

UDAS

User's manual

* This manual is made for understanding about how to use UDAS.



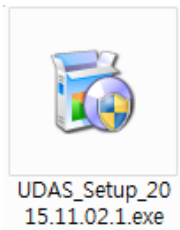
Contents

| | |
|-------------------------------------|----|
| 1. Installation Program..... | 1 |
| 2. Run UDAS Program..... | 3 |
| 3. Splash Screen..... | 4 |
| 4. Main Menu..... | 5 |
| 4.1 Ribbon Bar..... | 5 |
| 4.2 Project Explorer..... | 6 |
| 4.3 Installation Explorer..... | 7 |
| 5. Project Menu..... | 8 |
| 5.1 Create..... | 8 |
| 5.2 Open..... | 9 |
| 5.3 Edit..... | 10 |
| 6. Drawing Menu..... | 11 |
| 6.1 Add..... | 11 |
| 6.2 Add Similar..... | 14 |
| 6.3 Example..... | 15 |
| 6.3.1 Variable Spring Type..... | 15 |
| 6.3.2 Constant Spring Type..... | 17 |
| 6.3.3 Strut Type..... | 19 |
| 6.6.4 Snubber Type..... | 21 |
| 7. Data Menu..... | 23 |
| 7.1 Drawing List..... | 23 |
| 7.2 BOM List..... | 24 |
| 7.3 BOM Summary..... | 24 |
| 8. View Menu..... | 25 |
| 8.1 Project Explorer..... | 25 |
| 8.2 Installation Type Explorer..... | 25 |
| 8.3 Switch Windows..... | 25 |

| | |
|--------------------------------|-----------|
| 9. Options Menu | 26 |
| 10. Help Menu | 27 |
| 10.1 Manual | 27 |
| 10.2 Ask | 27 |
| 10.3 UNISON eTech | 27 |

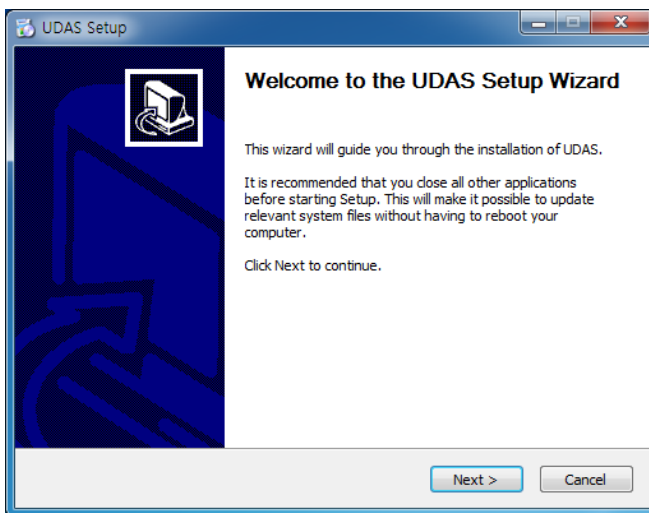
1. Installation Program

- 1) Double click on UDAS_Setup_2015.11.02.01.1.exe file.

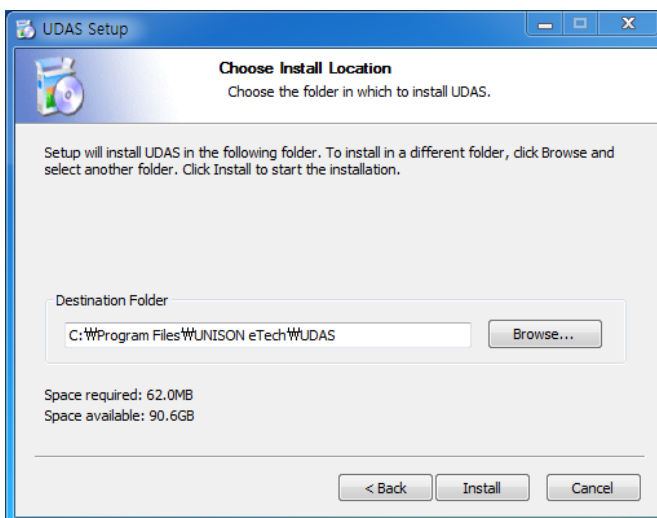


- 2015.11.02.1 is an installation file version, so it can be changed.

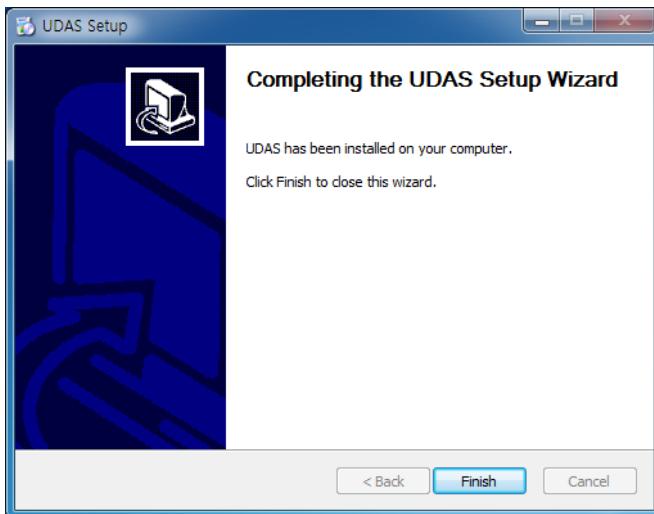
- 2) Click the Next button to install UDAS



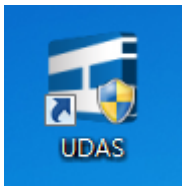
- 3) Select the path of installation folder and click Install button to proceed with installation.



- 4) Click Finish button to finish installation.



- 5) UDAS icon has been created on wallpaper.



- 6) Catalog Data file is automatically created on the subordinate path of Program Data folder.

- ✓ Database => C:\ProgramData\UNISON eTech\UDAS\CatalogData.cdb
- ✓ InstTypeImage => C:\ProgramData\UNISON eTech\UDAS\InstTypeImage
- ✓ TemplatePDF => C:\ProgramData\UNISON eTech\UDAS\TemplatePDF

2. Run UDAS Program

- 1) To execute UDAS Program, double click on UDAS icon or double click START MENU -> All programs -> UNISON eTech ->UDAS -> UDAS.exe.

Screen

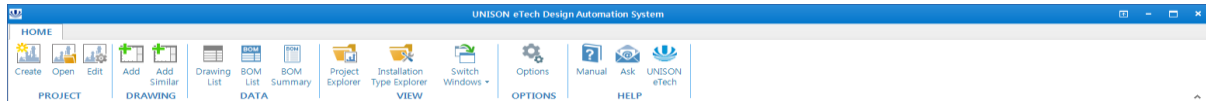
3. Splash Screen

- 1) It shows the information about version of file which is running currently.
- 2) Comparing current catalog data installed in local and catalog data installed in server, if there is a newer version of file in server, it automatically downloads the newest version of file.



4. Main Menu

4.1 Ribbon Bar



1) It is divided into 6 groups overall.

■ [PROJECT]

- ✓ Create: Create a new project.
- ✓ Open: Select the project which has been already created and then call in the data.
- ✓ Edit: Edit the project data which has been already created.

■ [DRAWING]

- ✓ Add: Add a new drawing to a project.
- ✓ Add Similar: Add a drawing by using the open drawing screen.

■ [DATA]

- ✓ Drawing List: Look up all the list of drawings and contents of projects.
- ✓ BOM List: Look up the BOM contents of drawing of the project.
- ✓ BOM Summary: Look up the sum of weight of materials described in drawing of the project.

■ [VIEW]

- ✓ Project Explorer: Check the project list and each drawing belonging to the projects.
- ✓ Installation Type Explorer: Check each type according to installation types.
- ✓ Switch Windows: You can select open screen lists in work area and close it.

■ [OPTIONS]

- ✓ Options: You can designate the working folder of projects.

■ [HELP]

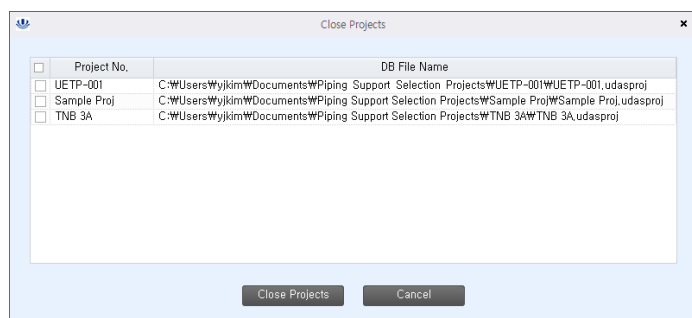
- ✓ Manual: You can call in files relating to using program.

Menu

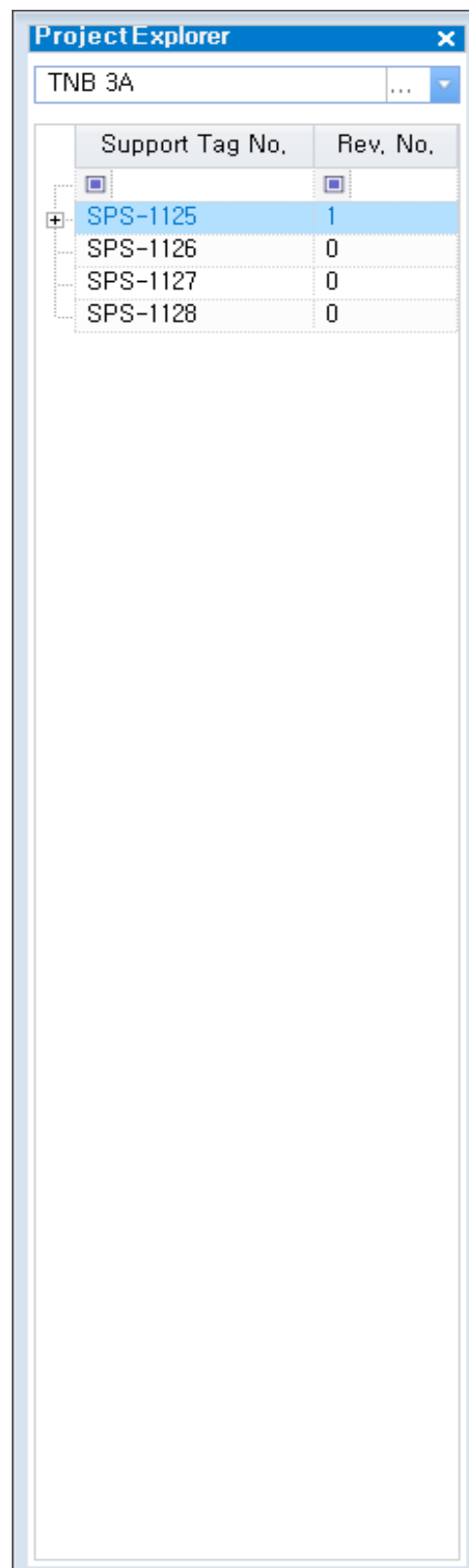
- ✓ Ask: You can email to the person in charge relating to using program.
- ✓ UNISON eTech : You can access UNISON eTech Inc. website.

4.2 Project Explorer

- 1) On the top, it shows on screen the list of project in progress and the list of drawings which have been selected.
- 2) When clicking the left side button of drop down button, you can see the project list and can delete the finished project from the list by clicking Close Projects button.



- 3) On the grid at the bottom, it shows the list of drawings which have been added to currently selected project. .
- 4) Drawings are composed of tree structure. The final revisal is seen on screen and you can check the former revisal by clicking + button.
- 5) It is possible to modify and/or delete the final revisal. If you select Support Tag No. and click on the right mouse button to click "Edit" or "Remove" button, then drawing screen will be displayed on working area.
- 6) It is impossible to modify and/or delete the former revisal. In this case, "View" is possible only. If you select Support Tag No. and click on the right mouse button to click "View" button, then drawing screen

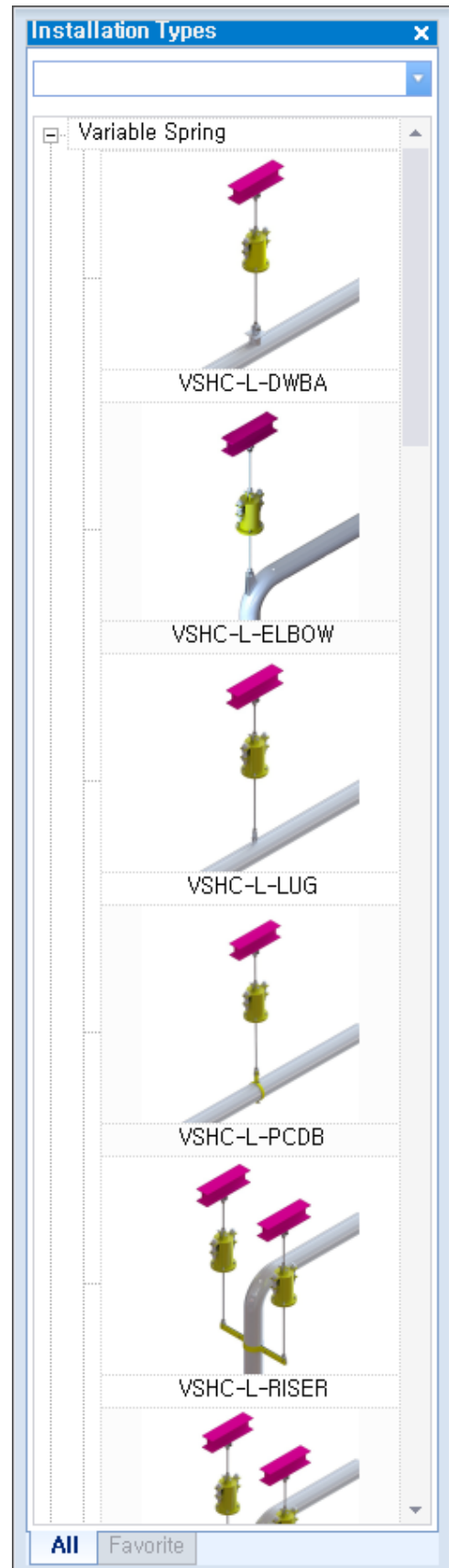


Menu

will open on "Working" area. Every button is displayed but these buttons are inactive except preview.

4.3 Installation Explorer

- 1) Divided into 6 groups overall, installation types are displayed.
 - Variable Spring Hanger
 - Constant Support
 - Strut
 - Snubber
 - Rigid
 - Under
- 2) By using drop down function, you can quickly search for installation types that you try to look for.
- 3) You can add installation types that you use frequently by using add favorite function.
- 4) You can delete items registered on favorite tab by using remove favorite function.



Menu

5. Project Menu

5.1 Create

- 1) Click Create button on Project menu.



- 2) Input Project No. (This is a required input item.)
- 3) Choose basic system of units (e.g. load, length, temperature, pressure, weight, etc.) which will be used at Project.
- 4) Choose Plant direction about east/west, north/south, up/down.
- 5) Choose the basic load type. (Hot load or Cold load)
- 6) Set up the maximum variability of Variable Spring Hanger. (UET Standard : 25%)
- 7) Set up the Permissible Angle value.
- 8) Choose the maximum Rod length.
- 9) Click Create button to save the setting value.

Create Project

Project

(2) Project No.

Project Name

Owner

Contractor

Units

(3) Load kgf N kN lbf

Length mm in

Temperature °C °F

Pressure kgf/cm² bar psi

Item Weight kg lb

Plant direction

(4) East/West

North/South

Up/Down

(5) Default Load Type Hot Load Cold Load

(6) Variability(VS) %

(7) Permissible Angle °

(8) Max. Rod Length 2000mm 2500mm 3000mm

Metric Units SI Units Imperial Units

(9) Create Cancel

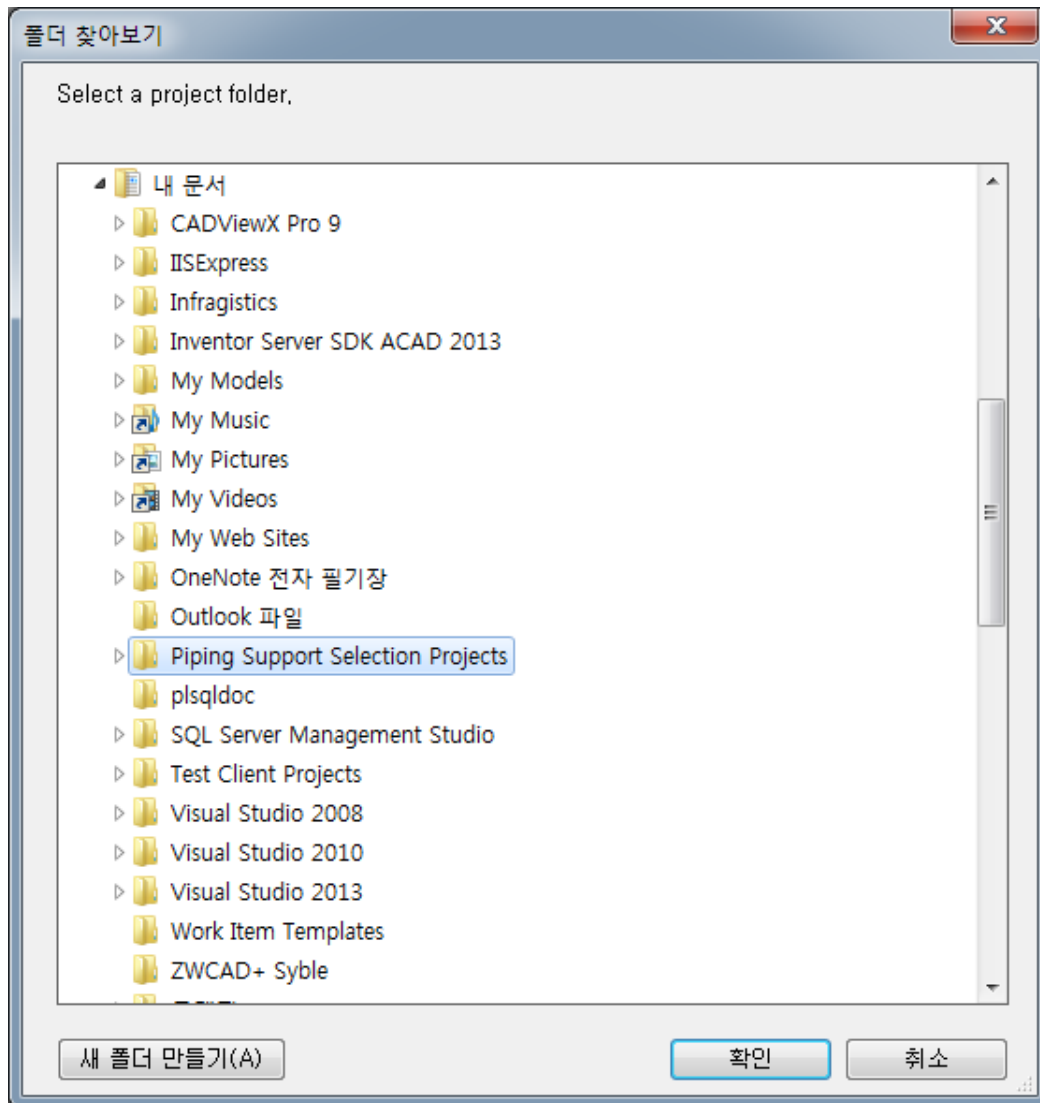
Menu

5.2 Open

- 1) Click the Open button on Project menu. (The basic selected folder is a route of Working Folder which has been set on [9. Options Menu.](#))



- 2) If you select a project folder, it is added to the project seeker and the drawing list will be displayed on the project seeker.
- 3) In the case that a project has been already added to the project seeker, then change that project into Active project.



Menu

5.3 Edit

- 1) Click Edit button on Project menu.



- 2) If you want to change project number, you can change it at this stage.
- 3) Units are applied when drawing up a new drawing. It means that units are not applied to existing drawings.
- 4) Click Save & Close button to save new setting value.

Edit Project Setting

Project

(2) Project No.

Project Name

Owner

Contractor

(3) Units

Load kgf N kN lbf

Length mm in

Temperature °C °F

Pressure kgf/cm² bar psi

Item Weight kg lb

Plant direction

East/West

North/South

Up/Down

Others

Default Load Type Hot Load Cold Load

Variability(VS) %

Permissible Angle °

Max. Rod Length 2000mm 2500mm 3000mm

Metric Units SI Units Imperial Units

(4) Save & Close Cancel

6. Drawing Menu

6.1 Add

- 1) Click Add button on the drawing menu. (It is used when drawing up a drawing.)



- 2) The input items in Support division group box should be required.
- 3) For each type, required input items are different. Required input box is shaded with red color on screen for every case.
- 4) Drawing Screen
- ① left area: Input Data Screen for selection
 - ② Middle area: Showing rendering images
 - ③ Bottom area: Result data after selection

| Node No. | Design Load | Pipe Movement | | Offset |
|----------|-------------|---------------|---------|--------|
| | kgf | Thermal | Maximum | mm |
| Up +Y | | | | |
| Down -Y | | | | |
| South +X | | | | |

| No. | Description |
|-----|-------------|
| | |
| | |
| | |
| | |

- 5) Input Data area is divided into 6 kinds of group overall.
- ✓ Support division
 - Support Tag No. : This is a required input item.
 - Rev. No. : This is a required input item and every Rev. No. should be different each other relating to one Support Tag No.
 - ✓ Pipe data
 - Pipe Size, O.D (Out Diameter) : Select a pipe nominal diameter or input an external diameter.
 - Pipe Matl Spec: Select the material of pipe. If there is no material possible to select, click the “.” button to add a new material of pipe.
 - Insul. Thk. : Input insulation thickness.
 - Dgn. Temp. : Input design temperature.
 - H/T Load: Input hydraulic pressure test load.
 - Node No. : Input node number.
 - Direction Axis: This will call the project direction which has been saved when creating the project.
 - Design Load: Input design load of each direction.
 - Thermal Movement: Input thermal movement of each direction.
 - Maximum Movement: Input maximum movement of each direction.
 - Offset: Input Offset of each direction except Up and/or Down direction.
 - ✓ Support data
 - Support Type No. : Select one of the installation types that have been predefined in advance. According to installation types, required items are changed and unnecessary items are deactivated.
 - Variability Req.: Input the upper limit of transformation rate of Variable Spring Hanger.
 - Dimension A, B: Input the length of installation.
 - Dimension C-C: Input the gap between hangers.
 - Elevation 1, 2: Set up the height of Top or Bottom.

- Elbow Radius: Set up when support is used for elbow pipe.
 - Dummy Pipe Size: Set up when dummy pipe is used for sustaining main pipe.
 - Elevation Looking: Designate elevation looking directions of PDF.
 - ✓ Drawing Info.
 - Title: Input the title of drawing.
 - Drawing No.: Input drawing number.
 - ISO Dwg. No. : Input ISO drawing number.
 - Rev. Date: Input revision date.
 - Rev. Desc. : Input revision description.
 - Dgn. Pressure: Input design pressure.
 - ISO Line No. : Input ISO line number.
 - Set Q'ty: Input Set quantity of BOM material.
 - ✓ Location plan
 - Print location: Designate whether it is displayed or not on printed drawing.
 - T1, T2, S1, S2: Input Grid numbers.
 - EW1, EW2: Input the distance from T1, T2 to installation point.
 - NS1, NS2: Input the distance from S1, S2 to installation point.
 - ✓ Units
 - Load: Select the unit of load.
 - Length: Select the unit of length.
 - Temperature: Select the unit of temperature.
 - Pressure: Select the unit of pressure.
 - Item Weight: Select the unit of weight.
- 6) Result Data screen is divided into 4 kinds of group overall.
- ✓ Result
 - Display selection result value according to installation types.

- ✓ Log
 - Display the expression of selection process with Input data.
 - ✓ Bill of Material
 - Display material lists according to installation types.
 - ✓ Message
 - When the result of material selection is against the input conditions, the contents are displayed according to items.
- 7) "Reset" button: Initialize all of data.
- 8) "Save" button: Add a new drawing to project.
- 9) "Revise" button: On add mode, it is deactivation state.
- 10) "Search" button: By using input data, you make a selection.
- 11) "Preview" button: Display the preview function before creating PDF drawing.

6.2 Add Similar



- 1) Click Add Similar button on the drawing menu.
- When active tab of working area is not drawing, it is inactive.
 - When active tab is drawing, a new drawing screen on which input data of relevant drawing screen has been inputted is displayed.
- 2) This has same screen as 6.1 ADD. So, please refer to [6.1 Add](#) for explaining screen.

6.3 Example

6.3.1 Variable Spring Type

- 1) Click Add button on drawing menu.
- 2) Select "VSHC-L-PCDB" for Support Type No. on Drawing screen or drag "VSHC-L-PCDB" image of installation type seeker into screen.
- 3) ※ Input "001" into the box for Support Tag No.
- 4) ※ Input "1" into the box for Rev. No.
- 5) Select "DN250" for Pipe Size.
- 6) Select "A53 Grade B" for Pipe Mat'l Spec.
- 7) Input 100 into the box for Insul. Thk.
- 8) Input 150 into the box for Dgn. Temp.
- 9) Input 3500 into the box for Hydro Test Load.
- 10) Input "100" into the box for Node No.
- 11) ※ Input 3000 into the box for Design Load Down.
- 12) ※ Input 15 into the box for Thermal Down.
- 13) ※ Input 24 into the box for Variability Req.
- 14) ※ Input 2500 into the box for Dimension A.
- 15) Input 500 into the box for Dimension B.
- 16) Input 1500 into the box for Elevation 1.
- 17) Input 3500 into the box for Elevation 2.
- 18) Input "ASD" into the boxes for Title , Drawing No. , ISO Dwg. No. , Rev. Desc. , Prepared , Checked , Approved.
- 19) Input 222 into the box for Dgn. Pressure.
- 20) Input "1500" into the box for ISO Line No.
- 21) Input 1 into the box for Set Q'ty.

Support division

Support Tag No.

Rev. No.

Pipe data

Pipe Size

O.D. [mm]

Pipe Mat'l Spec

Insul. Thk. mm

Dgn. Temp. °C

Hydro Test Load kgf

| Node No. | Design Load | Pipe Movement | | Offset |
|----------|-------------|---------------|---------|--------|
| | | Thermal | Maximum | |
| | kgf | mm | mm | mm |
| Up | +Y | | | |
| Down | -Y | 3000,0 | 15,0 | |
| South | +X | | | |
| North | -X | | | |
| West | +Z | | | |
| East | -Z | | | |

Support data

Support Type No.

Variability Req. [%]

Dimension A, B mm

Dimension C-C mm

Elevation 1, 2 mm

Elbow Radius

Dummy Pipe Size

Elevation Looking

Drawing info. Location plan Units

Title

Drawing No.

ISO Dwg. No.

Rev. Date

Rev. Desc.

Dgn. Pressure kgf/cm²

ISO Line No.

Set Q'ty

22) Click Search button to search the proper item for the relevant input conditions.

23) The screen displays result value and information of the proper item and BOM list.

Result

Variable spring

Series < VSM >

Size No. < 16 >

Spring Rate 26.79 kgf/mm

Variability 13.40 [%]

Hot Load 3000.0 kgf

Cold Load 2598.2 kgf

H. Set. Pos. 26.0 mm

C. Set. Pos. 11.0 mm

Result Log

Bill of Material

| No. | Description | Model | Size | Dim | Length | Material | Q'ty | Unit | Total | Remark |
|----------------|------------------------|----------|-------|------|--------|----------|------|------|----------|--------|
| 1 | VARIABLE SPRING HAN... | UC-VSM-C | 16 | 581 | | | 1 | 62.6 | 62.6 | |
| 2 | WELDED BEAM ATTAC... | WBA | M36 | 100 | | A36 | 1 | 8.6 | 8.6 | |
| 3 | WELDLESS EYE NUT | ENR | M36 | 40 | | A668G... | 3 | 1.6 | 4.8 | |
| 4 | HANGER ROD/ZNUTS | RDFT | M36 | 320 | 400 | A36 | 1 | 3.2 | 3.2 | |
| 5 | HANGER ROD/ZNUTS | RDBR | M36 | 1074 | 1150 | A36 | 1 | 9.2 | 9.2 | |
| 6 | DOUBLE BOLT PIPE CL... | PCDB-M | DN250 | 305 | | A36 | 1 | 20.9 | 20.9 | E=STD. |
| Total : | | | | | | | | | 109.3 kg | |

Message

24) Click Save button to save the relevant drawing.

25) You can preview the selection result in a form of PDF by clicking Preview button.

Drawing Preview

test/001/1

Zoom :

| NO. | DESCRIPTION | MODEL-SIZE | LENGTH | MATERIAL | Q'TY | WEIGHT UNIT | TOTAL | REMARK |
|-----|------------------------|--------------|--------|----------|------|-------------|-------|--------|
| 1 | VARIABLE SPRING HANGER | UC-VSM-C-16 | | | 1 | 62.6 | 62.6 | |
| 2 | WELDED BEAM ATTACHMENT | WBA-M36 | | A36 | 1 | 8.6 | 8.6 | |
| 3 | WELDLESS EYE NUT | ENR-M36 | | A668G-C | 3 | 1.6 | 4.8 | |
| 4 | HANGER ROD/ZNUTS | RDFT-M36 | 400 | A36 | 1 | 3.2 | 3.2 | |
| 5 | HANGER ROD/ZNUTS | RDBR-M36 | 1150 | A36 | 1 | 9.2 | 9.2 | |
| 6 | DOUBLE BOLT PIPE CLAMP | PCDB-M-DN250 | | A36 | 1 | 20.9 | 20.9 | E=STD. |

NOTES

- DIMENSION : MIN. WELD SIZE BY ASCE IF NOT SHOWN.
- APPLICABLE CODE & STANDARD : MSS-SP-58
- P.A. = PIPE ATTACHMENT
- S.A. = STEEL ATTACHMENT
- INSTALL LENGTH IS ADJUSTABLE (MIN. ± 80)
- (*) = HANGER ROD LENGTH IS FIELD ADJUSTABLE

TOTAL WEIGHT : 109.3 kg

LOCATION PLAN

| | | |
|------------------|--------------|-------------------------|
| PIPE MATERIAL | | A36 Gr50 B |
| PIPE SIZE () | | DN200 |
| DNAL TEMPERATURE | | 150 °C |
| DNAL PRESSURE | | 222 kgf/cm ² |
| INSULATION THK. | | 100 mm |
| HYDRO TEST LOAD | | 3000.0 kgf |
| ISO DWG NO. | ASD | |
| ISO LINE NO. | 100 | |
| SPRING DATA | | TOTAL TRAVEL |
| HOT LOAD | 3000.0 kgf | HOT POINT |
| COLD LOAD | 2598.2 kgf | COLD POINT |
| SPRING RATE | 26.79 kgf/mm | VARIABILITY |
| LOAD RANGE | | 2000.0 - 4000.0 |
| NODE NO. | DESIGN LOAD | PIPE MOVEMENT |
| | kgf | THERMAL |
| UP | | DOWN |
| DOWN | 3000.0 | 16.0 |
| SOUTH | | |
| NORTH | | |
| WEST | | |
| EAST | | |
| SUPPORT TAG NO. | 001 | |

26) You can check the result by using a mouse wheel button zooming in and zooming out.

27) You can print a preview screen by using Print button.

28) You can save a preview screen by using Save As button.

6.3.2 Constant Spring Type

- 1) Click Add button on the Drawing menu.
- 2) Select "CSHC-S-PCDB" for Support Type No. on Drawing screen or drag "CSHC-S-PCDB" image of installation type seeker into screen.
- 3) ※ Input "001" into the box for Support Tag No.
- 4) ※ Input "1" into the box for Rev. No.
- 5) Select "DN250" for Pipe Size.
- 6) Select "A53 Grade B" for Pipe Mat'I Spec.
- 7) Input 100 into the box for Insul. Thk.
- 8) Input 150 into the box for Dgn. Temp.
- 9) Input 3500 into the box for Hydro Test Load.
- 10) Input "100" into the box for Node No.
- 11) ※ Input 1000 into the box for Design Load Down.
- 12) ※ Input 65 into the box for Thermal Down.
- 13) ※ Input 2500 into the box for Dimension A.
- 14) Input 1500 into the box for Elevation 1.
- 15) Input 3500 into the box for Elevation 2.
- 16) Input "ASD" into the boxes for Title , Drawing No. , ISO Dwg. No. , Rev. Desc. , Prepared , Checked , Approved.
- 17) Input 222 into the box for Dgn. Pressure..
- 18) Input "1500" into the box for ISO Line No.
- 19) Input 1 into the box for Set Q'ty.
- 20) Click Search button to search the proper item for the relevant input conditions.
- 21) The screen displays result value and information of

Support division

Support Tag No.

Rev. No.

Pipe data

Pipe Size

O.D.

Pipe Mat'l Spec

Insul. Thk.

Dgn. Temp.

Hydro Test Load

| Node No. | Design Load | Pipe Movement | | Offset |
|----------|-------------|---------------|---------|--------|
| | | mm | mm | |
| | kgf | Thermal | Maximum | mm |
| Up | +Y | | | |
| Down | -Y | 1000.0 | 65.0 | |
| South | +X | | | |
| North | -X | | | |
| West | +Z | | | |
| East | -Z | | | |

Support data

Support Type No.

Variability Req.

Dimension A, B

Dimension C-C

Elevation 1, 2

Elbow Radius

Dummy Pipe Size

Elevation Looking South North West East -

Drawing info. Location plan Units

Title

Drawing No.

ISO Dwg. No.

Rev. Date

Rev. Desc.

Dgn. Pressure

ISO Line No.

Set Q'ty

the proper item and BOM list.

Result

Constant spring

Total Travel < 90 > [mm]

CS Size No. < 28 >

Hot Point 8,2

Cold Point 1,0

Hot Load 1000,0 kgf

Cold Load 1000,0 kgf

H. Set. Pos. 74,0 mm

C. Set. Pos. 9,0 mm

Result Log

Bill of Material

| No. | Description | Model | Size | Dim | Length | Material | Q'ty | Unit | Total | Remark |
|----------------|------------------------|----------|----------|------|--------|----------|------|------|----------------|--------|
| 1 | CONSTANT SPRING HA... | UC-CSH-C | 28-90... | 463 | | | 1 | 76,0 | 76,0 | |
| 2 | STRUCTURAL WELDING... | SWL | M20 | 75 | | A36 | 2 | 0,5 | 1,0 | |
| 3 | HANGER ROD/2NUTS | RDBR | M20 | 1647 | 1700 | A36 | 1 | 4,3 | 4,3 | |
| 4 | WELDLESS EYE NUT | ENR | M20 | 35 | | A668G... | 1 | 0,9 | 0,9 | |
| 5 | DOUBLE BOLT PIPE CL... | PCDB-L | DN250 | 280 | | A36 | 1 | 10,4 | 10,4 | E=STD. |
| Total : | | | | | | | | | 92,6 kg | |

Message

22) Click Save button to save the relevant drawing.

23) You can preview the selection result in a form of PDF by clicking Preview button.

The screenshot shows a 'Drawing Preview' window for a drawing titled 'test/CSHC-S-PCDB(001_2)/1'. The drawing includes a technical drawing of a spring hanger assembly with dimensions and a Bill of Materials table.

| NO. | DESCRIPTION | MODEL-SIZE | LENGTH | MATERIAL | Q'TY | WEIGHT UNIT | REMARK |
|-----|------------------------|------------|--------|----------|------|-------------|--------|
| 1 | CONSTANT SPRING HANGER | UC-CSH-C | | AS6 | 1 | 76,0 | |
| 2 | STRUCTURAL WELDING LIP | SWL | | AS6 | 2 | 0,5 | |
| 3 | HANGER ROD/NUTS | RDBR | 1700 | AS6 | 1 | 4,3 | |
| 4 | WELDLESS EYE NUT | ENR | | AS688G | 1 | 0,9 | |
| 5 | DOUBLE BOLT PIPE CLAMP | PCDB-L | DN250 | AS6 | 1 | 10,4 | E=STD. |

NOTES

1. DIMENSION : MIN. WELD SIZE BY AS6
2. MIN. WELD : MIN. WELD SIZE BY AS6
3. APPLICABLE CODE & STANDARD : MSS-SP-58
4. P.A = PIPE ATTACHMENT
5. INSTALL LENGTH IS ADJUSTABLE (MIN. ± 80)
6. (*) : HANGER ROD LENGTH IS FIELD ADJUSTABLE.

PIPE MATERIAL : AS6 Grade B
PIPE SIZE () : DN250
DNK TEMPERATURE : 150 °C
DNK PRESSURE : 222 kg/cm²
INSULATION THK : 50 mm
HYDRO TEST LOAD : 3000,0 kgf
ISO DWG NO. : ASD
ISO LINE NO. : 1500
SPRING DATA : TOTAL TRAVEL : 90 mm
HOT LOAD : 1000,0 kgf **HOT POINT** : 8,2
COLD LOAD : 1000,0 kgf **COLD POINT** : 1,0
SPRING RATE : VARIABILITY
LOAD RANGE : 1000,0 ± 100,0 kgf
INDEX NO. : 100 **DESIGN LOAD** : kgf **PIPE MOVEMENT** : mm
UP : TENSILE **DOWN** : COMPRESSIVE
WT : UP **WT** : DOWN
WT : SOUTH **WT** : NORTH
WT : WEST **WT** : EAST
SUPPORT TAG NO. : CSHC-S-PCDB(001_2) **SCALE** : N/A **DRAWING NO.** : ASD **PAGE** : 1 **REV** : 1

24) You can check the result by using a mouse wheel button zooming in and zooming out.

25) You can print a preview screen by using Print button.

26) You can save a preview screen by using Save As button.

6.3.3 Strut Type

- 1) Click Add button on the Drawing menu.
- 2) Select "STRUT-L-PCDB" for Support Type No. on Drawing screen or drag "STRUT-L-PCDB" image of installation type seeker into screen.
- 3) ※ Input "001" into the box for Support Tag No.
- 4) ※ Input "1" into the box for Rev. No.
- 5) Select "DN250" for Pipe Size.
- 6) Select "A53 Grade B" for Pipe Mat'l Spec.
- 7) Input 100 into the box for Insul. Thk.
- 8) Input 150 into the box for Dgn. Temp.
- 9) Input 3500 into the box for Hydro Test Load.
- 10) Input "100" into the box for Node No.
- 11) ※ Input 3000 into the box for Design Load Down.
- 12) ※ Input 2500 into the box for Dimension A.
- 13) Input 1500 into the box for Elevation 1.
- 14) Input 3500 into the box for Elevation 2.
- 15) Input "ASD" into the boxes for Title, Drawing No. , ISO Dwg. No. , Rev. Desc. , Prepared , Checked , Approved.
- 16) Input 222 into the box for Dgn. Pressure.
- 17) Input "1500" into the box for ISO Line No.
- 18) Input 1 into the box for Set Q'ty.
- 19) Click Search button to search the proper item for the relevant input conditions.
- 20) The screen displays result value and information of the proper item and BOM list.

Support division

| | |
|-----------------|-----|
| Support Tag No. | 001 |
| Rev. No. | 1 |

Pipe data

| | | |
|-----------------|-------------|--------|
| Pipe Size | DN | DN250 |
| O.D. | 273,05 [mm] | |
| Pipe Mat'l Spec | A53 Grade B | Carbon |
| Insul. Thk. | 100 mm | |
| Dgn. Temp. | 150 °C | |
| Hydro Test Load | 3500,0 kgf | |

| Node No. | Design Load | Pipe Movement | | Offset |
|----------|-------------|---------------|---------|--------|
| | | mm | | |
| | kgf | Thermal | Maximum | mm |
| Up | +Y | | | |
| Down | -Y | 3000,0 | | |
| South | +X | | | |
| North | -X | | | |
| West | +Z | | | |
| East | -Z | | | |

Support data

| | | | |
|-------------------|--|------|----|
| Support Type No. | STRUT-L-PCDB | | |
| Variability Req. | 24 [%] | | |
| Dimension A, B | 2500 | mm | |
| Dimension C-C | mm | | |
| Elevation 1, 2 | 1500 | 3500 | mm |
| Elbow Radius | <input type="radio"/> Long <input type="radio"/> Short | | |
| Dummy Pipe Size | DN | | |
| Elevation Looking | <input type="radio"/> South <input type="radio"/> North <input type="radio"/> West <input type="radio"/> East <input checked="" type="radio"/> - | | |

Drawing info.

| | | | |
|---------------|-------------------------|-----|-----|
| Title | ASD | | |
| Drawing No. | ASD | | |
| ISO Dwg. No. | ASD | | |
| Rev. Date | 2015-11-23 | | |
| Rev. Desc. | ASD | | |
| | ASD | ASD | ASD |
| Dgn. Pressure | 222 kgf/cm ² | | |
| ISO Line No. | 1500 | | |
| Set Q'ty | 1 | | |

Result

Hot Load kgf

Cold Load kgf

H. Set. Pos. mm

C. Set. Pos. mm

Result

Bill of Material

| No. | Description | Model | Size | Dim | Length | Material | Q'ty | Unit | Total | Remark |
|----------------|------------------|---------|-------|------|--------|----------|------|------|----------------|----------|
| 1 | SWAY STRUT | SSA | 1 | 2075 | | | 1 | 19,2 | 19,2 | C-C=2075 |
| 2 | REAR BRACKET | BSS | 1 | 65 | | A36 | 1 | 2,6 | 2,6 | |
| 3 | STRUT PIPE CLAMP | STPC-03 | DN250 | 360 | | A36 | 1 | 33,8 | 33,8 | E=STD. |
| Total : | | | | | | | | | 55,6 kg | |

Message

21) Click Save button to save the relevant drawing.

22) You can preview the selection result in a form of PDF by clicking Preview button.

Drawing Preview

test/001/1
Zoom:

NOTES

1. DIMENSION :
2. MIN. WELD : MIN. WELD SIZE BY ASSC IF NOT SHOWN
3. APPLICABLE CODE & STANDARD : MSS-SP-58
4. P.A = PIPE ATTACHMENT
5. S.A = STEEL ATTACHMENT
6. (*) : HANGER ROD LENGTH IS FIELD ADJUSTABLE.

TOTAL WEIGHT : 55,6 kg

LOCATION PLAN

| NO. | DESCRIPTION | MODEL-SIZE | LENGTH | MATERIAL | Q'TY | WEIGHT | REMARK |
|-----|------------------|---------------|--------|----------|------|--------|----------|
| 1 | SWAY STRUT | SSA-1 | | | 1 | 19,2 | C-C=2075 |
| 2 | REAR BRACKET | BSS-1 | | A36 | 1 | 2,6 | |
| 3 | STRUT PIPE CLAMP | STPC-03-DN250 | | A36 | 1 | 33,8 | E=STD. |

23) You can check the result by using a mouse wheel button zooming in and zooming out.

24) You can print a preview screen by using Print button.

25) You can save a preview screen by using a Save As button.

6.6.4 Snubber Type

- 1) Click Add button on Drawing menu.
- 2) Select "SNUBBER-L-PCDB" for Support Type No. on Drawing screen or drag "SNUBBER-L-PCDB" image of installation type seeker into screen.
- 3) ✖ Input "001" into the box for Support Tag No.
- 4) ✖ Input "1" into the box for Rev. No.
- 5) Select "DN250" for Pipe Size.
- 6) Select "A53 Grade B" for Pipe Mat'I Spec.
- 7) Input 100 into the box for Insul. Thk.
- 8) Input 150 into the box for Dgn. Temp.
- 9) Input 3500 into the box for Hydro Test Load.
- 10) Input "100" into the box for Node No.
- 11) ✖ Input 3000 into the box for Design Load Down.
- 12) ✖ Input 25 into the box for Thermal Down.
- 13) Input 10 into the box for Thermal North.
- 14) Input 10 into the box for Thermal East.
- 15) ✖ Input 2500 into the box for Dimension A.
- 16) Input 1500 into the box for Elevation 1.
- 17) Input 3500 into the box for Elevation 2.
- 18) Input "ASD" in the boxes for Title, Drawing No. , ISO Dwg. No. , Rev. Desc. , Prepared , Checked , Approved.
- 19) Input 222 into the box for Dgn. Pressure.
- 20) Input "1500" into the box for ISO Line No.
- 21) Input 1 into the box for Set Q'ty.
- 22) Click Search button to search the proper item for the

Support division

Support Tag No.

Rev. No.

Pipe data

Pipe Size

O.D. [mm]

Pipe Mat'l Spec

Insul, Thk. mm

Dgn. Temp. °C

Hydro Test Load kgf

| | Node No. | Design Load | Pipe Movement | | Offset |
|-------|----------|-------------|---------------|---------|--------|
| | | | kgf | Thermal | |
| Up | +Y | | | | |
| Down | -Y | 3000,0 | 25,0 | | |
| South | +X | | | | |
| North | -X | | 10,0 | | |
| West | +Z | | | | |
| East | -Z | | 10,0 | | |

Support data

Support Type No.

Variability Req. [%]

Dimension A, B mm

Dimension C-C mm

Elevation 1, 2 mm

Elbow Radius

Dummy Pipe Size

Elevation Looking South North West East -

Drawing info. Location plan | Units

Title

Drawing No.

ISO Dwg. No.

Rev. Date

Rev. Desc.

Dgn. Pressure kgf/cm²

ISO Line No.

Set Q'ty

relevant input conditions.

23) The screen displays result value and information of the proper item and BOM list.

| Result | | Bill of Material | | | | | | | | | | |
|---------------|------------|------------------|--------------------|---------|-------|------|--------|----------|------|------|---------|----------|
| Snubber | | No. | Description | Model | Size | Dim | Length | Material | Q'ty | Unit | Total | Remark |
| Rated Load | 3000,0 kgf | 1 | HYDRAULIC SNUBBER | SNA-EA | 3-100 | 2079 | | | 1 | 37,3 | 37,3 | C-C=2079 |
| Rated Stroke | 100,0 mm | 2 | REAR BRACKET | BSN | 3 | 66 | | S25C | 1 | 1,7 | 1,7 | |
| Design Load | 3000,0 kgf | 3 | SNUBBER PIPE CLAMP | SNPC-04 | DN250 | 355 | | A36 | 1 | 33,4 | 33,4 | E=STD. |
| Design Stroke | 25,0 mm | | | | | | | | | | | |
| Hot Point | 25,0 mm | | | | | | | | | | | |
| Cold Point | 0,0 mm | | | | | | | | | | | |
| | | | | | | | | | | | Total : | 72,4 kg |
| Hot Load | | Message | | | | | | | | | | |
| Cold Load | | | | | | | | | | | | |
| H. Set. Pos. | | | | | | | | | | | | |
| C. Set. Pos. | | | | | | | | | | | | |
| Result | | Log | | | | | | | | | | |

24) Click Save button to save the relevant Drawing.

25) You can preview the selection result in a form of PDF by clicking Preview button.

The drawing preview window displays a technical drawing of a snubber assembly. The drawing includes a side view and a location plan. The BOM table is as follows:

| No. | Description | Model-Size | Length | Material | Q'ty | Weight (kg) | Remark |
|-----|--------------------|---------------|--------|----------|------|-------------|----------|
| 1 | HYDRAULIC SNUBBER | SNA-EA-100 | | | 1 | 37,3 | C-C=2079 |
| 2 | REAR BRACKET | BSN-3 | | S25C | 1 | 1,7 | |
| 3 | SNUBBER PIPE CLAMP | SNPC-04-DN250 | | A36 | 1 | 33,4 | E=STD. |

NOTES:

- DIMENSION : MIN. WELD SIZE BY ASG
- MIN. WELD SIZE BY ASG
- APPLICABLE CODE & STANDARD : MSS-SP-58
- S.A. = PIPE ATTACHMENT
- INSTALL LENGTH IS ADJUSTABLE (MIN. 80)

TOTAL WEIGHT : 72,4 kg

PIPE MATERIAL: A36 (Grade B)
 PIPE SIZE (): DN250
 DNAL TEMPERATURE: 150 °C
 DNAL PRESSURE: 222 kgf/cm²
 INSULATION THK: 100 mm
 HYDRO TEST LOAD: 3000,0 kgf
 ISO DWG NO.: ASD
 ISO LINE NO.: 1500

SPRING DATA: TOTAL TRAVEL: 100,0 mm
 HOT LOAD: 3000,0 kgf HOT POINT: 25,0 mm
 COLD LOAD: 3000,0 kgf COLD POINT: 0,0 mm
 SPRING RATE: VARIABILITY

LOAD RANGE: 100 kgf

PIPE MOVEMENT mm: THERMAL: 25,0 mm, WORKMAN: 10,0 mm

DESIGN LOAD: 3000,0 kgf RATED LOAD: 3000,0 kgf
 MOVEMENT: 25,0 mm STROKE SIZE: 100,0 mm
 COLD POINT: 0,0 mm HOT POINT: 25,0 mm

SUPPORT TAG NO.: 001

SCALE: N/A

DRAWING NO.: ASD

PAGE: 1

REV: 1

CONTRACTOR: test 01
 SUB-SUPPLIER: UNISON C Tech Co., Ltd.
 PROJECT: test
 TITLE: ASD

26) You can check the result by using a mouse wheel button zooming in and zooming out.

27) You can print a preview screen by using a Print button.

28) You can save a preview screen by using Save As button.

7. Data Menu

7.1 Drawing List



- 1) After check the check box of drawing that you try to make a selection, click the "Batch Selection" button to make Selection plenty of drawings in a lump.
- 2) After check the check box of drawing that you try to save in a form of PDF, click the "Batch PDF" button to create plenty of drawings in a form of PDF in a lump.
- 3) After check the check box of the drawing that you try to save in a form of PDF, click the "Combine PDF" button to make plenty of drawings into a form of PDF all in one.
- 4) You can check the final revision drawing list and data by clicking "Refresh" button.
- 5) You can check all drawings and data of the project by clicking "All Revisions" button.
- 6) You can save Excel file data into DB by clicking "Import" button.
- 7) After check the check box of the drawing that you try to export, click "Export" button in order to export data that you see on screen into a form of Excel file.
- 8) If you drag the header of a certain column into "Drag a column header here to group by that column" area, you can check the data which is grouped by relevant column.

| Drawing List [Sample Proj] x | | | | | | | | | | | | | |
|--|-------|---------|----------|-------|-------|-------|------------|---------|----------|------------|-----------------|--------------|----------------|
| Drawing List : Sample Proj | | | | | | | | | | | | | |
| Batch Selection Batch PDF Refresh Import Export | | | | | | | | | | | | | |
| Drag a column header here to group by that column. | | | | | | | | | | | | | |
| | TagID | TagNo | RevSeqNo | RevNo | DwgNo | Title | RevDate | RevDesc | LoadUnit | LengthUnit | TemperatureUnit | PressureUnit | ItemWeightUnit |
| 1 | | 1 VS-01 | | 1 0 | | | 2015-09-08 | | kgf | mm | °C | kgf/cm² | kg |
| 2 | | 2 VS-02 | | 1 0 | | | | | kgf | mm | °C | kgf/cm² | kg |

7.2 BOM List

- 1) You can check the BOM data of the final revision drawing by clicking "Refresh" button.
- 2) You can check the BOM data that belong to the project by clicking "All Revisions" button.
- 3) You can export data that you see on screen into a form of Excel file by clicking "Export" button.
- 4) If you drag the header of a certain column into "Drag a column header here to group by that column" area, you can check the data which is grouped by relevant column.

| | TagID | Support Tag No. | Rev. No. | Part No. | Desc | ModelCode | Size | Dim | Length | Mat'l Spec | Q'ty | Set Q'ty | Weight | Total Weight | Set Total Weight |
|---|-------|-----------------|----------|----------|------------------------|-----------|------|-----|--------|------------|------|----------|--------|--------------|------------------|
| 1 | 1 | VS-01 | 0 | 1 | VARIABLE SPRING HANGER | UC-VSM-C | 17 | | 654.98 | | 1 | 1 | 76.20 | 76.20 | 76.20 |
| 2 | 1 | VS-01 | 0 | 2 | WELDED BEAM ATTACHMENT | WBA | M42 | | 125.00 | A36 | 2 | 2 | 11.00 | 22.00 | 22.00 |
| 3 | 1 | VS-01 | 0 | 3 | WELDLESS EYE NUT | ENR | M42 | | 60.00 | A668Gr.C | 3 | 3 | 3.30 | 9.90 | 9.90 |
| 4 | 1 | VS-01 | 0 | 4 | HANGER ROD/2NUTS | RDBR | M42 | | 207.51 | 300 A36 | 1 | 1 | 3.27 | 3.27 | 3.27 |
| 5 | 1 | VS-01 | 0 | 5 | HANGER ROD/2NUTS | RDBR | M42 | | 207.51 | 300 A36 | 1 | 1 | 3.27 | 3.27 | 3.27 |

7.3 BOM Summary

- 1) It will display total material weight of the final revision drawing by clicking "Refresh" button.
- 2) You can export data that you see on screen into a form of Excel file by clicking "Export" button.

| | TagID | Support Tag No. | Rev. No. | Q'ty | Weight |
|---------|-------|-----------------|----------|------|--------|
| 1 | 1 | VS-01 | 0 | 8 | 114.64 |
| 2 | 2 | VS-02 | 0 | 0 | 0.00 |
| Total : | | | | | 114.64 |

8. View Menu

8.1 Project Explorer

- ✓ In a case that the user closes the project seeker, this function works to load it again.

8.2 Installation Type Explorer

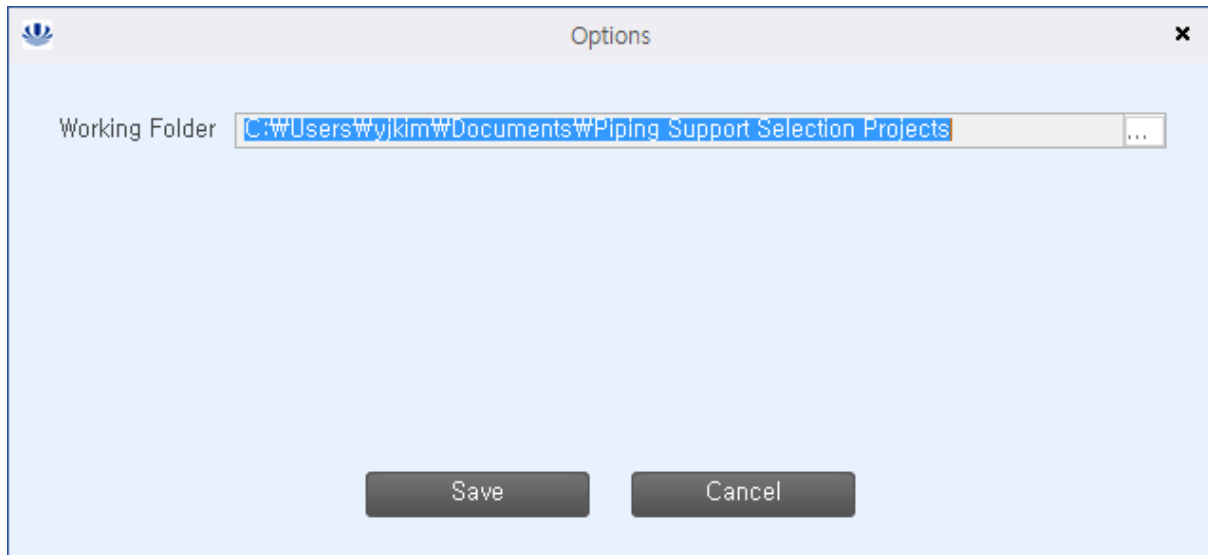
- ✓ In a case that the user closes the installation type seeker, this function works to load it again.

8.3 Switch Windows

- 1) You can check the list of screens that are loaded in program.
- 2) In a case that multiple screens are loaded, you can change active tap by selecting the list.
- 3) You can close multiple screens together.

9. Options Menu

- 1) When project is created, you can set up the root route where the project is saved.
- 2) This is a route of folder that is selected basically while doing [5.2 Open Project](#).



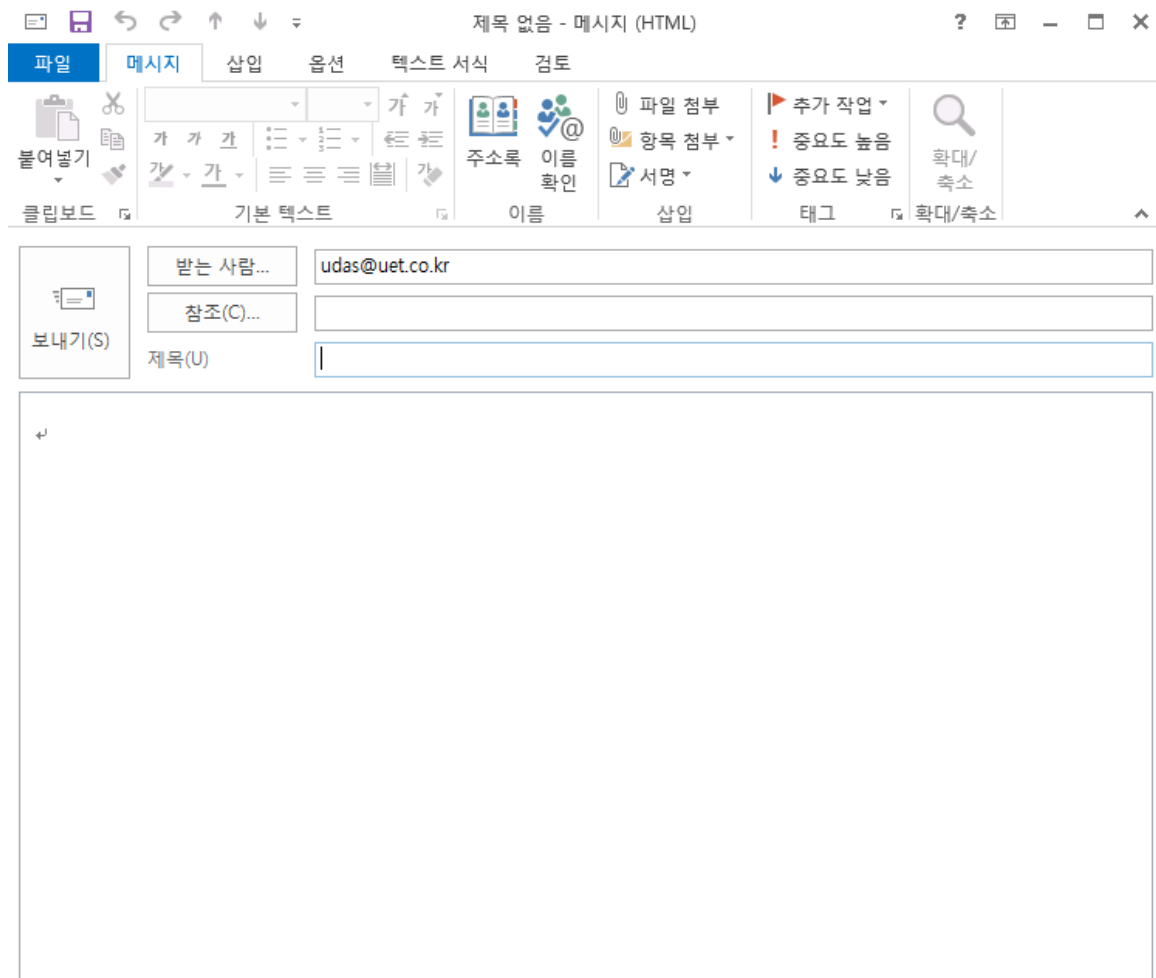
10. Help Menu

10.1 Manual

- ✓ Display program operation manual.

10.2 Ask

- ✓ If you have any further questions, you can email to the person in charge.



10.3 UNISON eTech

- ✓ Transfer to UNISON eTech website. (<http://www.uet.co.kr>)