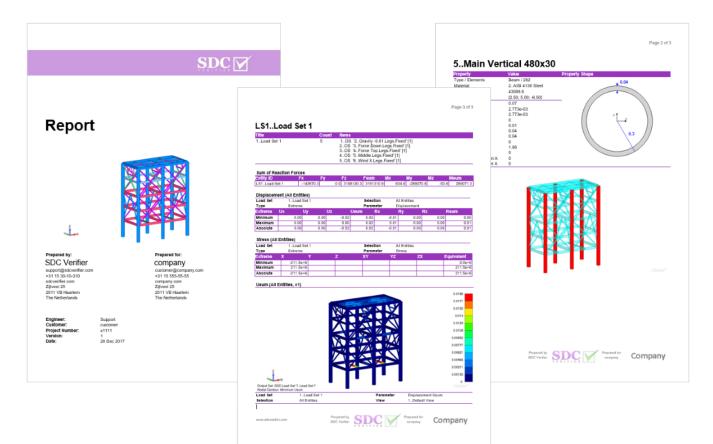


SDC Reporting

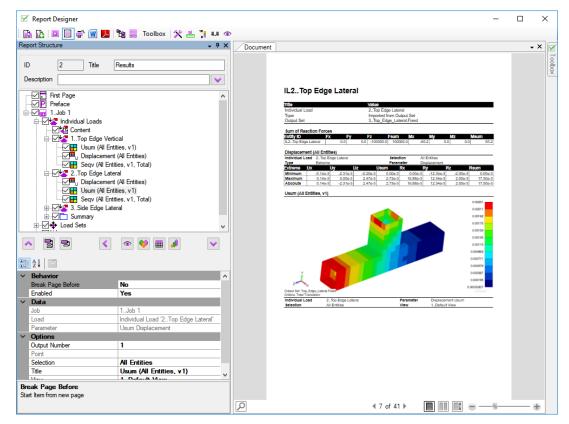
An extension for Ansys Femap and Simcenter which automates the generation of full calculation reports





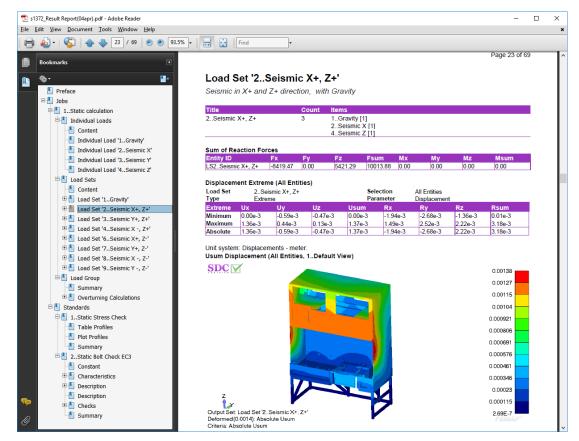
SDC Reporting is an extension for the CAE programs which automate the generation of full calculation reports. All SDC Reporting features are available within SDC Verifier software.

The report Designer is an advanced tool to document the FEA model and to create full calculation reports in Docx and PDF formats.



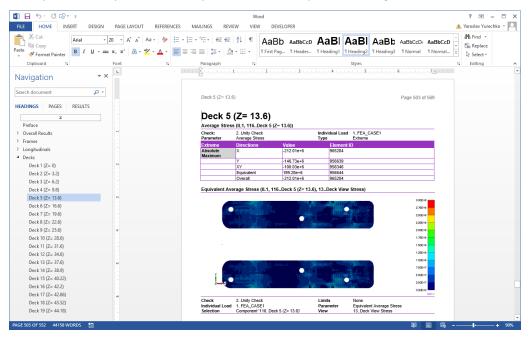
With the Presentation Designer quick Power Point presentations with summary and main results can be generated:

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The report structure is translated into Microsoft Word and PDF bookmarks to facilitate navigation through the report.

Results can not only be ordered by loads, but also by selections (for example, frames, longitudinals, decks).



Material "1AISI 4	340 Stool"	Page 7 of 10	D	Anim Manfield 400, 00%	
Viateriai "1AISI 4 Property	Value			Vain Vertical 480x30" Value Property S	
Elements	444		Property Type / Elements	Value Property S Beam / 282	
Mass	10665.9		Material	2. AISI 4130 Steel	• 0.04
Gravity Center	[2.50; 5.00; -0.04]		Mass	43088.6	
Young Modulus	2.10e+11		Gravity Center	+3000.0 [2.50; 5.00; -8.50]	
Shear Modulus	0		Area	0.07	
Poisson Ratio	0.32				
Shear	156000.00		11	2.773e-03	(r t))
Mass Density	7850.00		12	2.773e-03	r 🖵 II
Tensile Strength	0		112	• \	
Yield Stress	0		Torsion Constant	0.01	0.3
			Y Shear Area	0.04	
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			Nonstructural Mass	0	
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Automatic description of the materials and properties data (including mass overview). The elements related to material/property are highlighted.

All boundary conditions and the description of the applied loads are automized.

		Page 7 of 8			Page 8 of 8
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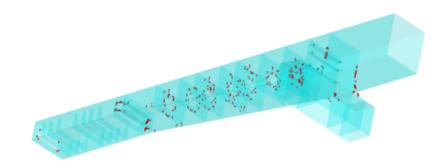
The mesh quality based on 8 different criteria is checked and described in the element quality section.

Element Quality (1..Default View)

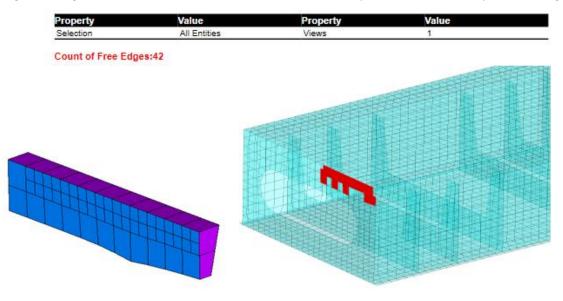
Perform elements checks based on the Femap Quality Element Criteria

Quality Type	Limit	Quality Type	Limit	
Aspect Ratio	10	Taper	10	
Alternate Taper	0.5	Internal Angle	30	
Skew	30	Warping	20	
Nastran Warping	0.05	Jacobian	0.6	

Count of elements that failed the selected quality checks: 403



The Free Edge tool recognizes locations where the connection between the model parts is lost due to incompatible meshing.



The total mass overview for different selections (materials, properties, user selections) including COG.

Title	Elements	Mass	Gravity Center
1steel	386	813741.1	[-3.11; 0.00; 49.81]
2AISI 4340 Steel	0	0.0	[0.00; 0.00; 0.00]
3machine room	5	63750.0	[-37.50; 0.00; 56.50]
4wheels	8	188400.0	[-15.00; 0.00; 1.50]
6e house	1	40000.0	[-28.00; 0.00; 56.00]
Overall	400	1105891.1	[-8.02; 0.00; 42.19]

In the SDC reporting tool a lot of different table options are present to make a complete overview of the calculation results. For example, a reaction forces for selected load situations with Min and max highlighted in each direction.

Summed Reaction	Force								
	solute Read Entities	ction	Force		Loads Cou	nt 11			
Entity ID	Fx		Fy	Fz	Fsum	Mx	My	Mz	Msum
IL1Top Edge Vertica	I	0.0	100000.0	0.0	100000.0	-196.4	0.0	0.0	196.4
IL2Top Edge Lateral		0.0	0.0	-100000.0	100000.0	-65.2	0.0	0.0	65.2
IL3Side Edge Latera		0.0	0.0	-100000.0	100000.0	0.0	0.0	0.0	0.0
LS1All_combination:	s.1	0.0	110000.0	-200000.0	228254.3	-281.2	0.0	0.0	281.2
LS2All_combination:	5.2	0.0	-110000.0	-200000.0	228254.3	150.8	0.0	0.0	150.8
LS3All_combination:	5.3	0.0	110000.0	0.0	110000.0	-150.8	0.0	0.0	150.8
LS4All_combination	6.4	0.0	-110000.0	0.0	110000.0	281.2	0.0	0.0	281.2
LS5All_combination	5.5	0.0	110000.0	0.0	110000.0	-281.2	0.0	0.0	281.2
LS6All_combination:	6.6	0.0	-110000.0	0.0	110000.0	150.8	0.0	0.0	150.8
LS7All_combination	6.7	0.0	110000.0	200000.0	228254.3	-150.8	0.0	0.0	150.8
LS8All_combination:	s.8	0.0	-110000.0	200000.0	228254.3	281.2	0.0	0.0	281.2

Extreme results as the absolute maximum stress for different selections (materials, properties, user selections).

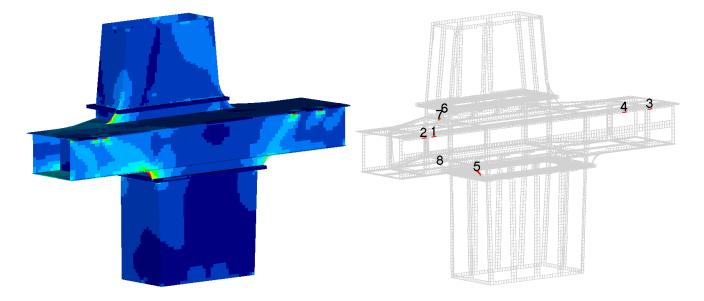
	opEdgeVertica ute Stress	al	Sele	ections	5		
Components	x	Y	Z	XY	YZ	ZX	Equivalent
Material '1S275'	1.0e+6	-0.8e+6		0.5e+6			1.6e+6
Material '2S340'	-30.8e+6	-31.3e+6		-12.5e+6			33.3e+6
Material '3S420'	-31.1e+6	41.0e+6		27.4e+6			62.1e+6
Material '4DC01'	-31.1e+6	-70.3e+6		-30.0e+6			79.3e+6
Material '5DC11'	42.6e+6	-160.8e+6		-31.7e+6			157.9e+6

A quick overview of the absolute maximum displacements over all loads in one table:

5,	Displace All Entit				Loads Cou	nt 11			
Load	U	x	Uy	Uz	Usum	Rx	Ry	Rz	Rsum
IL1Top Edge Verti	cal	0.01e-3	-2.10e-3	0.81e-3	2.11e-3	2.24e-3	0.21e-3	0.19e-3	2.25e-3
IL2Top Edge Late	ral	0.14e-3	-2.31e-3	2.47e-3	2.73e-3	16.88e-3	12.34e-3	2.00e-3	17.50e-3
IL3Side Edge Late	eral	0.00e-3	0.01e-3	0.08e-3	0.08e-3	-0.07e-3	0.04e-3	0.02e-3	0.08e-3
LS1All_combination	ons.1	0.14e-3	-4.61e-3	3.39e-3	4.64e-3	19.13e-3	12.34e-3	2.00e-3	19.16e-3
LS2All_combination	ons.2	0.14e-3	0.44e-3	1.62e-3	1.67e-3	14.62e-3	12.34e-3	2.00e-3	15.98e-3
LS3All_combination	ons.3	0.14e-3	-0.45e-3	-1.55e-3	1.61e-3	-14.63e-3	12.34e-3	1.99e-3	15.99e-3
LS4All_combination	ons.4	0.14e-3	4.63e-3	-3.32e-3	4.65e-3	-19.14e-3	12.34e-3	2.00e-3	19.17e-3
LS5All_combination	ons.5	0.14e-3	-4.63e-3	3.32e-3	4.65e-3	19.14e-3	12.34e-3	2.00e-3	19.17e-3
LS6All_combination	ons.6	0.14e-3	0.45e-3	1.55e-3	1.61e-3	14.63e-3	12.34e-3	1.99e-3	15.99e-3
LS7All_combination	ons.7	0.14e-3	-0.44e-3	-1.62e-3	1.67e-3	-14.62e-3	12.34e-3	2.00e-3	15.98e-3
LS8All_combination	ons.8	0.14e-3	4.61e-3	-3.39e-3	4.64e-3	-19.13e-3	12.34e-3	2.00e-3	19.16e-3

The number format of all tables can be customized for different result categories (for a SI unit model Stress with fixed power e+6 shows MPa or N/mm2 and e-3 shows mm for displacements) :

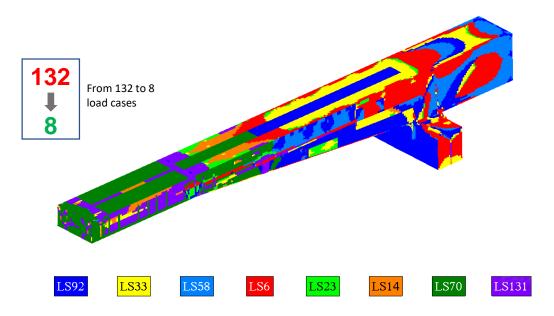
Category	Туре	Digits after decimal point	Digits For Power	Fixed Power	Power Value	Example
Displacements	Scientific V	2	1		-3	16000000000.00e-3
Stress	Scientific V	1	1		6	160.0e+6
Forces	General 🗸 🗸	1				16000000.0
Utilization Factor	General 🗸 🗸	2				16000000.00
Buckling Factor	General 🗸 🗸	2				16000000.00



The Peak Finder finds all peak zones based on the user criteria and presents the results using labeled plot:

Zone	Value	Zone	Value
Zone 1 (Elements: 2)	1.45	Zone 5 (Elements: 15)	1.41
Zone 2 (Elements: 2)	1.44	Zone 6 (Elements: 1)	1.21
Zone 3 (Elements: 2)	1.43	Zone 7 (Elements: 3)	1.09
Zone 4 (Elements: 2)	1.42	Zone 8 (Elements: 1)	1.01

The Governing Loads tool extracts the critical loads out of a large group of load combinations:



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In a report template it is possible to configure the layout of the first page, header, footer, fonts and margins:

The Header/Footer items can contain a project information (e.g. customer company name or logo), custom text or image. In addition, user can create custom fields and use them in the report layout.

03/01/2018		Page 3 of
Preface		
This document is generated with Report Profile: 1Results Generation on: 1/3/2018 10:37:	h SDC Verifier 5.0 and calculated with Fernap v11.3.2 18 AM	
Unit System		
Current Unit System = MKS (Me	ter/Kg/Second). It is used in calculations for the follow	ving standards: API RP 2A,
	5018, FEM 1.001 and Eurocode3.	
Dimensions	Value	
Length	Meter	
Mass	Kilogram	
01032	18	
Time Force Stress Model Informa	Second Newton Pa	
	Count	
Model Summary		
Entity Mass	1105891.1	
Entity Mass	1105891.1	
Entity Mass Gravity Center	1105891.1 [-8.02; 0.00; 42.19]	
Entity Mass	1105891.1	

Demo Header	support@sdcverifier.com
Preface	
This document is gener Report Profile: 1Result Generation on: 1/3/201	
Unit System Current linit System= 1	NS (Meter/Kg/Second). It is used in calculations for the following
	SO 19902, Norsok N004, DIN 15018, FEM 1.001 and Eurocode3.
Dimensions	Value
Length	Meter
Mass	Kilogram
Time-	Second
Force	Newton
Force	0
stress Stress Model Info Model Summary	Newton Pa
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