
 - 3) Click the [OK] button.
- To delete the coordinate system, follow the procedure given below on the [Coordinate] dialog box.
 - 1) Select a coordinate system.
 - 2) Click the [Delete] button.

A message asking whether to delete the coordinate system will be displayed.
 - 3) Click the [OK] button.

The coordinate system will be deleted.

Parameters for Create coordinate Dialog Box	
Origin	Select Point, Circle or Sphere to set as an origin. Memo When select Circle or Sphere as an origin, the center is set as the origin.
x Vector	Select to which of x, y, or z vector the primitive corresponds. Memo The direction vector of Line or Segment can be set as x/y/z vector.
y Vector	
z Vector	
No set	Select to which of xy, yz, or zx plane the primitive corresponds. After set a plane, only one vector can be set. Memo Face or Square can be set as a plane.
xy Plane	
yz Plane	
zx Plane	
Name	Enter a name of the new coordinate system.

Changing the Machine Coordinate System

This function changes the new created user coordinate system to the machine coordinate system.

Ref. For details of this function, refer to “Regarding Changing of coordinate system” (page 19).

Operating Procedure

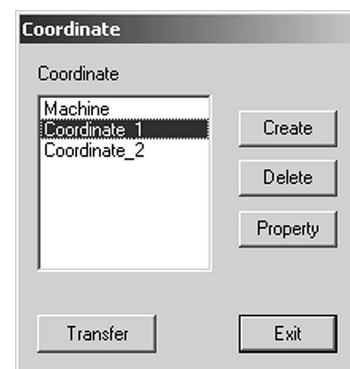
Follow the procedure given below when the [Inspection] dialog box is displayed.

- 1 Select the elements that you change the coordinate system from the element-list displayed at the right side of the temporary window.

Memo Usually selecting the all elements.

- 2 Click the [Coordinate] button.

The [coordinate] dialog box will appear.

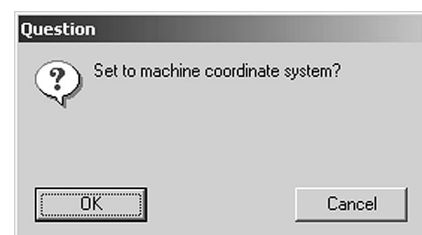


- 3 Select a name of the coordinate system which wants to set as the machine coordinate system from the “Coordinate” list of the [Coordinate] dialog box.

- 4 Click the [Transfer] button.

The confirmation message wheather or not change the coordinate system will be displayed.

Memo In the case that there were unselected elements on step 1, the message saying that will be displayed. If you want to reselect the elements, click the [Cancel] button to cancel the operation, and redo from step 1.



5 Click the [OK] button.

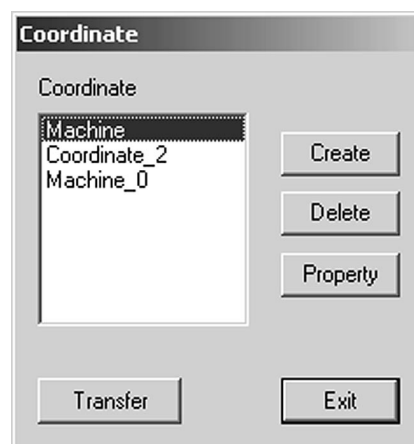
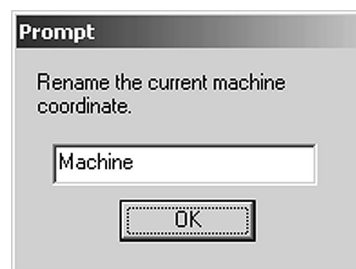
The [Prompt] dialog box will appear.

6 Input a new name for the primary machine coordinate system.

Note The name “Machine” is for machine coordinate system only. It is impossible to use for other coordinate system.

7 Click the [OK] button.

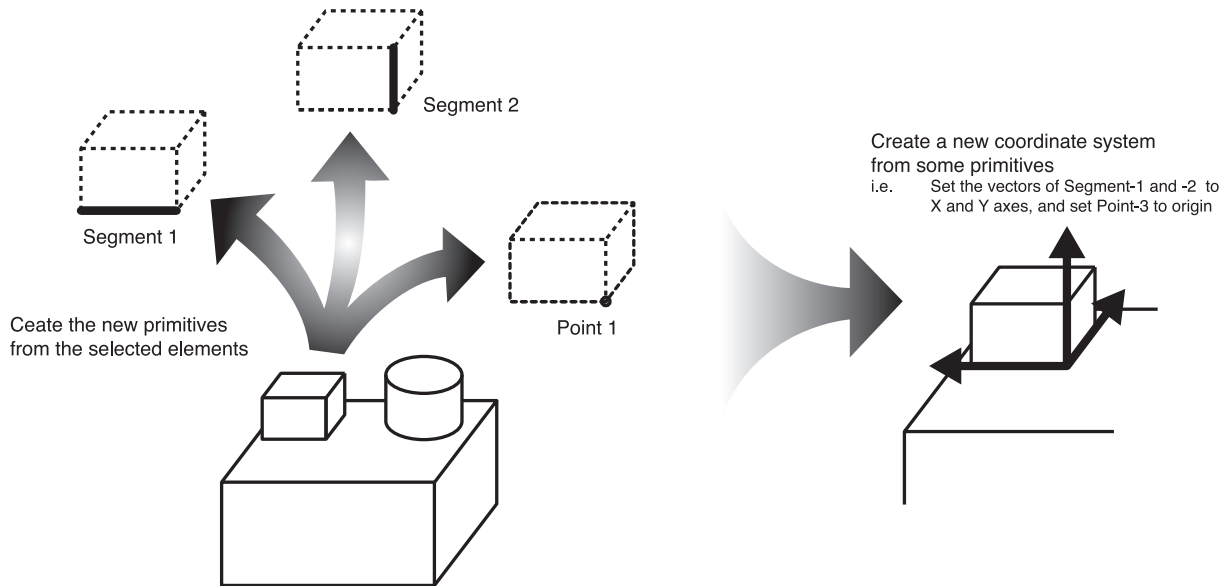
Set the coordinate system selected on step 2 to the machine coordinate system. At the same time, the primary machine coordinate system is saved with new name, and list-uped on the bottom place of “Coordinate” list of the [Coordinate] dialog box.



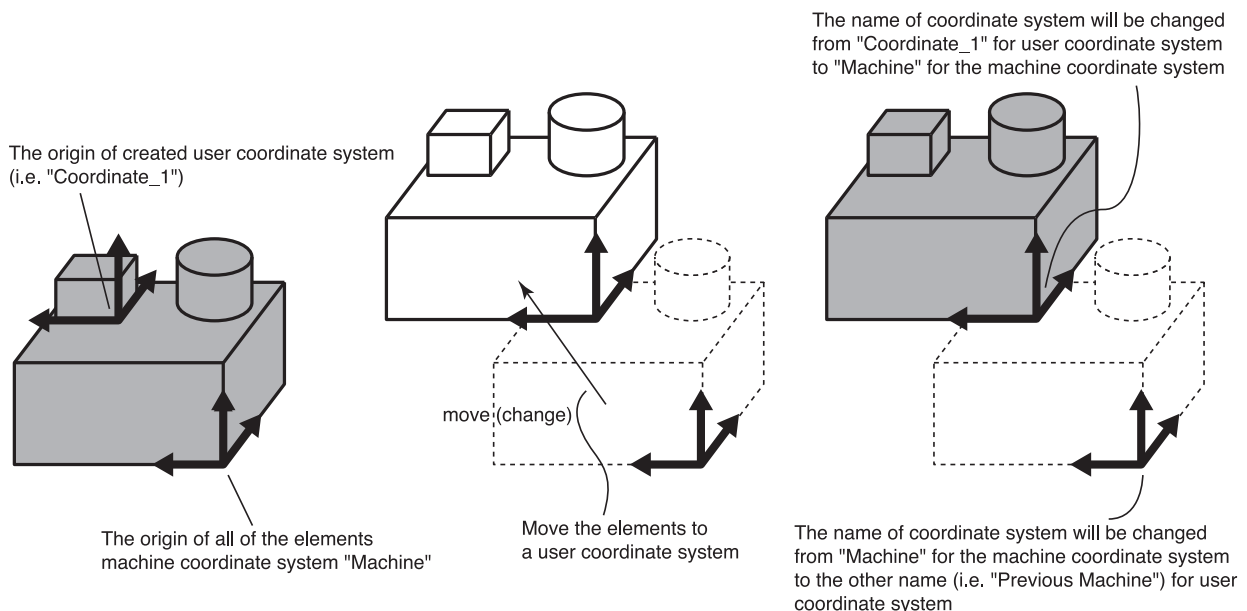
Regarding Changing the Machine Coordinate System

The all elements is attributed on the machine coordinate system, and is only one on the [Tool - Analyze - Inspection] function.

However, in this software, it is possible to create two or more new coordinate systems (i.e. user coordinate system) from some primitives as shown below.



“Changing the machine coordinate system” is to change a user coordinate system to the machine coordinate system. That means that the elements are transferred from the machine coordinate system to a user coordinate system set as the new machine coordinate system.



When you set a user coordinate system (i.e. the name of “Coordinate_1”) to the machine coordinate system, it will be saved under the name of “Machine” automatically. At the same time, the previous machine coordinate system that had been named “Machine” will be set as the user coordinate system, but is necessary to change the name because the “Machine” is wrong name as the user coordinate system. Change the name of the coordinate system to another (i.e. “previous Machine”).

[Ref.] For details, refer to step 6 of on page 18; procedure “Changing the machine coordinate system”

Setting Datum

This function creates a new datum from a primitive.

Note In advance, it is necessary to create the object by which a datum can be set (one or more Line, Segment, Square, or Faces).

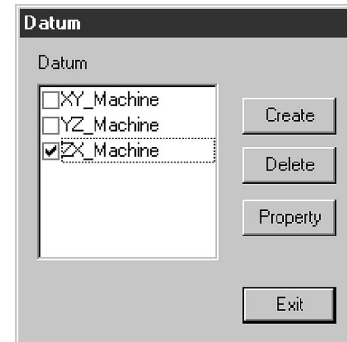
Operating Procedure

Follow the procedure given below when the [Inspection] dialog box is displayed.

1 Click the [Datum] button.

The [Datum] dialog box will appear.

Memo The XY/YZ/ZX planes of the machine coordinate system have been set beforehand.



2 Click the [Create] button.

The [Create datum] dialog box will appear.

3 Select a primitive to set as a datum, and then enter a name.

Memo Face, Square, Line, and Segment can be set as a datum.



4 Click the [OK] button.

A new datum will be created.

- To confirm contents of the datum, follow the procedure given below on the [Datum] dialog box.
 - 1) Select a datum.
 - 2) Click the [Property] button.

The [Datum property] dialog box will be displayed.
 - 3) Click the [OK] button.
- To delete the datum, follow the procedure given below on the [Datum] dialog box.
 - 1) Select a datum.
 - 2) Click the [Delete] button.

A message asking whether to delete the datum will be displayed.
 - 3) Click the [OK] button.

The datum will be deleted.

Setting Tolerance table

This function set a tolerance table.

Operating Procedure

Follow the procedure given below when the [Inspection] dialog box is displayed.

1 Click the [Tolerance table] button.

The [Set up tolerance table] dialog box will appear.

Memo Tolerance values have been set beforehand.

2 Enter tolerance values written on a drawing, and then click the [OK] button.

The tolerance values will be set.

- If try to enter a value into the [Tolerance Table] without entering a numerical value into the [Up To] field, "Over" will be automatically entered into the [Up To] field and a message stating "The value below blank is disabled." will be displayed.
When press the [OK] button, columns below that column will become inactive and no value will be able to enter into those columns.
- When a numerical value is entered into [Tolerance Table], tolerance is "± (entered value)." If the tolerance upper limit differs from the tolerance lower limit, delimit tolerance with a comma like "(lower limit), (upper limit)."

Memo The settings of the tolerance table is saved in a mis file(Inspection file) when save the inspection results.

Over	Up To	Tolerance Table
0	3.000	-0.050,0.050
3.000	6.000	-0.060,0.060
6.000	10.000	-0.080,0.080
10.000	18.000	-0.090,0.090
18.000	30.000	-0.100,0.100
30.000	50.000	-0.120,0.120
50.000	80.000	-0.160,0.160
80.000	Over	-0.180,0.180

OK Cancel

Tutorial

Here explaining about the basic operation of the “Comparing “ and “Inspection” by using the inspection function added on the Polygon Editing Tool.

Ref. For the detail of the installation of the Inspection Add-on software, please refer to page 3; “Installation of the software”.

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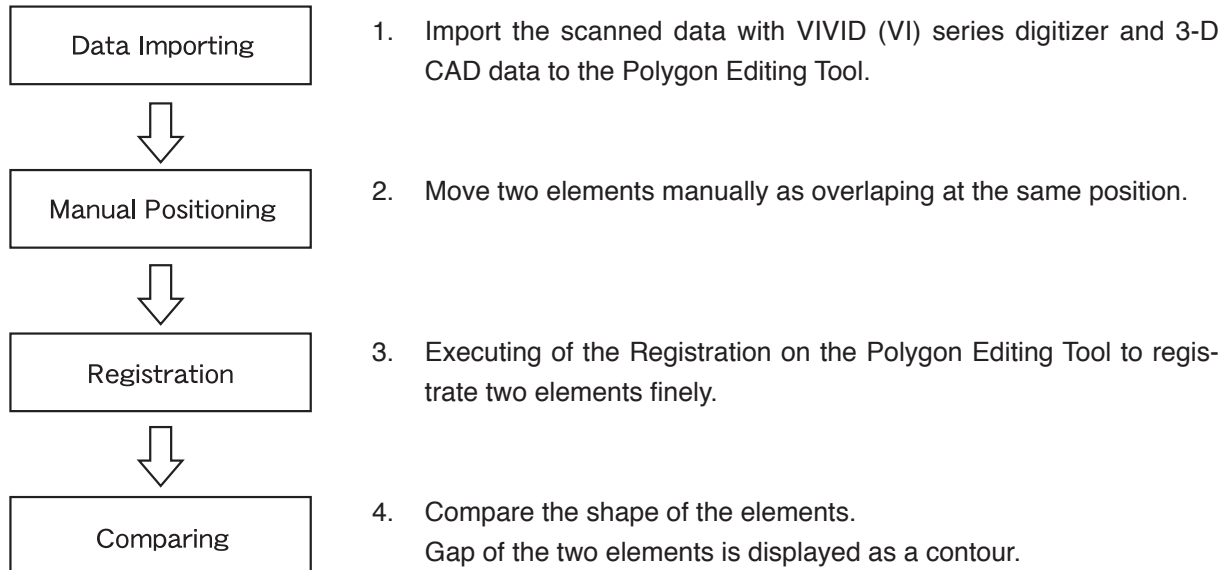
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Shape Comparing of Elements

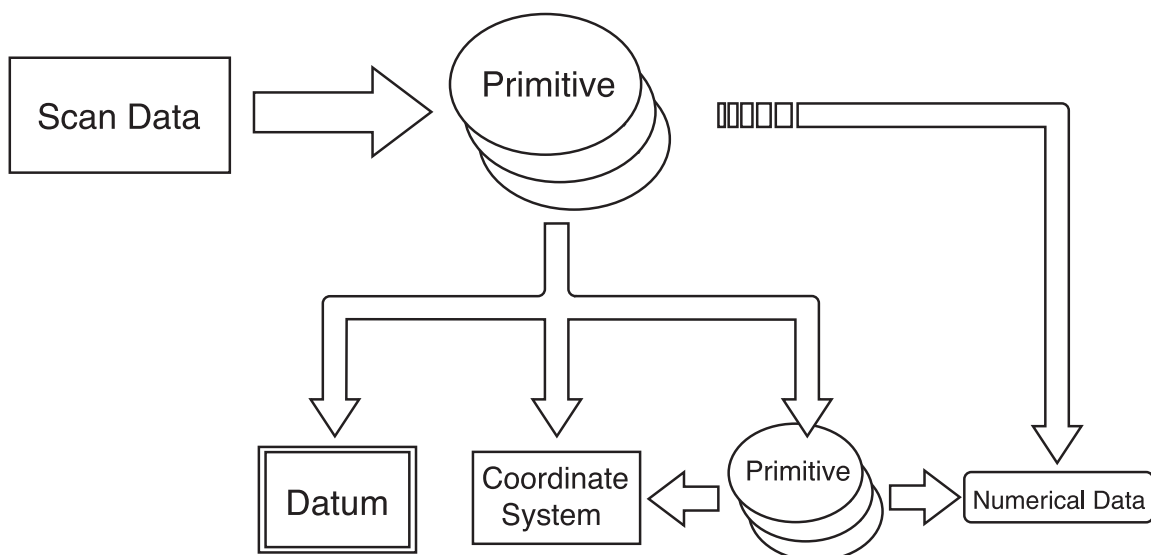
1) Requirement

- Scanned Data with VIVID (VI) series digitizer
- 3-D CAD data of the scanned object

2) Procedure



Composition of the Data using on the Inspection



Scanned Data:

Scanned data with VIVID (VI) series digitizer

Primitive:

Object(s) with physical shapes (ie. Point, Line, Circle etc.)

Numerical data:

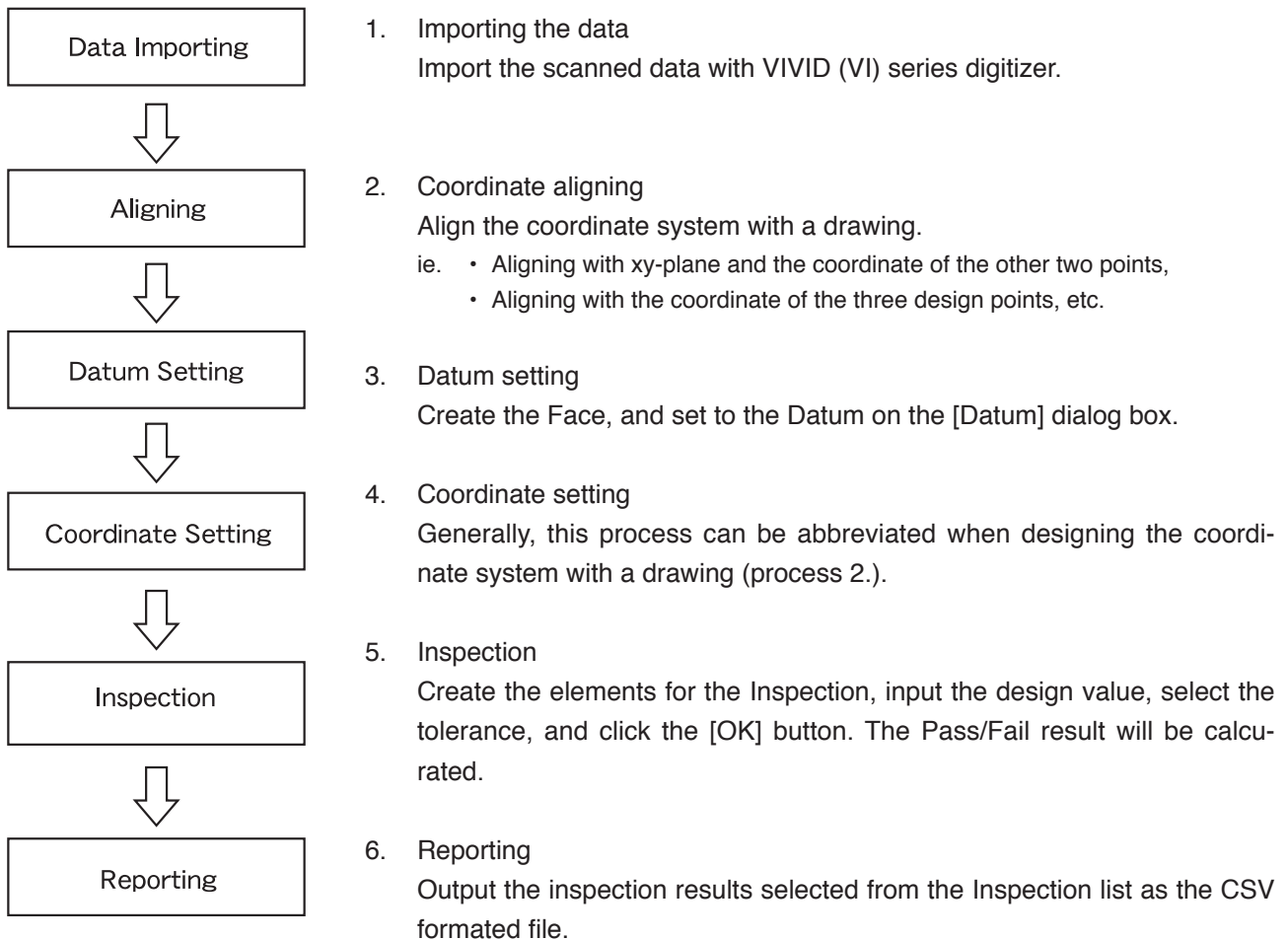
Object(s) calculated with the Primitives, and have no shapes (ie. Distance, Angle etc.)

Dimension Inspection of Elements

1) Requirement

- Scanned data with VIVID (VI) series digitizer
- Drawing

2) Procedure





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