



Tutorial

Engineering results presentation and Reporting with SDC Verifier

Updated on: December 21st, 2023

Tested with: SDC Verifier 2023 R2.1

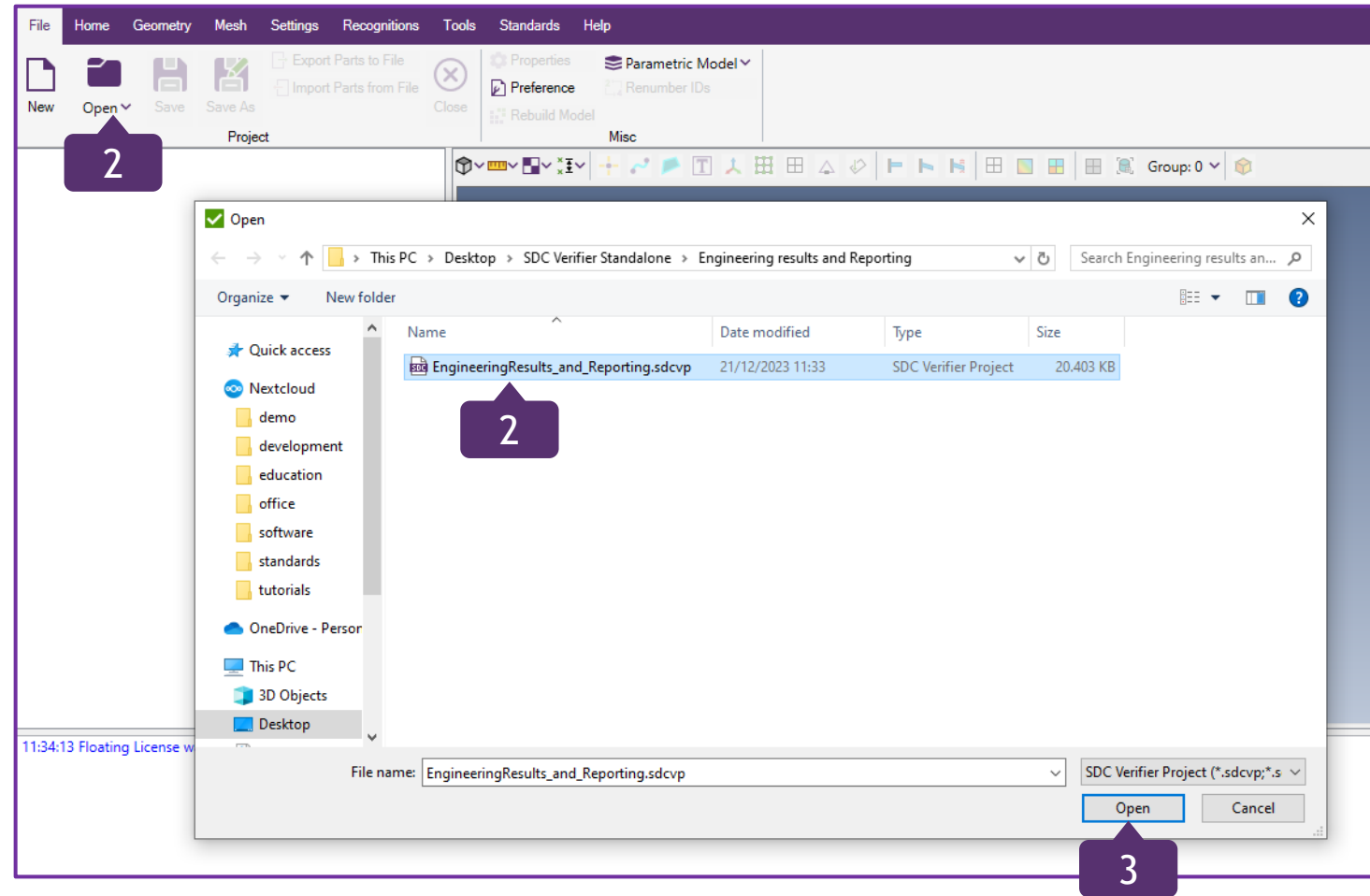
SDC Verifier is a powerful all-in-one software solution for structural design, FEA analysis, and verification according to standards.

This step-by-step tutorial is designed to **get** you **started** with the main SDC Verifier features.
You will learn how to:

- Launch SDC Verifier;
- Preview General Results;
- Configure Settings of Edit View Window
- Preview Results from Checks
- Generate Tables and Plots
- Add Governing Loads
- Adjust Settings in Number Format
- Add Criteria Plot for the Loads
- Generate and Export the Entire Report

Open the Starter Model

- 1 Launch SDC Verifier 2023 R2.1
- 2 Press Open and select project *EngineeringResults_and_Reporting*
- 3 Press *Open*



1

In *Jobs* section, to check the created *Plots*, expand *Individual Loads* => 1..*Gravity* and 2..*Vertical force*

2

Expand *Plots* and execute right click on 2..*Seqv* (IL1, All Entities, v1, Total [Abs Max])

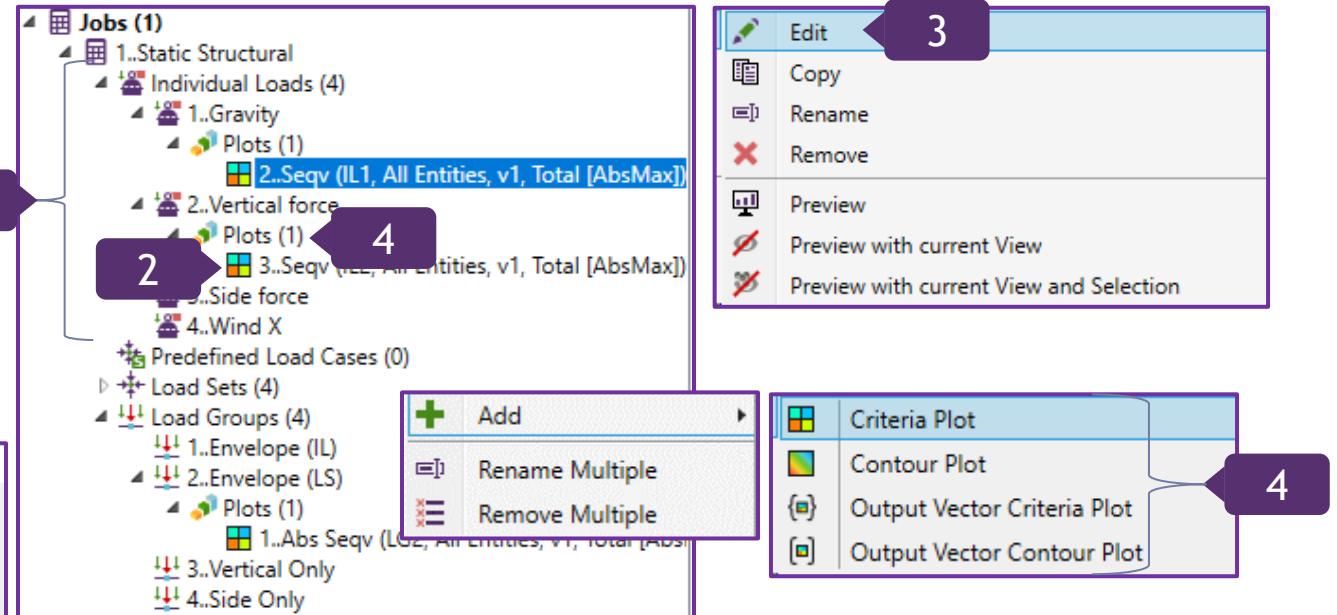
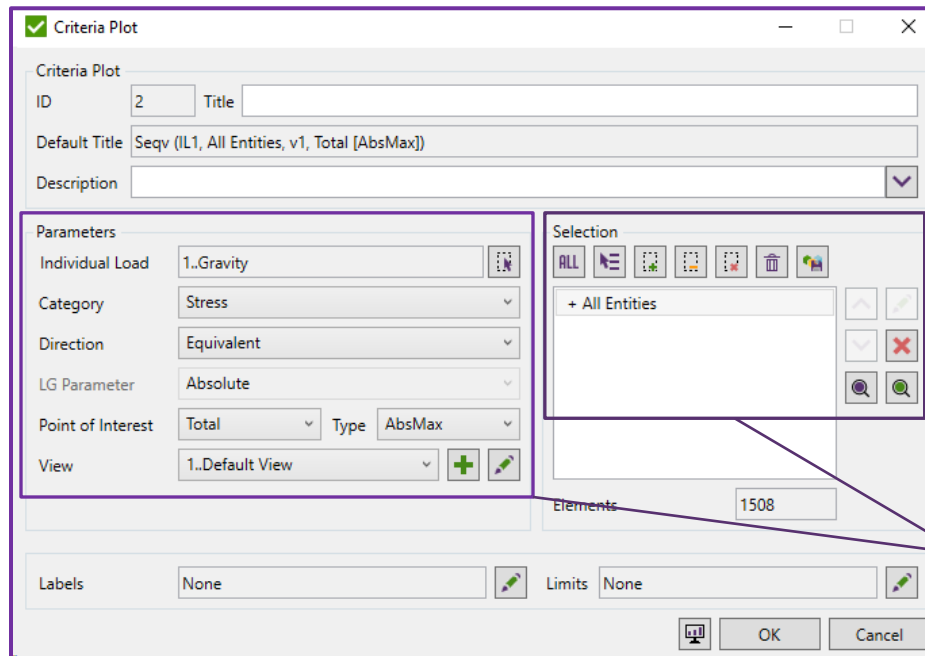
3

Select *Edit*

4

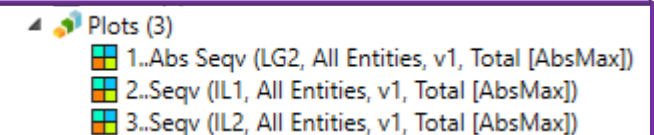
To add more *Plots*, execute right click on the required *Plots* => Add, and select relevant command

In Jobs section, there is a possibility to preview General Results, and add extra *Plots*.



In Criteria Plot window, the Parameters like Individual Load, Category, Direction, Point of Interest, Type, View, along with Selection can be adjusted and modified.

Additionally, the results are grouped together in the Plots section.



Settings of Edit View Window

1

In View section, press

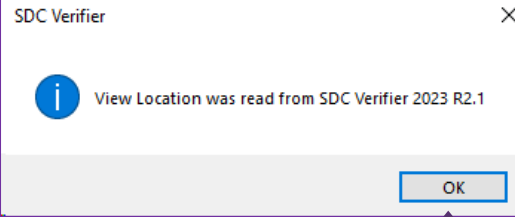


2

Press *Get*, and then press *OK*

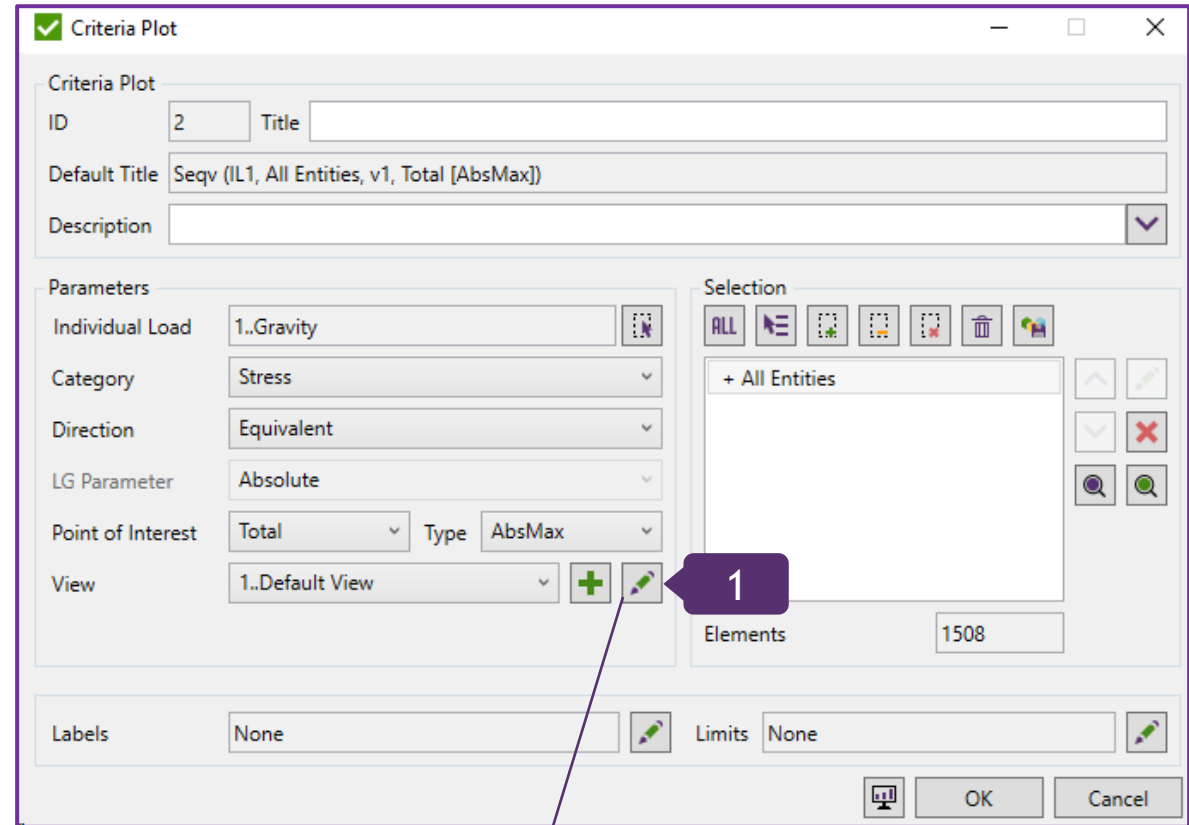
3

Press *Advanced...*



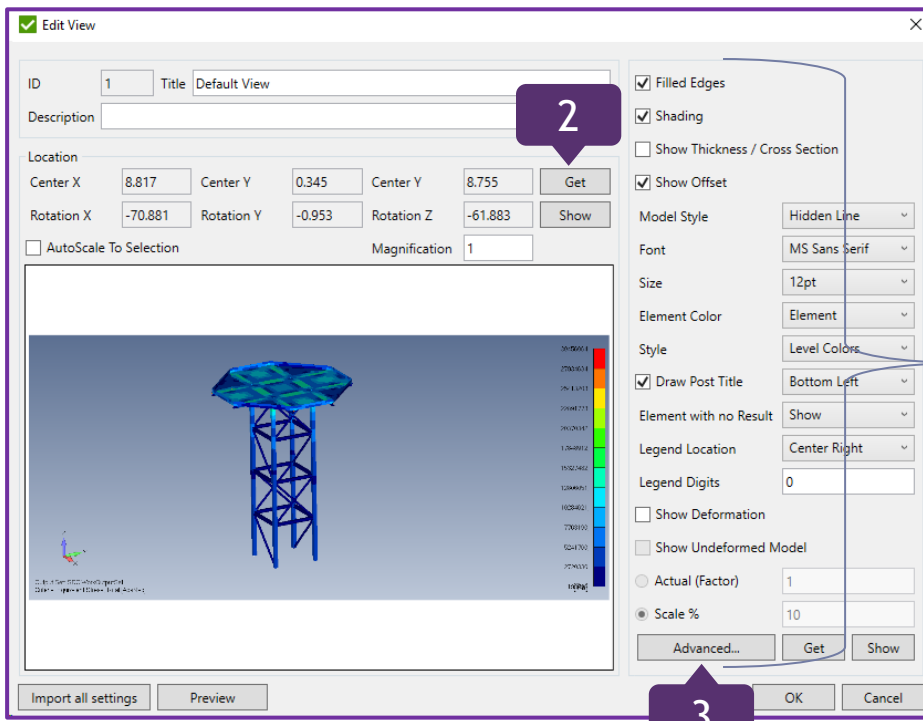
2

Filled Edges, Shading, Thickness/Cross Sections, Offsets etc., can be ON or OFF. The rest of the options can also be set.



1

Editing Option allows to adjust the view of the model. The adjustments like changing the rotation angle or zooming of the model are carried out directly on the graphical interface.



2

3

Advanced Settings of Edit View Window (Continuation)

4

Press  to go to *Legend Settings*

5

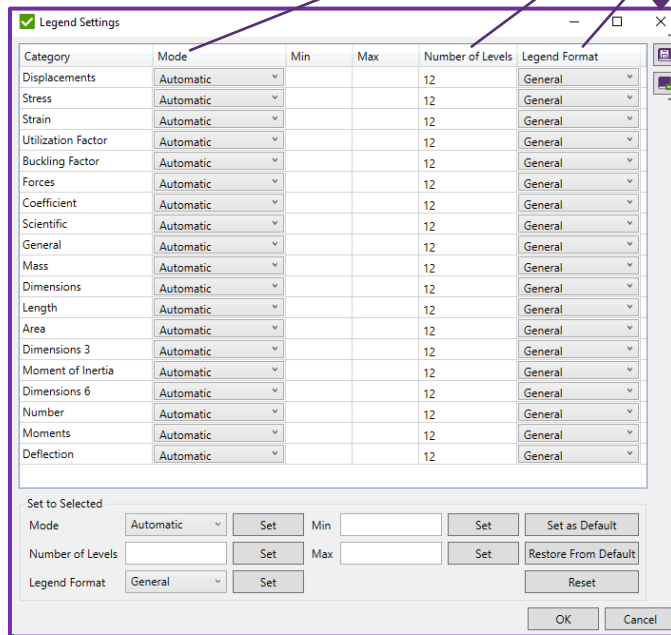
Close the window

6

Close the window

7

Press *OK*



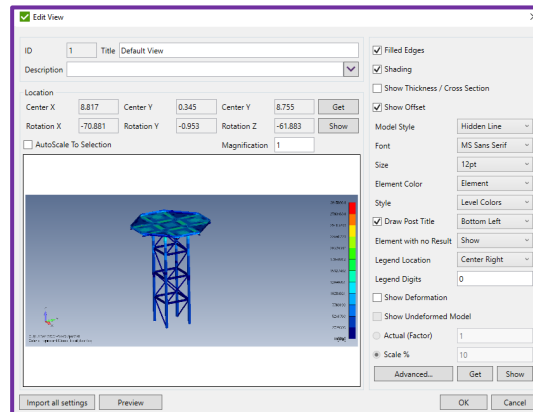
The Legend Settings dialog box contains a table with the following data:

Category	Mode	Min	Max	Number of Levels	Legend Format
Displacements	Automatic			12	General
Stress	Automatic			12	General
Strain	Automatic			12	General
Utilization Factor	Automatic			12	General
Buckling Factor	Automatic			12	General
Forces	Automatic			12	General
Coefficient	Automatic			12	General
Scientific	Automatic			12	General
General	Automatic			12	General
Mass	Automatic			12	General
Dimensions	Automatic			12	General
Length	Automatic			12	General
Area	Automatic			12	General
Dimensions 3	Automatic			12	General
Moment of Inertia	Automatic			12	General
Dimensions 6	Automatic			12	General
Number	Automatic			12	General
Moments	Automatic			12	General
Deflection	Automatic			12	General

Below the table, there are fields for 'Set to Selected', 'Mode' (Automatic), 'Number of Levels' (12), and 'Legend Format' (General). Buttons for 'Set', 'Min', 'Max', 'Set as Default', 'Restore From Default', and 'Reset' are also present.

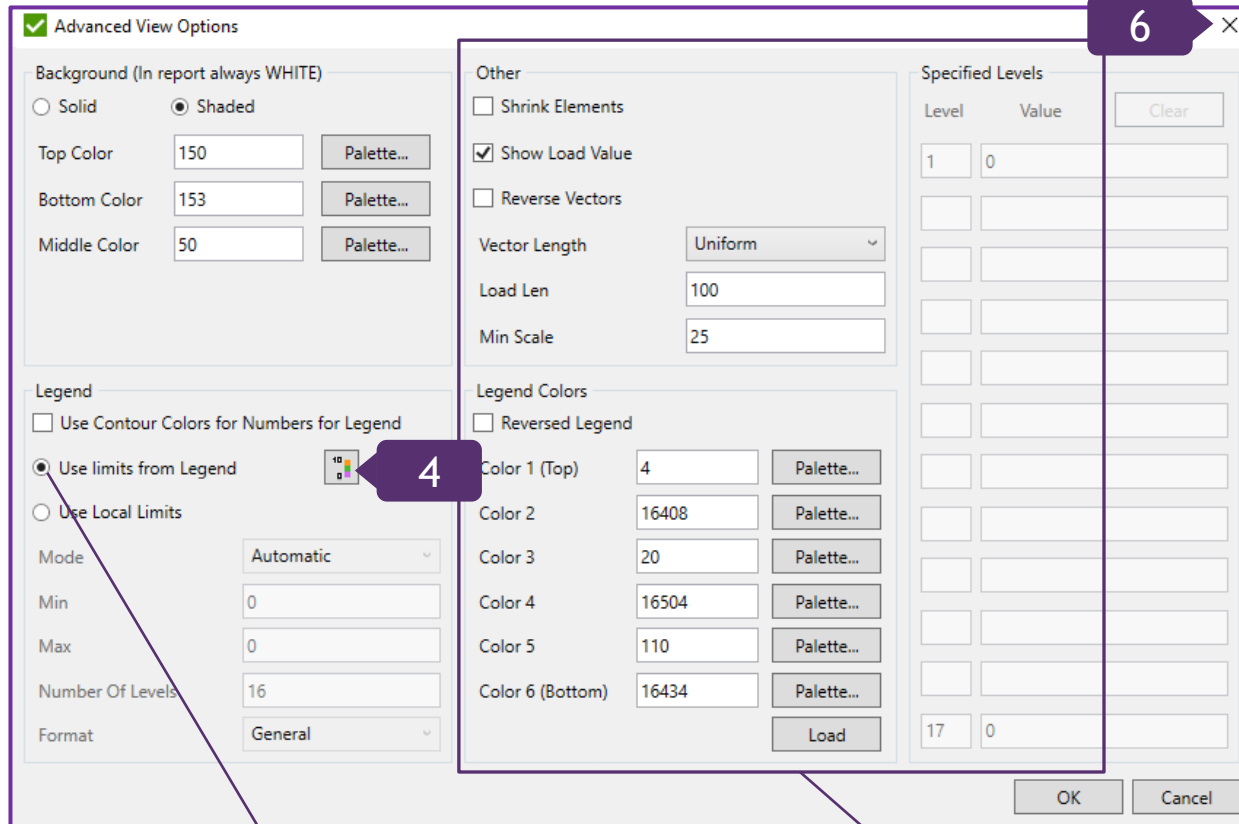
By default, the settings are the following: Mode - Automatic; Number of Levels - 12; Legend Format - General. But these options are adjustable.

The Settings can be saved, and also stored in the Library.



The Edit View dialog box shows a 3D model of a structure. It includes fields for 'ID' (1), 'Title' (Default View), 'Description', 'Location' (Center X: 0.817, Center Y: 0.345, Center Z: 0.755), 'Rotation X' (-70.881), 'Rotation Y' (-0.953), 'Rotation Z' (-61.883), 'Magnification' (1), 'Model Style' (MS Sans Serif), 'Font' (12pt), 'Element Color' (General), 'Style' (Level Colors), 'Legend Location' (Center Right), 'Legend Digits' (0), 'Show Deformation' (checked), 'Show Undeformed Model' (unchecked), 'Actual (Factor)' (1), and 'Scale %' (10). Buttons for 'Import all settings', 'Preview', 'OK', and 'Cancel' are at the bottom.

Advanced View Options allow to define Legend's Background, Colors and other Specified Levels.



The Advanced View Options dialog box is divided into several sections:

- Background (In report always WHITE):** Radio buttons for 'Solid' and 'Shaded' (selected). Fields for 'Top Color' (150), 'Bottom Color' (153), and 'Middle Color' (50) with 'Palette...' buttons.
- Other:** Checkboxes for 'Shrink Elements' (unchecked), 'Show Load Value' (checked), and 'Reverse Vectors' (unchecked). Fields for 'Vector Length' (Uniform), 'Load Len' (100), and 'Min Scale' (25).
- Legend:** Checkboxes for 'Use Contour Colors for Numbers for Legend' (unchecked), 'Use limits from Legend' (selected), and 'Use Local Limits' (unchecked). Fields for 'Mode' (Automatic), 'Min' (0), 'Max' (0), 'Number Of Levels' (16), and 'Format' (General).
- Legend Colors:** Checkboxes for 'Reversed Legend' (unchecked) and 'Color 1 (Top)' (4), 'Color 2' (16408), 'Color 3' (20), 'Color 4' (16504), 'Color 5' (110), and 'Color 6 (Bottom)' (16434) with 'Palette...' buttons. A 'Load' button is at the bottom.
- Specified Levels:** A table with 'Level' and 'Value' columns. The first row has '1' and '0'. A 'Clear' button is at the top right.

Buttons for 'OK' and 'Cancel' are at the bottom right.

By Default, Use limits from Legend setting is ON.

The Settings for specific parameters of the View are also available.

Copy and Rename Default View

1

Expand Views section and execute right click on 1..Default View

2

Select Copy

3

Title: *Zoomed in*;
Press OK

4

In Views section, execute right click on 2..Zoomed in and select Edit

5

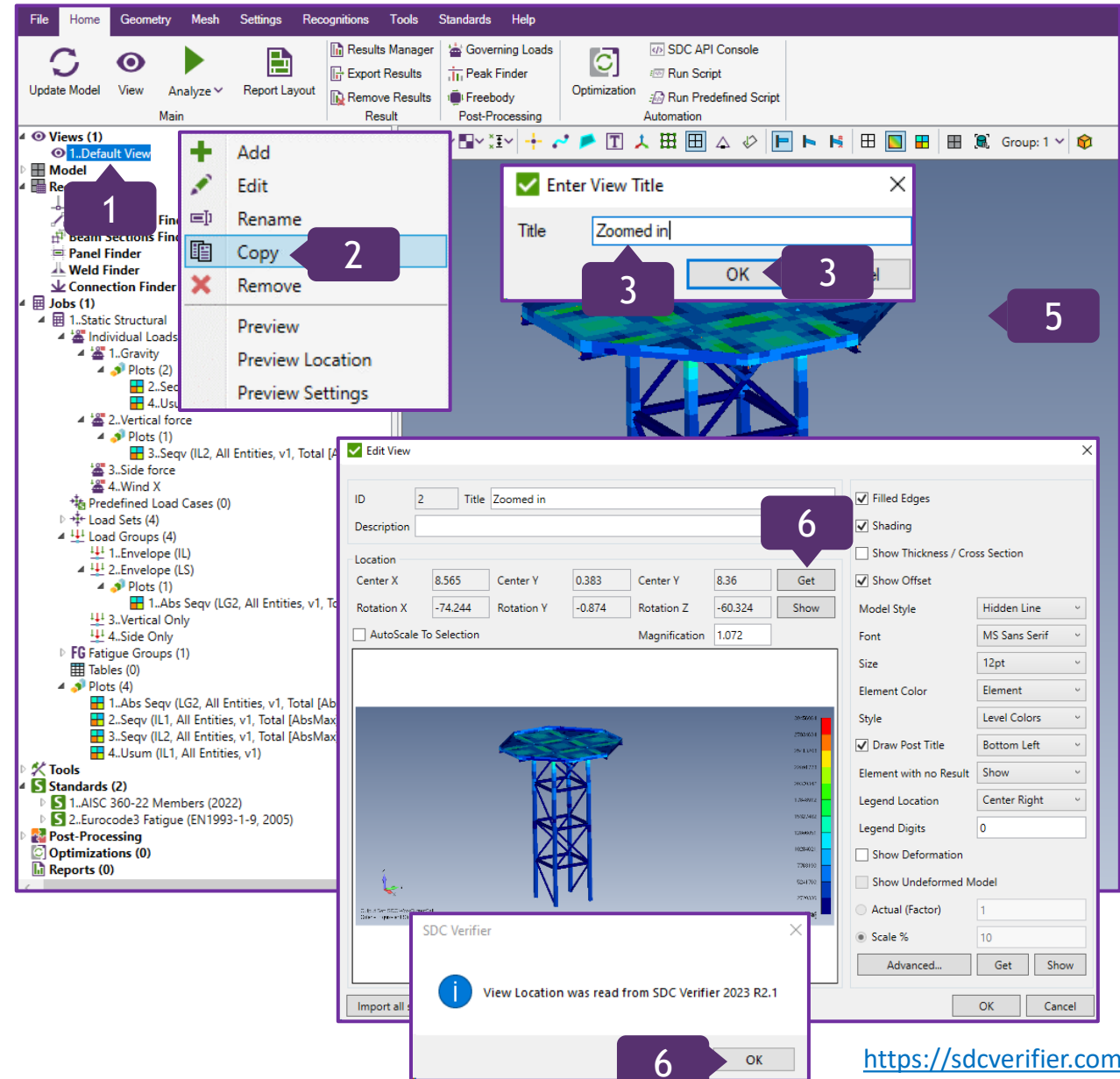
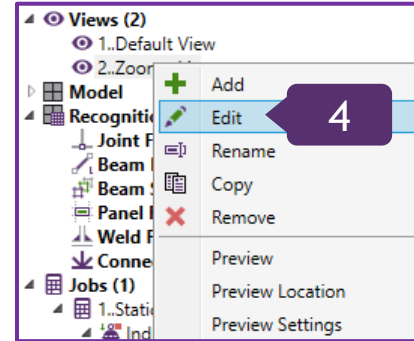
On the graphical interface, zoom the model in

6

Press Get;
Press OK

7

Press OK



The identical, but zoomed-in view of the model has been obtained. The same analogy applies to the view of the bottom of the model, etc.

The Overview of Displacement Plot

1

In *Plots* section, execute right click on 4..Usum (IL1, All Entities, v1)

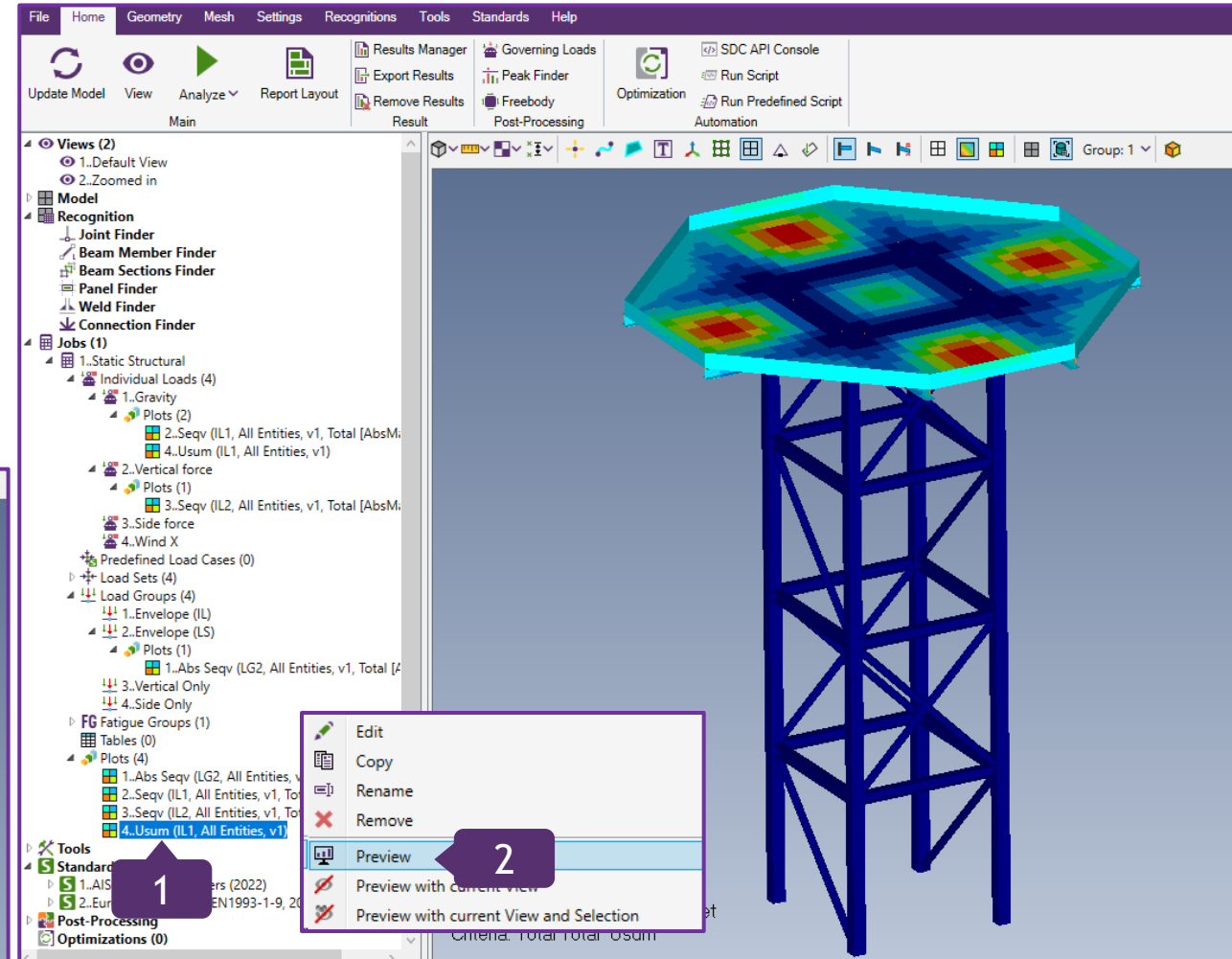
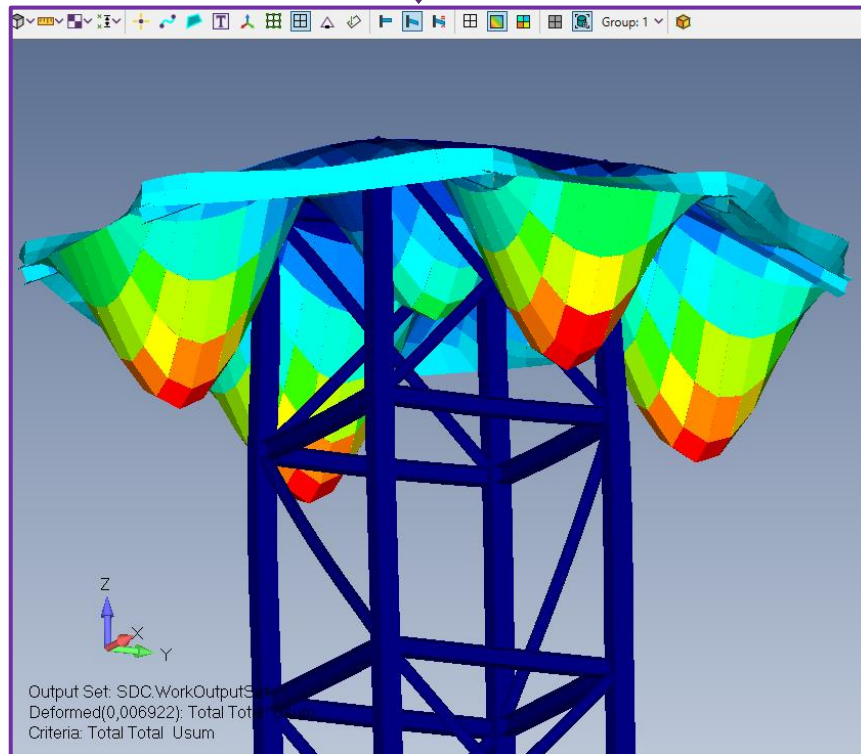
2

Select *Preview*

3

Press  to check the deformed value

The deformations result one Individual Load, which is Gravity. The category is Displacement.



Note: In the tutorial “Analysis of the Structure”, additional loads like Distributed Force was applied on top of the deck of the model.

Apply Another Individual Load

1

In *Plots* section, execute right click on 4..Usum (IL1, All Entities, v1)

2

Select *Edit*

3

In *Individual Load* section, press

4


Select 4..Wind X;
Press OK

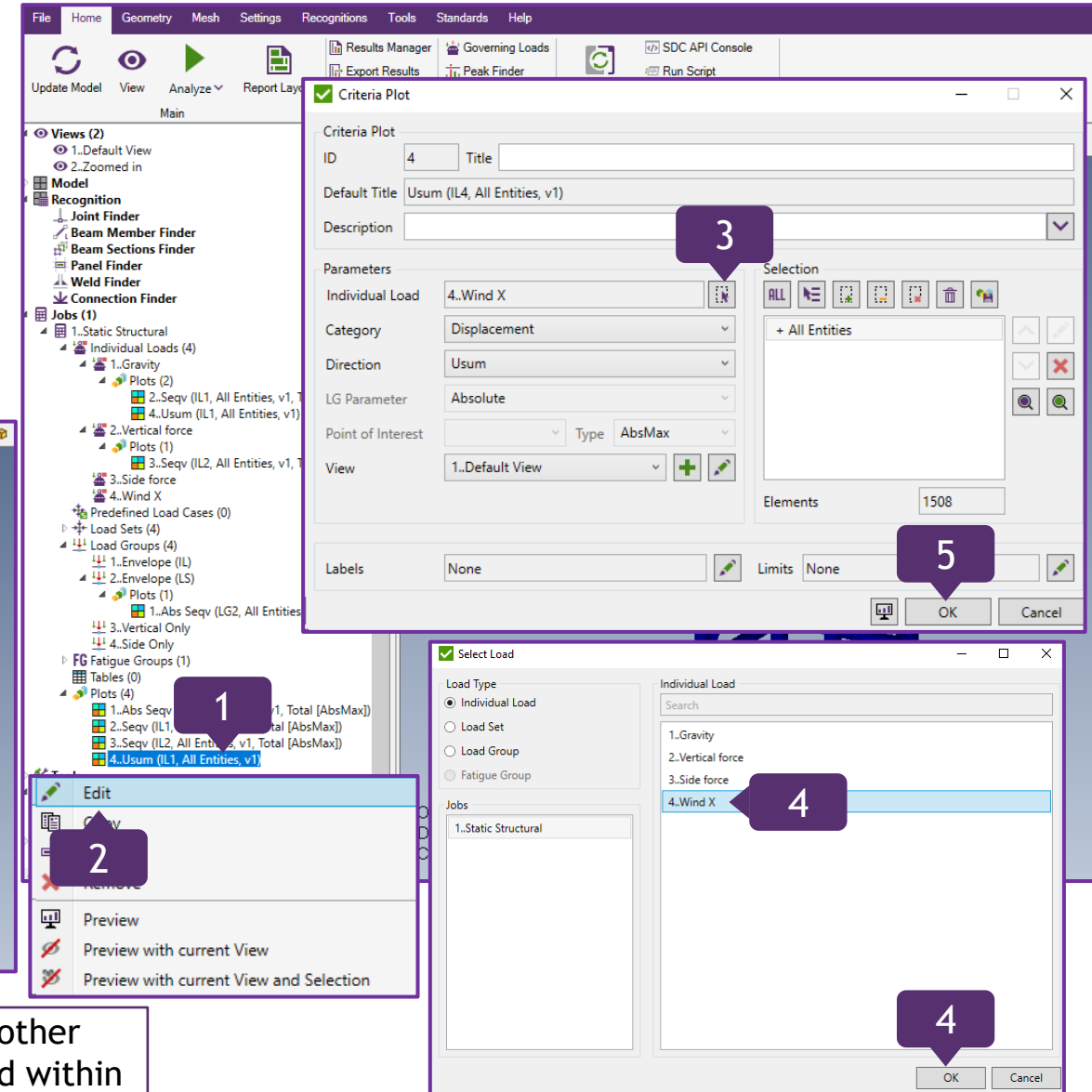
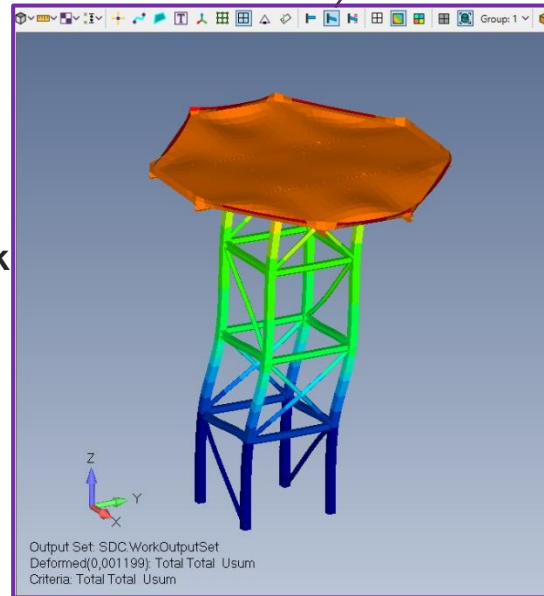
5

Press OK

6

In *Plots* section, execute right click on 4..Usum (IL1, All Entities, v1);
Select *Preview*

The Displacements from Wind in X Direction have been shown. Press  to check the deformed value.



To show more Displacements, other Individual Loads can be applied within the analogy of the steps from this slide.

Preview Results from Checks

1

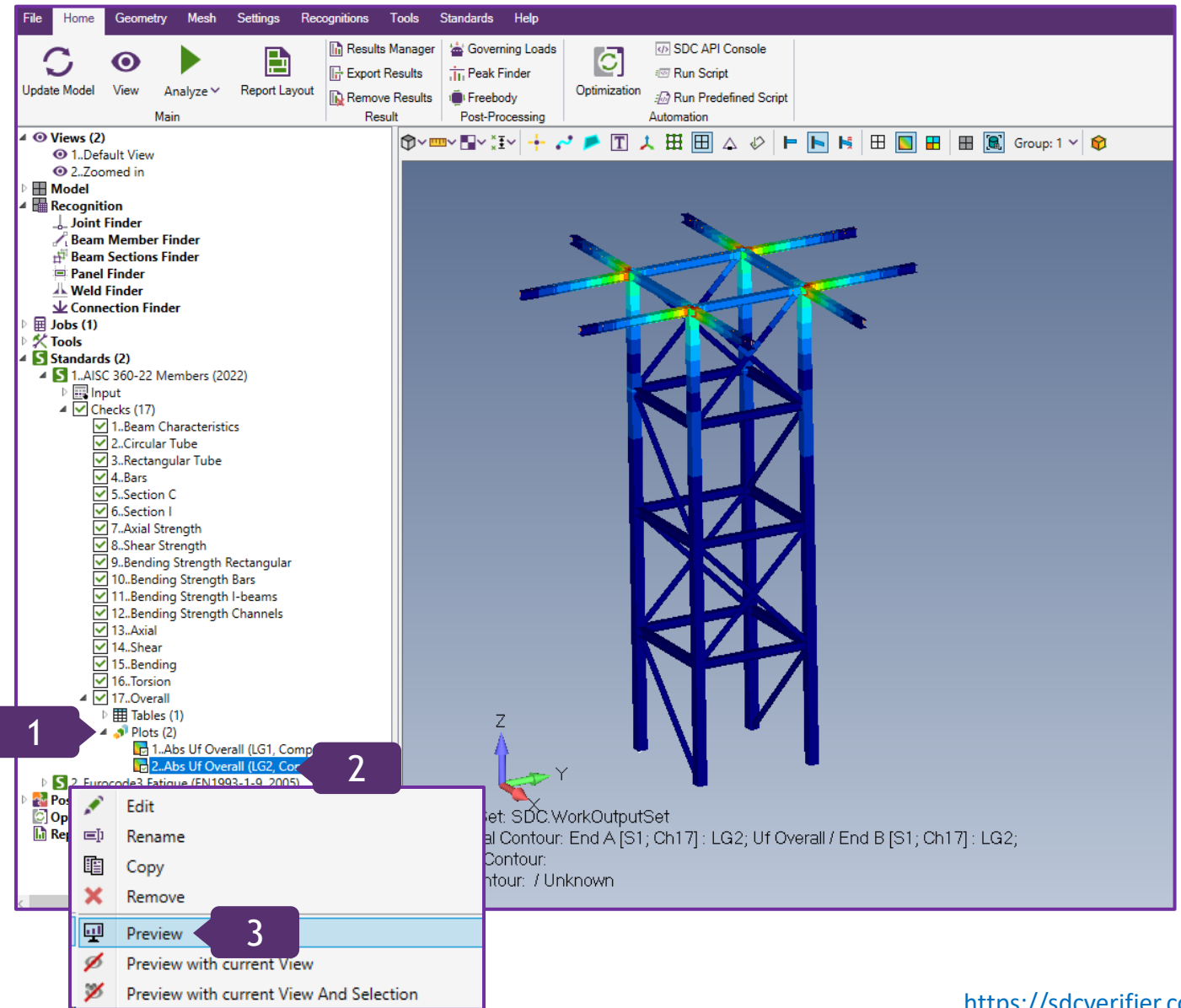
In Standards section, expand 1..AISC 360-22 Members (2022) => Checks (17)=> 17..Overall => Plots

2

Execute right click on 2..Abs Uf Overall (LG2, Component '1..AISC360 selection (s1)', v1)

3

Select Preview



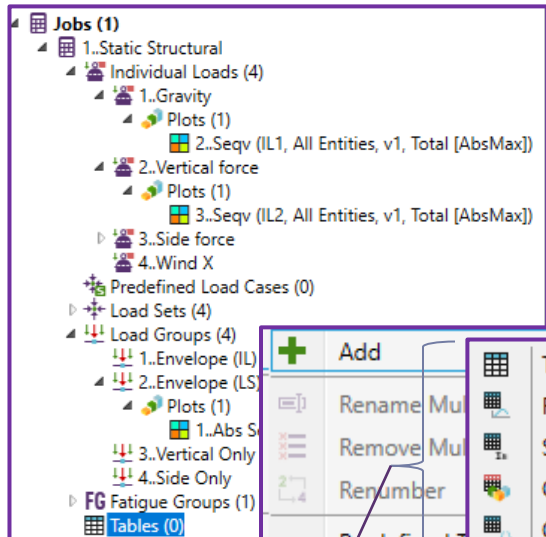
Generate a Table

1

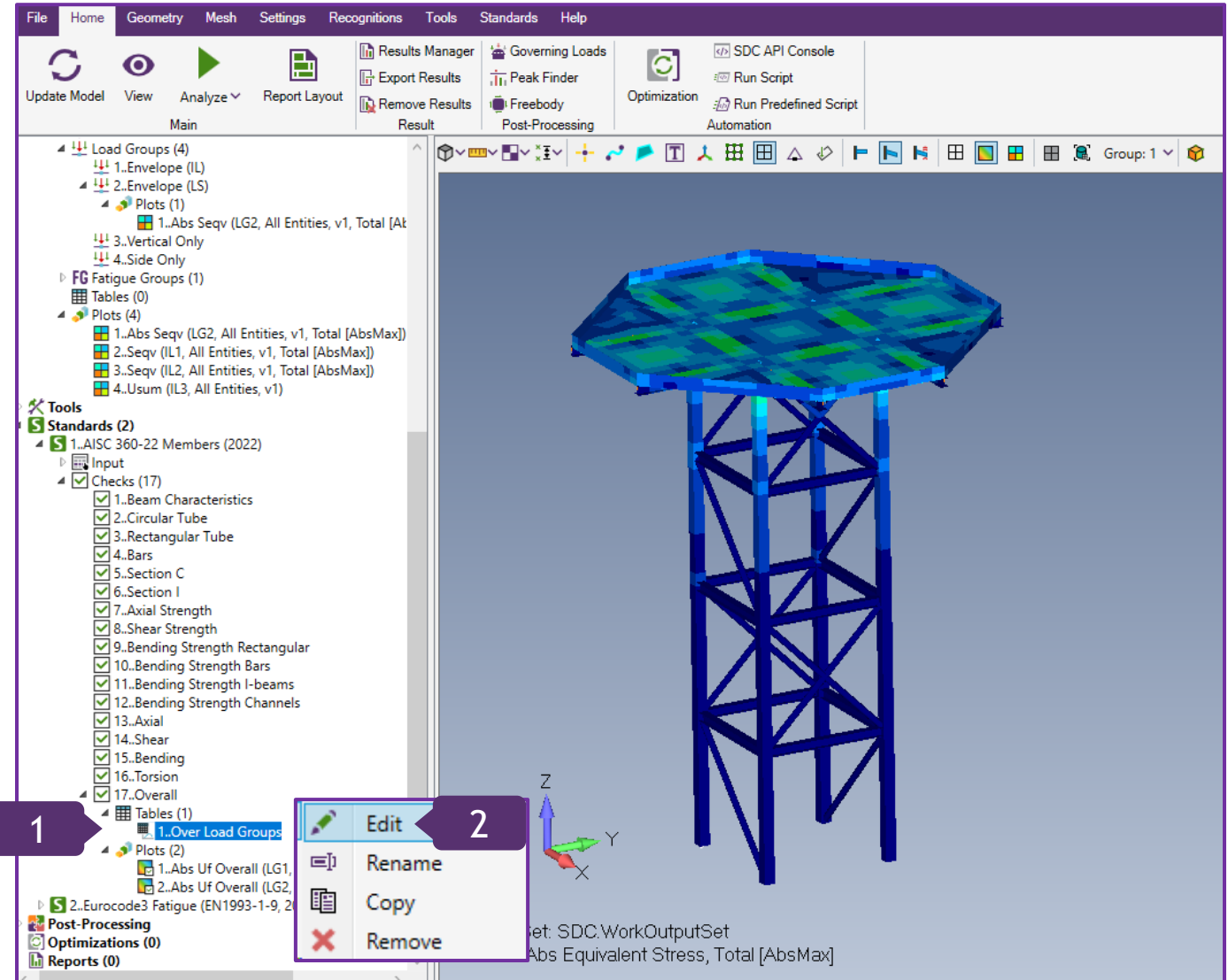
In Standards section, expand 1..AISC 360-22 Members (2022) => Checks (17)=> 17..Overall => Tables

2

Execute right click on 1..Over Load Groups and select Edit



Tables in Job section of the Model Tree allow users to add a variety of table types for specific purposes.



1

2

Generate a Table (Continuation)

3

In Loads Count, *Selected loads: 10;*
Direction/Parameter: All


4

Press *Fill Table*

5

Press  to filter the required Value

6

Press  to export the Table Info into
Excel file

7

Press *OK*

6

3

3

5

4

7

The values of all the Loads have been generated.

After setting the filter, press to start the process.

Load	Uf Axial	Uf Bending	Uf Bending	Uf Shear	Uf Axial ar	Uf Overall
Individual Load '1..Gravity'	0.04	0.07	0.03	0.03	0.11	0.11
Individual Load '2..Vertical force'	0.28	0.45	0.21	0.17	0.76	0.76
Individual Load '3..Side force'	0.02	0.04	0.01	0.01	0.04	0.04
Individual Load '4..Wind X'	0.02	0.01	0.01	0.00	0.02	0.02
Load Set '1..Load Set 1'	0.33	0.52	0.24	0.20	0.88	0.88
Load Set '2..Load Set 2'	0.05	0.07	0.03	0.03	0.11	0.11
Load Set '3..Load Set 3'	0.36	0.56	0.27	0.21	0.95	0.95
Load Set '4..Load Set 4'	0.05	0.07	0.04	0.03	0.11	0.11
Load Group '1..Envelope (IL)'	0.28	0.45	0.21	0.17	0.76	0.76
Load Group '2..Envelope (LS)'	0.36	0.56	0.27	0.21	0.95	0.95

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Load	Uf Axial	Uf Bending Major	Uf Bending Minor	Uf Shear	Uf Axial and Bending	Uf Overall
Individual Load '1..Gravity'	0,04	0,07	0,03	0,03	0,11	0,11
Individual Load '2..Vertical force'	0,28	0,45	0,21	0,17	0,76	0,76
Individual Load '3..Side force'	0,02	0,04	0,01	0,01	0,04	0,04
Individual Load '4..Wind X'	0,02	0,01	0,01	0,00	0,02	0,02
Load Set '1..Load Set 1'	0,33	0,52	0,24	0,20	0,88	0,88
Load Set '2..Load Set 2'	0,05	0,07	0,03	0,03	0,11	0,11
Load Set '3..Load Set 3'	0,36	0,56	0,27	0,21	0,95	0,95
Load Set '4..Load Set 4'	0,05	0,07	0,04	0,03	0,11	0,11
Load Group '1..Envelope (IL)'	0,28	0,45	0,21	0,17	0,76	0,76
Load Group '2..Envelope (LS)'	0,36	0,56	0,27	0,21	0,95	0,95

Check Properties by Creating Components Extreme Table

1

In Standards section, expand 1..AISC 360-22 Members (2022) => Checks (17), and select 17..Overall

2

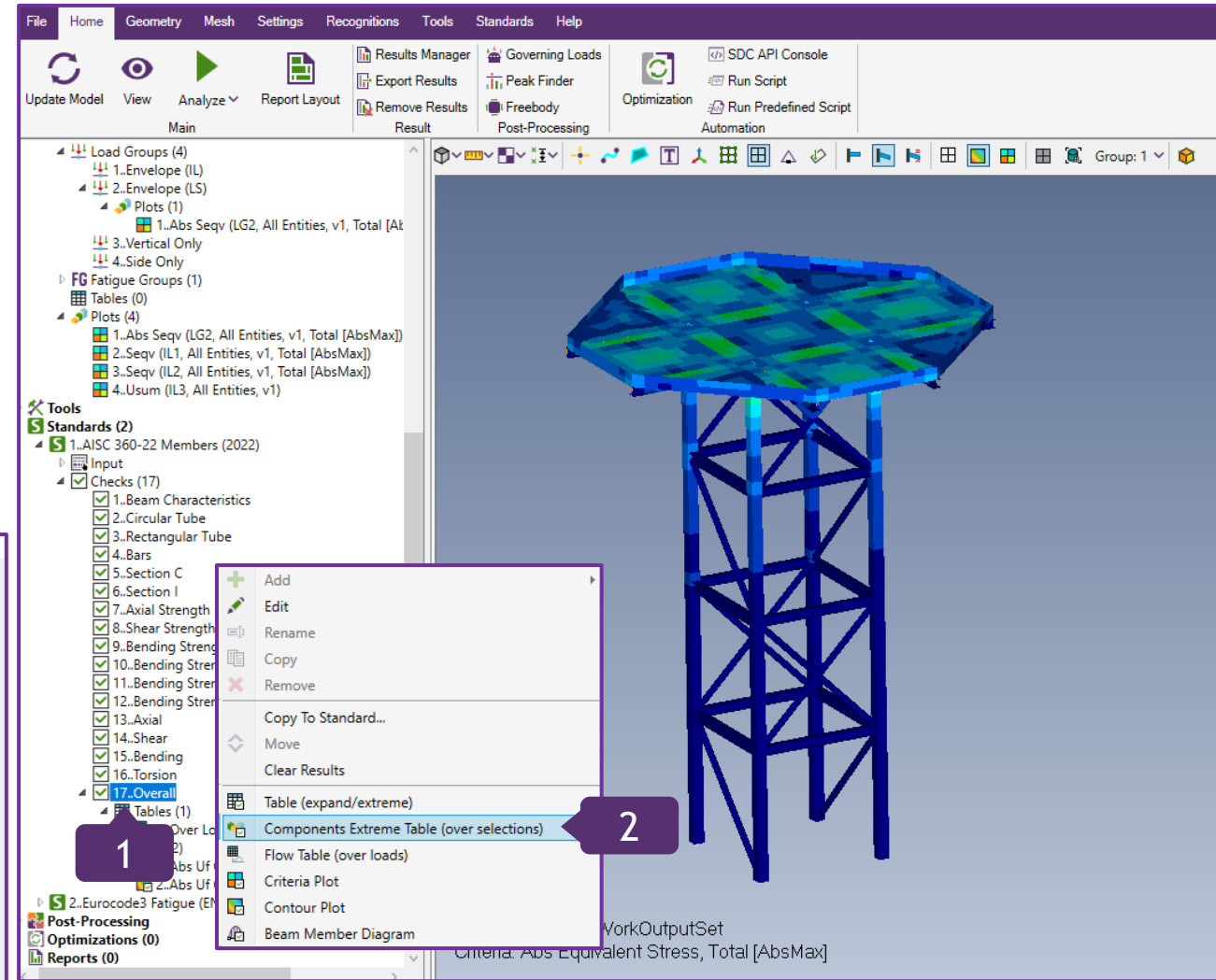
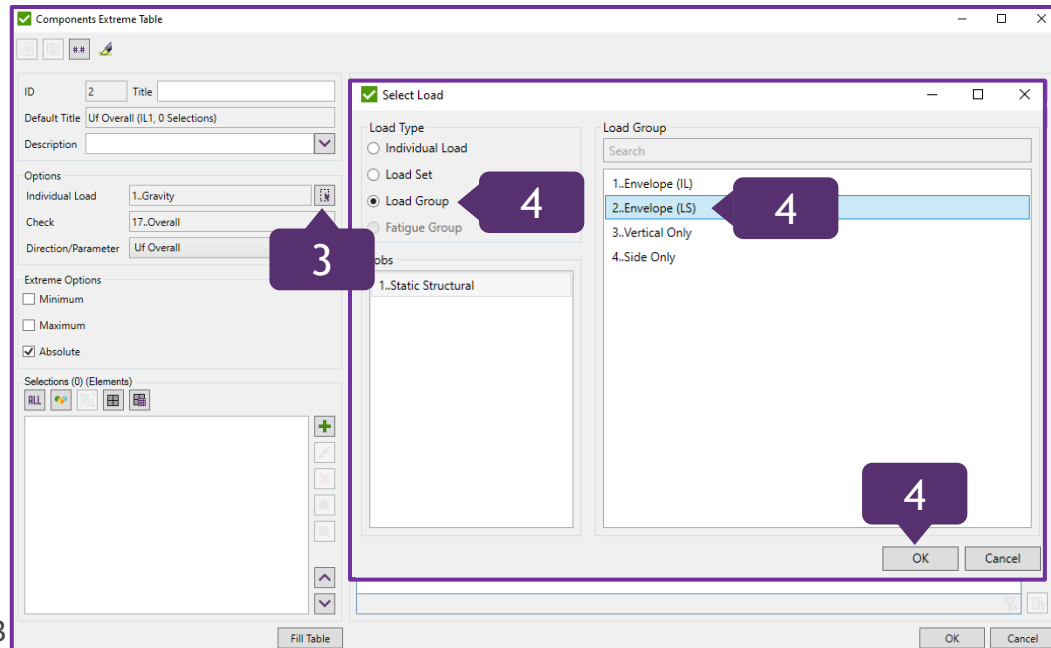
Execute right click on 17..Overall and select Components Extreme Table (over selection)

3

In Individual Load section, press

4

Load Type: Load Group;
Load Group: Envelope (LS);
Press OK



Create Components Extreme Table (Continuation)

5

Press  to add selections, based on materials/properties;
Select Properties from List

6

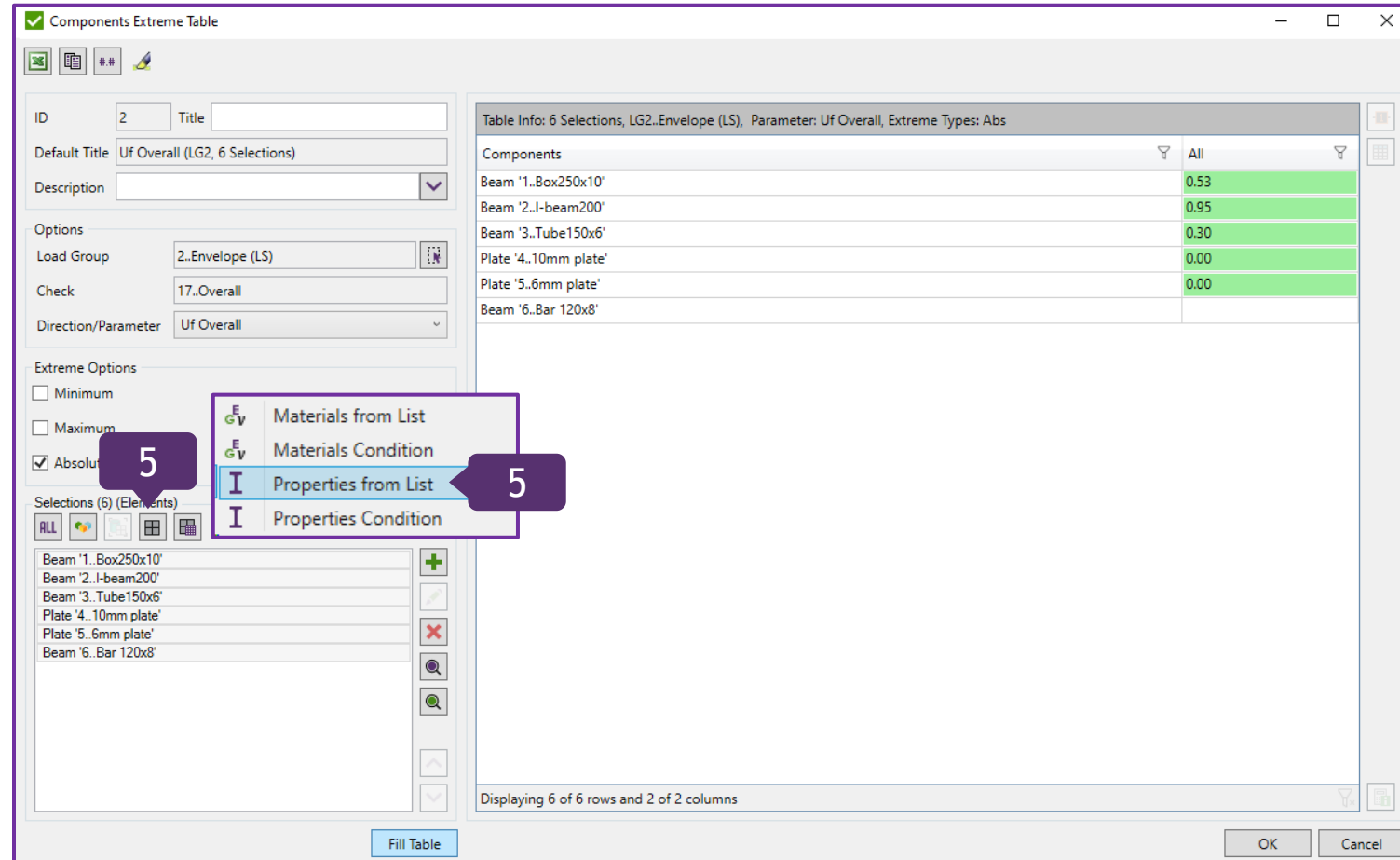
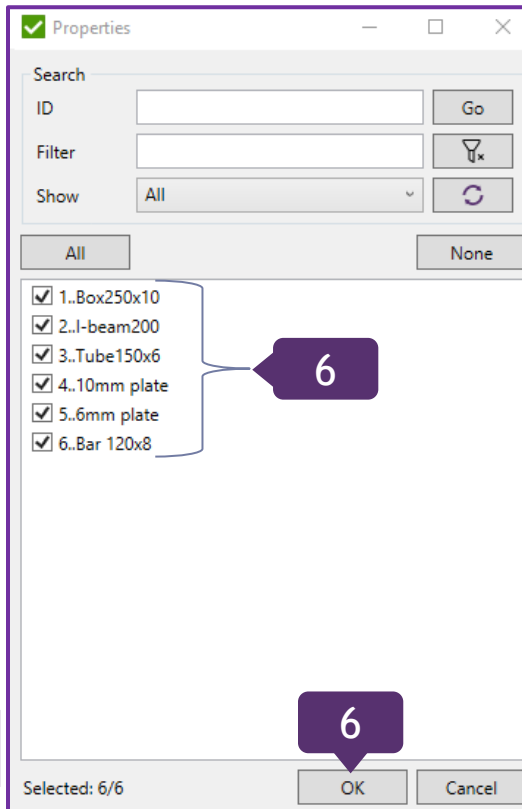
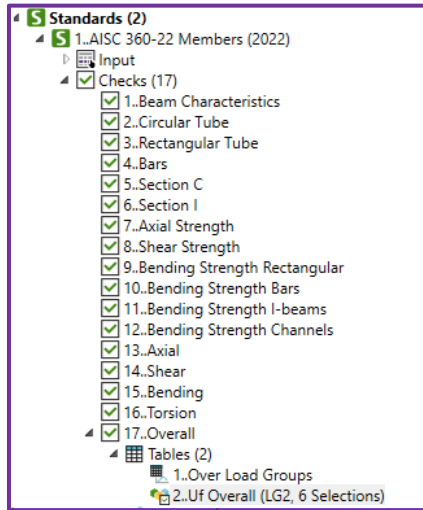
Select all properties;
Press **OK**

7

Press **Fill Table**

8

Press **OK**



The table has been stored.

Post-Processing Tool: Peak Finder

Peak Finders Tool allows to preview certain peaks of the worst results in the model by a Criteria.

1

Expand *Post-Processing* section and execute right click on *Peak Finders*; Select *Add*

2

Title: *Stress*

3

Result: *from Load*;
Category: *Stress*;
Direction: *Equivalent*

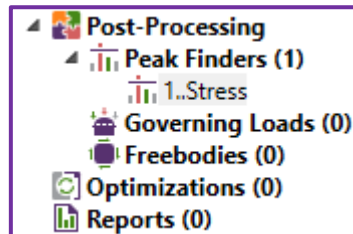
4

Criteria: *Range*;
Result: *> 1*

5

Press *OK*

The Peak has been created.



3

Peak Finder Tool

ID: 1 Title: Stress

Default Title: Peak for Seqv (Range: (1; +Inf))

Description:

Result: ☒ from Load ☐ from Check

Category: Stress

Direction: Equivalent

Parameter:

Direction:

Criteria: ☒ Range ☒ Absolute

|Result| > 1

|Result| None 0

☐ Number of elements (Abs Values)

☐ Percent of elements (Abs Values)

Result Criteria: Abs

OK

4

5

Edit the Peak of the Peak Finder Tool

1

Expand *Peak Finders* and execute right click on *1..Stress*; Select *Edit*

2

Press  to Open a Peak Finder Table

3

Load Group: *2..Envelope (LS)*

4

Press *Fill*

5

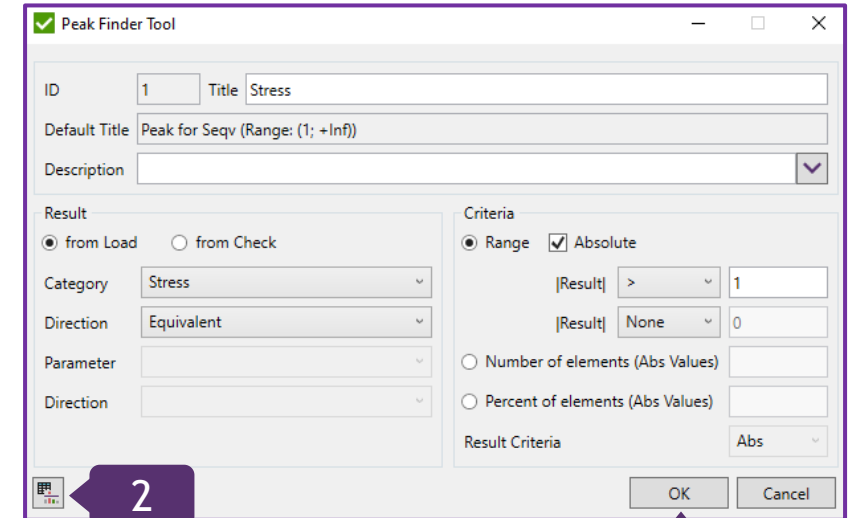
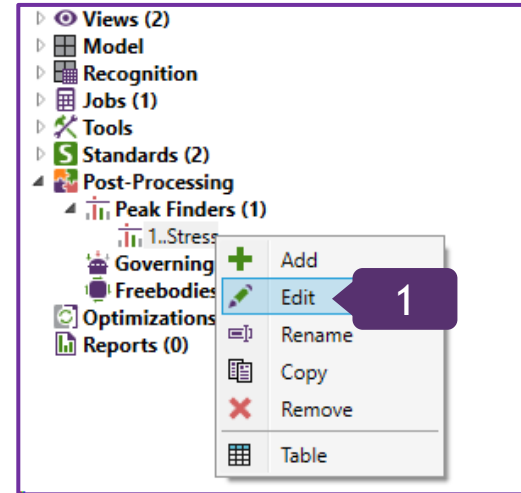
Press  to preview the results

6

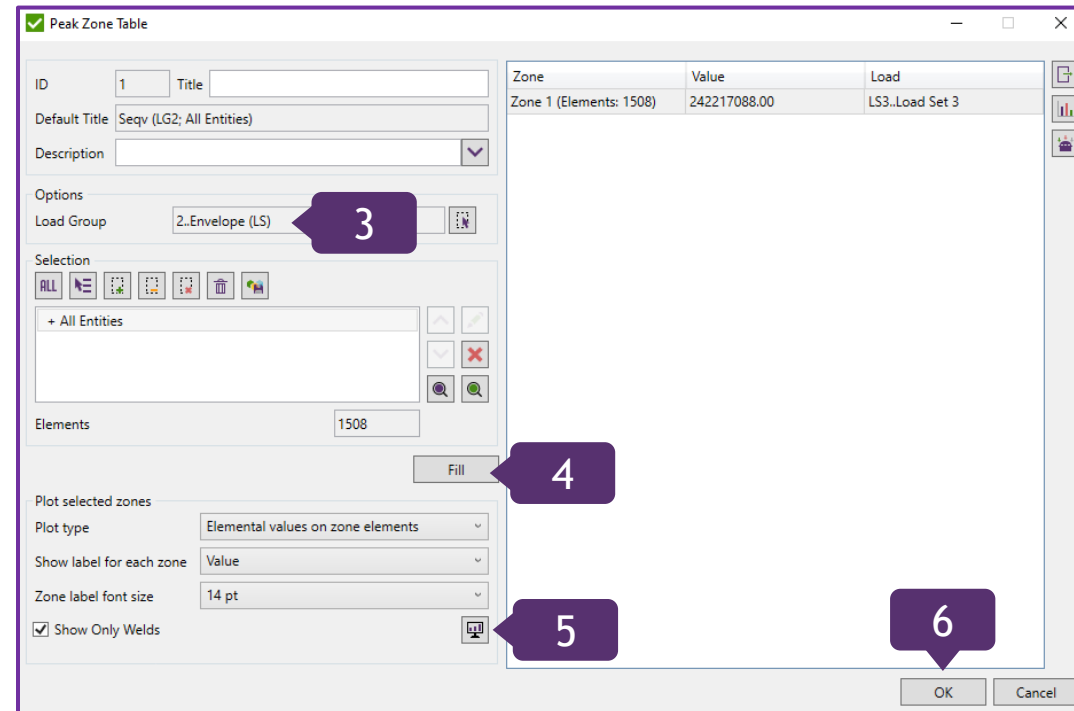
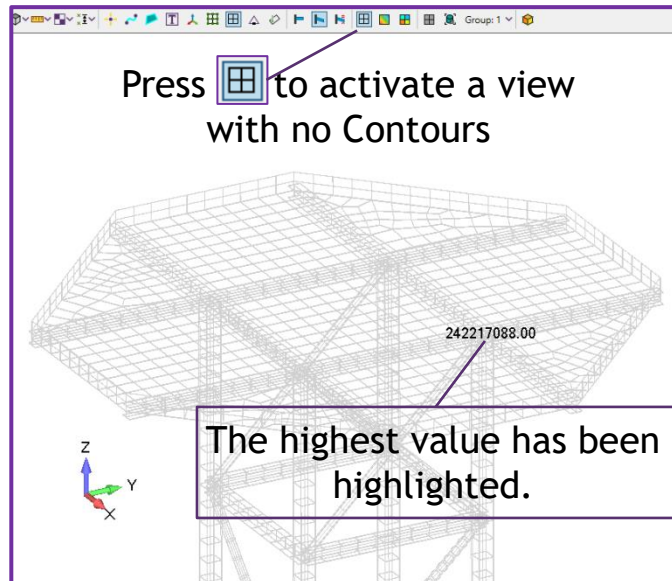
Press *OK*

7

Press *OK*



7



Add Governing Loads

1

Expand *Post-Processing* section and execute right click on *Governing Loads*; Select *Add*

2

Category: *Stress*;
Direction: *Equivalent*

3

Load Group: *2..Envelope (LS)*;
Limits Criteria: *100% of abs elements*;
Table Type: *Summary (worst governing load)*

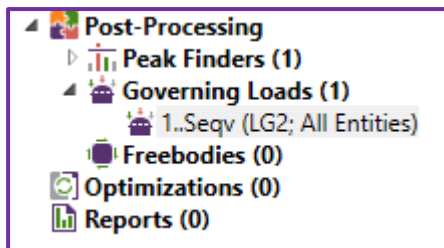
4

Press *Fill Table*

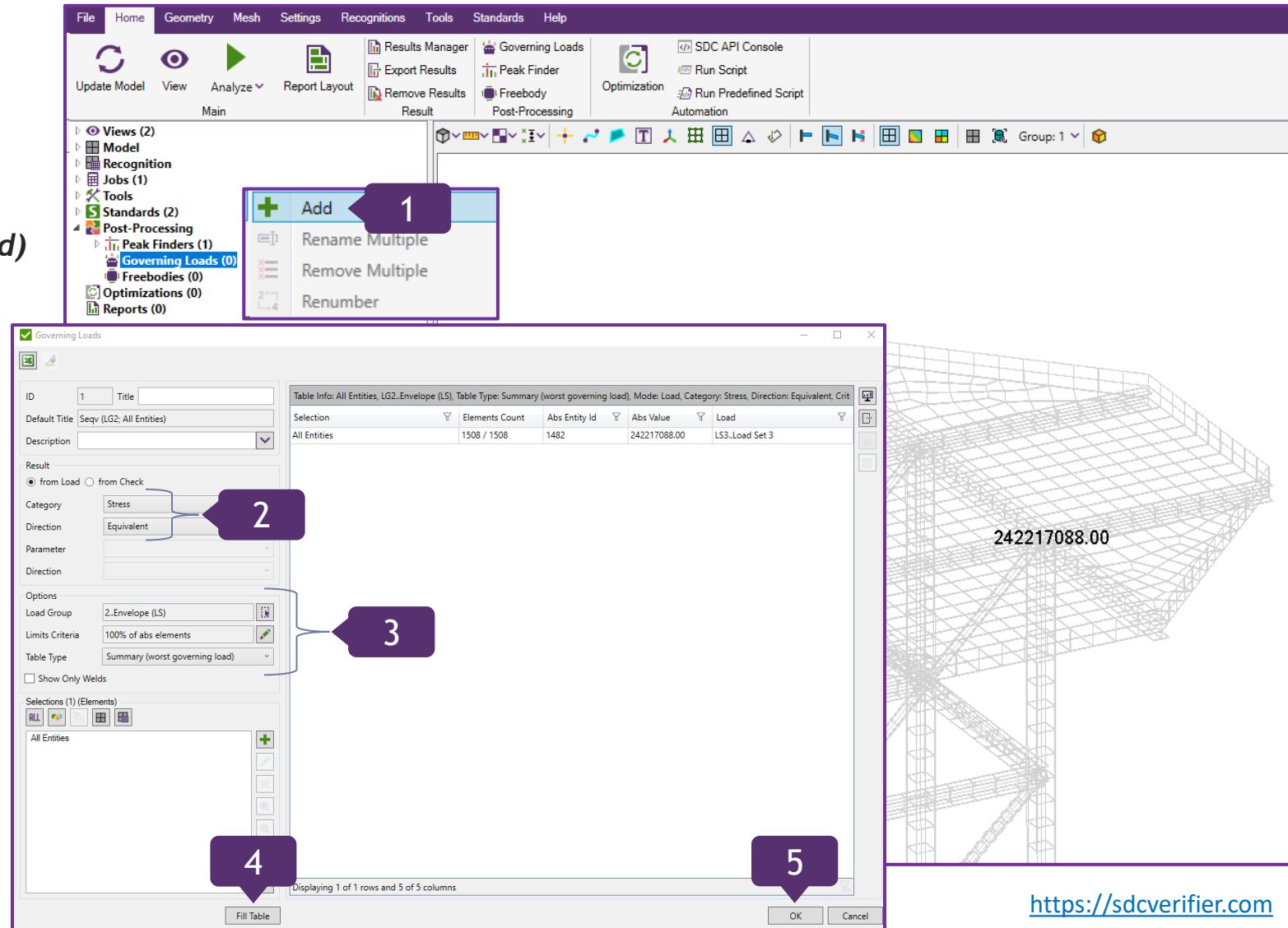
5

Press *OK*

The Governing Load has been created.



Governing Loads Tool allows to find out which Loads cause the critical results. It is particularly useful for big models with an extensive list of outputs.

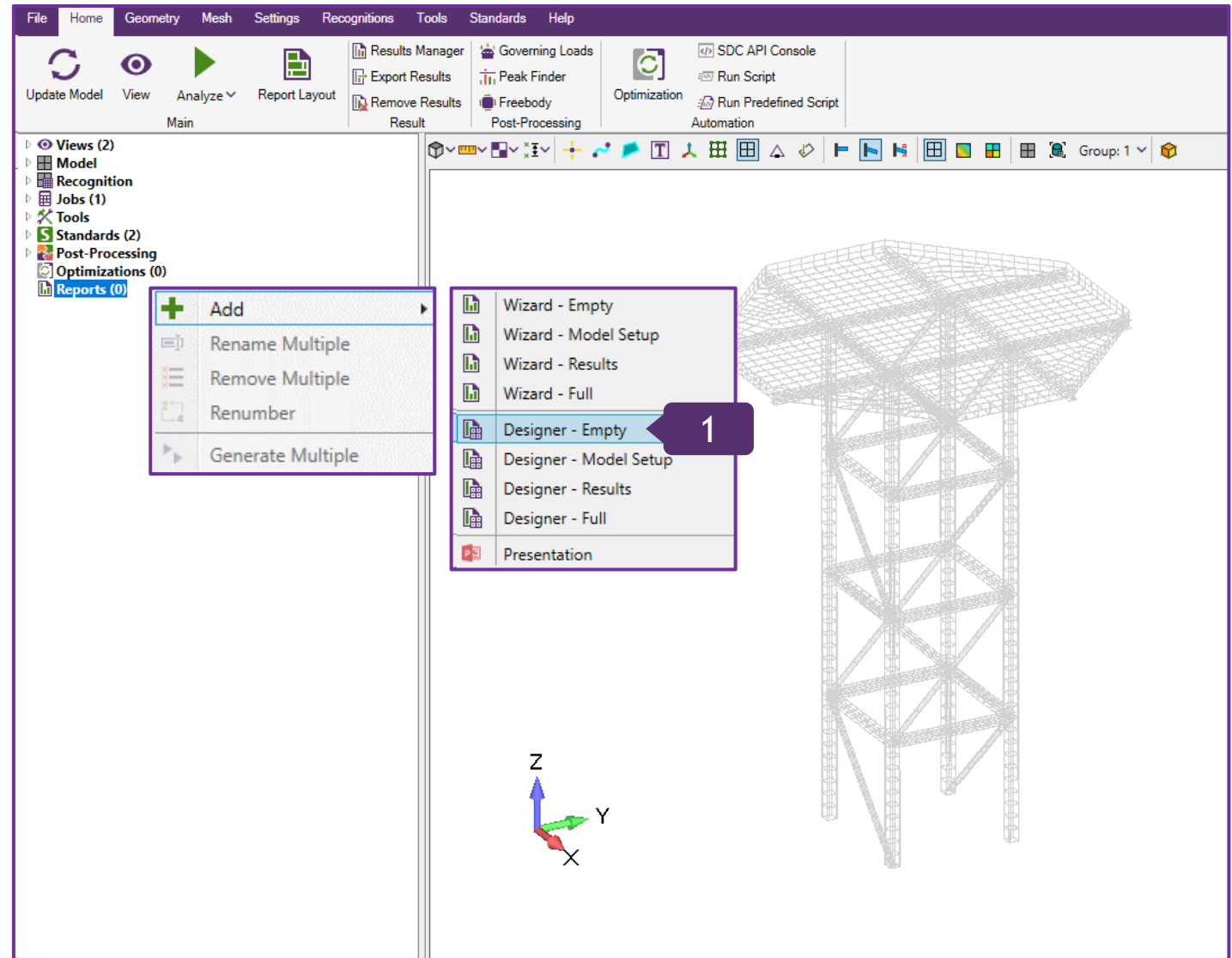


Open a Report Designer

1

Execute right click on *Reports* => *Add* and select *Designer - Empty*

Report Designer is a Tool that allows full control over the structure of the report, as it is customizable.



Generate First Page of Report

1

In Home section, execute right click on *First Page* and select *Generate*

2

To assign the Project a Number, insert the required numbers (e.g., 001)

3

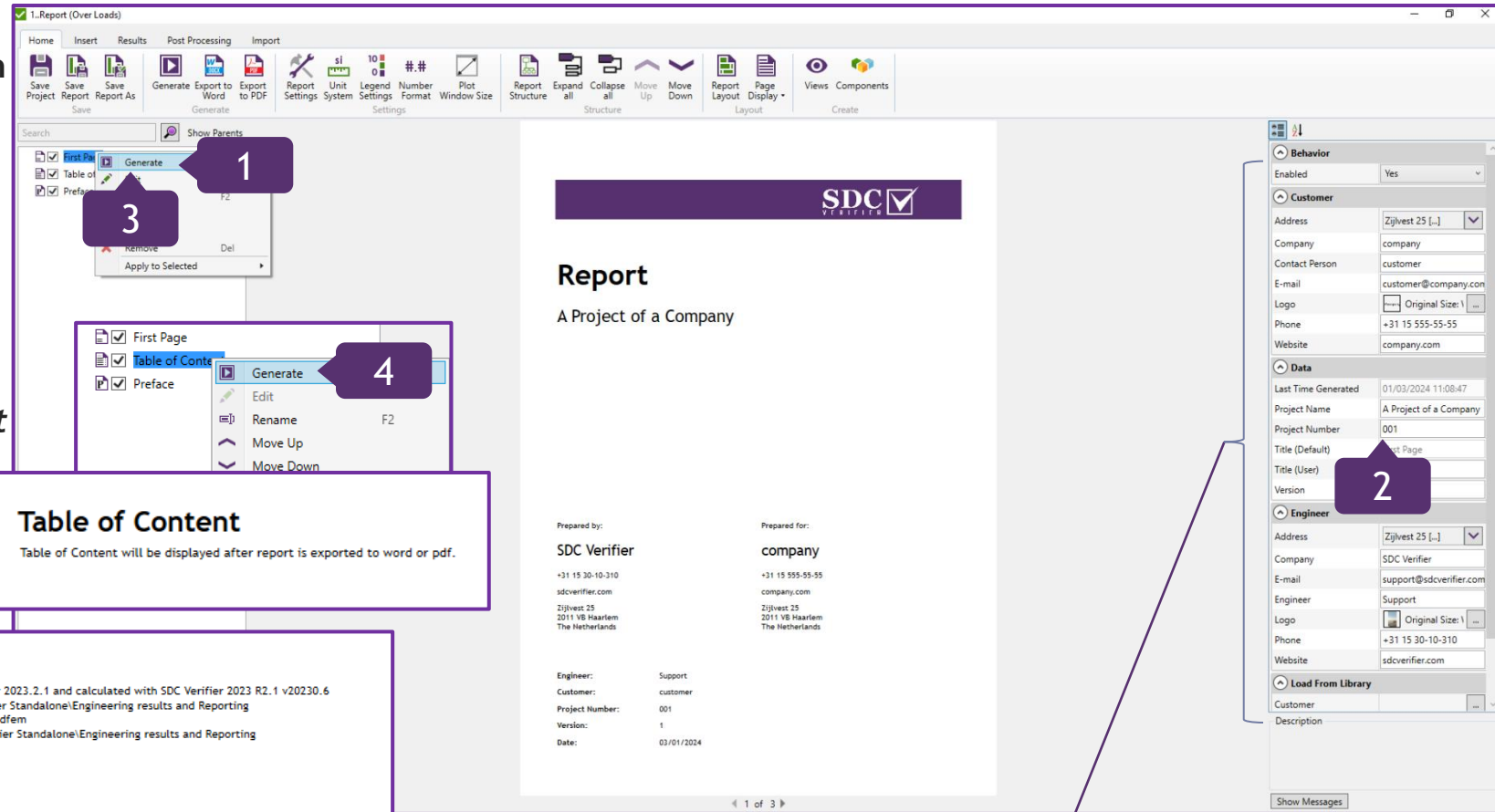
Repeat the step 1

4

Execute right click on *Table of Content* and select *Generate*

5

Execute right click on *Preface* and select *Generate*



The information about the Project can be configured either in the Menu, or in the Project Settings, where it has been previously stored.

Preface section is especially useful for retrospectives of previous projects, as all essential information is presented there.

The Structure of the Report

1

In *Insert* section, press on *Model Setup* and select *Full Chapter*

2

Expand *FEM Model Description* to check the structure of the Report

3

Execute right click on *Properties* and select *Generate*

4

Double-click on any property to check the Plot

During the process of generating, SDC Verifier uses the graphical interface to build the Plots.

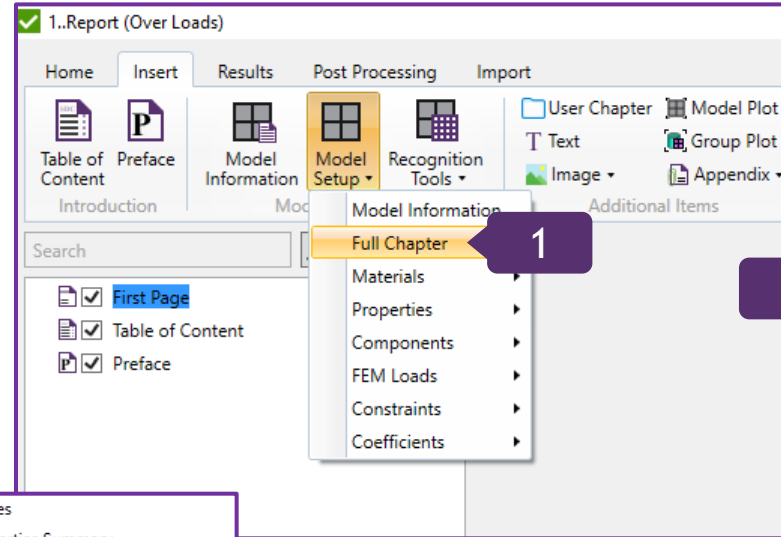
Properties

This paragraph contains properties information.

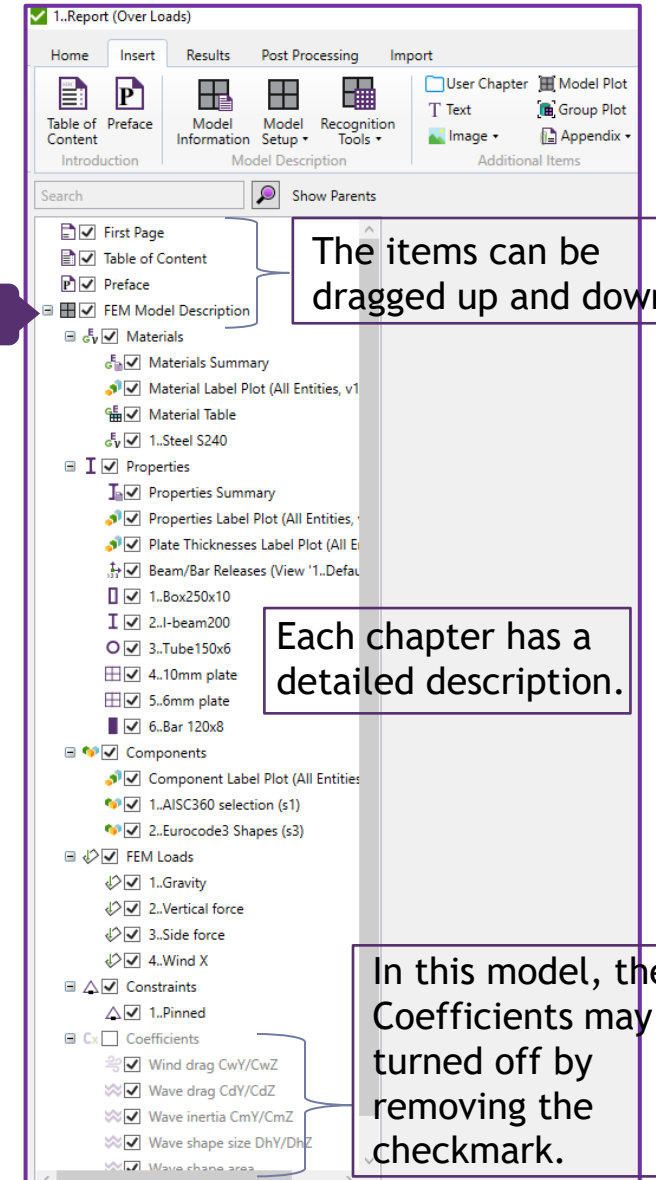
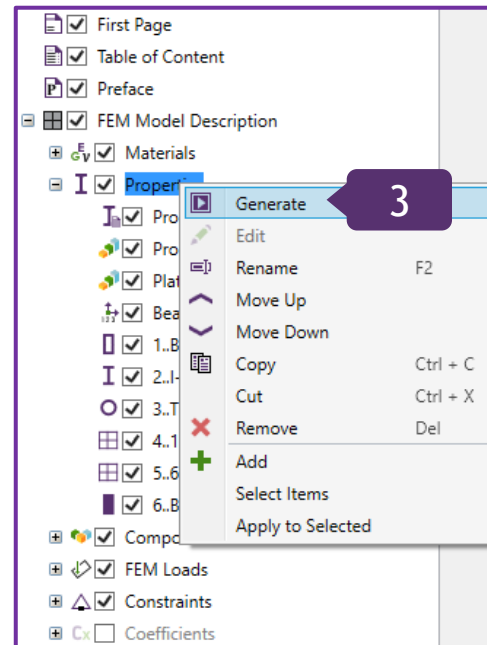
Properties Summary

Calculated for the CSys "0..Basic Rectangular".

Title	Elements	Material	Mass [kg]	Gravity Center [m]
1..Box250x10	160	1..Steel S240	3617.28	[1.50; 1.50; 6.00]
2..I-beam200	240	1..Steel S240	3074.69	[1.50; 1.50; 8.95]
3..Tube150x6	168	1..Steel S240	1084.80	[1.50; 1.50; 6.50]
4..10mm plate	748	1..Steel S240	4945.50	[1.50; 1.50; 12.00]
5..6mm plate	192	1..Steel S240	409.35	[1.50; 1.50; 12.15]
6..Bar 120x8	0	1..Steel S240	0.00	[0.00; 0.00; 0.00]
Overall	1508		13131.63	[1.50; 1.50; 9.18]



2



Include Stress Plot and Stress Table in Every Load




1

In *Results* section, press *Criteria*

2

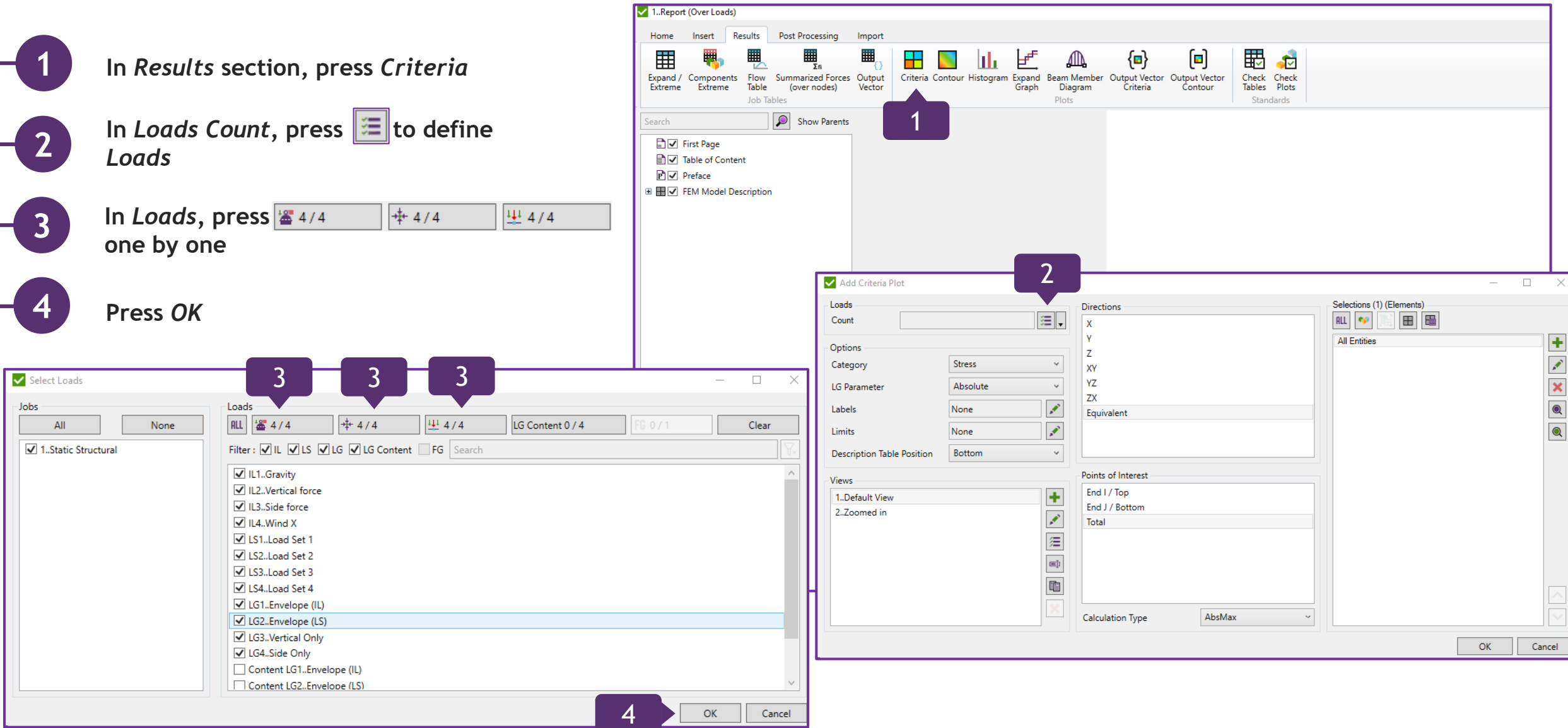
In *Loads Count*, press  to define Loads

3

In *Loads*, press  4 / 4  4 / 4  4 / 4

4

Press *OK*



1..Report (Over Loads)

Home Insert Results Post Processing Import

Expand / Extreme Components Extreme Flow Table Summarized Forces (over nodes) Output Vector Criteria Contour Histogram Expand Graph Beam Member Diagram Output Vector Criteria Output Vector Contour Check Tables Check Plots Standards

Search Show Parents

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Include Stress Plot and Stress Table in Every Load (Continuation)

5

Category: *Stress*

6

LG Parameter: *Absolute*;
Views: *Default View*

7

Directions: *Equivalent*

8

Points of Interest: *Total*

9

Selections: *All Entities*;
Press *OK*

The screenshot shows the 'Add Criteria Plot' dialog box with the following settings and callouts:

- Loads:** Count: Selected loads: 12;
- Options:**
 - Category: Stress (5)
 - LG Parameter: Absolute (6)
 - Labels: None
 - Limits: None
 - Description Table Position: Bottom
- Views:**
 - 1..Default View (6)
 - 2..Zoomed in
- Directions:**
 - X
 - Y
 - Z
 - XY
 - YZ
 - ZX
 - Equivalent (7)
- Points of Interest:**
 - End I / Top
 - End J / Bottom
 - Total (8)
- Selections (1) (Elements):**
 - All Entities (9)
- Calculation Type:** AbsMax
- Buttons:** OK, Cancel (9)

The screenshot shows the project structure tree with the following items:

- First Page
- Table of Content
- Preface
- FEM Model Description
- Results
 - 1..Static Structural
 - Individual Loads
 - Load Sets
 - Load Groups
 - Load Group '1..Envelope (IL)'
 - Load Group '2..Envelope (LS)'
 - Load Group '3..Vertical Only'
 - Load Group '4..Side Only'
- Abs Seqv (LG4, All Entities, v1)

A complete structure of the Loading Condition has been created for every Individual Load, Load Set and Load Group. Also, the Stress Plot has been added.

Create Expand/Extreme Table (Stress)

1

Expand 1..Static Structural => Individual Loads => Individual Load '1..Gravity'

2

Execute right click on Seqv (IL1, All Entities, v1, Total [AbsMax]) and press Generate

3

Press Expand/Extreme

4

Press  to select recent Loads

5

Categories: Stress

6

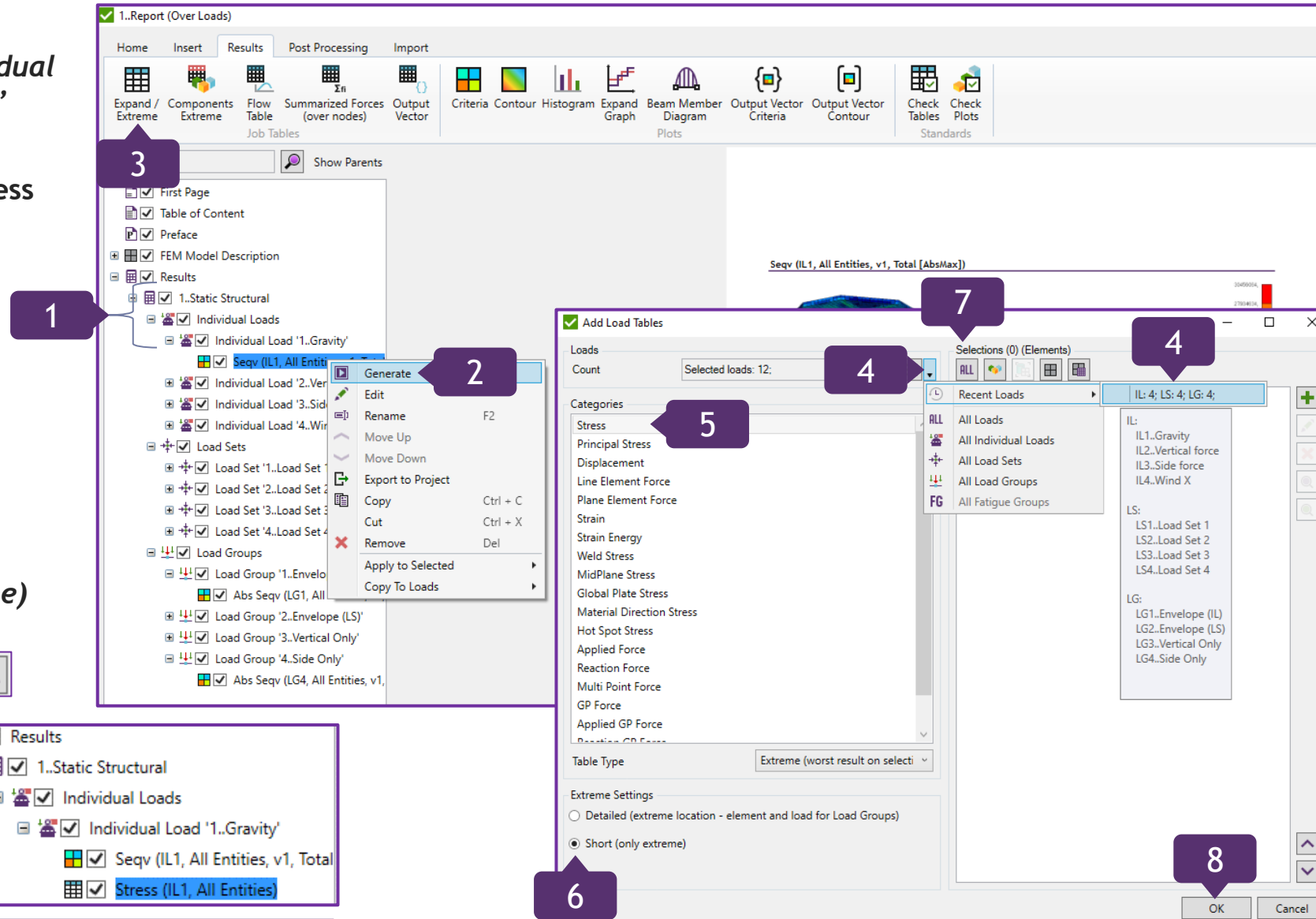
Extreme Settings: Short (only extreme)

7

In Selections (0) (Elements), press  to select All Entities

8

Press OK



The Table has been created.

1

Execute right click on *Stress (IL1, All Entities)* and select *Generate*

2

Break Page Before: No

1..Report (Over Loads)

Home Insert Results Post Processing Import

Expand / Extreme Components Extreme Flow Table Summarized Forces (over nodes) Output Vector Criteria Contour Histogram Expand Graph Beam Member Diagram Output Vector Criteria Output Vector Contour Check Tables Check Plots Standards

Search Show Parents

First Page Table of Content Preface FEM Model Description Results 1..Static Structural Individual Loads Individual Load '1..Gravity' Seqv (IL1, All Entities, v1, Total) **Stress (IL1, All Entities, v1, Total)** Individual Load '1..Gravity' Individual Load '1..Gravity' Individual Load '1..Gravity' Load Sets Load Set '1..Load' Load Set '2..Load' Load Set '3..Load' Load Set '4..Load' Load Groups Load Group '1..Envelope (LS)' Load Group '2..Envelope (LS)' Load Group '3..Vertical Only' Load Group '4..Side Only' Abs Seqv (LG1, All Entities) Stress (LG1, All Entities) Load Group '2..Envelope (LS)' Load Group '3..Vertical Only' Load Group '4..Side Only' Abs Seqv (LG4, All Entities, v1) Stress (LG4, All Entities, v1)

Generate Edit Rename Move Up Move Down Export to Project Copy Cut Remove Apply to Selected Copy To Loads

Seqv (IL1, All Entities, v1, Total (AbsMax))

Individual Load Selection Point IL1..Gravity All Entities Total (AbsMax) Parameter View Limits Stress Equivalent 1..Default View None

Stress (IL1, All Entities)

Individual Load Type	1..Gravity Extreme	X [Pa]	Y [Pa]	Z [Pa]	XY [Pa]	YZ [Pa]	ZX [Pa]	Equivalent [Pa]
Minimum		-30456064.00	-15592861.00	-5507008.50	0.00	0.00	0.00	1833.34
Maximum		15667262.00	17058246.00	5508113.50	0.00	0.00	0.00	30456064.00
Absolute		-30456064.00	17058246.00	5508113.50	0.00	0.00	0.00	30456064.00

Behavior Break Page Before No Enabled Yes

Data Job 1..Static Structural Last Time Generated IL1..Gravity Load IL1..Gravity Title (Default) Stress (IL1, All Entities) Title (User)

Options Category Stress Extreme Table Style Short Selection All Entities Type Extreme (worst result)

Selection location plot Insert plot No

By setting "No" to Break Page Before, the table is below the Stress Plot.

Adjust Settings in Number Format

1

In *Home* section, press *Number Format*

2

Category: *Stress*

3

Number Format: *Scientific*;
Digits after decimal point: 2

4

Activate *Fixed Power*;
Set 6 MPa

5

Press *Set Format*

6

Category: *Displacements*

7

Number Format: *Scientific*;
Digits after decimal point: 2

8

Activate *Fixed Power*;
Set -3 mm

9

Press *Set Format*;
Press *OK*

1. Home section, press *Number Format*

2. Category: *Stress*

3. Number Format: *Scientific*;
Digits after decimal point: 2

4. Activate *Fixed Power*;
Set 6 MPa

5. Press *Set Format*

6. Category: *Displacements*

7. Number Format: *Scientific*;
Digits after decimal point: 2

8. Activate *Fixed Power*;
Set -3 mm

9. Press *Set Format*;
Press *OK*

Category	Type	Digits after decimal point	Fixed Power	Power Value	Example
Displacements	General	2	<input type="checkbox"/>		160000000.00
Stress	Scientific	2	<input checked="" type="checkbox"/>	6	160.00e+6
Strain	General	2	<input type="checkbox"/>		160000000.00
Utilization Factor	General	2	<input type="checkbox"/>		160000000.00
Buckling Factor	General	2	<input type="checkbox"/>		160000000.00
Forces	General	2	<input type="checkbox"/>		160000000.00
Coefficient	General	2	<input type="checkbox"/>		160000000.00
Scientific	General	2	<input type="checkbox"/>		160000000.00
General	General	2	<input type="checkbox"/>		160000000.00
Mass	General	2	<input type="checkbox"/>		160000000.00
Dimensions	General	2	<input type="checkbox"/>		160000000.00
Length	General	2	<input type="checkbox"/>		160000000.00
Area	General	2	<input type="checkbox"/>		160000000.00
Dimensions 3	General	2	<input type="checkbox"/>		160000000.00
Moment of Inertia	General	2	<input type="checkbox"/>		160000000.00
Dimensions 6	General	2	<input type="checkbox"/>		160000000.00
Number	General	2	<input type="checkbox"/>		160000000.00
Moments	General	2	<input type="checkbox"/>		160000000.00
Deflection	General	2	<input type="checkbox"/>		160000000.00

Number Format

☐ General ☒ Scientific

Digits after decimal point: 2

☒ Fixed Power

Power Value: 6

Example: 160.00e+6

Set Format

OK Cancel

Category	Type	Digits after decimal point	Fixed Power	Power Value	Example
Displacements	Scientific	2	<input checked="" type="checkbox"/>	-3	160000000000.00e-3
Stress	Scientific	2	<input checked="" type="checkbox"/>	6	160.00e+6

Adjust Views to Inactivate Filled Edges

1

Execute right click on *Stress (IL1, All Entities)* and select *Generate*

2

Press *Views*

3

Select *1..Default View*;
Press 

4

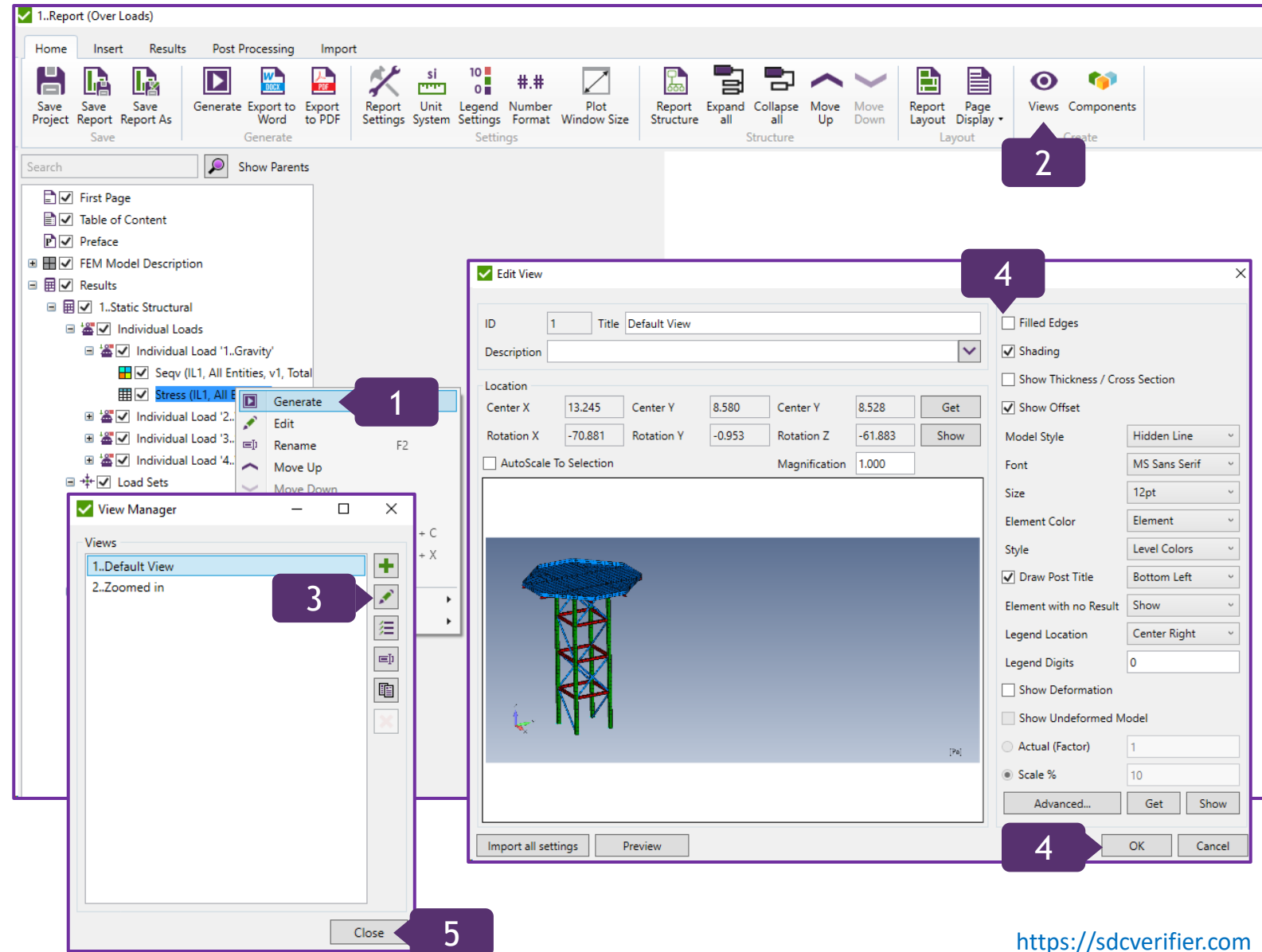
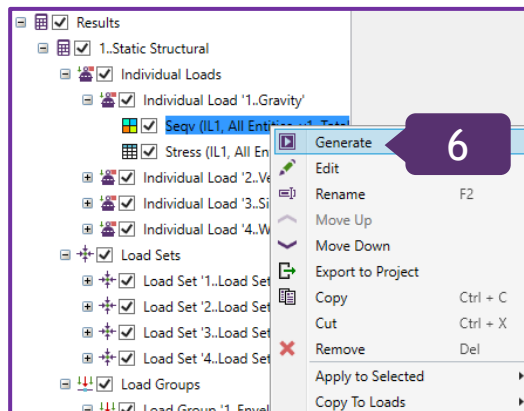
Inactivate *Filled Edges*;
Press *OK*

5

Close the window

6

Execute right click on *Seqv (IL1, All Entities)* and select *Generate*




Add Criteria Plot for all Recent Loads

1

In *Results* section, press *Criteria*

2

Press  and follow the path to select recent Loads

3

Category: *Displacement*;
LG Parameter: *Absolute*

4

Views: *1..Default View*

5

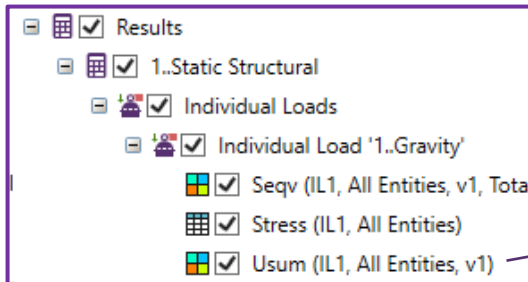
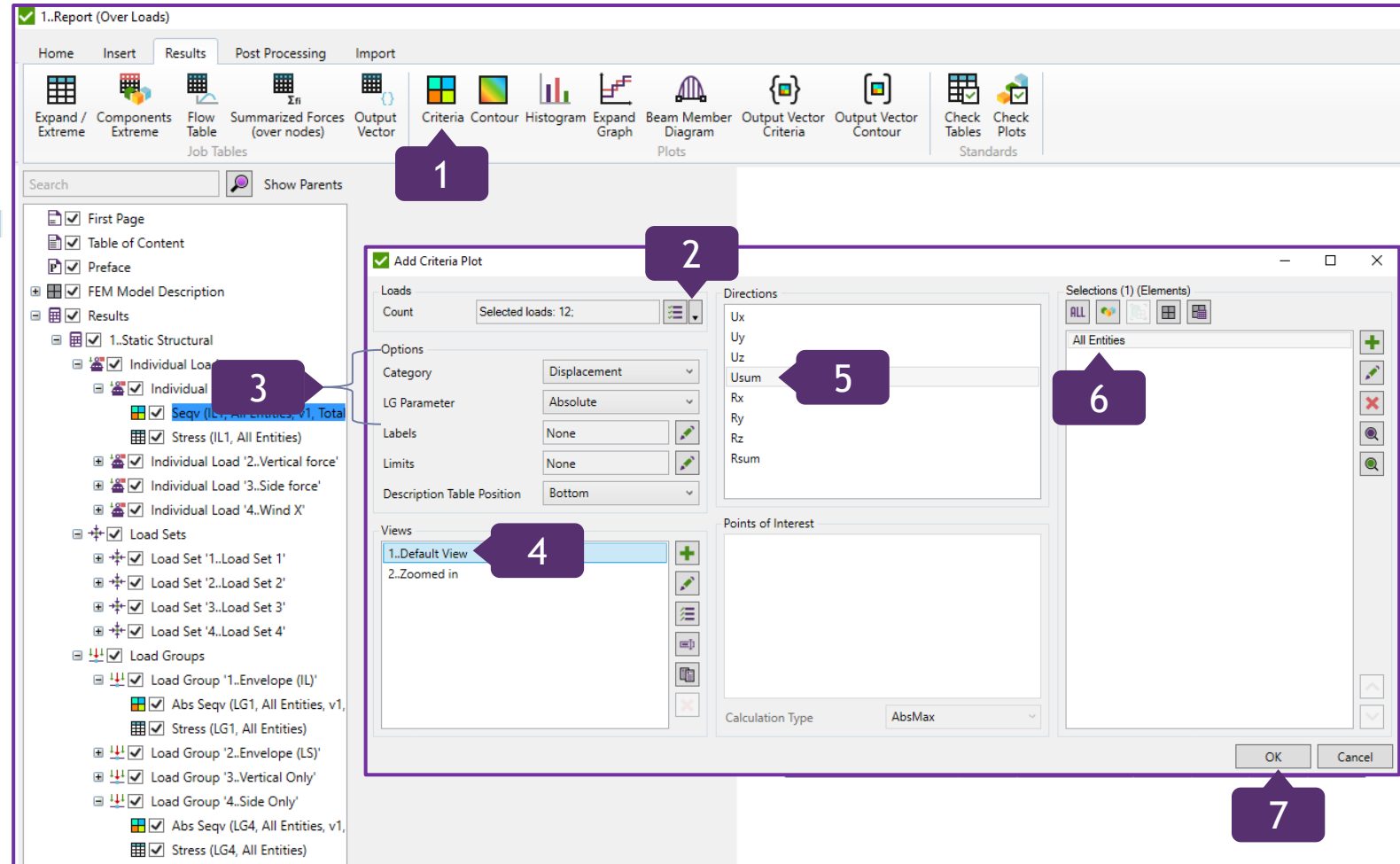
Directions: *Usum*

6

Selections (Elements): *All Entities*

7

Press *OK*

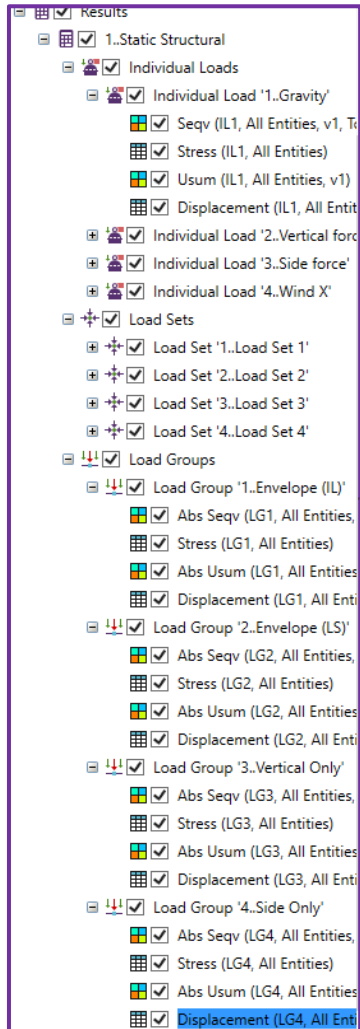


The Criteria Plot has been created.

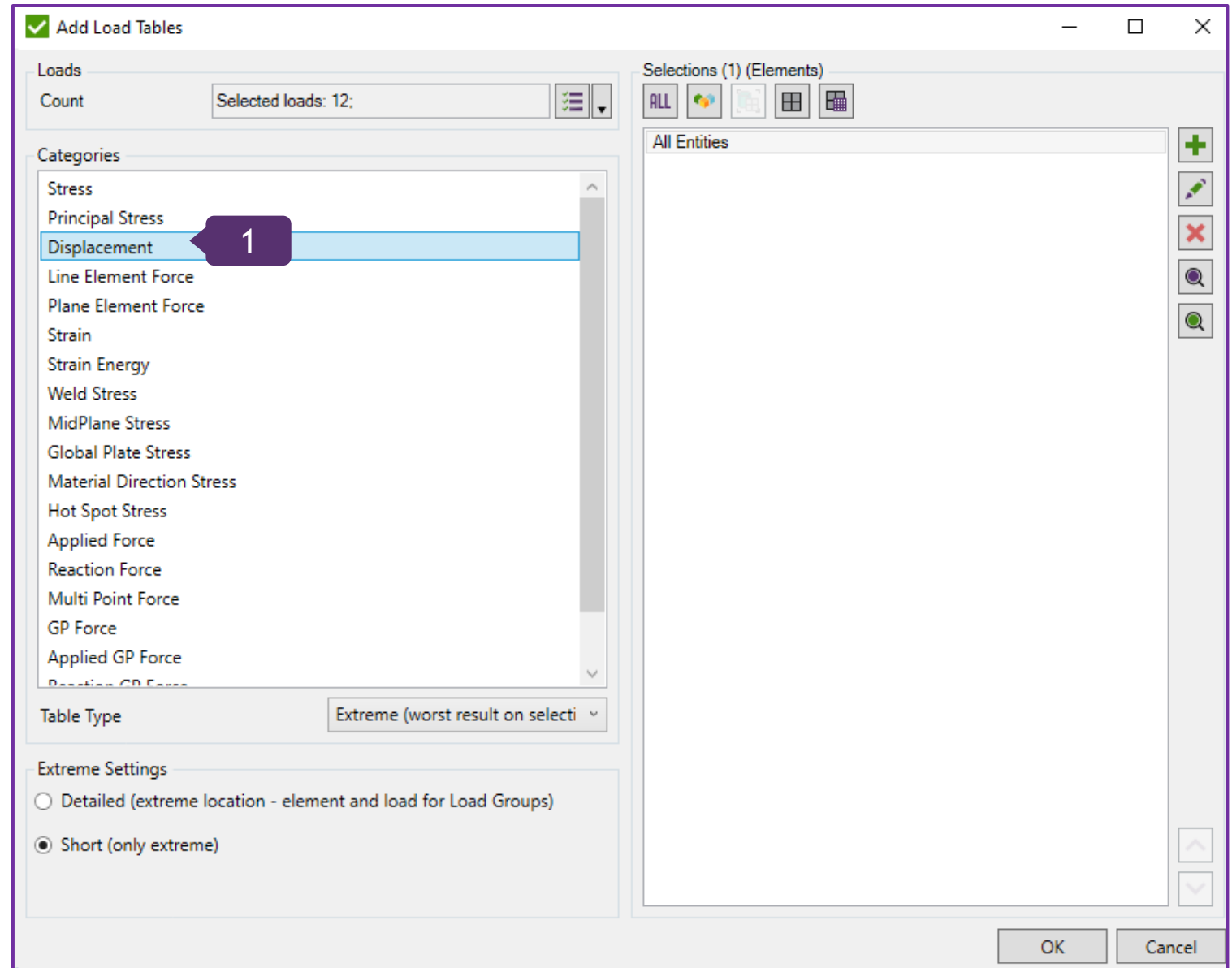
Create Expand/Extreme Table (Displacement)

1

Execute the steps 3-8 from slide 23;
Categories: *Displacement*



For each item of the Job, Stress Plot, Stress table, Displacement Plot and Displacement Table have been created. These are general results.



Create Check Plots

1

In *Results* section, press *Check Plots*

2

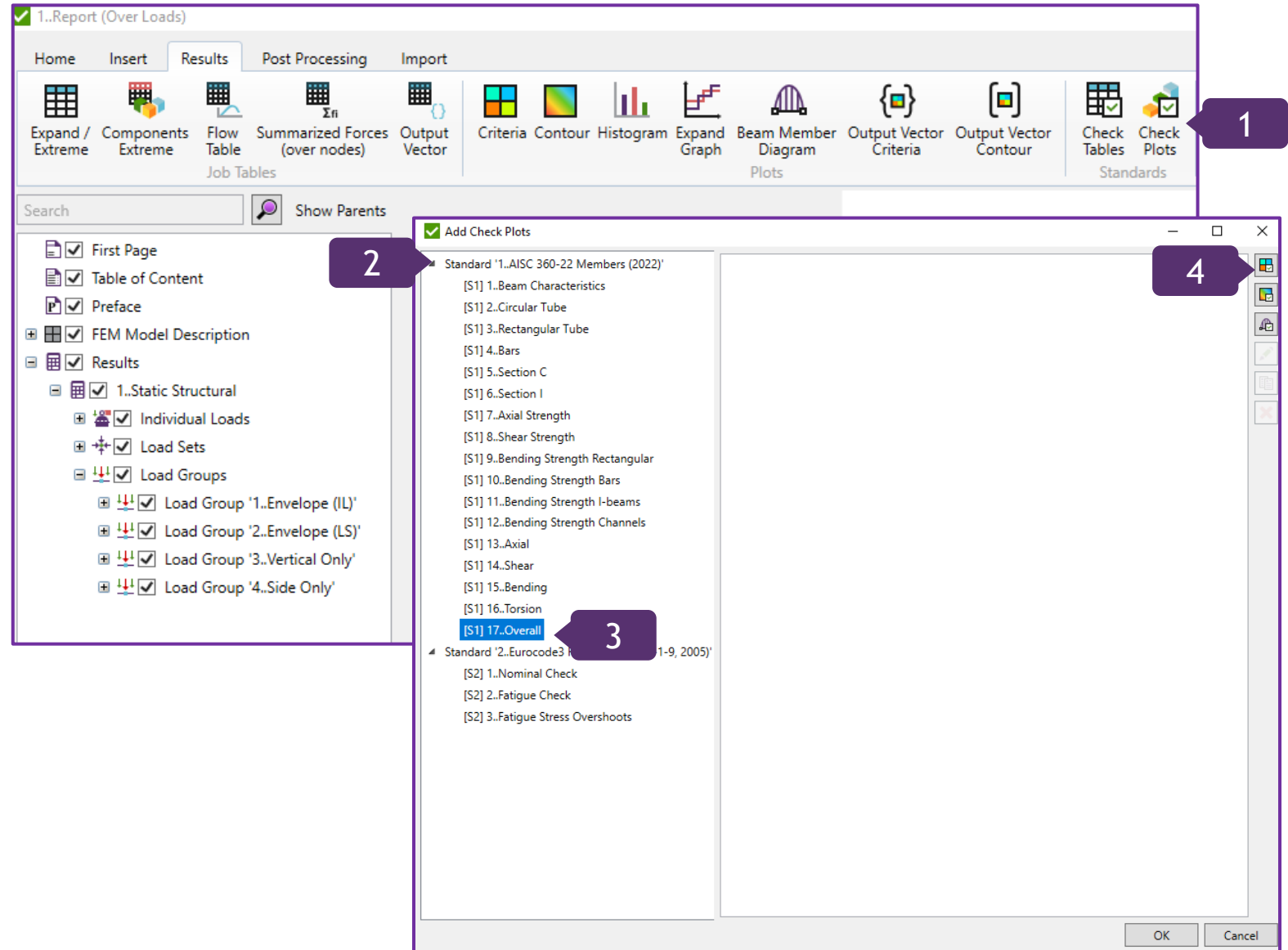
Expand *Standard '1..AISC 360-22 Members (2022)'*

3

Select *[S1] 17..Overall*


4

Click on 



Create Check Plots (Continuation)

5

Press  and follow the path to select recent Loads

6

Parameters: *Uf Overall*;
Views: *1..Default View*;
Points of Interest: *Total*

7

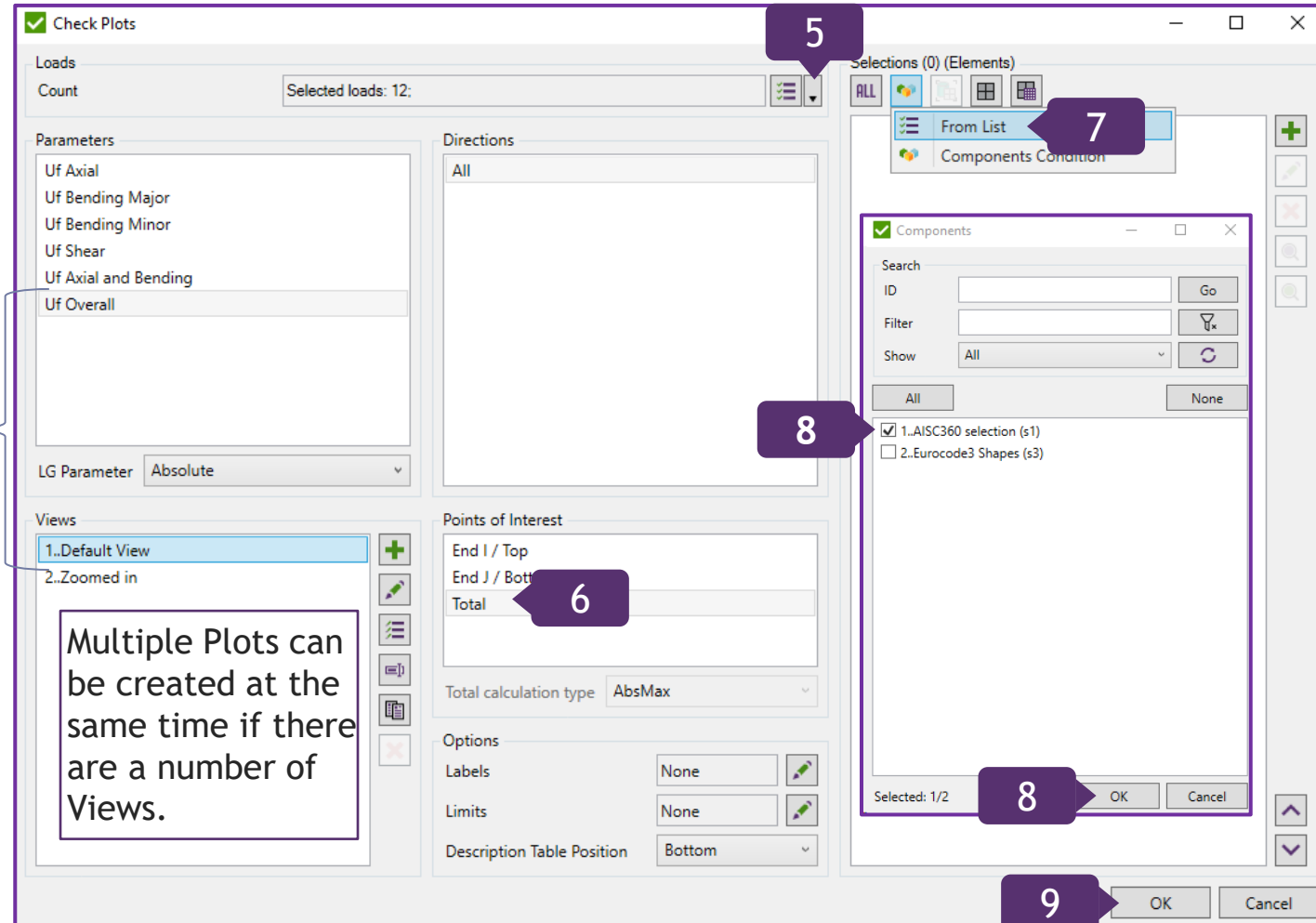
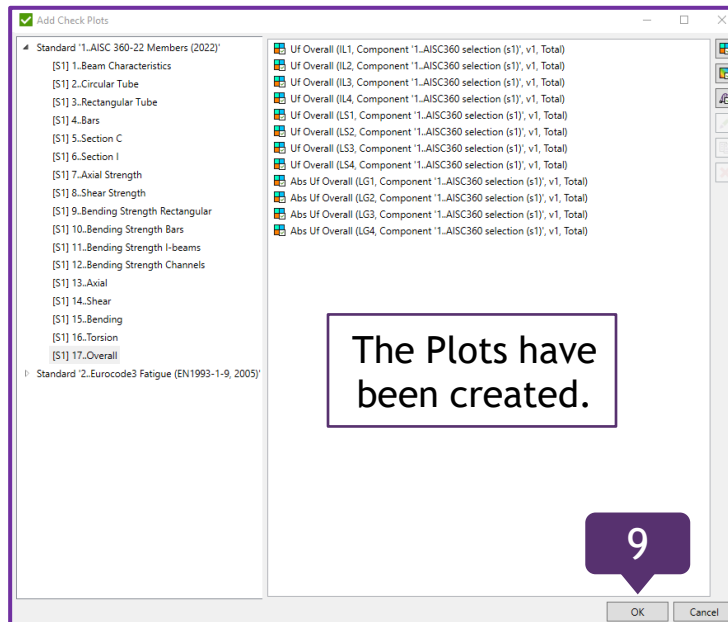
Press  and select *From List*

8

Activate *1..AISC360 selection (s1)*;
Press *OK*

9

Press *OK*



Multiple Plots can be created at the same time if there are a number of Views.

The Plots have been created.

Create Check Tables

1

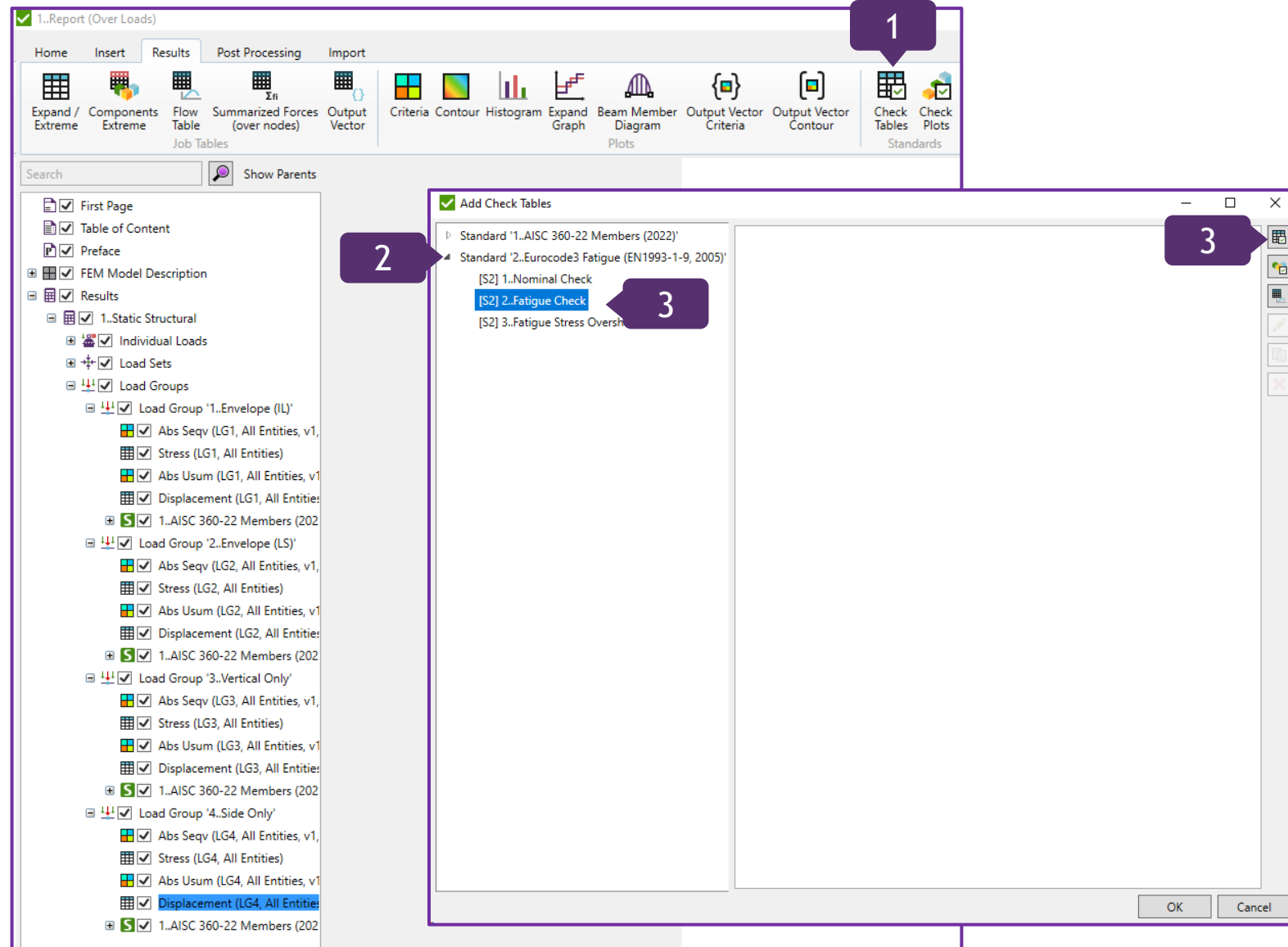
In *Results* section, press *Check Tables*

2

Expand *Standard '2..Eurocode3 Fatigue (EN1993-1-9, 2005)'*

3

Select *[S2] 2..Fatigue Check* and Press 



Create Check Tables (Continuation)

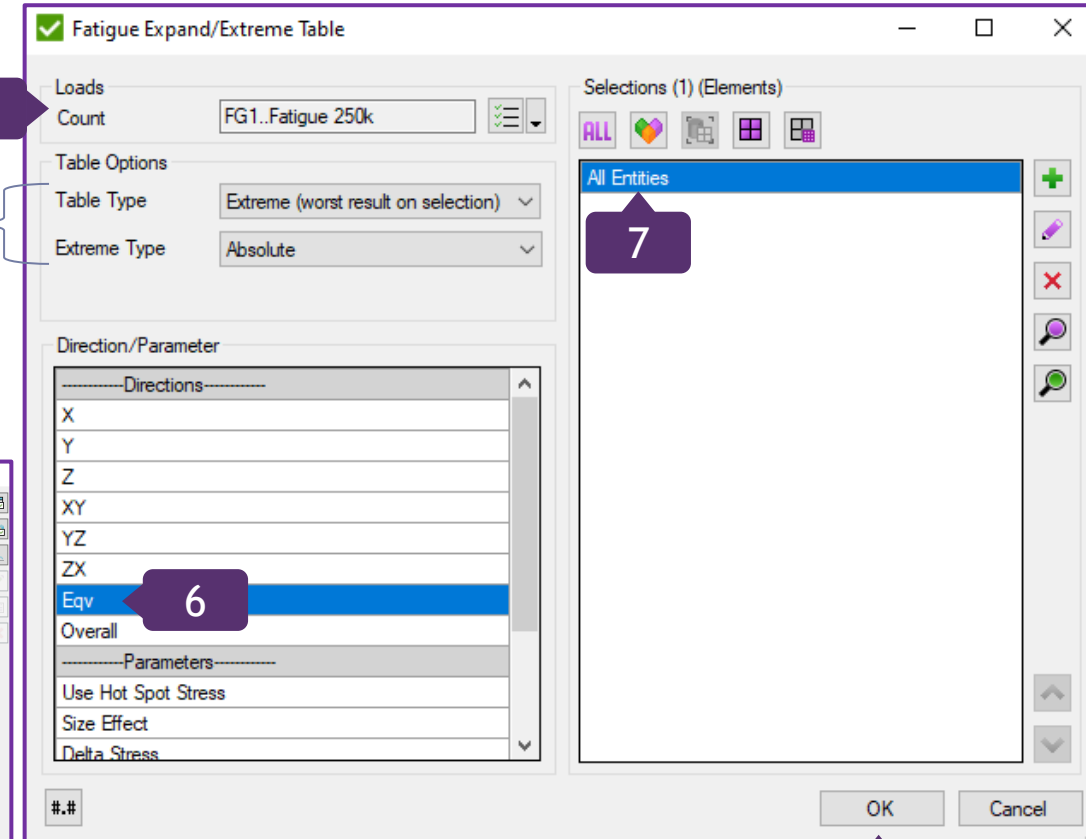
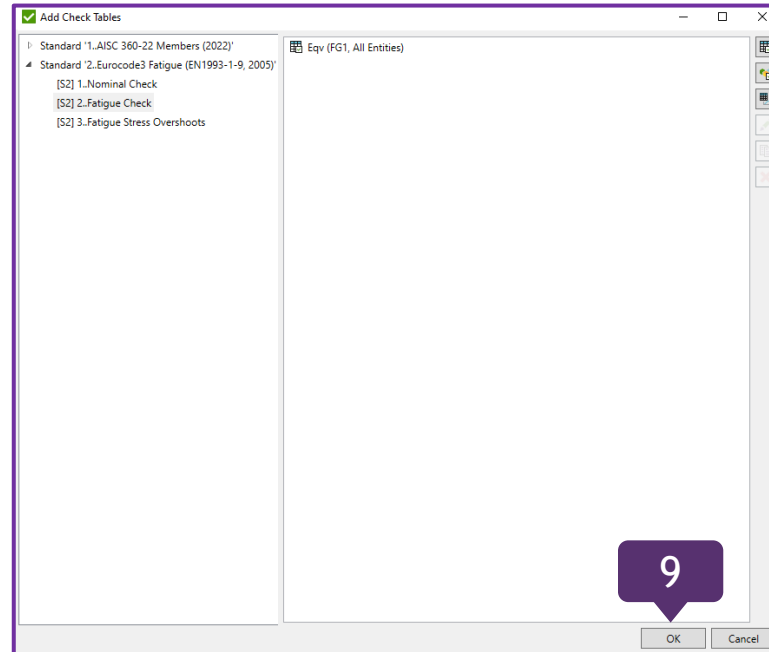
- 4 Loads Count: *FG1..Fatigue 250k*
- 5 Table Type: *Extreme (worst result on selection)*; Extreme Type: *Absolute*
- 6 Direction/Parameter: *Eqv*
- 7 Selections (Elements): *All Entities*

8 Press **OK**

9 Press **OK**

- ☒ **FG** ☒ Fatigue Groups
 - ☒ **FG** ☒ Fatigue Group '1..Fatigue 250k'
 - ☒ **S** ☒ 2..Eurocode3 Fatigue (EN1993
 - ☒ ☒ Eqv (FG1, All Entities)

Fatigue Group and the results for Eurocode3 Fatigue (EN1993-1-9,2005) have been created.



Include User-Defined Items

- 1 In *Insert* section, press *User Chapter*
- 2 Title: *Summary*;
Press *OK*
- 3 Press *Text*;
Break Page Before: *No*
- 4 In *Text* section, type: *Based on the completed demonstration project and the analysis of the tower. All results are OK*
- 5 Press *Enter*
- 6 Drag *Text* up to the *Summary* section;
Press *Generate* on *Summary*

The screenshot displays the SDC Verifier software interface with the '1..Report (Over Loads)' window open. The 'Insert' tab is selected, and the 'User Chapter' button is highlighted with a purple circle and the number 1. Below the 'User Chapter' button, the 'Text' button is highlighted with a purple circle and the number 2. A dialog box titled 'Enter User Chapter Title' is open, showing the title 'Summary' and the 'OK' button highlighted with a purple circle and the number 2. The 'Text' button is highlighted with a purple circle and the number 3. The 'Text' section is highlighted with a purple circle and the number 4. The 'Summary' section is highlighted with a purple circle and the number 6. The 'Generate' button is highlighted with a purple circle and the number 6. The 'Generate' button is highlighted with a purple circle and the number 6.

The interface shows the following sections and items:

- Home**: Table of Content, Preface, Introduction
- Insert**: User Chapter, Model Plot, Text, Image, Appendix
- Results**: Model Information, Model Setup, Recognition Tools
- Post Processing**: Model Plot, Group Plot
- Import**: Appendix

The 'Enter User Chapter Title' dialog box contains:

- Title: Summary
- OK button
- Cancel button

The 'Text' section contains:

- Break Page Before: No
- Enabled: Yes

The 'Text' section contains the text: Based on the completed demonstration project and the analysis of the tower. All results are OK

The 'Summary' section contains:

- Generate button
- Edit button
- Rename button (F2)
- Move Up button
- Move Down button
- Copy button (Ctrl + C)
- Paste button (Ctrl + V)
- Cut button (Ctrl + X)
- Remove button (Del)
- Add button
- Select Items button
- Apply to Selected button

-
- The screenshot shows the ANSYS Workbench interface. On the left, the 'Model' tree is visible, showing a hierarchy of components including 'Individual Load', 'Load Sets', 'Load Groups', and 'Fatigue Groups'. The 'Summary' report is open in the center, displaying a color-coded stress distribution on a tower model. A callout box points to the 'Generate' button at the bottom left, with the text 'These items can also be copied.' Another callout box points to the 'Summary' report, with the text 'These Options can also be included into the Report'.

The screenshot shows the 'Generate' menu with the following options: Generate, Edit, Rename (F2), Move Up, Move Down, Copy (Ctrl + C), Paste (Ctrl + V), Cut (Ctrl + X), Remove (Del), Add, Select Items, and Apply to Selected. The 'Add' option is highlighted, and a sub-menu is open showing: User Chapter, Selection Containers, Text, Image, Model Plot (highlighted), and Group Plot. At the bottom, the 'Summary' tab is selected, showing a list of items: Text, Abs Seqv (LG1, All Entities, v1, Total [4]).

<https://sdcverifier.com>

Save the Report

1

In *Home* section, press *Save Report As*

2

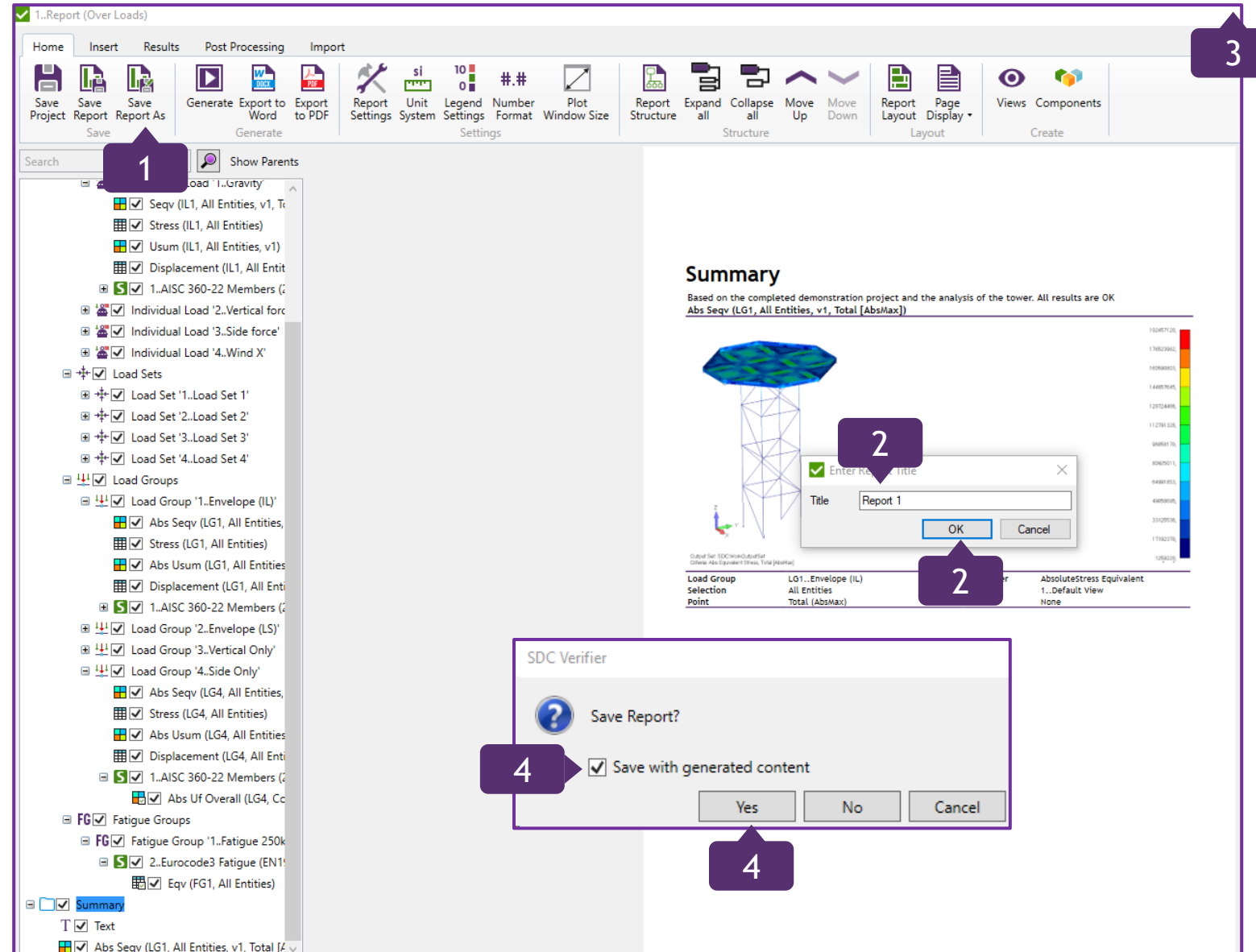
Title: *Report 1*;
Press *OK*

3

Close the window

4

Activate *Save with generated content*;
Press *Yes*



Adjust the Results

1

In *Mesh* section, expand *Properties* and select *2..I-beam200*

2

Execute right click on *2..I-beam200* and select *Edit*

3

Press *Shape*

4

Activate *Change Shape*

5

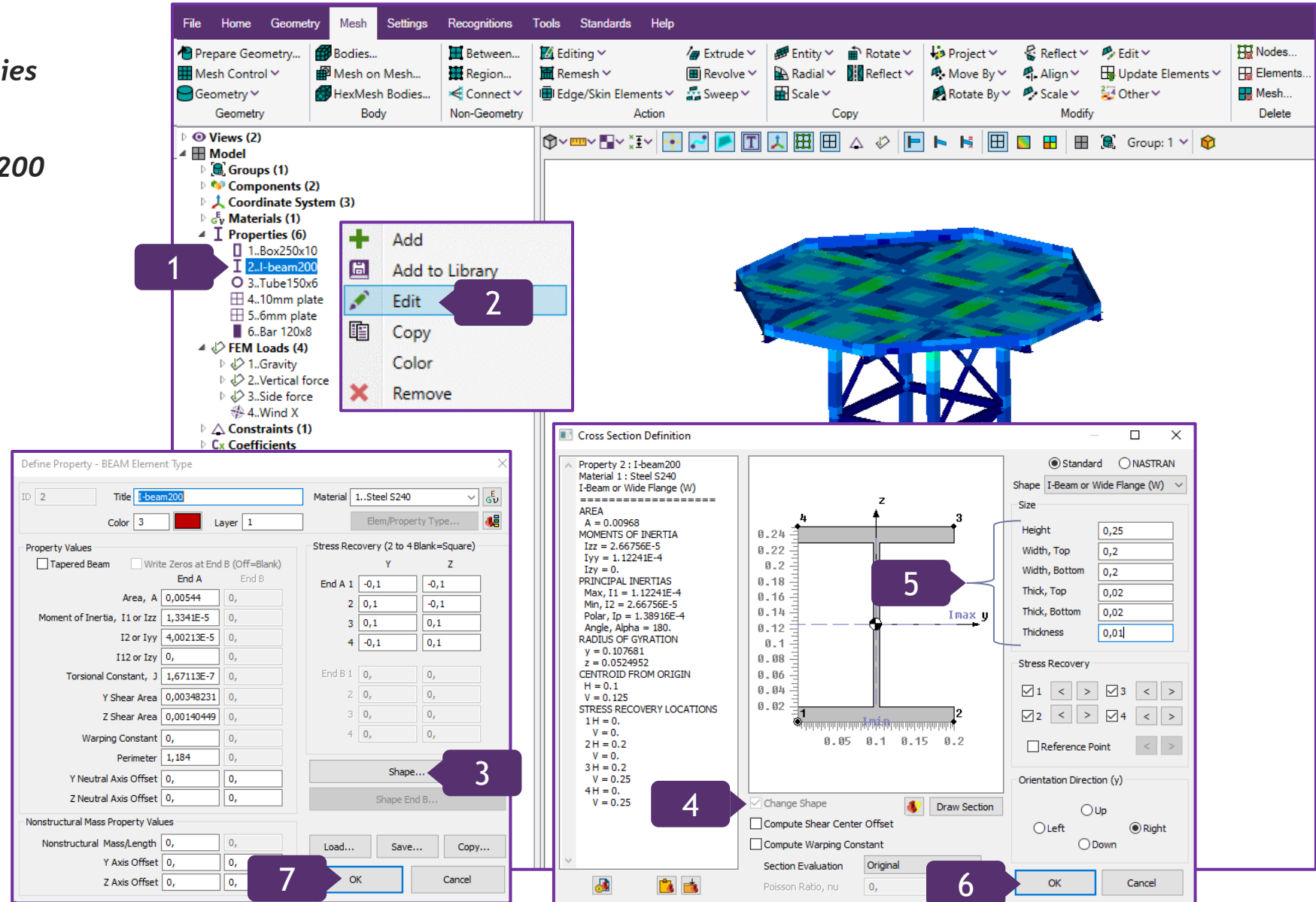
In *Size* section, fill in the suggested configuration

6

Press *OK*

7

Press *OK*



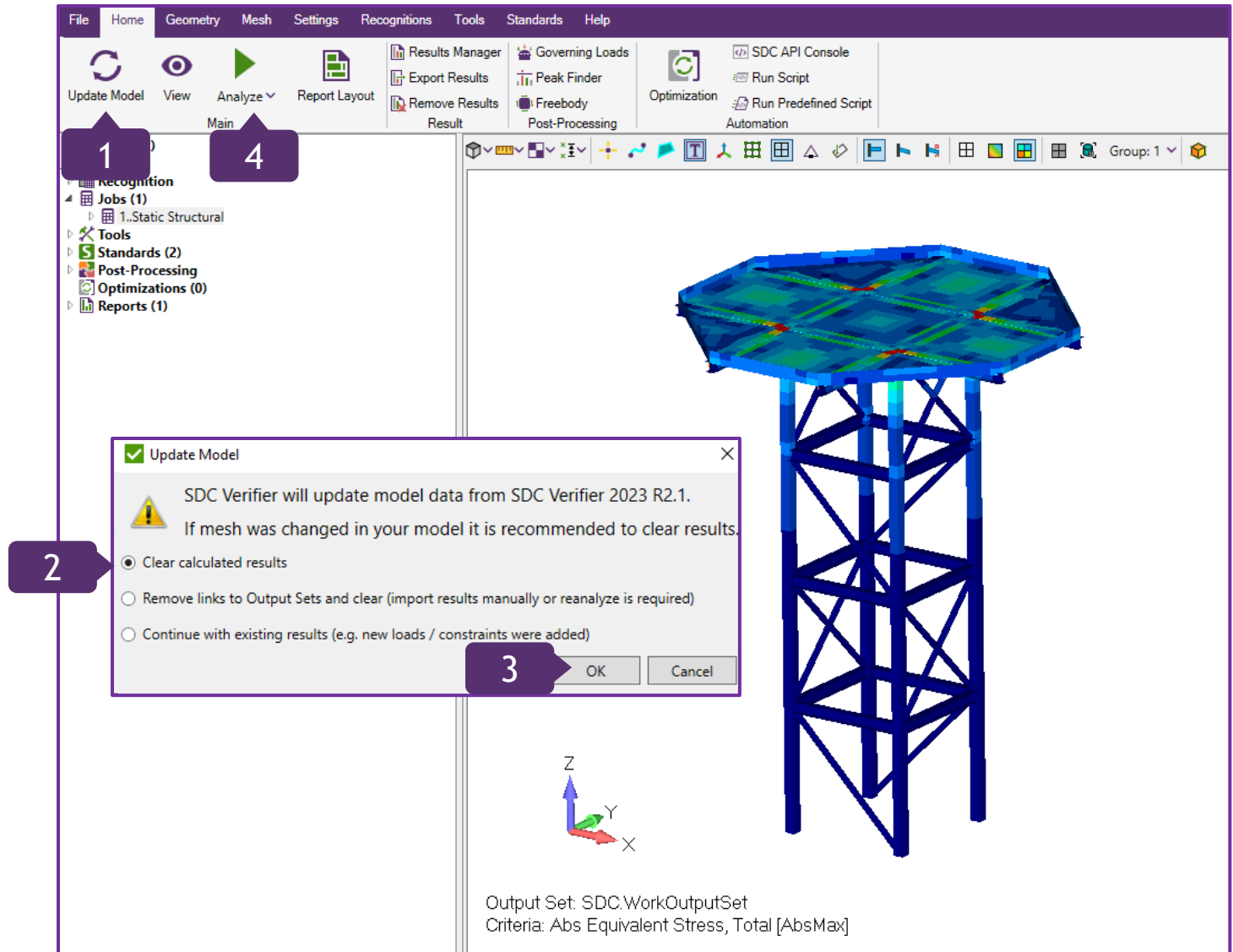
Update the Model

1 In *Home* section, press *Update Model*

2 Activate *Clear calculated results*

3 Press *OK*

4 Press *Analyze*



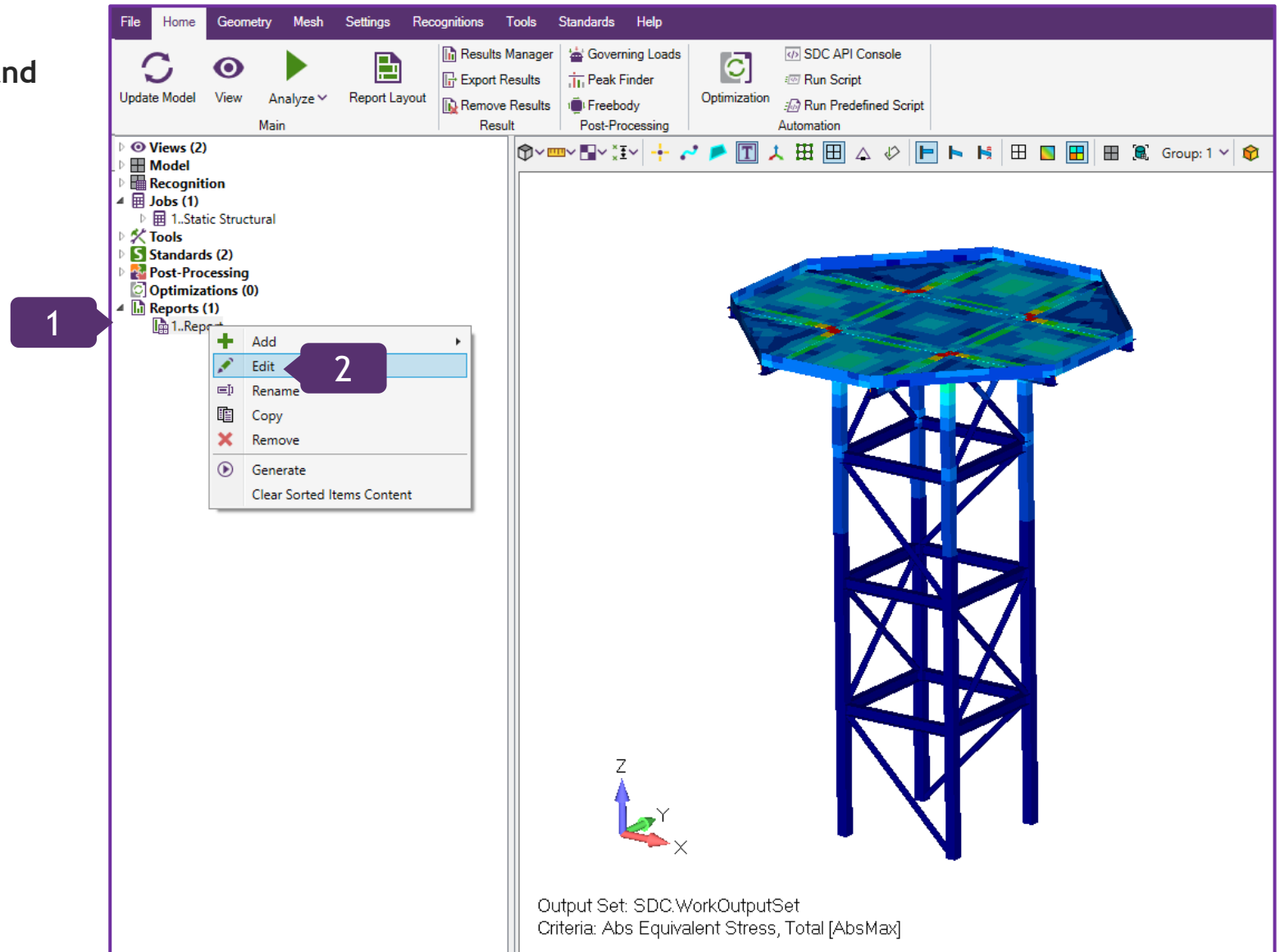
Edit the Existing Report

1

In *Home* section, expand *Reports* and execute right click on *1..Report*

2

Select *Edit*



Edit the Existing Report (Continuation)

3

Expand 1..Static Structural => Load Groups => Load Group '2..Envelope (LS)' => 1..AISC 360-22 Members (2022)

4

Execute right click on Abs Uf Overall (LG2, Component '1..AISC360 selection (s1)', v1, Total) and press Generate

5

Press Yes

The screenshot shows the SDC Verifier software interface. The left sidebar contains a tree view with the following structure:

- 1..Static Structural
 - Individual Loads
 - Load Sets
 - Load Groups
 - Load Group '1..Envelope (LL)'
 - Load Group '2..Envelope (LS)'
 - 1..AISC 360-22 Members (2022)
 - Abs Uf Overall (LG2, Component '1..AISC360 selection (s1)', v1, Total)

A context menu is open over the 'Abs Uf Overall' item, showing options: Generate, Edit, Rename, Move Up, Move Down, Export to Project, Copy, Cut, Remove, Replace Standard, Apply to Selected, and Copy To Loads. The 'Generate' option is highlighted.

The main plot area displays a 3D model of a structure with a color scale on the right. The title of the plot is 'Abs Uf Overall (LG2, Component '1..AISC360 selection (s1)', v1, Total)'. Below the plot is a table:

Check	[s1] 17..Overall	Point	Total
Load Group	LG2..Envelope (LS)	Parameter	Absolute Uf Overall
Selection	Component '1..AISC360 selection (s1)'	View	1..Default View

A dialog box titled 'SDC Verifier' is open in the foreground, asking 'Save Report?'. It has a checkbox 'Save with generated content' which is checked. The 'Yes' button is highlighted.

Generate and Export the Entire Report

1

Press *Generate*

2

Press either *Export to Word* or *Export to PDF* (the decision is based upon Company's requirements)

3

Press *Yes*

